University of South Africa

College of Agriculture and Environmental Sciences

WRITING A PROPOSAL
FOR INTERNAL AND EXTERNAL FUNDING

A guide for staff and students

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For the
College of Agriculture and Environmental Sciences

University of South Africa

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Define tomorrow.

UNISA

Welcome to the Online Electronic Resource for:

A Guide on How to Write a Proposal for Internal and External Funding

INTRODUCTION

If you need this Guide, it means that you have progressed to the stage in your research career where you know what you want to research, but require funding to actually conduct the study. It also implies that you have already written one proposal – i.e. for your Master's or Doctoral research. There are many points of co-incidence between the two kinds of proposals and hence it is imperative that you read the document: *"A Guide on How to Write a Proposal for Master's and Doctoral students".* However, there are also several aspects in which they differ. **This document focuses specifically on those aspects that pertain to proposals for funding.**

> **THE PURPOSE OF THIS DOCUMENT IS TO PROVIDE TIPS ON IDENTIFYING APPROPRIATE SOURCES OF FUNDING AND TO GUIDE YOU IN WRITING EACH OF THE SECTIONS OF A PROPOSAL FOR FUNDING.**
> It is meant for all members of staff and students:
> - who require <u>funding</u> for their M or D projects
> or
> - who already have a PhD and need <u>funding</u> for further research.

The following topics will be discussed:

- ➢ IDENTIFYING FUNDING SOURCES
  - o Sources of funding
  - o Selecting the most appropriate funding programmes
- ➢ 'TWEAKING' YOUR FUNDING PROPOSAL
  - o Criteria for a good proposal
  - o Structure and contents of application forms
  - o Writing the proposal

> **General information**
> *Personal information
> *The team and collaborators

> **Project info**
> *The title
> *The narrative including background, gap and motivation, aims and objectives, study area, methodology/materials and methods, significance and context
> *The budget

- ➢ FINAL COMMENTS

IMPORTANT NOTE

DO NOT FIRST FIND A FUNDING SOURCE AND THEN WRITE A PROPOSAL TO 'FIT' IT.

YOUR RESEARCH PROJECT MUST DICTATE WHICH ORGANISATION YOU SHOULD APPROACH FOR FUNDING.

THIS IMPIES THAT YOU SHOULD HAVE A DRAFT PROPOSAL READY AND WAITING FOR THE RIGHT OPPORTUNITY TO 'TWEAK' IT TO FULFIL THE REQUIREMENTS

IDENTIFICATION OF FUNDING

SOURCES OF FUNDING

Funding may either be sourced internally i.e. from UNISA or from external sources i.e. from some other institution or organisation.

INTERNAL FUNDING

There are five major **UNISA-based** research funds for staff:

- ACADEMIC QUALIFICATION IMPROVEMENT PROGRAMME (AQIP)

- MASTERS AND DOCTORAL SUPPORT PROGRAMME (MDSP) and, for women,

- WOMEN IN RESEARCH SUPPORT PROGRAMME (WiR)

- VISIONKEEPS PROGRAMME (VKP).

- OPEN DISTANCE LEARNING RESEARCH SUPPORT SYSTEM (ODL-RSP)

Each has its own requirements and procedures to be followed. Details of these are available from the College Research Administrator (Marthie van Wyk: vwykmj@unisa.ac.za) or from the Research Support Directorate (Riana Zaayman: zaaymr@unisa.ac.za). These programmes are not competitive in terms of allowing only one candidate per College, School or Department. However, the proposed research must be of outstanding quality so as to justify the funding provided. **The pool of funding available for research is limited and only the best quality research will be funded.**

EXTERNAL FUNDING

By contrast, there are a myriad of organisations that may provide **EXTERNAL** research funding. The one most often approached by academics, is the National Research Foundation (NRF). It is government funded, and tax-payers money is used to fund research. The NRF has a number of different funding instruments. The most well-known of these is the Thuthuka Programme that funds young researchers – usually under the age of 45. However, they also have other funding instruments, ranging from Student Support Programmes to Instrument Specific Programmes such as the Bioinformatics and Functional Genomics Programme to the Global Change, Society and Sustainability Research Programme to the Indigenous Knowledge Systems Programme. A list of these programmes has been attached at the end of this document. (Also see https://www.nrf.ac.za and search for *funding opportunities*.) There are a number of other institutions such as the Water Research Commission (WRC) which funds water-related research, the Medical Research Council (MRC) (focusing on medical issues), the Oppenheimer Trust, the Development Bank, the Wildlife Foundation, various government departments, the Bill and Melinda Gates Foundation etc. etc. A Google search for *research funding in South Africa* will also provide information on a multitude of research grants and funding opportunities. Also consult *Funding Institutional.com* and *Research Africa*. Keep an eye open for other funding opportunities which are often listed on the NRF, WRC or journal websites. Publications such as "*Engineering News*" are also quite up to date with information on funding opportunities in the sciences. Note that the university often sends out information on research funding opportunities. Read them!!!

> YOU WILL HAVE TO DO SOME HOMEWORK TO LOOK FOR AN APPROPRIATE ORGANISATION TO FUND YOUR RESEARCH

The most important thing to keep in mind is that external funding sources are **HIGHLY COMPETITIVE** funding instruments and you will be competing with researchers at your own and other universities, research institutions or even with researchers from other counties. **ONLY THE BEST WILL WIN.**

IT IS IMPORTANT TO NOTE THAT EACH FUNDING ORGANISATION HAS ITS OWN RULES REGARDING WHAT TYPE OF RESEARCH THEY FUND, THE APPLICATION PROCESS AND THE ITEMS THAT WILL BE FUNDED. MOST HAVE SPECIFIC FORMS THAT MUST BE COMPLETED.

IT IS VITAL THAT YOU READ (and understand) THE FRAMEWORK DOCUMENTS IN WHICH THIS INFORMATION IS GIVEN. THESE PROVIDE THE "RULES OF THE GAME" AND IF YOU DON'T FOLLOW THEM, YOUR PROPOSAL WILL NOT BE CONSIDERED.

REMEMBER – YOU NEED FUNDING - THEY HAVE NOT APPROACHED YOU! IF YOU DO NOT CONFORM TO THEIR REQUIREMENTS (FOLLOW THE RULES), THE FUNDING WILL SIMPLY BE AWARDED TO SOMEONE ELSE

SELECTING THE MOST APPROPRIATE FUNDING ORGANISATION

Barring internal funding and the NRF's Thuthuka Fund, funding organisations are usually very specific in the type of research that is funded. The first thing that you must do is to identify the most appropriate funding source for your research. It would be stupid and a waste of time to apply for funding from an unsuitable source. For instance, there was a call for research applications from the United Arab Emirates for research projects on rain enhancement. This included subject fields such as cloud microphysics, cloud dynamics, aerosol/cloud interactions, precipitate particle formation, cloud seeding, cloud chemistry, nowcasting and forecasting of weather for seeding operations. Unless you are a meteorologist, climatologist, physicist, chemist, engineer or someone with specific knowledge of these fields, this funding is not for you.

If you are conducting research that has industrial application, you can easily narrow down your search for an appropriate funding organisation by simply conducting a search for funding available in that specific industry. Keep in mind that the Department of Trade and Industry (DTI) also has specific funding programmes for industry-related programmes. Once identified, you need to contact the industry and work with them to draw up a proposal for funding. The DTI's THRIP Programme is an example of an industry–university joint project. In this instance, the industry partner - not you - must apply for funding.

IN ORDER TO IDENTIFY THE MOST SUITABLE FUNDING SOURCE, YOU NEED TO ALREADY HAVE A DRAFT PROPOSAL

Thereafter:

STEP 1: COMPILE A LIST OF POSSIBLE FUNDING ORGANISATIONS THAT SUPPLY FUNDING FOR YOUR TYPE OF RESEARCH.

