

Part 3

A research manager's notebook

Sound project management techniques for a new research context

Notes for researchers and research managers



Contents

A little background	2
Research Management: The skills in brief	3
Four key research management tasks	5
1. Manage the legalities of research-grant contracts	6
Nuances of terminology	6
Who sets the terms and who signs?	7
The basic elements of a typical research contract	8
Framework of a typical research-grant contract	9
Signing the contract...	10
2. Establish systems that streamline grant management	11
Find the right tools and customise them for your needs	12
Schedule time to regularly review progress	15
Manage expectations	15
Never stop learning	16
3. Assist with financial reporting	17
Tips for financial reporting	18
What to do if you have to revise a budget	19
4. Drive policies and processes around research ethics	20
Ethics, what ethics?	20
Towards a set of shared principles on research ethics	22
Useful ethics networks and training programmes	23
Summing up	26
Useful resources	27
Acknowledgements	28

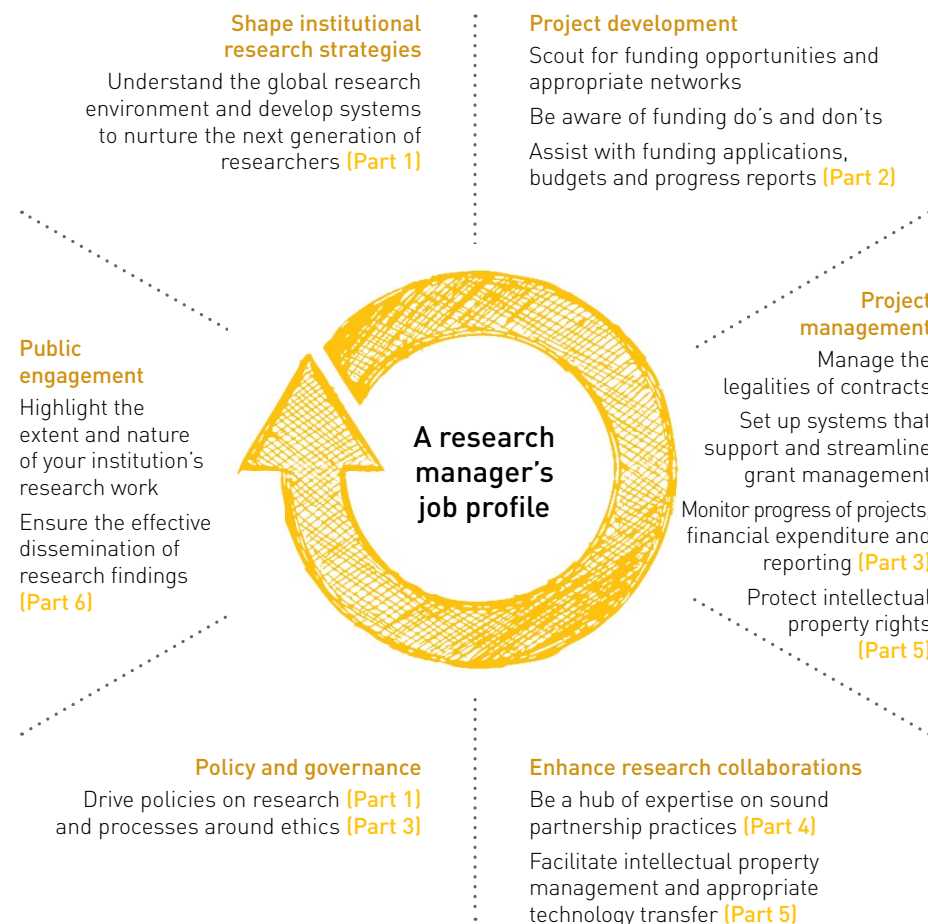
A little background

Although few institutions offer formal qualifications for research managers, this situation is rapidly changing as the discipline of research management becomes increasingly formalised. A place for research managers on the map of the world's professions is being carefully carved out.

