

SEVEN

HOW TO SAY WHAT NEEDS TO BE SAID IN THE CASE FOR SUPPORT

Summary

This chapter helps you structure and present your funding proposals effectively. It describes a generic structure for your case for support that you can adapt to any funding agency application template. By explaining the function and properties of the case for support, it helps you develop research grant applications that communicate the right information in the right format.

The *What Do We Need to Know?* Tool helps you present your project in a logical and consistent way. In addition, you will find a number of extracts from successful grant applications, which illustrate some of the advice and guidance. You can find more information about each of these in Appendix 3.

Introduction

Preparing fundable research grant applications is very time consuming and low success rates make the outcome uncertain. Applicants usually have to make several high-quality applications in order to win one grant.

There are two main obstacles to making multiple applications quickly and efficiently:

- Funding agency criteria and templates vary so widely that it is difficult to develop projects or proposals that fit more than one agency
- Each individual application is time consuming as many funding agencies provide a complex application template to complete

This chapter helps streamline this process so that you can take less time to make multiple high-quality applications. It does so by explaining the generic properties of a fundable project and the generic functions of an effective case for support.

Although funding agencies may use different formats for their templates, the information required is usually rather similar. However, these similarities can be hard for a busy researcher to identify.

First, identical section headings can be misleading. 'Introduction', 'Background', 'Track Record' and 'Methods' can mean different things to different funding agencies. Second, different section headings may be used for identical content. 'Summary', 'Project Outline' and 'Abstract' usually mean the same thing.

Reading the funding agency guidance carefully is the only way to understand what the agency requires for each part of its template. However, this chapter also proposes that the diversity of funding agency templates masks many common properties. In brief, differences are often superficial and the underlying structure of application templates remains constant.

Ultimately, a generic approach allows you to create and replicate high-quality research grant applications in less time.

The 'fundable' project

As discussed in Chapter 5, funding agencies use their evaluation process to collect evidence for four key propositions about your project. These propositions and the evidence that supports them demonstrate whether the proposed research deserves funding:

- 1 The *importance* proposition: this proposal asks an important question.
- 2 The *success* proposition: this project is likely to answer the question.
- 3 The *value* proposition: the likely gain from this project is worth the resources requested.
- 4 The *competence* proposition: the applicant and team are competent to carry out the project as described.

Although specific evaluation criteria vary widely, they always have these four propositions at their heart. Understanding this will help you develop fundable projects and adapt them to different funding agencies.

The effective case for support

The research proposal or 'case for support' is the central narrative of your research grant application. This document contains all the essential information about your project and is usually several pages long.

For inexperienced applicants, writing a case for support that interests and convinces busy, non-specialist readers is a daunting task. This document is usually supported by an application form and a set of appendices. The sheer volume and variety of information required can make the whole process confusing and frustrating.

The process will be much clearer if you understand the core functions of a case for support, how it relates to other sections of the application template and how it is used to evaluate your project. There are two main things you need to know:

- The case for support is the heart of an application. Most agencies expect the case for support to contain all the information needed to allow a committee to decide, in principle, whether a project should be supported.
- Other parts of the application template tend to consist of repeated or expanded sections of information included in the case for support. They will also include reference material or information that is only of use to specialist reviewers.

You must also understand the role of the case for support in convincing the referees and grants' committee members who will decide if your application gets funded. There are three things this aspect of your application must do to excite them, to convince them of your four key propositions and stand out against the competition.

- It must get your 'foot in the door' by exciting readers about your research plans and provide a preview of the project
- It must show that 'we have a problem' that needs a research project like yours to solve it
- It must demonstrate that 'this project is the solution' and convince decision makers that they want to fund your project

The rest of this chapter discusses these three functions and provides some illustrative examples of how they work in practice.

Section 1: A foot in the door

The first thing your case for support must do is to excite readers about your research plans and provide a project overview. Once you have got your 'foot in the door' and engaged your readers' interest, you can move on to detailed information about your research plans.

By previewing the entire project in the first few paragraphs of the case for support, your planned activity is easier for non-specialist readers to understand. This section also prevents detail-readers from losing the overall picture as they tackle the more in-depth sections of the document. Equally, it makes all the headline information about your project available to speed-readers, who may only ever read this section of your application.