Note the name of the organisation/fund, contact details, topics funded, dates of deadlines, amount of funding provided.

STEP 2: NARROW DOWN THE LIST OF ORGANISATIONS THAT FITS YOUR REQUIREMENTS.

Note details of the focus/topics/themes funded by the organisation/fund/programme and the eligibility criteria.

STEP 3: DOWNLOAD THE APPROPRIATE FRAMEWORK DOCUMENT OR GUIDELINES FOR RESEARCH FUNDING.

STEP 4: <u>STUDY THIS THOROUGHLY</u> before attempting to complete the application form.

Most forms are available on-line. Some funding organisations want very short applications, while others require much more detail. Some want a short preliminary proposal for shortlisting. If your proposal gets through the first round, you will be requested to submit a more comprehensive proposal.

Note that there will probably be closing dates for funding applications. Some organisations have one closing date per year (eg. the WRC) while for others there are two or more. Most of the internal funds have two calls per year. However, depending on the amount of money available for research, this might be reduced to only one. It is vital to keep these dates in mind since the closing date is final and the organisation's website for application simply closes down on the set date and time. Proposals that must be vetted by UNISA (i.e. all internal funding and NRF programmes) have various internal deadlines. The one of importance to you is the **CLOSING DATE FOR THE COLLEGE. However, your proposal for funding must actually be ready at least 2 weeks before the College closing date.** This is because you will require a number of signatures (e.g. from the CoD, your supervisor (if applicable), possibly the Executive Dean) and you may need to obtain copies of ethics approval. This all takes time.

Upon submission, your proposal will be vetted by the College Vetting Committee. There are usually some revisions to be made and you will have a few days to address these. Thereafter you must send the revised and updated proposals to either Winnie Motsatsi (Motsawm@unisa.ac.za) (for external funding applications) or Riana Zaayman (Zaaymr@unisa.ac.za) (for internal funding applications) at the Research Support Directorate. It will then be vetted by the Institutional Vetting Committee, who will make the final decision regarding whether your application is acceptable or not. You will be informed officially whether your proposal has been accepted or not.

Note that it is also extremely important that you inform the College Offices if you are applying for any other type of funding (neither internal not NRF funding).

The importance of completing the proposal for funding timeously also applies to applications for funding organisations other than internal and the NRF.

Please note that THE FINAL DATE OF SUBMISSION IS NOT NEGOTIABLE. ONCE THE DEADLINE IS REACHED, THE SITE FOR SUBMISSIONS IS CLOSED DOWN. This applies to all funding organisations. If you miss the due date – that's it !!!.

TRY AGAIN NEXT YEAR

THE FUNDING PROPOSAL

What is the first thing that you must keep in mind when writing your proposal?

The first thing that you must do is to take note of and fulfil the criteria of a good proposal.

CRITERIA FOR/CHARACTERISTICS OF A GOOD PROPOSAL

There are two aspects that define a good proposal, namely **NOVELTY** and **COMMUNICATION**.

NOVELTY: Your research does not have to be Nobel Prize standard. You do not have to be an Einstein! However, your research must be directed at solving a problem. **If there is no problem – there can be no research**. Your research must be useful and have the

potential to make an impact. You will only be able to show novelty once you have done a thorough literature survey. Once you know what HAS been done, you will understand what has NOT been done – and hence the GAP in research. Your research must be interesting and exciting. It must grab the reviewers' attention.

COMMUNICATION: The proposal must be written so that the **reader** understands what the research is all about – thus you must **WRITE FOR THE READER** - not for yourself. **You** know what you want to do, but you must tell the reader/reviewer what your research is about. You must therefore use clear language, short and simple sentences and set the information out in a logical and coherent manner. The document: *Tips for Scientific Writing,* available online on the College's OER website provides some guidelines to help you to achieve this.

SINCE THERE ARE DETAILED GUIDELINES AVAILABLE TO THE UNISA STAFF FOR APPLYING FOR NRF THUTHUKA FUNDING, (available from the Research Directorate), THE THUTHUKA APPLICATION PROCESS WILL NOT BE DISCUSSED IN THIS DOCUMENT. INSTEAD, IT WILL FOCUS ON APPLICATIONS FOR ALTERNATIVE EXTERNAL AND INTERNAL FUNDING.

STRUCTURE AND CONTENTS OF APPLICATION FORMS

Each funding organisation's/institution's application form has its own structure and requirements. The application forms for UNISA's internal funding programmes have been standardised. However, the **criteria** for each of the grants are specific. For example, one of the eligibility criteria for the MDSP programme is that the candidate must not be eligible for Thuthuka funding (e.g. requiring funding for a Master's degree), or their application must have been unsuccessful or the outcome of their Thuthuka application is pending. The budget is also unique to the programme e.g. for MDSP, a maximum of R30 000 per annum for a Master's application while that for a PhD is R45 000 per year (2018 values).

GENERIC CONTENTS OF PROPOSALS

There is a considerable amount of overlap between the information that is required by different funding organisations. The information usually falls into two categories namely, **GENERAL INFORMATION** and **PROJECT INFORMATION.**

GENERAL INFORMATION:

This includes:

- Personal information and
- information about the research team

PROJECT INFORMATION:

- The title
- Abstract (not always required)
- Problem statement : Background (including the literature review); Research problem, motivation/justification/rationale for the research and gap in knowledge; importance that the research be conducted
- Aim and objectives/purpose of the study/hypothesis
- Importance/significance of research results/impact of the research; Context
- Study area & Research Methodology (research design, data collection & analysis)/Materials and methods
- List of activities and time frame
- Budget
- References
- Dissemination of information (not always required)
- Collaborators (may be included in *general information* on the *research team*)

Each of these will be discussed in the following sections.

Note: The information required by the funding organisation is not necessarily required in the same sequence as given above. Two or more sections are frequently combined e.g. in a WRC application form, the section on rationale and motivation would include information on the background to the study.

The reviewers of external grants usually want to know more about the **actual research** than the philosophy behind it. There are exceptions to this – such as in the case of the Humanities, but in the Sciences, concentrate on information on the research problem, the importance of conducting the research, an explanation of how you are going to do the research and the possible significance of the research results.

Keep in mind that a number of the sections included in the proposal have been discussed in the document: *A guide on how to write a proposal for M and D students,* **I will focus on those that may be new.**

REMEMBER
THE RESEARCH PROPOSAL IS A BLUEPRINT FOR THE RESEARCH PROJECT
It defines exactly what you are going to do, why you are going to do it and how you are going to do it

AS USUAL, THERE ARE A NUMBER OF THINGS THAT YOU SHOULD TAKE INTO ACCOUNT BEFORE YOU ACTUALLY START WRITING. THESE RULES FOR WRITING INCLUDE:

- READING THE FUNDING ORGANISATION'S GUIDELINES. NOTE THE THRUST/FOCUS OF THE ORGANISATION'S FUNDING PROGRAMMES. YOUR RESEARCH MUST FALL WITHIN THIS FIELD.
- CONFIRMING THAT YOU ARE ELIGIBLE FOR FUNDING
- PRINTING OUT THE APPLICATION FORM AND SEE WHAT INFORMATION IS REQUIRED.
- MAKING CERTAIN THAT YOU ARE UP TO DATE WITH THE LATEST LITERATURE ON YOUR TOPIC. (THIS SHOWS THE REVIEWERS THAT YOU ARE A MASTER OF THE TOPIC).
- PLANNING WHAT YOU ARE GOING TO INCLUDE IN EACH SECTION. DO THIS ONE SECTION AT A TIME. SEE THE *GUIDE ON HOW TO WRITE A PROPOSAL FOR MASTERS OF DOCTORAL STUDENTS* AND FOLLOW THOSE DIRECTIONS.