This booklet is the third of a series of six in which research managers based mainly in Africa and the Caribbean share their insights, and provide practical guidance on the challenges they have faced in different aspects of their work. The booklets do not contain any strict rules or procedures, but rather suggest issues that you may need to consider as you work out the best way of serving your own institution.

Examples of best practice are being collected and collated by research offices, associations, funding organisations, and more. Based on what has been collected so far, it is clear that solid project-management skills form part of a research manager's most essential resources and therefore, project management forms the primary focus of this notebook.

Research management: The skills in brief



©Research Africa

This diagram illustrates the core skills that research managers need, and shows which book in the series contains more information on each skill. (In designing this diagram, we also drew on the core-competency framework developed by the Association of Research Managers in the UK and the US Society for Research Administrators.)

In some ways research management derives from the broader field of management studies – the notion that, as processes, organisations or institutions grow in number or scale, the efforts and effectiveness of the people involved benefit from being monitored and managed in various ways. Management studies is, itself, a relatively new discipline. This is despite business schools and other institutions dedicated to training managers having grown at a phenomenal rate since the 1950s.

Within management studies, the field of project management offers several useful tools that can be used in managing aspects of research and research contracts. After all, research involves completing a series of tasks in a systematic and efficient way. For this reason, research managers can customise and use many of the tools already developed by project managers.

Many project-management failures stem from a lack of understanding about what exactly the project is. If managers can't define a project properly, they may also struggle to tell if they are managing it well or not. The same applies to research management. If research managers are unaware of the primary goals, or the key developments and milestones in research projects they are responsible for, they cannot assist in managing the administrative requirements of projects or support researchers in doing so.

Four key research management tasks

The rest of this notebook provides some pointers about four aspects of project management which are particularly relevant to research projects:

- 1 **Managing** the legalities of research-grant contracts
- 2 **Establishing** systems to streamline grant management
- 3 **Assisting** with financial reporting
- 4 **Driving** policies and processes around research ethics

Of course, the complexities of this topic go well beyond what can be covered in a short booklet, so some additional resources are listed on the last few pages. We also urge you to share your own experiences with us at info@research-africa.net. Where appropriate, we will make these available via the relevant regional networks.

Most of us learn best by doing. try out different project management tools and resources and find the ones that work best for you.

1. Manage the legalities of research-grant contracts

Oh happy day! Your institution has been awarded a research grant. The crucial role that you can play now is in helping to ensure that the grant is formalised as a written contract, a letter of agreement, or a memorandum of understanding.

No money will arrive until the contract has been signed



Most people feel a bit wary about signing legal documents, especially if they have no legal training. But as you become familiar with what goes into a research-grant contract, you will be able to reassure your academic colleagues about what has to be included, and alert them to possible pitfalls.

Of course, contracts assume and sometimes define the nature of the relationship between two parties. See **Part 4** of this series for crucial tips on how to establish healthy and mutually beneficial research partnerships with different kinds of organisations.

Nuances of terminology

Some donors prefer to call their contracts memoranda of understanding (MOUs) or grant agreements, but if they record an exchange of money or resources, these are still considered to be legally binding 'contracts'. In other words, contracts are essential when there is an exchange of money or any other asset. Ideally, contracts help to protect the interests of all sides and ensure that mutual trust develops between parties.

MOUs, on the other hand, tend to be signed when two organisations agree to work together, *each using their own resources*. In general, MOUs are simpler, more flexible and less formal than contracts, but more formal than verbal agreements. Well-written MOUs reflect diplomatic savvy and creative thinking. They also provide a mutually beneficial framework within which different entities can work together to achieve individual and shared goals.

Who sets the terms and who signs?

Donors usually draft the funding contracts, outlining the accountability and responsibility of each party (in this instance, the word 'party' refers to the institutions or individuals that sign the contract).

Sometimes, bursaries, fellowships and small research grants happen at a personal level, and in these cases *individual researchers* can sign the contracts.

Large grants for big research projects require a designated representative from the research institution to sign the contract. This is usually a deputy vice-chancellor, the director of research, or the chief financial officer.

