Is any of the surplus allocated to my personal research account?

As your employer hosts the project, you have no automatic access to any overhead attached to the grant. If you have ideas about how this money should be spent, you must negotiate before your submit the application.

Which project costs is the overhead expected to cover?

If a funding agency offers overheads, there will usually be guidance on the purpose of the overhead. Generally, overheads (or indirect costs) are an acknowledgement of the expense of hosting a project and include items such as office space, administrative support and shared central resources. The funding agency may offer broad guidance as to how overheads should be used but leave the final decision to the host institution.

Does this mean I cannot add project consumables, technical support, or office supplies to my budget?

As above, an overhead payment may come with a list of ineligible items that any overhead or indirect costs should cover. Make sure that your employer understands this requirement.

If I win a grant that funds investigator time, do I automatically get relief from teaching or administrative duties?

If you want relief from other duties, you need to negotiate this before you submit the grant application. This process should allow you and your employer to decide whether your project is financially viable and ensure that you do not proceed with false assumptions about how the grant, if awarded, will be allocated internally.

Conclusion

After reading this chapter, you should be able to calculate the right budget for every research grant application. This includes both calculating accurate budgets and ensuring that all your project costs are eligible. You should also be aware of the possible pitfalls and issues that you need to resolve before submitting your applications.

THIRTEEN

HOW TO PUT TOGETHER COLLABORATIVE PROJECTS

This chapter addresses the challenge of writing collaborative research grant applications. It suggests a number of techniques that help convince decision makers to support complex projects and discusses ways in which large collaborative applications differ from single applicant bids.

There are three Tools within this chapter. *The Collaboration Checklist* helps you decide whether to invest time and energy into a particular consortium. Meanwhile, the *Collaborative Project Agenda* addresses the preparatory and behind-the-scenes issues that can prevent workable collaborations. Finally, *Produce Your Evidence II (Collaboration)* considers the different approach needed to create a fundable collaborative application.

Introduction

The basic principles of successful grant-writing generally apply to collaborative research grant applications. However, there are some additional challenges you must meet when seeking research funding for large-scale projects with multiple partners. There are also some instances when you may need to adapt your approach to meet the needs of complex and highly-specified funding schemes.

Although there are many schemes that support small collaborations and short-term partnerships, making fundable application to schemes of this sort is reasonably straightforward. However, convincing decision makers to fund a long, expensive multi-site or multi-disciplinary project presents particular challenges.

The longer and more complex a project, the more opportunity it has to fail. At application stage, effectively supporting the *success* proposition is crucial. This chapter concentrates on these complex, large-scale applications.

Your first task is to understand both the advantages and drawbacks of engaging with this type of funded research. Involvement in large collaborative applications and projects involves higher levels of effort and lower success rates. Unless you weigh these up carefully you may waste large amounts of your time on no-hope applications.

Once you have decided to go ahead, you must consider the following if you are to create a fundable collaborative bid:

- An understanding of the funding agency's motives in offering collaborative grants. Each agency has its own agenda, which is determined by political, charitable, scientific or commercial factors. If your project does not support the overall aim of the scheme (however well it tackles the research question), you will not be successful.
- A balance between agency requirements regarding the scale of your consortium and what resources you actually need to answer the research question successfully. This means designing a workable and cost-effective project within quite strict political or bureaucratic constraints.

In addition, collaborative research grant applications present a number of grant-writing challenges. In brief, your application document must do some or all of the following:

- Make a long-term multi-site or multi-disciplinary project easy to understand and easy to remember
- Convince decision makers that a project created within 'artificial' parameters is exciting and achievable
- Defend each aspect of your project effectively from the larger number of non-specialist decision makers tasked to evaluate larger projects

As a consequence, acting as Principal Investigator on a research grant application of this scale is very difficult without previous experience in winning large grants.

Applicants to funding agencies with idiosyncratic requirements, such as the European Commission, often take advantage of professional training or bid-writing services in order to improve their likelihood of success. Your chances as an inexperienced applicant who tries to work in isolation are slim.