FURTHER TIPS

- Distil your ideas. Cut down on duplication and irrelevant information. Only the most important information is to be included in the proposal.
- Ensure that there is a logical flow throughout the proposal and that you don't make assumptions regarding the knowledge that the reviewer has of your topic. Ensure that you use good language. Make your proposal exciting, interesting and easy to read and comprehend.
- Remember to stick to the limits. If the funding organisation indicates that you may not use more than 3 000 characters for a specific section – then don't exceed it. Do a character/word count. **If the proposal is too long, the reviewers will not bother to read it.**
- Check that the budget is correct and includes all envisaged expenses; that the funding required falls within the limits; and that it only contains items that are funded by the organisation. **STICK TO THE RULES!**
- Ensure that you have submitted your proposal to the ethics committee for evaluation/obtained ethical approval.
- Ensure that your CV is updated. In the case of NRF proposals, you must also update your CV on the NRF system.

WRITING THE GENERAL INFORMATION

All funding organisations require PERSONAL INFORMATION i.e. your name, your title, your academic qualifications, department/College/University, contact details etc. Ensure that all information is provided and that it is correct. The address for CAES is: UNISA SCIENCE CAMPUS, Corner of Christiaan de Wet Road and Pioneer Avenue, FLORIDA, 1709 or UNISA SCIENCE CAMPUS, 28 Pioneer Ave., FLORIDA PARK, ROODEPOORT, 1709.

Funding organisations sometimes request details regarding your **research output** in terms of your articles in scientific peer reviewed journals and in conference proceedings. The funders are not interested in you hobbies or the fact that you are trustworthy and a good worker!!!. Only your **research** is relevant.

THE TEAM: This does not apply to the MDSP and AQIP programmes but to projects where a team of researchers with different fields of specialisation is involved. In such projects, you will have to indicate who the **project leader** is. You will also have to indicate the **principal researchers**, other **team members** and possibly, **students.** Their contact details and role in the project must be clearly indicated. Ensure that the team's expertise covers all aspects of the research. For example, I once applied to the WRC for funding on a project entitled: *Thermal Springs in South Africa: Past, present and future.* This project was multidisciplinary and included geographers, environmental scientists, microbiologists, and a number of geologists specialising in different fields (structural geologists, geophysicists and one who was an expert in isotopes). The project was also inter-institutional, including researchers from UNISA, the University of Pretoria (UP), the university of Johannesburg (UJ) and the Council of Geosciences (CGS).

In the case where you are applying for funding for the following year and don't have details regarding students, just indicate: *MSc student 1 -* and then the possible role that the student will play in the project etc., etc.

With the exception of the students, you should identify all the role-players in the project at an early stage. It is important that your team members should complement – and not duplicate – your speciality field. **In addition to their expertise, give attention to their personal qualities such as dependability, ability to work under stress, enthusiasm for the project and their ability to work with a team of other people.**

It is always a good idea to get all team members together early on and plan the proposal together. This will ensure that all details regarding the different aspects of the proposal have been thought through and that you do not make promises that you can't keep. **Decide on issues such as authorship and co-authorship of articles and reports right at the beginning. Will every team member's name appear on a publication or only those people who actually contributed to the article? These are issues that can cause a considerable amount of conflict later on.**

In some cases, the funding organisation requires copies of the project leader, principal investigators' and team member's CVs. Obtain this timeously. Don't wait for the day before the due date to contact the team members.

Keep the team up to date on any progress. Have regular get-togethers where information can be exchanged between all team members. Research is an exciting process and a learning curve. Revealing information regarding thermophilic (heat loving) bacteria in thermal spring waters is as fascinating to geologists as to microbiologists. Information on isotopes in thermal spring waters is also novel and fascinating to microbiologists.

Note that some institutions/organisations distinguish between the terms **<u>co-investigator and collaborator.</u>** A *co-investigator* is someone who is **actively involved** in conducting the research (immaterial as to which organisation they belong to) whereas a *collaborator* does not actively participate in the research project but is someone who you **approach for specific information or to facilitate or advise on** specific aspects of the research process.

WRITING THE PROJECT INFORMATION

Keep in mind that your proposal will not be the only one to be considered by a reviewer or a panel of reviewers. They will have to evaluate many proposals. They might not even be experts in your particular field of study. They don't have the time or the patience to read long, involved proposals.

PROPOSAL CONTENTS

THE TITLE

As usual, the first thing that you are going to write is the **TITLE** of the project. This must be short but descriptive, be a true reflection of the content, contain the majority of the variables and be free from jargon, abbreviations or slang. There might be a limit to the number of characters that may be used. Adhere to these rules. Extra characters will simply be cut off and not appear on the final proposal.

THE ABSTRACT

In contrast to proposals for post graduate studies (a Master's or a Doctoral study), most funding organisations want a short description of the proposal – either presented as a very short **ABSTRACT** or a slightly longer **SUMMARY**.

The abstract/summary forms the first part of the proposal Internal reviewers use this to do a preliminary assessment of whether your proposal fulfils the criteria and falls within the ambit of the funding organisation's research focus; whether it is interesting and novel; well written; clear and logically set out; is feasible; and that the budget falls within the

organisations prerequisites. This will help them decide whether it is worth investing time or money in you. If your proposal fulfils these criteria, they will look at the detailed proposal.

Although the abstract is the first part of the proposal, it is often the only part that is read – so this is where you must grab the reader's attention.

> **IT IS UP TO YOU TO CONVINCE THE REVIEWERS THAT YOUR RESEARCH IS SO UNIQUE AND IMPORTANT THAT IT NEEDS TO BE FUNDED.**

Below are examples of four abstracts of various lengths. Read one or more of these to see what information is required in an abstract and how it is constructed.

NOTE: IT IS ESSENTIAL THAT YOU READ EXAMPLE 4 SINCE IT WILL BE USED IN ALL FURTHER SECTIONS OF THIS DOCUMENT

EXAMPLE 1: Application by Mr Monyama for NRF Thuthuka funding (modified)

TITLE: RELATIONSHIP OF HOUSE FLIES WITH FOOD AND BACTERIA OF MEDICAL IMPORTANCE IN HOSPICES IN BLOEMFONTEIN (276 words)

Pathogenic microorganisms are widespread in hospitals and in the community environment. Houseflies are ubiquitous, especially in summer, and have abundant opportunity to become contaminated with microbial pathogens and transport them from contaminated places to foodstuffs causing great risk to humans. Antibiotic resistant bacteria are becoming increasingly prevalent in hospital environments. Houseflies may thus also carry such bacteria and contaminate the patient environment causing a serious public health problem because it threatens effective prevention and treatment of an ever-increasing range of bacterial infections. There is a dearth of information on microbiota harboured by houseflies and their role in transmission of antibiotic resistant bacteria. During the last few years there has been an increase in the number of hospices in South Africa due to the HIV/AIDS epidemic and the increased number of people who need palliative care due to mental illness and ageing. These patients are particularly vulnerable to infections. The proposed study will focus on characterisation of microbiota and antibiotic resistant bacterial species associated with houseflies in hospices in Bloemfontein. Houseflies and food samples will be collected in kitchens of hospices. They will then be identified and screened for the presence of bacterial genera using next generation sequencing platforms. Thereafter,

bacterial genera of medical importance will be identified and the species-specific PCR and LAMP will be used to screen for bacteria species of medical importance that will then be isolated for characterisation of antibiotic resistant bacteria. Data will then be compared with patients' disease profiles in these hospices, to determine the relationship of bacteria, housefly vector and human host. This study will contribute to formulation of control and preventative action of bacterial spread in hospices in Bloemfontein.

EXAMPLE 2: Application by Prof D Hedding for UNISA Vision Keepers Programme (modified).

TITLE: DEBRIS-RIDGE "MORAINES" IN THE SOUTHERN ALPS: A PERIGLACIAL HOUSE OF CARDS?

