First page of the Fellowship Proposal

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA
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1. Why is the first page important?

Imagine you have spent the last few weeks reading numerous applications that are outside your field. Their corresponding assessor reports have been conflicting and now you are heading into a smallish room in Canberra where you will be confined for a few days, to rank these proposals. You will be surrounded by a group of equally overloaded academics trying to work out who should receive funding. So, what will make some grants stand out over others?

The ARC selection panels consider huge numbers of proposals, as Table 1 on the application numbers and success rates for the 2020 DECRA round demonstrates, but awards a small percentage of grants. In fact, fellowship schemes are the most competitive, in that they have some of the lowest success rates. For example, the 2020 Laureate round had a success rate of just 9.6%. It's important then to try to ensure that at every step of the application you are bringing your audience with you, if you want to maximise your chances of success.

Discipline Panels – DECRA 2020	Applications considered	Applications approved	Success rate (%)
Biological Sciences and Biotechnology	235	39	16.6
Engineering, Information and Computing Sciences	322	49	15.2
Humanities and Creative Arts	181	29	16
Mathematics, Physics, Chemistry and Earth Sciences	252	41	16.3
Social, Behavioural and Economic Sciences	258	42	16.3
Total	1248	200	16

Table 1 *Application numbers, success rates for approved Discovery Early Career Researcher Award 2020 applications by discipline.*

Most agree, the first page of the project section is critical. This is where you need to capture your audience and persuade them there is an important problem or gap in knowledge that needs attention. It's also where you must provide a clear overview of how you will address the issue, begin to seed arguments that you are a leader and have the credentials to undertake that plan successfully:

> *"An effective aims page makes the case that the research is important, the methods are likely to be successful, and the applicant is the right person and team to do the project… If the specific aims page is confusing, boring, or overly controversial then reviewers may be lost as advocates. In contrast, an effective aims page predisposes the reader to stay engaged and eager for subsequent details. Although a grant cannot be won with the specific aims page, a proposal can be lost by confusing or alienating reviewers."*
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> *Monte AA, Libby AM. Introduction to the Specific Aims Page of a Grant Proposal. Acad Emerg Med. 2018;25(9):1042-1047. doi:10.1111/acem.13419 p.1*

2. Before you start writing…

You need to be very clear on who your audience is going be. Unlike the summary sections which are written for lay audiences (the Minister, the general public and for assignment of assessors), this part of the grant is written for two types of audiences. One type that we have already mentioned are the **General Assessors**,

who will probably not be experts in your field. It's worth noting that they will read your application, the detailed assessments and your rejoinder as a package. The second is the **Detailed assessors** who are drawn from the Australian (~75%) and international (~25%) research community. They will be looking in-depth at your proposals and will provide scores and comments against the scheme specific selection criteria.

Therefore, the biggest challenge you have is how to balance the needs of both. The detailed assessor will be looking to make sure that you provide a clear, reasoned, evidenced based argument that articulates both the research gap and a worthwhile, practical response to it. The general assessors are wanting you to give them a coherent, plausible and engaging narrative.

However, what both types of Assessors are looking for from the first page is to be provided with a roadmap, master plan or executive summary of the work that includes a compelling a case of why the research needs to be done, why it needs to be done now, its potential impact and that you have the skills to do it.

3. How?

There are lots of good articles and blogs that provide prescriptive or codified ways to approach a first page. I would encourage you look out for them as they often provide thought-provoking insights and frameworks. Some useful ones include:

- A good place to start is https://parkerderrington.com/grant-writing-introduction/ - but don't stop there. You will also find lots of great resources on the blog https://parkerderrington.com/catalogue/ including Start by getting the structure of your case for support as a set of key sentences.

- Introduction to the Specific Aims Page of a Grant Proposal is a journal paper that specifically looks at the first page of your grant and breaks it down into its components. It is written for an American audience but all the tips resonate with ARC funding applications.

- http://fundermental.blogspot.com/2018/12/five-ingredients-for-perfect-research.html offers an interesting piece on 'How to tell a story' in the context of a grant proposal.

Do some research and find an approach that suits your style and the narrative you want to tell. Just remember, all good first pages allow your assessors to establish the following points:

- ☑ There is a compelling defined research issue that needs addressing
- ☑ A clear specific overarching aim
- ☑ A plan of action that will address the aim

Most importantly, **the first page should be able to be read and understood by a non-expert.**

4. Narrative structure is important but in and of itself it's not enough

Some of the common issues we see on the first pages of grant applications are:

Not writing for your audience

This is probably the most common mistake we see. An opening paragraph written for an expert in the field. As you can see when the paragraph is rewritten, it can still retain all the scientific terms if they are explained.

Original Text	Rewritten for the lay audience
Anthropogenic disturbances (e.g., fragmentation) can homogenise biotic communities by reducing the variation in species composition across locations. Global agricultural intensification has produced biotic homogenisation. For example, in Europe, increased pesticide use has led to increased similarities in both bee and hemipteran communities relative to non-agricultural areas. Croplands, pastures, and rangelands constituted ~50% of the global vegetated land surface as of 2005. Thus, agriculture has the potential to significantly impact diversity of natural communities.	In Europe the increasing reliance on pesticides has driven ecological systems that are increasingly less diverse, a phenomena called biotic homogenisation. The has led to increased similarities between hymenoptera (pollinators like bees) and hemiptera (bugs like aphids) communities in agricultural communities. The impact of a reduction on species variation needs to be better understood.