The 'foot in the door' element of the case for support is closely related to the 'Summary', 'Abstract' or 'Project Outline' sections of the wider application template. In a two-stage application process, the first stage primarily has a 'foot in the door' function. This section should form no more than 20 per cent of a full case for support and can be as short as one paragraph. It primarily supports the 'importance' and 'success' propositions.

Objectives

In brief, the 'foot in the door' is the first element of the generic case for support. It is like the salesman who puts a foot in the door to give himself a few precious seconds to describe what he is selling and why you need to buy it. In the context of a grant application, this means:

- Getting readers excited about the project
- Previewing detailed information that you present in later sections of the case for support

Funding agency guidance seldom points out that non-specialist grants' committee members have many high-quality applications to read before they meet. However, you must assume this and write with the intention of making your project stand out against the competition.

The agency often requires a separate project summary that helps get your 'foot in the door' and this is very important. However, applicants must also ensure that the opening lines of their case for support always preview the entire project.

Serious readers and casual readers

There are two categories of reader to consider here. First, there are the 'serious' readers, who need detailed information about your particular project. Second, there are the more 'casual' readers, who need a basic understanding of every project that comes before the committee.

The serious readers are the referees, the chair of the grants' committee and the members designated to present your proposal to the committee. This group knows that they will have to understand the case for support and explain it to other knowledgeable and critical people.

They want to do this job well and in a way that makes them look and feel good. They will approach your case for support with a feeling of determination tinged with anxiety. They know that they are going to have to understand and explain the case for support. They will want to know how much effort this will take.

They also want to know whether the effort will be repaid. For this, they need a sense that your research problem is important and your programme of research

deals with it effectively. Your 'foot in the door' section should make them believe that they have struck lucky.

The casual readers (most of the other committee members) approach your case for support with a more relaxed frame of mind. They have read all the grant applications that they themselves have to present to the committee. They look to see whether your application is interesting enough for them to read and accessible enough for them to contribute to the debate.

Your 'foot in the door' text should convince them that both these things are true. Remember, however, that they do not have much time. Indeed some of them will read your case for support for the first time while the committee is discussing your application. Make it easy for them to get up to speed quickly so that they can contribute to the discussion before it ends.

There are three stages to getting your foot in the door:

- Stage One: Attention and orientation
- Stage Two: Establishing the importance of your question
- Stage Three: Previewing the project

You may find it useful to refer to Appendix 2 as you follow the advice in this chapter. It provides a comprehensive breakdown of application templates, what functions they perform and how they are read and used by different categories of reader.

Stage One: Attention and orientation

A general principle of grant writing is that you should give the reader the information that they want when they want it. The question of what they want and when they want it is mostly common sense. So, the first thing they want to know is what the project is about.

For serious and casual readers alike, the first sentence of the case for support is crucial. It must be simple and it must tell them what the project is about. This is just as important for highly technical or abstract research as it is for applied projects with obvious benefit.

EXAMPLE 9

OPENING LINES

Here is an example of an effective first sentence from a funded application. The applicants begin their case for support with the research question itself:

This project asks how the extraordinary rendition and proxy detention of terror suspects has developed and whether they are US-led phenomena. *Rendition and Detention Project*

Inexperienced grant-writers prefer to start with a slow build-up about their topic that gradually gets to the point and demonstrates their grasp of the field. Alternatively, they start with a quirky quotation from a philosopher or public figure. In doing this, they hope to stimulate the reader's curiosity and demonstrate their own erudition.

Unfortunately, slow build-ups and erudite quotations are bad tactics in grant-writing. Grant-readers are in a hurry. They want to know straight away what your project is about. You should tell them.

Stage Two: Establishing the importance of your question

The next two or three sentences of the 'foot in the door' section put the research topic in context by dealing with its importance.

If the topic is specialist, it may be necessary to explain what developments make it important to study the topic now. If the topic is obviously important, you need to emphasise how your approach to the topic is likely to be fruitful.