Even for less complex schemes, expect to compete against established consortia with experience in the area and insider knowledge of the funding agency. Trying to build a consortium from scratch with a minimal track record is not a competitive starting point for a large collaborative bid.

The rest of this chapter discusses each of the key challenges to successful collaborative grant-writing. It also considers what to do when a large collaborative project is rejected by a funding agency.

Why collaborate?

Success in high-profile collaborative schemes is career enhancing and academic employers encourage collaboration. However, there may be other factors that attract you to large collaborative project:

- Your research questions can only be answered through a multi-site or multi-disciplinary approach
- You want to facilitate existing partnerships outside your institution with external funding
- You are invited to join a consortium and the opportunity appears to require minimal effort or a high chance of success

None of these reasons is inherently problematic. However, there are a series of considerations that may make you think twice about some collaborative funding opportunities:

- Many dedicated collaborative funding schemes – such as European Commission calls or UK Research Council managed programmes – have very low success rates.
- Funding agency guidance alone may not be enough to help you prepare a successful application to one of these high-profile collaborative schemes. Further advice may be necessary in order to understand the type of consortium or project that is most likely to be successful. You may also need help in decoding the guidance and understanding how it translates into successful proposals.
- Coordinating a collaborative bid as lead applicant is extremely time consuming and requires strong management skills. Equally, playing a small part in a larger consortium may leave you in a 'journeyman' role where you provide specific technical skills but get no publishable output.
- Projects inspired by cross-disciplinary calls for proposals do not always lead to high-profile publications in leading journals.
- Multi-disciplinary applications must appeal to decision makers who have no expertise in some of the participating disciplines. This can reduce their chance of success, especially when they are in competition with single discipline bids.

This means that collaborative funding opportunities always need careful consideration. Avoid getting involved in no-hope consortia or becoming entangled in poorly-managed, poorly-resourced projects that damage you professionally.

The following Tool will help you decide whether to commit to a large-scale collaborative application.

TOOL 17

THE COLLABORATION CHECKLIST

Before agreeing to join a consortium, ask the following questions:

- What sort of discipline and/or institution leads successful applications to this scheme? What is the success rate of the scheme? You can find this information from the funding agency.
- Does the Principal Investigator have the track record to lead a project of this scale and complexity (see Chapter 1)? Has he or she managed at least one three-year project grant with a team of postdoctoral researchers? If not, the funding agency may be reluctant to award a large grant to an untried research team.
- Is the proposed role and contribution of each partner clear at an early stage in the application process? A lack of organisation is usually apparent in the application document itself and affects your chance of success.
- What will the project bring to you in terms of:
  - Grant income or access to resources? Check the eligible costs of the scheme with the funding agency and find out what share will come to your institution. There is no point committing to a project that takes up a large proportion of your time but only provides enough money to cover a few travel expenses.
  - Networking opportunities? Who else is involved? Are these researchers with whom you would like to develop closer working relationships? If so, working together on the application may bring future benefits whether the project is funded or not.
  - Access to publishable outputs? Will the research project itself lead to worthwhile publications for you? Unless the project generates a disproportionate amount of research income, funded research that does not lead to publication is of questionable value.
  - Project management experience? What will your role be within the project? What elements will you manage? If involvement in the funded project will enhance your CV as a future project leader, then you should consider accepting the invitation.
- How much time will you need to invest in preparing the application? Weigh this up against the success rate of the scheme and the track record of the Principal Investigator before you commit.
- How does the Principal Investigator propose that the consortium works together in order to prepare a fundable application (e.g. meetings, Skype, agreed timetable leading up to the deadline)?
- Will the resources available through the scheme allow you to carry out your part of the project effectively?

- Does your employer consider the scheme financially viable? (See Chapters 6 and 12 for more information). Some schemes have elaborate requirements for institutional match funding or very restricted eligible costs that make them unattractive to particular host institutions.

In the light of these answers, do you consider that this collaboration:

- Has a reasonable chance of success?
- Is likely to be well managed by the Principal Investigator?
- Will bring you sufficient benefit in terms of income, publications and building your personal research network?
- Is likely to answer the research question successfully?