Abstract: *(281 words) Pronival ramparts are debris ridges formed at the downslope margins of perennial or semi-permanent snowbeds beneath bedrock cliffs. Pronival (also termed "protalus") ramparts evolve from transport of rock debris across perennial or semi-permanent snowpatches at the foot of rock cliffs, mainly formed by sliding, rolling and bouncing or rockfall boulders across a snowpatch. While both relict and active pronival ramparts have been identified in the vast majority of glaciated mountain ranges around the world, in New Zealand's Southern Alps, they are strangely absent from positions where, according to early work, they should be present, especially given the temperature, high-relief, high-rainfall and seismically active nature of the mountain range. Much of the evidence underpinning the chronology of the closing stages of New Zealand's Late-Glacial and Holocene glaciation rests on the assumption that dates collected from debris-ridges in this alpine terrain are glacial moraines – landforms bulldozed by ice that delineate the maximum extent of Pleistocene and Holocene ice extents. However, in this project, we propose a radical rethinking of this common assumption in New Zealand's Southern Alps. We will investigate of pronival ramparts are present in the Southern Alps of New Zealand and, in so doing, assess these features as palaeo-environmental indicators which can be used for reconstructions of past environmental characteristics. Pronival ramparts do not require glacial conditions to develop and thus we may refine the current inferred (assumed) palaeo-environmental conditions experienced in the Southern Alps since the Last Glacial Maximum. These palaeo-environmental reconstructions in the Southern hemisphere are significant globally since they help scientists not only better understand landscape response to climatic change in the past but will help us better predict landscape responses to potential climate change in the future.*

EXAMPLE 3: Project proposal by Dr M Strauss for NRF Thuthuka funding:

TITLE: ELUCIDATING THE CAPACITY FOR, AND ROLE OF, SELECTIVE BRAIN COOLING IN ARTIODACTYLS AND FELIDS.

Project abstract (297 words):

Several groups of mammals, especially the even-toed ungulates (e.g., sheep, goats, camels and antelope), and also the felids (i.e., cats), have the requisite anatomy that facilitates selective brain cooling. Selective brain cooling ensues when the temperature

of the brain is lowered below that of core body temperature through a process of counter-current heat exchange. In the even-toed ungulates the carotid rete facilitates this counter-current heat exchange, while an extra-cranial rete fulfils the same function in the felids. Recently we have shown that sheep can conserve up to 61% of their daily water requirements by selectively cooling their brains. However, we found greater variability in selective brain cooling use within than between species when we investigated selective brain cooling use in three free-living antelope in an area where we could not control access to drinking water. Although selective brain cooling may have facilitated the evolutionary success of even-toed ungulates during the hot and dry Eocene/Oligocene - we do not know the extent to which the even-toed ungulates differ in their ability to conserve body water through selective brain cooling. Moreover we do not know whether selective brain cooling fulfils a similar water conservation function in the felids, who replenish much of their water requirements through the ingestion of fresh meat. We therefore want to further explore selective brain cooling through a combination of anatomical and physiological investigations. Firstly we want to compare carotid rete anatomy among artiodactyl species, and between artiodactyls and lions, using a combination of traditional and modern anatomical techniques. Then we will investigate selective brain cooling use in free-living African lions along an aridity gradient. Our focus, therefore, would be on quantifying carotid rete characteristics across species, including the capacity for heat transfer, and on elucidating the ecological significance of selective brain cooling in felids.

EXAMPLE 4: In **2012**, a number of researchers from UNISA, UP, UJ and the Kara Heritage Institute submitted a project proposal to the National Heritage Council (NHC) for funding. *There was no limit to the number of words allowed for the summary and since this was a multidisciplinary project and probably totally 'new' to the reviewers, it was longer than usual.*

Note – I will use this project as examples for the different sections throughout this GUIDE.

*TITLE: **INDIGENOUS KNOWLEDGE ON THE DISCOVERY, CUSTODIANSHIP, HISTORY, LEGENDS, BELIEFS, CUSTOMS AND USES OF THERMAL SPRINGS IN SOUTH AFRICA: USING THE PAST AS A BASIS FOR SUSTAINABLE FUTURE DEVELOPMENT. PART 1: LIMPOPO PROVINCE***

PROJECT SUMMARY (386 words)

In addition to the age-old use of thermal (hot) springs for therapeutic purposes, recent research has indicated many new uses including the generation of geothermal energy, mineral extraction, agriculture, aquaculture and space heating. In South Africa thermal springs were revered by rural communities and some were believed to be sacred sites. Unfortunately, the Indigenous Knowledge (IK) associated with thermal springs has not been documented but exists only in oral tradition. There is a risk that the commercial development of thermal springs could lead to the loss of rich cultural heritage. It is imperative that this IK be documented before it is too late and that this knowledge be used for wise decision-making regarding future development. This project aims to

document the IK associated with thermal springs in Limpopo and to identify developments which can occur in tandem with this. The project has four objectives, namely: To document the knowledge of discovery, beliefs, customs and traditional uses associated with thermal springs in South Africa; To identify springs with special cultural importance; To obtain information on the physical and chemical characteristics of these springs and their potential uses; and To combine this knowledge to suggest potential future uses that will be in harmony with traditional uses and customs. Both qualitative and quantitative research designs and methodologies and a combination of ethnographic and laboratory research will be used. Semi-structured questionnaires will form the basis of interviews that will be the held with holders of traditional knowledge so as to document their stories, beliefs, customs and uses. Water and mud samples will be collected and chemical analyses conducted at the ARC laboratories in Pretoria. Recommendation will be made for potential developments of specific thermal springs and the incorporation of these springs into a tourism route. Prior to final preparation of the report, findings and recommendations will be discussed with the holders of the IK to obtain their final comments/inputs. Thereafter the report will be presented to the NHC and other stakeholders. Input will be made towards the production of a glossy publication to promote Limpopo Province as the 'Land of Legends'.

Although IK should be obtained on all thermal springs in South Africa, this pilot study will focus on those in Limpopo Province. This part of the project will take 1 year to complete at a cost of R856 200.

It appears that all four abstracts have certain aspects in common. They are:

- PLACING THE TOPIC IN CONTEXT. THEY ALL START WITH THE GENERAL AND MOVE TO THE SPECIFIC. THEY OFTEN END WITH A GENERAL PROBLEM.

- INDICATING THE GAP IN KNOWLEDGE i.e. WHAT IS NOT KNOWN – WHAT HAS NOT BEEN RESEARCHED?

- STATING THE SPECIFIC PROBLEM OR MAIN RESEARCH QUESTION. WHY IS IT IMPORTANT TO DO THE RESEARCH?

- PROVIDING THE AIM OF STUDY, THE OBJECTIVES & STUDY AREA

- INDICATING THE RESEARCH DESIGN & METHODOLOGY

- STATING THE SIGNIFICANCE OF THE RESEARCH RESULTS

for non-UNISA/NRF proposals

- HOW LONG IT WILL TAKE AND THE TOTAL BUDGET REQUIRED.

- NOTE: AN ABSTRACT DOES NOT CONTAIN REFERENCES

NB: THERE MUST BE A 'GOLDEN THREAD' RUNNING THROUGH THE ENTIRE PROPOSAL. ALL IS FOCUSED ON SOLVING A RESEARCH PROBLEM

THE NARRATIVE

> IT IS IMPERATIVE THAT YOU KEEP THE SECTIONS SHORT
> AND FOCUSED. YOU ARE <u>NOT</u> WRITING A PROPOSAL
> FOR A MASTER'S OR A DOCTORAL DEGREE!

NOTE: THE NARRATIVE IS BASED ON LITERATURE AND THUS CONTAINS REFERENCES

PROBLEM STATEMENT

There will obviously be a considerable amount of overlap between the abstract (summary) and the problem statement. However, the problem statement has more detailed information and includes references.