You should also take care not to overstate the importance of what you will do. You do not need to pretend that for a few hundred thousand pounds you will succeed in a couple of years where decades of research costing millions of pounds have failed.

At this stage in the case for support, you just need to state why the question is important. This is not the place to bombard the reader with arguments, counter-arguments and citations.

EXAMPLE 10

IMPORTANT QUESTIONS

The following extract from a funded proposal explains why investigating a memory phenomenon called 'reconsolidation' is important:

Most evidence comes from the neuroscience literature, and despite 40 years of animal studies on this phenomenon, it is still strikingly absent from cognitive psychology and psycholinguistic research. There is no reason, however, why humans should be immune to reconsolidation and, in fact, a handful of neurobiological studies on human participants now demonstrate how reconsolidation substantially impacts upon procedural, associative, as well as basic episodic memory. *Memory Research Project*

This successful fellowship application appeals to the reader's own experience as a consumer of 'image-making technology' to show how the topic merits investigation.

Are image-making technologies establishing a language that is altering how we see the world? We know that moving image technologies are rapidly evolving and proliferating. In technologically advanced societies we have become used to moving images conveying ideas and telling stories. But are we aware of the extent to which technological interfaces participate in shaping the language of moving images? *Digital Media Fellowship*

These two examples use different approaches and the differences are worth noting. The first uses simple language to explain a gap in the scientific literature while the other addresses referees and grants' committee members as though they were lay readers (which they often almost are). Both techniques are effective in establishing the importance of the proposed research.

Stage Three: Previewing the project

In Stages One and Two of the 'foot in the door' section you set out your stall by stating your research question and showing why your question is an important one. Your next task is to preview the project itself.

Your readers now understand what your research question is and are willing to accept that it is important. Your final 'foot in the door' task is to mention why your question needs an externally-funded project to answer it and deserves the grant requested.

The most effective way of doing this is to give a brief preview of the project structure and how the proposed components of research activity combine to answer your research question. In order to do this you will need to break the question down. This is also the place to state how the public will benefit from the results of your project.

EXAMPLE 11

PROJECT PREVIEW

The following funded application deals with the reduction of pain in laboratory mice. By breaking the question down into three different things 'we urgently need to know', the applicant establishes that a substantial research programme is required now:

Many of these animals develop experimental or spontaneous tumours that are assumed to cause pain so guidelines on assessment and application of humane endpoints have been developed (UKCCCR 1988). These aim to reduce suffering by advising that animals are humanely killed before they experience unacceptably intense pain. However, current guidelines are relatively arbitrary and not based on objective assessments of animal welfare. We urgently need to know:

- If different types of cancer models cause pain?
- At what stage of tumour development pain occurs?
- Which models cause the most pain, and so most compromise welfare?

Answering these questions would allow us to avoid using tumour types that were likely to cause pain and, when this was not possible, to develop better evidence-based guidelines for the application of more humane endpoints. *Research Animal Project*

The next example is taken from the summary of a five-year research project on word recognition and the applicant uses this section to introduce the three themes to be explored. As with the previous example, the project overview is followed immediately by a summary of the benefits of this proposed research programme.

The current proposal includes a large set of theoretically-driven empirical studies of lexical activation. The empirical investigations are organized into three interlocking groups of experiments. One set of studies examines how phonetic variation can affect lexical access, and can even change the lexical representations themselves. Such variation can have surprisingly powerful effects on how words are represented in the lexicon. A second set of studies examines even more fundamental changes in the lexicon: How do adults add new items to their mental lexicons, and what are the consequences of such changes? The third set of experiments investigates the dynamics of lexical competition: How does the activation of one lexical item affect the activation levels of other lexical entries? *Spoken Word Project*

Note that both examples break the project down into several distinct components and show how funding these projects will lead to specific benefits and outcomes.

In summary, remember that the 'foot in the door' section must be written so that it can be read very quickly. Do not try to develop detailed arguments and justifications. Make clear and simple statements. You will have the opportunity to repeat and to justify these statements in the next two sections.

Assuming you have a limit of six pages for your case for support, your 'foot in the door' section should be about one page long. As this section summarises the other two sections of the case for support, you should probably write those sections first.