If so, it is worth getting involved. If not, you will be better off targeting more realistic research funding opportunities.

Why fund collaborations?

Funding agencies have specific reasons for setting up schemes that aim to support collaborative research. These include the following:

- Cooperation between different countries or regions
- Enhancing research capacity in certain areas or categories of organisation (e.g. developing countries, businesses, public sector organisations)
- Generating innovative answers to research problems or themes by encouraging different disciplines to work together
- Promoting partnerships between established research institutions and organisations in geographical areas or sectors that have a less developed research infrastructure

In order to gauge whether your project has a chance of success in a collaborative funding competition, you need to understand the funding agency's agenda. Even if your proposed consortium seems appropriate in terms of its scale and membership, there is no point in proceeding if your project does not also meet the objectives of the scheme.

EXAMPLE 36

WHY AGENCIES FUND COLLABORATIONS

Here are a few examples of the reasons funding agencies give for supporting collaborative research:

EC The Seventh Framework Programme (FP7): Cooperation[30]

The specific programme on **'Cooperation'** supports all types of research activities carried out by different research bodies in trans-national cooperation and aims to gain or consolidate leadership in key scientific and technology areas.

Leverhulme Trust: Programme Grants[31]

The scale of the awards ... is set at a level where it is possible for a research team to study a significant theme in depth by conducting a group of interlinked research projects which, taken together, can lead to new understanding. The themes are selected not to exclude particular disciplines from the competition but rather to encourage research teams to look upon their established research interests from a set of refreshing viewpoints.

Research Councils UK: Cross Council Research Themes[32]

Novel, multidisciplinary approaches are needed to solve many, if not all, of the big research challenges over the next 10 to 20 years. To achieve this, RCUK will coordinate the delivery of multidisciplinary research in seven priority areas. Each theme is important in terms of the knowledge and skilled people which will be generated, and has significant potential for delivering economic impact.

For more detail on how to find this sort of information about your target funding agencies, please refer to Appendix 2.

Once you identify the aim of the scheme, make the fit between your project and the scheme explicit. Demonstrating how your project serves the agency's agenda is a key part of establishing the importance of your project in a managed collaborative competition.

Use Tool 13 in Chapter 9 to produce evidence on how your project serves the agency agenda and include it prominently in strategic parts of your application document.

Workable collaborations

A collaborative grant application that results in a workable project needs a lot of behind-the-scenes discussion and negotiation that may not be apparent in the application document itself.

[30]http://cordis.europa.eu/fp7/cooperation/home_en.html (last accessed 20 October 2011)
[31]www.leverhulme.ac.uk/funding/RP/RP.cfm (last accessed 20 October 2011)
[32]www.rcuk.ac.uk/research/xrcprogrammes/Pages/home.aspx (last accessed 20 October 2011)

There is a paradox here. On one hand, the funding agency holds all the cards as projects that do not meet the agency criteria have no chance whatsoever. On the other, a collaborative project may look very promising on paper but prove unworkable, thanks to personality clashes or an unprofessional attitude within the consortium. Whatever the benefits of research grant success, there is no point in winning a large grant if the project is doomed to failure.

The tension between 'fundable' and 'workable' projects arises whatever your starting point, and might include any of the following:

1 **Call for proposals.** The applicants design a project that responds to a specific research question or theme and/or with a consortium that also meets the agency's requirements. Their challenge is to show that they will articulate and answer the question more successfully than competing consortia. However, if they feel that the agency criteria work against the most efficient or effective solution to the research problem, they are not at liberty to change the parameters. They also risk creating a consortium that looks attractive to the funding agency but does not prove workable in practice.
2 **Existing research collaboration.** The applicants target a scheme with a project idea developed within an existing partnership. These applicants must convince decision makers that their question is worth answering and that the proposed partnership is the best way of doing so. If the consortium includes superfluous partners who cannot be excluded for political or social reasons, then fundability of the bid is compromised. It may also be difficult to find a funding scheme that meets the needs of every partner who would like to be involved in the application.
3 **Research question.** Applicants create a partnership to answer a specific research question and then search for a suitable scheme. In many ways, this is the most logical and straightforward approach to funding collaborative research, although it relies on finding a scheme that fits both the question and the proposed partnership. This is not always possible.