Smaller travel grants and bursaries can be managed through letters of agreement. As these letters are legally binding, it is wise to give them the same care and consideration as you give to contracts.



The basic elements of a typical research contract

- The signatories or parties to the contract are named
- The legal capacity of the parties to act is noted
- The street address of each party is noted
- The grant made by the donor and its acceptance by the recipient(s) are recorded
- The broad aims of the research project are stated (a schedule can be attached as an addendum)
- The timing, process and conditions related to the payment of funds are stated
- The timing and frequency of reports from the recipient are noted
- Intellectual property rights are allocated (see Part 5 for more on this)
- Processes for amending the contract, and circumstances of further negotiation, are outlined
- Processes relating to mediation between parties or the cancellation of the contract are described
- The consent of the parties is denoted by the signatures of the individuals authorised to sign the contract. They, and (usually two) witnesses initial each page and sign in full on the last page
- Once signed, the contract is legally binding

Not all research-grant contracts are identical. The elements listed on this page are the minimum requirements for a contract to serve as proof of evidence should anything go wrong.



Framework of a typical research-grant contract

1. Agreed grant amount
2. Project objectives
3. Administering institution
4. Contacts
5. Availability of the grant
6. Amendments
7. Attachments
 - Attachment A – Additional terms and conditions of the grant
 - A1 Definitions
 - A2 Disclaimer
 - A3 Dissemination of results
 - A4 Project budget
 - A5 Grant administration
 - A6 Payments and financial reports
 - A7 Allowable expenses
 - A8 Centre review and audit
 - A9 Return of funds
 - A10 Visit to project
 - A11 Compliance with national laws
 - A12 Interpretation of this agreement
 - A13 Sub-contractors
 - A14 Notices
 - A15 Non-compliance
 - Attachment B – Schedule of project milestones
 - Attachment C – Project budget
 - Attachment D – Banking information form

Based on a letter from the International Development Research Centre (Canada)

Signing the contract...

The research-grant contract will be sent to your institution for signing. Sometimes several copies are sent so that each party has an original document. Before you send your copy back, scan or photocopy the document. Later, you should receive a copy that includes the donor's signature. The signed document is the key founding document. Everything will be reported, monitored and evaluated against it. Keep the original in a fireproof safe, and file a copy in an official project file. Give copies to the project's principal investigator, and the relevant financial officer.

Design a filing system, and keep up-to-date with filing. Too much precious time is wasted in trying to find documents.

Managing a contract requires you to be highly organised:

- Keep a note of your institution's legal obligations and financial responsibilities.
- Diarise key reporting deadlines, and refer to the contract often to make sure that the project is on track in relation to what was agreed.
- Send reports in on time.
- Should you need to change your plan in any way, inform the donor before you make a change; get their consent and ask for their advice.

It is hard to believe, but many recipients don't take reporting requirements seriously. Remember that your track record will be considered when it comes to future grants and job offers.

2. Establish systems that streamline grant management

You can have it done cheaply, quickly or properly - choose any two!

Most research projects involve constant trade-offs between three elements: the time available, the budget, and the quality of the work that is possible in relation to the first two.

Effective research management requires careful management of these three elements, making sure that there is a good balance between them, and *knowing what and how to prioritise* if you don't have enough of any one element.

Of course funders often want maximum quality, completed yesterday at minimum cost. And no researcher wants to see their efforts wasted because time runs out, or because there is no budget left for the dissemination of their findings.

A good research manager must keep track of key project milestones; how much the research is costing; when funds need to be spent, and what will be delivered at the end of it. Problems that may arise must be identifiable and then be addressed as early as possible.

Find the right tools and customise them for your needs

Google the words 'project management' and you will find loads of hints, tips and free software. Since the early 1900s, engineers, business leaders and others have spent vast amounts of time and energy thinking about project management and developing useful tools for project managers. Some of these tools can be usefully adapted for research management. However, *before* you impose your own favourite tools on anyone else, including your research colleagues, try them out thoroughly first. Be very sure that they do help to simplify tasks, provide timely reminders of what needs to be done, or prevent duplication of work.