Section 2: We have a problem

Your readers already know what your problem is and have a basic understanding of how you intend to solve it from the 'foot in the door' section. Your next task is to provide evidence in support of the 'importance', 'success' and 'competence' propositions (and aspects of the 'value' proposition).

Every funding agency devotes a section of its template to this task and this is part of the template that applicants often misunderstand and misuse. The headings tend to be quite general and with labels such as 'Introduction', 'Background', 'State of the Art', 'Rationale' or 'Timeliness'. These general headings sometimes encourage applicants to include too much irrelevant information.

In brief, the 'we have a problem' section should form no more than 30 per cent of your case for support and focus on supporting the four key propositions.

Objectives

The function of the 'we have a problem' section is to present evidence from the literature and other published sources that show:

- This problem needs solving (the *importance* proposition)
- You have the skills and experience to solve this problem (the *competence* proposition)
- The proposed project is the best way to solve this problem (the *success* and *value* propositions)

If you cannot provide evidence for all three assertions, the funding agency will reject your application.

Stage One: The problem needs solving

As an expert in the field, you will be very familiar with the literature and your challenge here is to cite evidence that is pertinent to your 'we have a problem' task. A common mistake is to include too much irrelevant material about the wider field. Applicants often show a virtuoso command of the literature but fail to convince the reader that their particular problem needs solving.

You should present a short list of reasons why the problem needs solving and follow each of them with evidence. These reasons should be realistic. Any excessive claims and hyperbole will make readers doubt the integrity of your arguments.

EXAMPLE 12

EVIDENCE FOR THE PROBLEM

The first example establishes the need for a new approach to web authoring and does so by explaining the limitations of existing solutions:

The use of Conceptual Authoring represents a novel approach to Semantic Web interfaces. The advantage of Conceptual Authoring over alternative approaches is that it definitively solves the habitability problem. Users compose texts by choosing from options generated by the system; as a result, the content of the text can never stray outside the system's conceptual repertoire, and no automatic interpretation of text is needed. Evaluation studies have shown that even for complex technical material, the interface can be used effectively by domain experts after only minutes of training [8]. Existing applications have, however, a serious limitation: with one partial exception [11], they are restricted to the editing of assertions (A-box) based on a fixed ontology and fixed linguistic resources. The challenge in the current proposal is to remove this restriction, allowing the same kinds of users to add new concepts and the linguistic patterns for expressing them—thus overcoming the adaptivity barrier as well as the habitability problem. *Web Authoring Project*

In the second example, the applicant explains why the physical presence of the proposed Visiting Fellow will enhance the field of Performance Studies in the UK.

Schechner is an expert lecturer, a vivid storyteller and teacher, who can distil and communicate complex ideas. Yet even when he shows film extracts of his own work in his lectures, these do not begin to communicate the combined wealth of his practical and theoretical knowledge. Passing on this research knowledge can only be done through practice, through embodied learning and reflection. *Theatre and Performance Visiting Fellowship*

In both cases, it is easy to identify the problems ('habitability' and 'passing on research knowledge') that the projects propose to solve.

Stage Two: You have the skills and experience to solve this problem

The second stage of 'we have a problem' must establish your capacity to lead the proposed project. Essentially, this means citing your own work and that of any collaborators. In doing so, you should follow three self-citation rules:

- Be honest about the importance of your contribution. The referees will easily spot false claims that your work leads the field when it is merely confirmatory or incremental. This

will severely damage the whole of your case for support because it will cast doubts on your competence and professionalism as a researcher.

- Do not only cite your own work, as this may give the impression that you are the only person working in your research area. This will cast doubt on the importance of your research area to the wider world.
- Cite your own work to show your research competence for this specific project. For this reason you might want to cite your confirmatory work with a disclaimer, such as 'We have confirmed this finding', to give the implicit message that you have the necessary research competences while acknowledging that you do not lead the field.