In order to avoid the problems inherent in each of these three scenarios, you must take the following steps:

First, only commit to partners you trust and will enjoy working with. Otherwise the project, if funded, will offer nothing but misery from start to finish. In the case of large collaborative funding schemes (such as those offered by the European Commission), you are unlikely to put together a workable consortium from scratch and produce a fundable application in the time between the publication of the Call for Proposals and the deadline. Consequently, pre-existing partnerships have an advantage over artificially-constructed consortia and the best collaborations develop naturally.

Secondly, test the 'workability' of your project without considering agency criteria. Does the project appear logically and appropriately resourced? Do any of the partners appear superfluous? Are any important resources missing?

Thirdly, find effective ways of communicating with your partners, negotiating the terms of your potential collaboration and ensuring mutual understanding. This process has two elements:

- If you are working with collaborators from different disciplines, sectors or countries, you may experience communication difficulties. Cultural and linguistic differences, technical terminology and professional expectations may cause problems if all key issues and terminology are not clarified at an early stage.
- The collaboration must be properly and formally constituted before you submit the application. Issues such as project and financial management, reporting, division of resources and intellectual property must be agreed and set out in writing in advance.

This behind-the-scenes work may not be explicit in the application document itself but is essential if a funded collaboration is to succeed. The following Tool is designed to help you produce a workable collaboration.

TOOL 18

THE COLLABORATIVE PROJECT AGENDA

Throughout your project negotiation, you need to meet (in person or virtually) with all partners and agree the following points before the application is finalised and submitted. The points on the agenda for this 'meeting' should include:

- Resources that each member of the consortium will provide (access to participants, equipment, office space, etc.)
- Resources that each member of the consortium needs in order to conduct their element of the project
- Any discrepancy between resources needed and the eligible costs of the funding agency
- The ownership of intellectual property rights and/or authorship of papers
- How the project will be formally managed and governed
  - Reporting lines
  - Financial management
  - Line management of staff
  - Supervision of students
  - Producing funding agency reports
- How progress will be assessed and decisions taken

In consultation with colleagues from your Research, Finance or Enterprise Offices, you then need to make sure that your decisions are properly documented and formally agreed. Some of this information will be included in the grant application document itself and other elements will be the subject of

memoranda of understanding or partnership agreements that are legally-binding to the signatories.

Only when you have established that your proposed consortium is workable should you commit yourself to the grant application.

Convincing collaborations

Assembling a workable consortium that also meets the requirements of the funding scheme is the first challenge to putting together a fundable application. The second challenge is to describe the proposed collaboration convincingly.

Inevitably, there is overlap between the two challenges, but there is a difference between a potentially effective collaboration and one that is described convincingly. First, it is possible to leave out information about the potentially effective collaboration that makes it impossible for decision makers to support the application. Secondly, very complex and specific evaluation criteria may not favour the most effective collaborations.

This is where previous experience and insider knowledge come in particularly useful. In order to succeed with this type of scheme, you may need help in reading between the lines of agency guidance and understanding what factors ensure a positive evaluation.

That aside, a collaborative research grant application has the same function as any other grant application. In brief, it must make your project seem more important than other applications in the same competition. Given this, you must keep in mind the parameters of your target funding scheme and what the key points of comparison are likely to be.

Inevitably, this depends on the individual funding scheme. How you convince decision makers to support your particular project depends on the nature of competing applications:

1. **They address the same research questions set by the funding scheme.** In this case, you do not need to justify the question itself. The emphasis must be on your ability to answer the question successfully. The decision makers will focus on your track record, your methods and the value for money of your approach.
2. **Every application takes an interdisciplinary approach to a project on the same theme.** In this case, you need to produce a striking research question and a consortium that provides an interesting response to the set topic.
3. **The scheme specifies consortia of similar size and composition.** In this case, you still need to show that your proposed consortium is the best way of answering the question. It is very important that you do not assume that any consortium that falls within the specified

range is fundable. The precise role and scientific contribution of each partner must always be clearly specified.