Not engaging the audience

Both these paragraphs came from the same grant, yet the researcher chose to open the application with the far less engaging one. It wasn't until page 3 of the application did the things finally become captivating.

How not to engage	How to grab attention
This application will fund research that will advance our understanding of pastoral management of social-ecological systems. Specifically, the project examines how mobile pastoralists in the Logone floodplain in the Far North Province of Cameroon coordinate their movements to avoid conflict and overgrazing in a land tenure system that is commonly described as open access, a situation generally regarded as leading to a tragedy of the commons.	How do mobile pastoralists coordinate their movements to avoid conflict and avoid overgrazing in a land tenure system that is commonly described as open access? Every year, after the water recedes, thousands of Arab and FulBe pastoralists from Cameroon, Nigeria and Niger move with more than 200,000 cattle into the Logone floodplain in the Far North Province of Cameroon. Not only do they distribute themselves in the floodplain without major conflict, mobile pastoralists also adjust their grazing pressure effectively to the available natural forage without overgrazing the floodplain. Moreover, they achieve all this without any apparent formal institutions that regulate pastoral use of and access to the floodplain, as neither the state nor traditional authorities have effective control over grazing resources.

Too many acronyms

Have you ever been in a meeting, where everyone is speaking in acronyms and you haven't the slightest notion of what they are talking about? Whilst those in the know can follow the shorthand, those who can't disengage or become very annoyed. The problem is that acronyms put the onus on the reader to interpret the meaning. Imagine how grant reviewers feel having to wade through paragraphs like the one below:

> *It is in the best interests of the United States (U.S.) of America (USA) to develop a Tax Plan (TP) that punishes neither America's Disadvantaged Working Class (ADWC) nor the Independently Wealthy (IW). It should come as no surprise that both the ADWC and IW would like to see a Tax Plan (TP) that includes Lower Tax Rates (LTR), but the demand for LTR must be balanced against the needs of the Taxpaying Public (TP). As a result, the current TP should be eliminated.* (taken from https://www.plainlanguage.gov/resources/humor/high-tech-humor/)

Follow the advice of many style guides, "To maximize clarity, use abbreviations sparingly" (American Psychological Association's publication manual 2009)

Too much jargon

George Orwell once wrote "Never use a foreign phrase, a scientific word, or a jargon word if you can think of an everyday English equivalent." Like using too many acronyms, jargon is a good way to alienate audiences outside of your field. And too much jargon, can render a sentence incomprehensible, *sending both your panel and expert reviewer into a comatose state. Take this example that was featured in the Bad Writing Contest :*

> *The move from a structuralist account in which capital is understood to structure social relations in relatively homologous ways to a view of hegemony in which power relations are subject to repetition, convergence, and rearticulation brought the question of temporality into the thinking of structure, and marked a shift from a form of Althusserian theory that takes structural totalities as theoretical objects to one in which the insights into the contingent possibility of structure inaugurate a renewed conception of hegemony as bound up with the contingent sites and strategies of the rearticulation of power. (Further Reflections on the Conversations of Our Time, an article in the scholarly journal Diacritics (1997))*

As Richard Branson wrote "*It's far better to use a simple term and commonplace words that everyone will understand, rather than showing off and annoying your audience. "*

Poorly crafted aims

Aims Vs Background: Many applicants choose to separate the Aims and Background sections. Whilst this can be an effective approach, mostly it produces aims that have no context to give them meaning. Therefore, it is important to always include an introductory paragraph that provides the overarching aim of the study and explains why it is needed.

Disconnected aims: Often, we read lists of aims that have worthy intent but none of them link to each other. Consequently, the reader must do a lot of hard work to work out if these aims will actually achieve anything cohesive. For example, the aims on the left leave it up to the reader to understand their significance, whereas the aims on the right explain the significance of each goal:

Disconnected Aims	***Connected Aims***
Aim 1 Build software architecture that is modular and easily extendable and customizable to include new or improved algorithms as they are being developed by others and us. Aim 2. Design a computational protocol and associated databases for generating new mutations that stabilize proteins using PROPKA-VMD. Aim 3. Experimental validation of the protocol on two industrially important enzyme families (family 11 xylanases and β-1,4-galactanases) of interest to Novozymes. Aim 4. Education of young researchers at the Masters, Ph.D., and Postdoctoral level in the area of industrially relevant biotechnology and IT. Aim 5. Design new marketable enzymatic catalysts relevant to Novozymes with increased stability.	The objective of the project is to provide the scientific community with a theoretical framework, software, databases, and experimentally validated examples of applications, for increasing protein stability. The software will be designed with industry in mind: (1) It will be computationally efficient in order to generate mutations and evaluate stability significantly faster than can be done experimentally. (2) It will be intuitive and user friendly and obviate repetitive and error prone tasks such as transferring data between different programs. (3) It will be modular and easily extendible so that additional functionality can be added easily. (4) It will be constructed entirely from software modules that are available free of charge to industry. The few needed software packages that do not meet this requirement will be implemented as open source modules based on the primary literature. (5) Its practical use will be described by detailed computational protocols on industrially relevant enzymes. (6) Novozymes will use beta versions of the software early on and provide feedback, which will be incorporated in the design process.