> NOTE: PLEASE REFER TO THE *Guide on how to write a proposal for Masters and Doctoral students* for all the sections that are common to M & D proposals and Proposals for funding.

PROBLEM STATEMENT

- ENTIRE PROBLEM STATEMENT CENTRES ON THE <u>PROBLEM</u>
  - Tell the reader - what is the problem & why is it important.
  - NOTE: IF THERE IS NO PROBLEM, THERE IS NO RESEARCH
- Introduction/Background (Start with interesting fact) – discuss problem – general to specific – briefly
- Motivation (why must research be done?)
- (Gap in Knowledge)
- State the problem – as a statement and mention aim
- Use appropriate literature
- Give references

EXAMPLE: THE NHC PROPOSAL:

Background:

Thermal (hot water) springs occur on all continents on earth. During ancient times they were thought to have mystical and magical powers and were the centres of religion and therapy for thousands of years (Encarta Encyclopaedia, 1997). Recent research has indicated a myriad of new uses of thermal springs worldwide. These include the generation of geothermal energy, mineral extraction, agriculture, aquaculture and space heating Chistopher & Armstead, 1978; Samsudin et al., 1997; Ahmad et al., 2002; Arnósson et al., 2002; Gemici et al., 2003; Dotsika et al., 2006; Lund et al., 2010). International confirmation of the therapeutic properties of thermal spring waters has led to the resurgence of the health and wellness industry in countries such as Spain, Italy, France, Romania, Austria, Israel, Poland and many other European and Asian countries (Harvey, 2007).

Problem statement:

In South Africa thermal springs were often revered by rural communities and some were believed to be sacred sites (Booyens, 1981; Henderdon, 1995) in the oral tradition. Little has been documented on the cultural and sacred traditions associated with SA thermal springs. A risk is that the interest being expressed in the commercial development of thermal springs. This could lead to the loss of the rich cultural heritage associated with thermal springs. It is imperative that IK associated with thermal springs be documented before it is too late. Ideally, this traditional knowledge should also be used to guide future development. However, the lack of a systematic IK base prohibits wise decision-making and the design of development guidelines on undeveloped thermal springs.

> HIGHLIGHT THE NOVELTY/IMPORTANCE OF YOUR RESEARCH.
>
> INDICATE (SOMEWHERE) WHETHER THE RESEARCH IS MULTIDISCIPLINARY OR INTERINSTITUTIONAL.

THE RESEARCH QUESTION/AIM/GOAL

If the application form has a specific heading **'*RESEARCH QUESTION'*** then write it in the form of a question i.e. the sentence should end with a question mark (?). It is easy to convert your research question to a statement i.e. **THE AIM.** Ensure that the title, the research question and the aim are in agreement. If the funding organisation requires a **HYPOTHESIS**, then keep in mind that a **research hypothesis** is an educated guess of what the answer to the research question could be. This must be founded on a thorough literature survey of similar research conducted previously. There must be a valid reason for you to assume that you know the answer to the problem. **Statistical techniques** are used to prove or disprove the research hypothesis. (This is where H_0 and H_1 are used).

Also keep in mind that the aim must include a **SCIENTIFIC ACTION VERB** such as "to explain; to identify, to examine, to assess etc. See ***Guide on how to write a proposal for Masters and Doctoral students*** and ***Tips on scientific writing.***

SCIENTIFIC ACTION VERBS

- Aim & objectives use scientific action verbs:
- Start with 'TO':
  - EXPLORATORY: explore, identify, discover, examine, characterise, document, determine, investigate, analyse (stats) ….. WHAT?
  - DESCRIPTIVE: map out, audit, describe, compare, monitor, track
  - EXPLANATORY: explain why, construct a causal model, compare, test a hypothesis, interpret
  - EVALUATIVE: evaluate, assess, determine impact, monitor outcomes   ….WHY? HOW?

Also note that there is a difference between an **AIM** and the **OBJECTIVES.** The **aim** is one overarching goal of the entire project. There is usually only one aim. The **objectives** are sub-aims or steps in the process which must be completed so as to achieve the aim or to answer the research question. There is usually more than one objective. Like the aim, they must contain scientific action verbs.

Each objective is a mini-research project with its own sub-aims, sub-objectives, design, methodology and outputs. It is vital that **the objectives** cover all the necessary steps in the research process. Each objective comprises a number of **activities** (actions) that need to be carried out. **THE ACTIVITIES THUS DICTATE THE METHODOLOGY USED AND THE BUDGET.** This implies that there is a direct link between the research problem, the aim, the objectives, the activities and the budget. Careful planning is imperative – not only in terms of **WHAT** you will do, but also – **WHO** will conduct the research, **WHERE** you will do it and **WHEN** you will do it. **The timeframe** is a vital component of the project proposal and will govern when certain activities will be carried out.
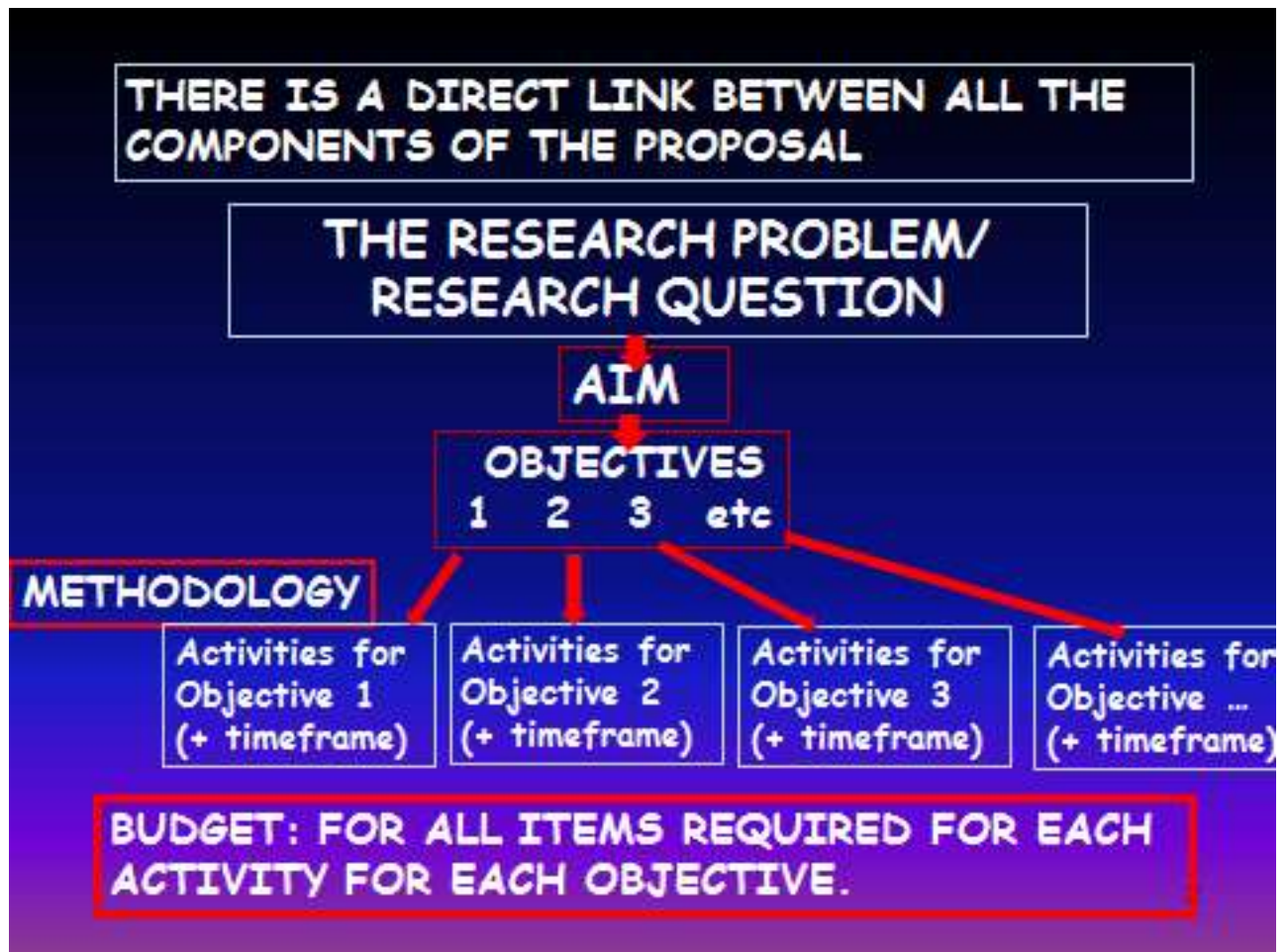
EXAMPLE: The aims and objectives for the National Heritage Council (NHC) project proposal were as follows:

Project Aim:

This project aims to document the IK associated with thermal springs and to identify developments which can occur in tandem with this. The project has four objectives.