4 **Most of the other projects are single applicant or single discipline.** In this case, you have to provide strong justification for each element of your project. You will be in competition against more straightforward, easily-defensible projects. They may also be cheaper because they are based at one site or easier to understand because they include one discipline.

In order to produce the evidence that will convince decision makers to support your collaboration, you need to write with the following information in mind:

- The overall aim of the particular funding scheme
- The parameters of the competition
- The published evaluation criteria

Use the Tool at the end of this section to generate evidence supporting the four key propositions as they relate to large collaborative projects.

Well-defended collaborations

In the context of a funding scheme with a set research topic and strict parameters on the composition of eligible consortia, producing a well-defended application is as important as creating an exciting project. In addition, a large collaborative project represents a large investment on the part of the funding agency. Consequently, there will be more caution in allocating the available funds.

In many cases, the funding agency has defined the question and provided a structure within which the question must be answered. Consequently, you need to justify and explain your choices within this framework.

This means paying special attention to:

- The specific role and active contribution of each partner
- Justifying each resource, including investigator hours and each member of staff
- The level of overheads requested (if this is variable)
- Deadlines and milestones for delivering various outputs
- Project management arrangements, including financial management and administration
- Project governance and ethical review, if necessary
- Compliance with funding agency reporting or audit requirements
- Dissemination programme

The resulting application document may not be the most exciting read in the world but it will prove hard to criticise and may fare better in the evaluation process than more flamboyant or seemingly innovative projects.

Well-described collaborations

The application document for a long multi-site or multi-disciplinary application must include an enormous amount of information if decision makers are to understand the project sufficiently to support it. This must be achieved in a way that means referees and grants' committee members do not lose sight of the overall project aims and potential outcomes.

This information will include:

- A background section that takes literature from several disciplines into account
- A description of several sub-projects, including their individual research questions and methodological approaches
- A justification of a large set of resources spread across several sites
- A timetable of activity that includes a large team and several sites working together for up to five years
- An extensive programme of dissemination
- Project management, including team meetings and milestones

You must fit all of this within the limited word count of the funding agency template and keep the main points memorable.

In addition, defending a complex project against critical, non-specialist decision makers means that you must organise your arguments clearly and logically so that key information can be easily identified and accessed.

In Chapter 9, we introduced ways of presenting information effectively so that it stays within the working memory of non-specialist speed readers (see *Example 29: Chunking*). This looked at breaking up arguments into manageable chunks and using lists or bullet points in order to communicate clearly.

If you are writing a very complex collaborative grant application, this approach will not be sufficient. The best way of marshalling large quantities of information is through graphs, charts and tables. In the case of overall project management, a formal GANTT chart showing activity, milestones and deliverables may be mandatory.

The areas of your project that will certainly benefit from being presented this way include:

- Budget: expenditure by type, year, sub-project and site
- Activity: key milestones in the project, including planning, data collection, analysis and dissemination as well as meetings and deadlines for project deliverables
- Team: who is assigned to the project or employed to work on it, for what period, in what capacity and with what responsibility
- Institutions: what each partner institution provides or facilitates

Finally, there is one aspect of describing a complex collaborative project that requires a rather different approach from the standard, single applicant proposal. This is in the use of jargon. Particular schemes use esoteric jargon in describing their requirements and you are well advised to mimic this in your application document.

This does not give you a free rein to also use within-discipline jargon, but if the funding agency asks you to provide a 'chronograph', you should stick to the same vocabulary, however tortuous.

Collaborative application development

In order to produce collaborative applications that are convincing, well-defended and well-described, you must take a different approach to constructing your application document.

Earlier in this book, we introduced the concept of four key propositions that each funding application must make in order to convince decision makers to support it. Tool 13 helped you produce the appropriate evidence and this chapter extends this tool to cover the additional demands of a large collaborative project.