The last thing anyone needs is an unwieldy system of rules and regulations that make no sense and add to your workload

One approach that is quite widely used by research managers is known as JPACE, which stands for **Justify, Plan, Activate, Control** and **End**. JPACE neatly captures the life cycle of a typical project, thus helping one to keep tabs on each stage of a process. Let's consider each phase, one by one.

Justify: researchers have to justify the need for a specific project. They have to come up with a concept and explain the objectives of the project. This is then used to produce a detailed proposal with budget, time, objectives and deliverables.

Plan: this breaks down all the work that needs to be done to accomplish the project – activities are listed; a budget is developed and possible income sources identified; a schedule is worked out, and risks are assessed and contained. At the end, the plan has to be approved by the relevant stakeholders and the funding obtained.

Activate: the activation phase is when stakeholders are informed, participants briefed and expectations clarified. The project team is trained. A kick-off meeting may be necessary. It is sometimes advisable to review the justification and planning phases of the project as part of the activation phase to make sure that all stakeholders and participants agree that the timeframes and budgets that have been allocated are appropriate. Deliverables and activities may need to be re-affirmed in the light of such discussions, and all stakeholders need to be consulted if any changes are proposed.

Control: managing or controlling a research project is a multi-faceted task. Project tasks must be tracked, performance must be monitored and staff development must be encouraged. If revised plans become necessary, the research manager must remember to obtain approval for revisions. For example, if a budget turns out to be smaller than expected due to currency fluctuations, the research manager may then need to consider applying for complementary funding.

End: The end phase is about tying up all the loose ends, making sure that everyone has been paid; everyone has been thanked; the research has been properly disseminated; the final reports have been submitted, and the expenditure has received a clean audit. More importantly, this phase is about reviewing the process in order to make sure that all participants have learned as much as possible from the experience. Often we move quickly from one project to the next without spending time reflecting on what we've learned and sharing ideas about what we could do better in future.

If project management isn't your strongest point, ask research managers at other institutions what tools they use, and why. Even better, find successful researchers, who feel supported by their institutions, and ask them what works for them

Consider using a Gantt chart or Kanbanize

A Gantt Chart (also known as a critical path chart) is an effective visual aid for tracking and managing project tasks and milestones. Gantt charts were developed by Henry Gantt, an American engineer and management consultant. If kept updated, Gantt charts can help you to plan, co-ordinate, and track specific tasks in a project.

You can find out more about Gantt Charts and how to use them at

<http://www.mindtools.com>.

Kanbanize is another free online tool that is well worth experimenting with.

See <http://kanbanize.com>

Whichever project management system you use, establish a sensible workflow, and then track your schedules, budgets and significant milestones effectively.



Create templates to save time

As you gain experience in managing research you'll discover that templates or master documents can simplify your life and save you time. Templates are just documents that you create once and then adjust or adapt to suit new projects. They can be anything from standardised thank-you notes, budget spreadsheets, timesheets that track progress on a research project, or the main headings of a typical project report.

You can develop a template for any document that you find yourself writing often. Just take care to edit the information each time, and never leave old data in a new document.



Schedule time to regularly review progress

As with life in general, unforeseen circumstances occur in research projects too. All you can do is to try to be prepared to handle them as they arise. Your ability to do this will increase as you gain experience, but a good first step is to make time to regularly review your project against targets that were set at the outset. This ensures that you avoid nasty surprises right at the end of a project.

If certain targets have been missed, look for ways in which you can address this. Make sure that the necessary people are informed and then try come to some form of agreement or compromise as to what happens next.

Manage expectations

As work progresses, remember to manage the expectations of your colleagues, your funders, your research institution and any other important stakeholders. Research goals may need to be revised during a project's activation phase and as a research manager, you'll need to constantly monitor and manage any risks associated with possible delays or changes.