EXAMPLE 13

SELF-CITATION

This is an example of self-citation from an early-career researcher. It establishes the Principal Investigator's innovations in the field, the contribution of other leading researchers and its compatibility with discoveries in related fields:

Consolidation itself is a fairly new concept in the domain of word acquisition. As my work with Gareth Gaskell has shown, sleep plays a major role in this respect: new words do not integrate our mental dictionary immediately, as a mere function of exposure, but instead require an interval of sleep to do so (Dumay & Gaskell, 2005, 2007, and submitted; Dumay *et al.*, 2004; Gaskell & Dumay, 2003). After sleep, not only the explicit knowledge about the novel words is enhanced (i.e., participants are better at recalling words learnt yesterday than words learnt just before the test), but more strikingly these words now compete with similar sounding existing words for access to consciousness in the course of word recognition (cf. Bowers *et al.*, 2005; Clay *et al.*, 2007; Tamminen *et al.*, 2010, for related findings).

For example, in one experiment, we taught participants new words (such as 'lirmucktoze') and then looked at their ability to detect the embedded existing word (e.g., 'muck'). The expected interference from the newly acquired word emerged only after a sleep interval (Dumay & Gaskell, submitted). In other words, sleep improves—but also integrates—new knowledge with existing information.

Findings like these fit exactly with the idea of a dual learning system (O'Reilly & Norman, 2002; McClelland, McNaughton, & O'Reilly, 1995), in which novel words are initially learnt in the hippocampus and later on interleaved with existing lexical knowledge over a longer period of time as part of their reduplication in the neocortex (Davis & Gaskell, 2009). *Memory Research Project*

This extract establishes the applicant's position in the field while showing that the research topic is of interest to other researchers and fits with findings from related areas.

Placing your own contribution in context avoids the common self-citation error of implying that other researchers are barking up the wrong tree and that your approach is the only right one. There are two reasons why you should avoid doing this:

Other researchers in your area are likely to have the opportunity to influence the funding decision by writing referees' reports. If your grant application rubishes them, they will be tempted to rubbish you in their reports.

A fight within a discipline gives the impression to a grants' committee that the discipline is not making progress. It is far better to praise the work that others in your field have done and point out that their results put you in a position to make further progress. Remember, but do not quote, the famous twelfth-century saying that we see further because we stand on the shoulders of giants.

Stage Three: The proposed project is the best way to solve this problem

There are plenty of important research questions that can be solved without external funding. If decision makers suspect that you could conduct your research without external funding, they will not award you a grant.

In order to agree that solving your problem requires a funded project, the reader needs to understand how each element of research activity helps answer the research question. This means developing your 'foot in the door' preview into a more detailed account of the proposed project structure.

In practice, every fundable research project has more than one component, strand, phase, sub-project or theme. Each of these elements should be linked to a specific sub-question aimed at solving the overall problem.

Inexperienced grant applicants often forget to demonstrate why an externally-funded research project is likely to solve the problem effectively. They focus on expert discussion of the topic that displays their insight into the main issues. Unfortunately, this approach does not explain or justify how the proposed project is likely to solve this problem.

EXAMPLE 14

THE NECESSARY PROJECT

These successful applications establish the need for a funded research project simply and concisely in the 'Background' section of the case for support:

- How has the global system of rendition and proxy detention developed, and how does it operate?
- It will investigate the development and operation of rendition and proxy detention by asking the following three sub-questions:

- 1 Is the global system of rendition and proxy detention US-led, or is it a more diffuse system with distinct and partly autonomous regional subsystems that serve specific local as well as US interests?
- 2 Are there any regional differences in the ways in which rendition and proxy detention have developed and are operated?
- 3 Can we identify any specific evolutionary moments or shifts in the development and operation of rendition and proxy detention? *Rendition and Detention Project*

In contrast, the following applicant uses the 'Objectives' section of the application template to demonstrate the four things that this research will establish and, therefore, how the project will solve the problem:

The current proposal will more reliably establish:

- The relationship between cancer growth stage (i.e. tumour burden) and pain;
- The occurrence and time of onset of pain in 3 common models of cancer in mice;
- Whether innovative behavioural and pharmacological testing methods can be used to assess the subjective experiences of mice with cancer;
- Whether current endpoint estimates are appropriate and how they can be improved. *Research Animal Project*

In both cases, the scale of the research activity needed becomes apparent as the question is broken into a group of smaller and more specific sub-questions. This process shows referees and grants' committee members that solving the problem requires a funded research project of the scale proposed.

