

# Grant writing: Satisfying all the criteria

by Ian Metcalfe

In the world of scientific research, the writing of grants has long been the realm of funding-starved academics desperate to push forward the boundaries of their specialist research areas. While the academics' situation may not have intrinsically changed, modifications to the intentions and structure of granting bodies, such as the European Commission Framework Programme (EC FP), the United States National Institute of Health (NIH) and the Gates Foundation Grand Challenges in Global Health (GCGH), have successfully drawn commercial organisations into the net.

Take for example the Lisbon Summit of 2000; it was here that the EU defined the need to build Europe as "a knowledge-based society". Since then many of the EC FP initiatives have stressed the need for the inclusion of industrial partners, particularly small and medium sized enterprises (SMEs) who are seen as the drivers of modern economies. To focus the development of research programmes towards a more product-oriented approach.

***R&D departments increasingly have to look for funds outside their organisation***

Furthermore, there is an increasing drive within institutions and organisations for research departments to be less reliant on other departments for their financial needs and this means they have to go out looking for funds.

The end result is that many researchers, and indeed research departments, spend vast amounts of time, energy and other resources in drafting proposals for potential funds. Unfortunately, a lot of these time-consuming proposal preparations meet with failure: the EU quotes a success rate of 1 in 5. It is here that professional writing skills are beginning to make their mark.

Recently, several companies specialising in the preparation of grant proposals have become established. While none of them guarantee the success of a submission, mainly due to the nature of the review and selection process, many of them carry titles alluding to improved chances of success: "Writing a Successful Grant Proposal", "Successful Grant Writing" and "How to write a competitive proposal for framework 6".

Only four years ago the nail biting, teeth grinding and hair pulling was firmly in the grasp of the researchers. Now many organisations and institutions "have a writer that can

handle that". For my sins I have spent the last few years more or less dedicated to the art of writing grant proposals. I learnt many of the "do's and don'ts" the hard way. Although I believe there is no real substitution to "learning by doing" I do feel that if some key pointers are given, that strangely enough are not in the various "Guides for Proposers", life would be a little simpler—at least for grant writers.

The various institutions have spent a lot of time and energy on creating detailed guidelines on the plethora of criteria for a grant proposal. On face value these instructions may seem fairly straightforward, but (isn't there always a "but"?) when one sits down and tries to satisfy these criteria there is little or no advice or guidance as to how one accomplishes this. The NIH proposal writing instructions go as far as to say 'the completion of this application should take no more than 40 hours'. An interesting and amusing thought (British sense of humour required). In fact, at one point I was thinking of having that particular phrase framed and mounted above my office door<sup>1</sup>. Just reading the instructions requires a good ten hours!

The writing process is also often complicated by apparent conflicts within the instructions. Conflicts that one only comes across when one sits down to write the application. For instance, there is often a comprehensive list of points required to be covered within certain sections, but (there's that "but" again) you are limited to a certain page length for that section. "Ah" some might say, "I'll shrink the font and squeeze the paragraphs together". Unfortunately, the granting bodies are one step ahead of you: they have defined fonts, font sizes and line spacing. The budding grant writer has to be a little more imaginative than that.

Bearing these and other criticisms of the guidelines in mind, they are essential in drafting the proposal. A lot of the time they include specific questions that need to be answered and important pointers towards the areas that will be considered important by the reviewers. This brings me on to the second set of documents that are important for a grant application: the guidelines for reviewers. It is worth obtaining a copy of these (freely available on the various websites of the granting bodies). For obvious reasons these documents often give a little more insight as to the key points that you must cover. These guidelines for reviewers break the review process down and show you the structure of how your proposal will be assessed; they may help you understand a little more about your target audience.

<sup>1</sup> By the way, if there are any readers out there who have managed to complete a successful NIH RFP grant application within 40 hours, I'd like to shake you by the hand.