TOOL 19

PRODUCE YOUR EVIDENCE II (COLLABORATION)

This Tool looks the sorts of evidence you must produce in order to convince decision makers to support large collaborative projects.

Proposition 1: This proposal asks an important question

When the funding agency sets the theme for a project, you must establish the importance of the question in a slightly different way. The agency already considers the question an important one and your task is to demonstrate that your response to the challenge set by the agency is not artificially induced. This leaves you with two tasks:

- To show that you also think the question is important by your previous work in this area
- To articulate a question that fits the criteria of the Call for Proposals and demonstrates its relative importance to the overall theme

Proposition 2: The project is likely to answer the question

In the case of large collaborative projects, project management is as important as methodology in demonstrating that you are likely to answer the question successfully. This is where the use of project management tools such as GANTT charts will be particularly important.

In particular, you need to provide evidence that shows how:

- Formal project management will mitigate risks, maximise outputs and aid completion
- You will complete a long, complex project in the time specified and with the resources specified
- Everyone involved in the project has a clear role

In addition, if your project is likely to be the only multi-disciplinary or multi-site project in the competition, you need to write defensively about your choice of an interdisciplinary or collaborative approach.

Proposition 3: The likely gain from the project is worth the resources requested

As your project will be expensive, you need to show a range of high-impact outputs appropriate to the question.

Also consider the funding agency's overall objective in supporting collaborative research programmes. If one of the aims is to support international cooperation or build research capacity, show explicitly how this project achieves this.

You also need to demonstrate that all requested resources are necessary to the completion of the project. Where the funding agency specifies the scale and composition of eligible consortia, your application document must show that your consortium is appropriate to the project.

If the decision makers suspect that you have bolted on partners or activities to create an eligible project, they will not fund you. Consequently, you need to show that each partner has a role relevant to answering the research question.

Where a project involves a large team, show who is involved in each dissemination activity and in what capacity. Ensure that your dissemination plan is well articulated and covers all the relevant academic and user groups. In addition, there may be forms of dissemination currently favoured by the funding agency decision makers. You may be able to consult with agency insiders or consistently successful applicants in order to ascertain this.

Proposition 4: The applicant and team are competent to carry out the project as described

The Principal Investigator must have a substantial track record of bringing large, funded projects to a successful conclusion.

In addition, each member of the team must have the skills and experience necessary for the conduct of each element of the project. As well as the bundle of CVs that accompany your application, you should mention the relevant experience of each project partner in the text of your application document.

Additional proposition 5: The institution is likely to support the research team appropriately

When a project is designed to run over several institutions and in several countries the role of each institution will vary, but should nonetheless be defined. The lead institution may provide centralised project and financial management via dedicated administrators, while some partner institutions may only provide specialist technical or scientific input to one Work Programme.

In addition, it may be that some institutions benefit from the expertise or research infrastructure of other members of the consortium. Indeed, this may be a requirement of the scheme if one of the objectives is to develop research infrastructure. In this case, this activity will help meet the overall objective of the scheme and should be presented as a positive outcome.

Rejection and resubmission

It is an unwelcome fact that large, complex collaborative grant applications take a long time to prepare and have a small chance of success. The specific demands of the funding agency regarding the scale and composition of consortia may also mean that your application is not immediately recyclable elsewhere.

It may be best to face up to this possibility at planning stage and commit to a collaborative grant application with this eventuality in mind. Consequently, one of your criteria for involvement may be looking at the benefits that involvement in the application might bring in terms of networking and generating further research ideas.

When faced with rejection you have the following options open to you:

- Using the existing collaboration to address a different question in a future Call for Proposals from the same funding scheme
- Submitting a related application to a different scheme with selected partners from the current collaboration (allowing for intellectual property rights, etc.)
- Taking your part of the project and submitting a single applicant proposal elsewhere

Whatever the outcome, make sure that your investment in a high-risk collaborative application has some intrinsic benefits.

Conclusion

After reading this chapter, you should be aware of the particular demands made by large, collaborative research grant applications and be able to approach the application process accordingly. This involves organising large amounts of information and convincing a range of non-specialist decision makers to support a speculative investment in your research.