In order to create a list of sub-questions, consider the things you 'need to know' in order to solve the overall problem. Then match each of these things you 'need to know' with specific research activities that provide answers to each of them. This gives you the basic structure of your project.

Creating sub-questions may be a stage in the research design process that you perform automatically. If you work in a field that uses experimental methods, your research project probably falls into a 'need to know' pattern as you develop a set of hypotheses and the activity that tests them.

In contrast, archival, theoretical or desk researchers may not find this process so straightforward. However, the ability to break your project down into a list of things we 'need to know' and activities that 'will tell us' the answers is a very effective way to show that your research is dependent on external funding. The following example shows how this can be done.

HUMANITIES PROJECT STRUCTURE

This is an extract from a fellowship application by a researcher in the humanities. Although the major project resource is investigator time, the proposed project is structured as carefully as a large-scale experimental project with multiple resources:

Animation's widespread and diverse impact makes it ideal to study the following questions:

- Q. 1: What does it mean to claim that technology participates or has agency in making images?
- Q. 2: Can a technological interface generate an audio-visual language?
- Q. 3: Does the language of an interface inform us about how our view of the world is evolving?

The project will be undertaken in four stages. Stages One and Three develop the theoretical ideas underlying the project: situated action and language of the interface. Stages Two and Four involve working with animations, games and websites to expand and reflect on these theoretical insights. *Digital Media Fellowship*

Using a 'scientific' project structure for a humanities project in this way has advantages. By breaking down the fellowship into three distinct sub-questions and four clearly articulated project components, the applicant immediately gives funding agency decision makers a justification for their investment.

Another category of project that may not fit the standard 'need to know' model is applied research, in which the outcomes are interventions or tools. In this case, you may wish to emphasise what we need to 'develop' rather than 'know'.

APPLIED PROJECT

The next example, from a complex, multi-partner project, lists the mechanisms needed to ensure effective ways of testing software and achieve the aims of the project. In each case, the applicants' match the solution 'we need' with the tool that the research team 'will provide'.

Property-driven development is a powerful new mechanism for gaining assurance of system reliability and functionality. However, in order to deliver its full benefits we need tools to integrate property-based testing into the development life cycle.

Property discovery. Current testing is based on sets of test cases embedded in test suites; we will provide tools to aid the software developers to extract properties from this test data. Current specifications and models are often informal: we will develop specialised property languages to ease the formalisation of existing specifications.

Test and property evolution. All software systems are subject to change and evolution; we will provide tools to support the evolution of tests and properties in line with the evolution of the system itself.

Property monitoring. Not all properties can be tested in advance of systems being executed; not all faults will be found during testing, be it ever so thorough. We will also provide tools to support the *post hoc* examination of trace details for conformance to (or indeed violation of) particular constraints.

Analysing concurrent systems. At the heart of service oriented systems is *concurrency*: servers will provide services to multiple clients in a seamlessly concurrent way; services will federate to provide complex functionality through concurrently performing parts of a task. We will provide tools by which such concurrent systems can be analysed for fundamental properties. *Software Testing European Project*

If the idea of articulating what we ‘need to know’ still causes you problems, the following Tool may help. It shows how to break your overall question and research programme into matching lists of sub-questions and research activity components.

TOOL 12

WHAT DO WE NEED TO KNOW?

This Tool is designed to help break your project into three to five research sub-questions and matching activity components.

- 1 List your research question and the activity you must undertake to answer it. ‘Writing my book’ does not count as research activity in this context. You should list all the research activity needed to answer the question. This might include interviews, archive visits, desk research, calculations, experiments, field trips, surveys or practice-as-research activity.
- 2 When you have made your list, consider how this activity falls into different categories, which might include:
 - Visits to different archives or countries
 - Experiments or interviews with different categories of participant
 - Different experimental conditions
 - Different themes that may emerge from your data
 - Distinct categories or sources of data
 - Different historical periods or sites of investigation
 - Different phases or stages of research activity

- 3 Group your activity into three to five categories that answer a specific part of the research question. These are your sub-questions.
- 4 Find a label that identifies each thing that we ‘need to know’. Use this phrase consistently across the sub-questions, objectives, headings and within the description of each component of research activity. Always refer to both your ‘need to know’ sub-questions and their corresponding activity components in the same order.