A point not to be missed is that milestones need to be accurately spaced to help track progress. Don't space milestones too far apart, and remember that even small achievements should be logged.

Funders tend to penalise both overspend and underspend unless it is explained and approved during the research process.



Never stop learning

Project management can seem a bit overwhelming at first, but once you find the appropriate tools and apply them to the different aspects of your work, you should be able to track the progress of each project. This should empower you to see possible problems as soon as they arise, deal with any crises promptly and ultimately ensure that projects run more smoothly.

Try not to become too loyal to particular ways of doing things. Keep asking yourself, and those who use your services, how you can improve what you do.



If you are willing to reflect honestly on your successes *and* your failures, you will be able to constantly sharpen your skills. As you gain experience, you will make an invaluable contribution to your institution and to the production of new and useful knowledge. *You can help to change the world!*

3. Assist with financial reporting

As a research manager, you may have to be involved in advising researchers on budgets and costs when they draw up research proposals and apply to donors for funding. You may also be required to monitor project budgets as they get spent and assist with financial reporting.

Carefully monitoring finances is paramount to keeping donors happy. Donors want to be able to see that their money is being put to good use, and that their inputs measure up to research-project outputs. Financial reporting forms a big part of managing any project, research or otherwise, and you'll need to have a good idea of what is expected of you in terms of reporting to the funding body.

Frequent budget checks are crucial - a 10% budget overrun is far easier to correct than a 50% overrun.



Tips for financial reporting

- Keep a tight rein on spending and update the books at least once a month.
- If the project runs over or under budget, make adjustments in good time.
- Seek accounting advice. If you're fortunate enough to have access to the services of an accountant, ensure that he or she is fully aware and supportive of your work, and helps you to check expenditure against project budgets. If you don't have access to an accountant, you may need to do much of the financial reporting yourself and submit this to your institution's finance system for checking.
- Keep everything. All slips and other proofs of expenses incurred under the project need to be recorded and reported on.
- Keep accurate records of all research work done and outputs produced.
- Ensure that financial and progress reports are submitted on time. Often, the next tranche of research funding is only released once you've submitted a progress report. The more timeous your submission, the more quickly you'll get paid out.
- Watch that budget! Make sure that you maintain reasonable cash flow to ensure that you can continue in your work even if funding gets delayed. This is especially important if project expenses are incurred before you get reimbursed for them.
- Develop your accounting skills. The financial aspects of managing research are complex but not difficult to learn. Keep an eye out for workshops on financial management for non-financial managers and the like, and attend these to boost your skills, ask questions and learn more.

The better your financial reporting, the higher your chances of receiving further funding.



What to do if you have to revise a budget

Budgets seldom run precisely according to plan. Make sure that your institution has controls in place to prevent unplanned or unauthorised expenditure. Remember that trade-offs are permissible when necessary. If money has to be spent on something that wasn't budgeted for, try to find another expense item that can be removed or adjusted to 'finance' the new item.

However, it is vital to always ensure that changes to expenditure under a budget are always within the limits set by the funders. If this is impossible, seek permission from the funder before authorising any changes. Remember that the funder has agreed to cost, time and output criteria, and anything that deviates too far from this must be renegotiated.

There are no medals for saving money, so spend the budget.
- Shelagh Gastrow, Executive Director, Inyathelo

4. Drive policies and processes around research ethics

Just as the role of donor agencies is transforming the nature of research and research funding, so technological innovations have created a range of new ways in which researchers can take shortcuts or falsify research data. Thus vigilance in relation to research ethics is becoming more and more essential. Yet, in many developing countries, policies on research ethics are not well established, leaving researchers to find their own way.

Being forced to defend diabolical errors of judgement or outright plagiarism on the part of researchers is something your institution can avoid if the values surrounding research ethics are first debated and then firmly entrenched in an institutional ethics policy, alongside the necessary expertise and administrative support systems.

Research managers can promote ongoing debate around questions of research ethics, and help to ensure that effective monitoring systems are set up.