Objectives:

1   *To document indigenous knowledge about the discovery, legends, beliefs, customs and traditional uses associated with thermal springs in Limpopo*

2   *To determine their status as sacred site amongst indigenous communities*

3   *To obtain information on the physical and chemical characteristics of these springs.*

4   *To combine this knowledge to identify potential future uses that will be in harmony with traditional uses and customs.*

THE SIGNIFICANCE AND CONTEXT

It is vital that you indicate the significance of your research i.e. how can the research RESULTS can be used? What actions can be taken once you know what the answer is to the research question? These actions usually refer to possible interventions that can be taken or possible policy changes that can be implemented or some activity that can be taken to prevent undesirable conditions persisting. *In the case of the NHC project, knowledge of which thermal springs are of cultural importance to the communities can be used to prevent commercial development of these springs for any uses that might result in the spring becoming inaccessible to the people.*

It is also a good idea to include a sentence of two on how your research fulfils the funding organisation's main focus area or a particular thrust or theme. Thereafter indicate how your research addresses the goals of the National Development Plan (NDP) for 2030 or the revised NDP. If there is no specific section for this in the application form, insert this in the most appropriate section – possibly in the Problem Statement.

In the case of the example, the project falls squarely into the ambit of the NHC which is to *"give priority to proposals in the following areas: Heritage Research and Publication, Liberation Heritage, Education & Training in Heritage, Indigenous Knowledge Systems, Women and Heritage, Youth and Heritage; and Indigenous Groups heritage initiatives in the country."* Clearly, this project focuses on Indigenous Knowledge Systems.

THE STUDY AREA AND METHODOLOGY

STUDY AREA

The place where the research is to be carried out might not be of any importance. For example, if you are going to conduct the research at the UNISA laboratories in Florida, you just have to mention this fact. On the other hand, the geographic location and environmental conditions might be vital to the project. This is the case in the NHC example.

METHODOLOGY

The methodology includes information on the research design, data collection, data analysis and comments on how rigour will be maintained. You need to justify for the methods used. References are required where applicable. Provide some information on methods or techniques that are not well known. However, when the analytical techniques are well known, such as the use of Pearson's linear correlation coefficient and Students t-test, no explanation is required of how this is calculated. **EXAMPLE** (for the NHC project):

> *METHODOLOGY*
>
> *General overview:*

The project will proceed in three stages. The first part will focus on the documentation and preservation of IK. It will include obtaining accounts of the mythological and historical background of thermal springs, contemporary beliefs, customs, traditions and use of thermal springs. This will be used to identify their status as sacred sites (Objective 2). The second part of the project will give attention to the analyses of the physical and chemical properties of the springs. The final part will attempt to merge traditional uses with potential economic activities, including therapeutic values, natural resource utilisation, e.g. salt production or mineral extraction etc. The twenty three thermal springs in Limpopo Province will be visited.

A combination of ethnographic surveys and laboratory analyses will be used.

Prior consent will be obtained for conducting the surveys. All ethical protocols will be followed.

Before the collection of primary data, field workers will be trained in the necessary protocols for conducting interviews, collecting and storing samples and the use of a cam-recorder. Primary data on the IK associated with thermal springs will be obtained by means of semi-structured questionnaire surveys at the thermal springs spread throughout Limpopo Province. Discussions will be held with traditional leaders, healers, elders and the custodians of those sites that have sacred or spiritual value. A snowballing technique will be employed to identify holders of IK. Legends pertaining to the discovery, beliefs, customs, rituals and traditions will be documented (using a cam-recorder) together with information on past and current uses.

A statistician will be involved in the compilation of the questionnaire to facilitate data storage and manipulation. A database will be compiled to document all information obtained. These data will be used to determine the status of the springs as sacred sites.

Water samples will be collected from each of the springs at source (where possible) and basic scientific measurements (e.g. temperature, pH) taken. Samples will be stored in cooler boxes and dispatched to Pretoria for analyses. Chemical analyses will be conducted by the Agricultural Research Council (ARC) in Pretoria. Secondary data on the criteria w.r.t the chemical composition of the spring water and suitability for economic develop will be obtained from literature. These will be used to determine the suitability of the thermal springs for various types of economic development.

This research project will entail extensive travelling to the study areas for the surveys and the collection of samples. In view of the limited time available for the project, it is envisaged that 4 teams of 2 field workers/students each will be required to obtain information on the IK associated with thermal springs in different parts of Limpopo. These springs are dispersed throughout the province, from Bela Bela in the south to Tshipise in the north and from Evangelina near Alldays in the west to Eiland and Soutini (Baleni) in the east. Most of the springs are in rural areas and robust vehicles are required to reach the springs and the holders of IK.

Springs will be identified that have significant cultural importance and should be preserved as is. Alternatively, springs with therapeutic properties and their potential for health and wellness tourism development will be identified and incorporated into the development of a cultural tourism route in Limpopo Province.

It is estimated that the preliminary study will be completed in one year, starting January 2012.

The above section gives a **general overview** of the procedures involved in carrying out the project. However, the reviewers require much more detail than this. The easiest way to

do this is to compile a detailed **time frame** and **list of activities** for each of the objectives separately.

This should include:

- The heading = the objective
- The actions/activities to be undertaken for that objective.
- Team members involved (who will do what?)
- The time frame (when will it be done/how long will it take to do)
- Expected outputs (e.g. articles, technical reports etc.)

YEAR 1	DESCRIPTION
Objective 1	
Activity 1	
Description of Activity 　❖ Personnel Responsible for Activity 　❖ Participant, location, laboratory	
Duration of the activity	
Expected outputs	

The NHC required much more than this, as is shown in the following example.

EXAMPLE: (Note: this was section 9 of the original NHC proposal)

9   WORK-PLAN (This section includes a list of ACTIVITIES for each objective, WHEN will they be done, WHO will do them and, where necessary, WHERE they will be done.)

9.1   ACTIVITIES FOR <u>OBJECTIVES 1 & 3:</u> DOCUMENT IK & DETERMINE STATUS OF SACRED SITES

*9.1.1 **Identify** geographical location of thermal springs in Limpopo Province. (Jan-Feb 2012)*
*9.1.2   **Obtain** permission for interviews from relevant tribal authorities. (Feb – march 2012)*
*9.1.3   **Compile** questionnaires to determine indigenous knowledge on thermal springs at selected sites (Feb-Mar 2012)*
*9.1.4 **Recruit** field workers/students with proficiency in relevant languages from the different geographical regions (Feb – mar 2012)*
*9.1.5 **Train** field workers in all customary protocols for conducting ethnographic research and the snowballing technique. They will also be trained in the use of a thermometer, collection and storage of samples. (Mar 2012)*
*9.1.6 **Conduct** questionnaire based surveys and interviews with local inhabitants and traditional healers in selected areas in Limpopo Provinces with thermal springs. (Apr – Sept 2012)*
*9.1.7 **Collect** water samples and dispatch to ARC laboratories in Pretoria. (Apr – Sept 2012)*
*9.1.8 **Document** information. (Apr – Sept 2012)*

Methods

Collection of water samples and questionnaire surveys will be conducted concurrently. The questionnaire survey is intended to identify the native IK from communities on the spiritual customs and beliefs associated with thermal springs.