Use the Tests in Chapter 11 to check whether your project breakdown is logical and likely to succeed in answering the overall research question.

Section 3: This project is the solution

By this stage, your readers are excited about your research question, convinced that the problem needs solving and that you and your approach may offer the best solution. Your next task is to support the *success*, *competence* and *value* propositions in full by describing your project and its outputs.

In your ‘we have a problem’ section you outlined your approach and provided evidence for your choice of methodology and project structure. In ‘this project is the solution’ you explain precisely how you will conduct the research and communicate the knowledge you produce.

‘This project is the solution’ will form the longest section of the case for support (at least 50 per cent) and funding agency headings may include ‘Research Methods’, ‘Plan of Investigation’, ‘Research Activity’ or ‘Study Design’. Sections of the template that deal with outputs and dissemination include headings such as ‘Beneficiaries’, ‘End Users’, ‘Impact’ or ‘Exploitation’.

This is the section of the case for support that applicants often neglect. It is essential that you give a full description of your project. The description of research activity and outputs must be complete if you are to convince the referees and grants’ committee that your project is the solution.

Objectives

The ‘this project is the solution’ section of your case for support must convince decision makers that the proposed project will answer the question. It uses a detailed description of the research programme to do this and referees read it particularly closely.

In order for non-specialist readers to agree that ‘your project is the solution’, you need to explain in detail:

- Your overall research design and methods
- How you will conduct each individual specific component of research activity (including specific methodological details and an account of resources you needed)
- The timing/duration of each research activity component and an explanation of how the project will be managed
- What you will do with the knowledge you produce

Stage One: Overall research design and methods

Your first task within this section is to describe your research design in detail. Many funding agencies make a separate section on methodology a specific requirement.

However, you should try to keep the section on general methods as short as possible. It is much easier to understand a description of research methods in the context of a specific piece of research designed to answer a specific question.

Here are two examples of how funded applications introduce their methodology section. Both provide an overview of the general approach and a summary of the project structure.

EXAMPLE 17

INTRODUCING METHODS

The following extracts are both taken from the opening lines of the applicants' 'Research Methods' section.

Our requirements analysis and early development will be based on two existing Semantic Web projects, both tackling complex real-world problems at the leading edge of eScience (workflows in bioinformatics, medical orders). Later in the project, a third application will be developed from scratch in a different domain (travel), suitable for incorporation into the University of Manchester's advanced OWL tutorial. *Web Authoring Project*

The project will be undertaken in four stages. Stages One and Three develop the theoretical ideas that underlie the project: situated action and language of the interface. Stages Two and Four involve working with animations, games and websites to expand and reflect on these theoretical insights. My research method is to combine analysis of moving images with an investigation of contextual materials such as published interviews and software manuals and interviews with image-makers. *Digital Media Fellowship*

In each case, the project structure is based on the sub-questions, ensuring that the reader receives consistent messages about the planned activity.

Even if the same methods are used in more than one of the sections of the research project it may be easier for the reader to understand them if they are described in the context of the first specific piece of research in which they will be used. Subsequent components that use the same method can then refer readers back to the earlier description.

However, if your project uses a complex experimental design, it may also be worthwhile to summarise common features in the introductory section so that you do not need to repeat 'technical' information several times.

EXAMPLE 18

SAVING SPACE

This example uses the introduction to the 'Methods' section to demonstrate common methodological features of seven proposed experiments:

All seven experiments follow the same structure (cf. Figure 2): they examine the long-term retention of newly consolidated knowledge, as a function of whether or not that knowledge is reactivated just before learning similar information. As shown section 2.2.1, this approach has been successful in revealing reconsolidation effects in various forms of memory in both animals and humans.