Ethics, what ethics?

Contrary to what many people believe, ethical debates are not restricted to the realm of philosophy. We all live according to ethical principles or value systems that affect what we do and how we act. Professional ethics are norms that help us distinguish between acceptable and unacceptable behaviour at work; they form the basis of codes of conduct that determine the morality or immorality of our actions as employees and professionals.

In the past, ethics and the values they were based on often remained unspoken; perhaps there was less need to articulate such values when communities were smaller and shared common cultures. Nowadays, the growth of inter-regional and international collaboration, and the tendency for

researchers to move around the world in search of work, means that many institutions are seeing the value of developing policies on research ethics and implementing these across all research activities, from undergraduate to post-doctorate level.

This could be you...

The amount of biomedical and social science research undertaken in African and Caribbean countries is often underestimated. For example, Temidayo Ogundiran, from the College of Medicine at the University of Ibadan and the University College Hospital in Nigeria has identified three categories of research in Nigeria that should receive more attention in relation to the ethical dilemmas they pose:

- Industry-sponsored research is undertaken by researchers for pharmaceutical companies wishing to promote new or old drugs. In these cases, research protocols may be indigenously developed or be a part of multi-centre trials. In most instances, companies do not go through the institutions where the researchers are based, but deal directly with individual researchers, who may or may not subject research protocols to ethics-board reviews.
- Collaborative research with colleagues from middle- to high-income countries is often externally funded. This includes hospital and community-based trials and mostly involves experimenting with drugs or vaccines. Of particular ethical concern in collaborative research is the fact that external sponsors may differ in their motives for conducting research, and the benefits to the country or local community may be limited. Moreover, the researchers and/or institutions tend to be vulnerable to financial pressures.
- Clinic- and community-based research can also be carried out by non-governmental organisations, which can be subject to similar financial pressures.

This text is adapted from Temidayo O Ogundiran's (2004) article 'Enhancing the African Bioethics Initiative' *BMC Medical Education*, 4:21

The need for the individual clinician/researcher to be committed to upholding high ethical standards and principles that respect the social, cultural, economic, educational and religious values of the people cannot be over-emphasised

- Temidayo O Ogundiran, College of Medicine,
University of Ibadan and University College Hospital, Nigeria

Towards a set of shared principles on research ethics

First published in September 2010, the principles and responsibilities set out in the Singapore Statement on Research Integrity are the product of the efforts and insights of the 340 individuals from 51 countries who participated in the 2nd World Conference on Research Integrity. Included in this group were researchers, funders, representatives of universities and research institutes, and scholarly publishers. The Statement represents the first international effort to encourage the development of unified policies, guidelines and codes of conduct.

The aim of those who drew up the Statement is to challenge governments, organisations and researchers to develop more comprehensive standards, codes and policies to promote research integrity both locally and globally.

To see the statement, go to:

<http://www.singaporestatement.org/statement.html>


Useful ethics networks and training programmes

Perhaps it is not surprising that ethics networks related to the medical and biomedical fields are better developed than most. The Pan-African Bioethics Initiative, for example, aims to increase dialogue and the flow of information among researchers in Africa, and to spur the development of bioethics capacity.

South African Research Ethics Training Initiative (SARETI) offers scholarships to health professionals in Africa. The scholarships give full financial support to four master's degree students annually. Self-funded or sponsored students can also apply. The programme is targeted at scientists, members of research ethics committees, public health personnel, social scientists, philosophers, ethicists, health journalists and lawyers whose work impacts on health. SARETI, a University of KwaZulu-Natal project, is funded by the Fogarty International Center of the US National Institutes of Health.

The Europe and Developing Countries Clinical Trials Partnership (EDCTP) have channelled a great deal of resources into funding research ethics development for African researchers. EDCTP note that many African countries lack ethical guidelines, and some lack regulatory bodies. To strengthen local capacity in both ethical review and the national regulatory framework in Africa, the organisation provides support through:

- Establishing and strengthening institutional and national ethics committees
- Running training courses and seminars
- A co-ordinating office that oversees activities in clinical trials and related research activities



PAHO (Pan American Health Organisation) has information on more than a thousand research ethics committees in Latin America, including eight committees in four Caribbean countries.