The IK data collected on the origin, uses and customs will be used to document and update the limited literature available on thermal springs in Limpopo Province. It is envisaged that all thermal springs will be visited. Water samples will be collected using standard protocols, analysed and used for Objective 3.

Timeframe:
This activity will take approximately 8 months from the start of the project. IK on as many thermal springs as possible will be documented so that differences in ethnical beliefs at different springs can be compared and included in the study. Intra- and intercultural beliefs, customs and rituals will be noted and analysed for similarities and differences. In view of the short timeframe, 4 teams will be required to travel to different parts of Limpopo Province – each focusing on specific ethnic groups.

Responsibilities **(note that the names of the team members are withheld since permission for their inclusion in this Guide has not yet been obtained)**
Prof A will be the project leader once funding has been obtained. She will be assisted by Prof B (Department of Anthropology, University of South Africa), Dr C, Ms D as well as Dr E (University of Johannesburg) and Dr F (Expert in IK) and Prof G (University of Pretoria) in carrying out research activities specified in this project. Dr H and Mrs I will facilitate the recruitment of field workers and assist in obtaining permission from the relevant authorities as well as establishing customary protocols to be employed. Profs A, B and C, as well as other qualified investigators, will also act as supervisors for post graduate students. The project will be coordinated by Mr J (Kara Heritage Institute).

Student Participants
Post graduate students enrolled at UNISA, the University of Pretoria and the University of Johannesburg will participate in this project. It is envisaged that this study could form the basis of at least 3 Masters-level students in disciplines ranging from Anthropology to Environmental Sciences/Management and Geography.

The same exercise was carried out for Objectives 2 and 4.

If the application form is not as specific as the one presented above, use a GANTT CHART to indicate the ACTIVITIES and the TIMEFRAME. This allows the reader to see at a glance when you are going to do what. See the example of a Gantt Chart in the *Guide on how to write a proposal for Masters and Doctoral students.*

THE BUDGET

Once you reach this stage, **study the guidelines provided by the funding institution again**.

NOTE: EACH FUNDING ORGANISATION HAS ITS OWN RULES AND FUNDING CATEGORIES. STUDY THESE CAREFULLY.

Usually, the types of funding fall into the following categories:

Human resources i.e. salaries and wages. This includes funding for field workers, experts consulted e.g. a statistician, cartographer, editor, translator etc. Some funding organisations allow you to apply for funding for a salary/stipend for yourself and the team members. Such funding is not available for internal funding or NRF projects, but the Water Research Commission does allow a stipend for team members.

Capital expenses: i.e. equipment and instruments. Often the organisation will define capital goods as equipment exceeding a specific amount or items that have a lifetime of more than 1 year. You will have to justify why you need this equipment. Check that all equipment is available at UNISA and in working order. Non-availability of equipment at UNISA could serve as motivation for the purchase any equipment/apparatus using grantholder funding. Breakables (e.g. glassware) or chemicals are **not** usually classified as capital expenses.

Running expenses. This includes breakables, low cost items, the cost of courier services, telephone calls, stationary, printer ink etc.

Subsistence and transport (S&T): This funding category usually includes vehicle hire, flight tickets, fuel costs, toll gates, accommodation and subsistence (food). A considerable amount of detail is required for this category. For example, for **TRAVEL COSTS**, you need to indicate:

> **The number of kilometres that you are going to travel/journey @ cost/km x the number of journeys.**

The cost/km can be obtained from UNISA's Finance Dept.

ACCOMMODATION COSTS include:

> **The number of people travelling/trip x number of nights away x cost of accommodation/person /night x number of trips.**

You usually have to include quotes for all major items such as equipment and accommodation.

DO NOT EXCEED LIMITS
STIPULATED BY FUNDING
ORGANISATION

Some funding organisations also make provision for **conference attendance** and for **students' bursaries**. Funding required for students is usually budgeted for separately and does not fall under the category: salaries and wages.

Since funding organisations may use different terms for funding categories e.g. instead of '*salaries and wages'* they might use '*human resource costs'*. It is imperative that you use the same headings as required, that you stick to the limits and do not ask for items that are not funded by the institution/organisation.

PLANNING THE BUDGET

This step relies completely on the research activities associated with each Objective.

It is suggested that you draw up a spreadsheet/table for the budget separately for each year. Use an Excel or similar program or simply a double sheet of paper and pencil – ensure that you have an eraser handy. The column headings should correspond to the budget items and the rows, to each of the activities. Now for each activity, plan exactly what you must do and the cost of each. Place the description of the item and the amount in the corresponding column. Do the budget for each year separately. Ensure that the budget reflects the activities and time line and that your calculations are correct.

The NHC EXAMPLE would entail the following items for Objectives 1 and 2:

>### *Equipment*
>*Recording equipment for interviews*
>*Camera-recorder*
>*Laptop*
>*Thermometers to measure the temperature of the thermal springs.*
>
>### *Running expenses*
>*Stationary and ink cartridges, telephone costs.*
>*Cellphones with recording abilities.*
>*Sample bottles, a cooler boxes and thermometers are required for each field worker.*
>*The costs of sending samples to Pretoria by courier.*
>
>### *Salaries and wages*
>*Re-imbursement of field workers who can speak the local languages adequately will be necessary to assist with the gathering of indigenous knowledge in rural areas.*
>*An honorarium will be needed to show goodwill to traditional leaders and other holders of IK.*
>*Statistician. Transcriber and translator to capture IK in English.*
>
>### *Bursaries*
>*Bursaries will be required for 3 post graduate students.*
>
>### *Subsistence and Travelling*
>*This project will involve considerable travelling to collect IK. There will be a need for accommodation, hiring of vehicles, fuel costs, tollgates and subsistence associated with these activities. Funds will be required for team members to attend meetings and training in Pretoria. Funds will also be needed for the dissemination of knowledge in the form of conferences presentations or seminars and feedback to holders of IK.*

DRAWING UP THE BUDGET

Once you have planned the budget and know which items are required, you simply have to put values to each of the items in the activities list and to 'balance the books'.

ENSURE THAT THE OBJECTIVES, ACTIVITIES
AND BUDGET ITEMS ARE ALIGNED

IF NOT, YOUR PROPOSAL WILL BE
REJECTED OUT OF HAND

The budget for the NHC project is indicated as Table 1, below.

To ensure that you have covered all the points, ask yourself the following questions:

DOES MY BUDGET:-

- Include a budget narrative that justifies the proposed major budget categories, and/or line items?
- Provide sufficient resources to carry out the project?
- Appear in the format provided by the funding organisation?
- Provide sufficient detail so that the reviewer can understand and appreciate how various items were calculated?
- Relate budget items to objectives, activities and in some cases anticipated outcomes or outputs? (Alignment).
- Include any attachments to justify costs and perhaps unusual requests?
- Identify evaluation and disseminations costs? (If applicable)
- Show that all numbers and computations are accurate?