The features common to all experiments are as described below:

- 1 On day 1, participants are explicitly instructed to learn two sets (A and B) of fictitious words (sometimes with their meaning) through intense exposure
- 2 Twenty-four hours later, and thus after overnight consolidation, participants first rehearse half of the words they learnt the day before (set A, for instance).
- 3 Immediately afterwards they learn two new sets of fictitious words, similar in form or meaning to the sets A and B words. Consequently, participants have now for each A or B word a potential 'corruptor' word, i.e., A_{cor} or B_{cor} in memory... etc. *Memory Research Project*

Stage Two: Specific activity components

By the time referees and grants' committee members reach this stage of your case for support, they will be clear about your project structure and ready to understand how you will conduct each component of research activity.

After introducing your general method, you should describe each of the research activity components. By now, these headings should be immediately recognisable to readers as they use the same labels and are presented in the same order as the research sub-questions.

This is the most important part of your entire research grant application as it is only here that you describe in full what you intend to do and how you will use the grant provided by the funding agency. If your explanation is inadequate or unclear, the decision makers will not be able to support your project, however convinced they are of its importance and your capabilities.

As a rule of thumb, you should aim to include enough detail for the project to be replicated. No matter how eminent you are, you need to provide this basic information. Nothing is taken on trust by critical referees.

The information your case for support provides about each activity component should include:

- The research sub-question or thing you 'need to know'
- When the activity takes place and its duration
- Who conducts the activity, where it takes place and which project resources it involves
- A detailed description of the research activity that answers each sub-question or thing we 'need to know'
- What the activity 'will tell us' and how you will arrive at your answer with the information you gather

Although there may be a separate justification of costs section, you make your job easier if you do not consign this information to an appendix. Referees and grants' committee members are more likely to support your request if you show how each resource is used alongside the activity it relates to. Also mention resources provided by the institution to show that the research environment is appropriate.

Stage Three: What you will do with the knowledge

The final part of the 'this project is the solution' element of your case for support explains how the information derived from the research will be made available to its beneficiaries.

Research on a topic that has direct economic, health or social benefit should contain a component that will allow that benefit to be realised. It is important that you are specific and realistic about the likely outputs. If any outputs have inherent costs (e.g. designing a website, hosting a conference) these should be included in the budget. All dissemination activity that takes place within the life of the project should also be included in the timetable.

If you conduct pure 'blue skies' research then this part is mostly about academic dissemination through conferences and papers. Even if your project has immediate benefit only for academic audiences, your referees and grants' committee members will want to understand its eventual potential for social and economic benefit.

PROJECT OUTCOMES

These extracts illustrate two approaches to communicating project outcomes within the narrative of a case for support. The first describes the knowledge that will be generated and the implications of this. The second example emphasises the disciplines that will be interested in the findings and lists the ways in which outcomes will be communicated to academics in these fields.

The product of the proposed research will be a much better understanding of the architecture of the system that accomplishes language comprehension. These studies will provide a much more detailed picture of how the mental lexicon changes over both the short term, and the longer term. Such an understanding is critical to our understanding of language processing. In turn, because language is such a fundamental cognitive ability, progress in describing language processing will enhance our understanding of human cognition, under both normal and disordered conditions. *Spoken Word Project*

The research carried out in this project will be of interest to cinema studies, communication and media studies, science and technology studies and also practice-based research. It will be written up as 4 journal articles (potential publishers include *Body and Society*, *Convergence*, *Journal of Visual Culture*, *Journal of Media Practice*). My research findings will be presented at three conferences: Society for Animation Studies, Society of the Social Studies of Science, and the Society for Cinema and Media Studies. *Digital Media Fellowship*

This difference in emphasis is appropriate to the nature of the two projects. The first applicant requests money from a government agency that funds research into human health and is more interested in the practical benefits than high-impact publications. The second project is theoretical and communication of the findings within a wide research community is the priority.

Conclusion

This chapter suggests ways of streamlining the application process and communicating with decision makers more effectively by understanding the underlying functions of the application template and generic properties of an effective case for support. By following the advice in this chapter, you should now have a generic structure for your case for support that can be mapped on to individual agency templates.