The University of Ibadan in Nigeria has run the West African Bioethics Programme since 2007. The programme aims to build the capacity of ethics committees throughout the West African region. Certificate and refresher courses are offered to members of ethics committees, researchers, and administrators. The programme accepts an average of 20 students per year and also organises public lectures to increase general awareness around bioethics.

This could be you...

Cheryl Macpherson is Professor and Chair of the Bioethics Department, School of Medicine, St George's University, Grenada. In a presentation on research ethics, she noted that as research capacity expands in the Caribbean, new challenges arise for the protection of human research participants and the ethical conduct of research.

For a variety of reasons, research generated in wealthy nations is often conducted in low- or middle-income nations, including those in the Caribbean. Host nations, however, rarely negotiate with overseas investigators to agree upon an equitable balance between the anticipated value and benefits of the protocol on the one hand, and the potential risks and harms to participants in host nations on the other. This is where shared values and ethics policies become essential.



The vulnerability of participants with less education and fewer resources than others warrants special protections, but this fact is often overlooked.

Summing up

This booklet has touched on some very different topics, each of which could easily become a specialist area for individual staff members. If, like many other research managers or administrators, you do not have the luxury of such colleagues, try to find out where there are training workshops that teach ethics management skills in your region. You'll be able to grow your network, find support and develop the skills necessary for you to enjoy the variety that your job as a research manager entails.

Useful resources

Ethics

Daar, AS and Singer, P (2002) '*Human Capital is Key to Research Ethics*' SciDev. net, 25 April. Available online at www.scidev.net/

Resnik, DB (2011) '*What is Ethics in Research & Why Is It Important?*' National Institute of Environmental Health Sciences website, 1 May. Available online at <http://www.niehs.nih.gov/>

Royal College of Nursing (2009) '*Research ethics: RCN Guidance for Nurses*'. Available online at www.rcn.org.uk

Shamoo A and D Resnik (2009) *Responsible conduct of research* (second edition). New York: Oxford University Press

Singapore Statement on Research Integrity. Available online at www.singaporestatement.org

Management tools

Rouse, M (2007) '*Definition: Gantt Chart*'. Search Software Quality.com, May. Available online at <http://searchsoftwarequality.techtarget.com/definition/Gantt-chart>

Westland, J (2011) '*Project Management: 4 Ways to Manage Your Budget*', 23 June, CIO. Available online at www.cio.com

Acknowledgements

Core Competency Framework diagram adapted from resources developed by the Association of Research Managers – UK Professional Development Framework and the US Society for Research Administrators.

Frank Heemskerk for information about EU contract documents provided at a workshop in Gabon in March 2011.

Dr WA Hoffman, chairperson of the Tshwane University of Technology Ethics Committee, for his input at the SARIMA workshop in Pretoria, 13–14 February 2012.

Patrice Ajai-Ajagbe from the Association of Commonwealth Universities, Maryke Hunter-Husselmann from Stellenbosch University and Riana Coetsee from Stellenbosch University for contributions on research management made via the RIMI4AC project.

Josepha Foba Tendo of the University of Buea for her presentation on 'Issues in Research Management in Africa', RIMI4AC workshop, London, October 2012.

Dr David Langley, Bristol University, for his presentation 'Current Trends in Research Management and Administration', RIMI4AC workshop, London, October 2012.

Sandra Prosalendis, Munyaradzi Makoni and Claire Maasch for pulling this material into a cohesive form.

Mary Ralphs for her editorial expertise and Tracey Watson for design and typesetting.

First published in 2013 by Research Africa

© 2013 Research Africa



Produced under the RIMI4AC Project funded by the European Commission's Africa, Caribbean and Pacific Science and Technology Programme.
Grant no. FED/2009/218782.