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Having got past the initial gatekeepers of the review process, by completing your application on time and with the right number of sections all within the correct length, your proposal is then dropped in the lap of the "experts". Anyone can volunteer to be an "expert". With most of the granting bodies this is achieved by filling in the equivalent of an application form on the respective web site, although it must be said that most "experts" are hand picked and invited to evaluate the proposals.

Following the submission deadline, the chosen experts are presented with a mountain of proposals to assess, normally in record-breaking time, prior to their participation in an evaluation panel. This part of the evaluation procedure is important to bear in mind, particularly when it comes to your description of complex scientific issues or management concepts. Keep your ideas clear and use diagrams wherever possible. Flow, Gantt, and Pert charts all help to convince the reviewer that what you are intending is achievable, well managed and of significance to the field. Looking at the guidelines for reviewers will enable you to decide what particular diagrams should be placed where and how much detail they should include. Remember, if the experts can't fully comprehend what it is you are trying to achieve and how exactly you are going to achieve it, then they will think it impossible and you will get a poor score in the evaluation.

In addition to these documents it is worthwhile doing some background reading on the issues that have raised the call for proposals in the first place. Often there is a political agenda behind the call as it has been generated to address a perceived scientific or technological shortfall. It certainly pays to know the source of the scientific or technological problem that your grant will solve in order to target your solution properly. Having an inside perspective is always valuable and many of the granting bodies are surprisingly open to communication. The NIH actually provide you with your own personal contact whom you can question about all aspects of your project. The EU have also helped me a great deal during the proposal preparation process, but getting hold of the right person to speak to can often be a challenge.

When it comes to the physical writing of the proposal, the value a professional writer can add is multi-faceted.

- Writers tend to be a little more detached from the science than the researchers themselves. This provides alternative perspectives and perhaps a more pragmatic view of the actual requirements of the project in order to achieve the defined aims.
- Writers generally have a good eye for detail and consistency in the presentation of facts, this goes hand-in-hand with being able to present these facts in an understandable and logical manner, introducing a flow to the sections of the proposal and minimising repetition.

- Writers generally enjoy writing and do not have to be dragged away from the laboratory to do something they perceive as not being their core competency.

As with most complex documents it helps to start with a template and a firm idea of what the proposal is about. After all, like most good stories, it needs a beginning, middle and end. For this reason I like to have all the scientists together to thrash out who exactly the partners are, what each will be contributing (in terms of scientific deliverables) and when the various deliverables and milestones are for the project. This can be a far from simple task but once it is done a lot of the information that will be required to answer the granting body's questions in the proposal will have been clarified. My personal favourite to achieve this is to lock everyone in a room with a large flipchart and not let anyone leave until the complete timelines and deliverables have been defined. At this point writers must keep their feet on the ground and stress the importance of keeping the proposal realistic and not let the researchers get carried away. By this I mean that many of the funding structures carry a maximum in terms of amounts of money that will be granted. For example, if one is applying for a Strategic Targeted Research Project (STREP), which carries a maximum funding of around 3 million Euro for 3 years, there is no point in designing a research proposal with 20 partners – it wouldn't even equate to a 50% post-doc per partner per year! It is therefore imperative that at this early stage the partners are aware of the funding limitations and scale the project accordingly.

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***Make the Partners aware of the funding limitations at an early stage***

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Once you have the backbone of the science together you then have to make sure you are achieving the right balance between the scientific aspects and the managerial aspects. Even if you have a Nobel Prize winning idea, if you do not show that you have both the resources and the managerial structure to carry out your concept it will almost certainly fail the evaluation. Be aware of the potential effect of your research and make sure you convey this clearly to the reviewers. It is also important that you know where your project fits in the grand scheme of things and that you portray your research as an intrinsic part of the programme. There are also political issues to consider: will your research provide a competitive edge and address potential transatlantic imbalances in know-how or intellectual property?

Although successful grant writing comprises many other factors, including budgeting and the detail of form filling, I hope that some of the pointers I've laid out here will help budding grant writers avoid the first pitfalls.

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