TABLE 1: BUDGET FOR THE NHC PROPOSAL

| Activity | Component | Details | Kara Institute Proposal: Activities based budget 2012/13 | | | | | | |
			Equipment	Salaries & Wages	S&T	Running costs	Bursaries	Conferences	TOTAL
IK surveys									
5 teams	Training 10 persons	4 vehicles@ R2000			8000				8000
		Transport = 4 x 1 000 km x R2.50/km			10000				10000
		Subsistence 8 x 2 days x R1000			16000				16000
	Field trips: 2 per team; 2 trips	8x vehicles@R2000/vehicle			16000				16000
		Transport = 8 x 3000 km x R2.50/km			60 000				60000
		Accommodation: 8 persons x 2 trips x 3 days/trip x R1000			48000				48000
	Statistician for questionnaires			5000					5000
	Statistician analysis			8000					8000
	Recording equipment	4 x R1200	4 800						4800
	Transcriber/Translator			15000					15000
	Honoraria for holders of IK:	20 springs X R500		10000					10000
	Stationary, ink, tel., posters etc.					10000			10000
	Team members salaries & wages	8 x R2000/d x 10 days		160000					160000
	Camera/cam-recorder		5000						5000
	Laptop		10000						10000
	Thermometers	8 x R800	6400						6400
Chemical and biological analyses									

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	Cooler boxes	4 x R1000	4000						4000
	Courier of 8 samples	8 x R500				4000			4000
	Chemical analyses	20 x R1 000				20000			20000
	Interpretation of results	A & D x 5 days @ R2000/d		20000					20000
Data analyses and interpretation									
	Anthropological analyses	Team members: B, F,H, I, J: 10 days @ R2000/d		100000					100000
	Balaeological potential	Team members: D & A: 10 days each @ R2000		20000					20000
	Tourism planning	Team members: E, G, A, D: 10 days @ R2000/d		80000					80000
	Tourism planning expert			30000					30000
	Cartographer			8000					8000
Progress report	Writing of report/collation of information	A, D &JJ: 8 days @ 2000/d		48000					48000
Final report	Writing of report/collation of information	A, D, J: 5 days @ R2000/d		30000					30000
	Editing			5000					5000
	Production of final report					10000			10000
Student bursaries		3 students X R20 000					60000		60000
Conferences	Local	4 members @ R5000						20000	20000
Meetings		2 meetings with all team members				5000			5000
TOTAL			30 200	539 000	158 000	49 000	60 000	20 000	**856 200**

REFERENCES

Be consistent in the use of the system used for the references. Note whether the funding organisation stipulates any particular system. If so – use it. If not stipulated, use the Harvard Referencing System or one that is commonly used in your discipline. BE CONSISTENT!!

There may not be a specific place for the references. In that case, you could include the references at the end of the relevant section. So you will have a references list at the end of Rationale & Motivation; Methodology etc. **Otherwise** place the references at the end of the document.

ADDITIONALS

Further information is often required by the funding organisation on how you will disseminate (distribute information) and who your collaborators are.

DISSEMINATION OF INFORMATION

It is important that you give attention to how you are going to make your research results available to the public and especially to the people who supplied information to you such. You MUST give feedback to anyone who assisted you in the research. You should also disseminate information through conventional channels in the form of articles and conference presentations. If your research can be assistance to the general public or to specific audiences such as farmers, consider publishing in the popular press. The Public Relations Officer for CAES (Poppie Khosa) will contact relevant newspapers/journals for you.

However, if you want to patent your research results, you must **not** make anything public. Reviewers must first sign a confidentiality form. Information in the public domain cannot be patented. Contact the research office to assist you.

COLLABORATORS

As indicated earlier, there is a difference between co-investigators (people who will be involved in the actual research) and collaborators (who will be consulted for information on specific issues). *In the case of the NHC example, there were 11 co-investigators from institutions ranging from UNISA, the Kara Heritage Institute, UP, UJ, the CRL Commission, and Parliament. Collaborators included the House of Traditional Healers and a number of Traditional Leaders including those people or organisations who were recommended by the Collaborators.*

Always remember, your research proposal is a precision tool from the first word to the last for communicating your ideas that would of necessity be read, discussed and acted upon by others. It is therefore important that you write a well-argued proposal, which is (i) realistic i.e. "*do-able"*, (ii) which is justified by its novelty, intellectual and scientific merit-i.e. "*defendable"* and (iii) which is within the aims and scope of the Funding organisation's policy i.e. "*fundable"*. It must be feasible. (Prof Onwu)

MORE TIPS

- Your proposal should fulfil the criteria for a good proposal i.e. novel, significant and stemming from a concept that is likely to advance the field of research.
- Don't try to impress anyone. The review panel might not all be experts in your particular field of study. So - explain to the reader what the problem is, why it is important that the research be conducted, what has not been done, what you are going to do, how you are going to do it, how long it will take to do, and how much it will cost. Do this in a clear, concise and simple, straightforward way to help the reader to see how all the different parts of the proposal are interconnected. Remember, you are writing for the reader and not for yourself.
- Make sure that you are up to date with the relevant literature and include the latest research/publication in the subject field (Ask you librarian for assistance with what has already been done in the area of your project.)
- Have a copy of a draft proposal available so that when a *call for proposals* is posted*,* you just have to 'tweak' yours to get it into the correct format.
- Plan the structure of the proposal according to the relevant guidelines provided. This is why you should print out a copy of your proposal so as to cross check with the guidelines.
- Express your ideas in a clear, concise and unambiguous manner. There is no place for duplication, vagueness or repetition.
- Stick to the limits. If it is indicated that there is a maximum word count – don't exceed it. This also applies to budget limits.
- Pay particular attention to accuracy of figures, tables, grammar, spelling and style. In general keep sentences short and simple.
- Make sure of the internal consistency of your write up. This means that the information placed under all the headings of the application form (starting from the problem statement through to the research objectives, the work plan, timelines, budget line items, outputs and outcomes) are properly aligned and integrated.
- It helps to have your proposal balanced and well proportioned. Sections that are too short or too long tend to distract and distort the balance.
- CHECK YOUR E-MAILS FREQUENTLY FOR MESSAGES FROM THE RESEARCH OFFICE
- MAKE USE OF THE ASSISTANCE PROVIDED BY THE COLLEGE AND THE RESEARCH OFFICE. WE ARE THERE TO HELP YOU!!!!

GOOD LUCK!!!!!!

ADDENDUM

List of NRF Funding Programmes

1. Africa Bilateral Programmes
2. African Coelacanth Ecosystem Programme (ACEP)
3. African Origins Platform Strategy
4. Bioinformatics and Functional Genomics (BFG)
5. Blue Skies Research Programme
6. Conference Fund
7. Centres of Excellence (CoE)
8. Collaborative Postgraduate Training
9. Community Engagement Programme
10. Competitive Programme for Rated Researchers (CPRR)
11. Competitive Programme for Unrated Researchers (CSUR)
12. DDAD Scholarship Programme
13. Education Research in South Africa
14. Energy Research Programme (ERP)
15. Equipment-Related Travel and Training Grants (ERTTG)
16. Foundational Biodiversity Information Programme (FBIP)
17. Global Change, Society and Sustainability Research Programme (GCSSRP)
18. Horizon 2020 European Research Council (ERC)
19. Human Capital Development for Multi-Wavelength Astronomy
20. Incentive Fund for Rated Researchers (IFRR)
21. Indigenous Knowledge Systems (IKS)
22. Infrastructure Funding Instruments (IFI)
23. Knowledge Fields Development Grants (KFDG)
24. Knowledge Interchange and Collaboration (KIC)
25. Nanotechnology Flagship Project for Emerging Researchers
26. New Generation of Academics Programme (Ngap)
27. Overseas Bilateral Programmes
28. Professional Development programme (PDP)
29. Research Career Advancement Fellowship
30. Research and Technology Fund (RTF)
31. Sabbatical Grants for Completing of Doctoral Degrees
32. South African Antarctic Programme (SANAP)
33. South African Research Chairs Initiative (SARChi)
34. South African Systems Analysis Centre (SASAC) PhD Programme
35. Thuthuka
36. World Academy of Sciences (TWAS) Postgraduate Fellowship Programme.