

Chapter 4.1

Professionalisation of Research Management and Administration in Southern Africa – A Case Study

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Abstract

This case study will illustrate how the Southern African Research and Innovation Management Association (SARIMA) set in motion a professionalisation journey through close collaboration with its members while leveraging strategic partnerships and funding opportunities. The case study will highlight the impetus that inspired the journey, and the outputs aimed at accelerating the professionalisation of research management and administration (RMA) beyond Southern Africa.

Keywords: Professionalisation; research management and administration; competency framework; professional recognition; Sub-Saharan Africa

Background

There are many factors that contributed to the development of RMA globally. Two of these drivers are: the growth in the importance of research and related activities, and

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the increased levels of legislation, regulation, oversight and compliance that are associated with them (Carter & Langley, 2009; Goodman, 2019; Kirkland, 2009).

Using a global lens, RMA has grown significantly over the years. Lewis (2014) attributes the expansion and specialisation of 'non-academic' roles in higher education to a more visible, globally linked RMA community. Poli (2021d) points to the growing body of academic literature as research managers and administrators (RMAs) engage in research into the practice of RMA. Derrick & Nickson (2014) argued that the growth is evident from the establishment of professional organisations for RMAs across the world. The membership directory of the International Network of Research Management Societies (INORMS) shows that 6 of the 21 member associations were established in the last 20 years and 7 more in the last 10 years. In Africa, SARIMA is the oldest, celebrating its 20th year of existence in 2022. SARIMA has four sister organisations, the three in Central (CARIMA), West (WARIMA)¹ and East Africa (EARIMA) were established and/or strengthened through a European Union funded project titled *Improvement of Research and Innovation Management Capacity in Africa and the Caribbean for the Successful Stimulation and Dissemination of Research Results (RIMI4AC)*. The latest addition is an association in North Africa (NARIMA) established in 2020.

RMA and its professionalisation is still evolving in Southern Africa and Africa at large, with the need for continued advocacy. In their study of 200 universities in Africa, Akindele and Kerridge (2019) concluded that most African universities still do not possess dedicated research support services. Although there is a growing number of research offices, they admittedly have diverse structures, resources and capacity (Dyason et al., 2017). Prof. Tom Kariuki, the Director of the Alliance for Acceleration of Sciences in Africa (AESAs)² recently stated that capacity development remains a key challenge hindering the development of research management ecosystems in Africa (ARMA UK, AESA, Wellcome Trust, 2021).

In the early years, much of SARIMAs focus was on South Africa, the country from which it originated. With the establishment of a portfolio first for Southern African Development Community (SADC) Engagement and later renamed to Africa Engagement, SARIMA showed its commitment to expand its footprint on the continent. SARIMA has joined forces with many partners over the years to build capacity and to take the first steps towards professionalising RMA.

SARIMAs 2011 Strategy for Capacity Building and Professionalisation, the outcome of stakeholder engagements and results from surveys laid the foundation for its professionalisation journey, allowing SARIMA to get a better understanding of the capacity needs and professionalisation preferences of the RMA community in the region (Williamson et al., 2020). The stakeholder inputs pointed to the need for SARIMA to broaden its training programme to accommodate a wider range of topics at differentiated levels of development from basic to advanced, context appropriate professional accreditation and postgraduate level qualifications in RMA. SARIMA responded by developing a concept for professionalising RMA. The generous funding support from the Department of Science and Innovation (DSI),³ South Africa and the Special Programme for Research and Training in Tropical Diseases (TDR)⁴ at the World Health Organisation (WHO), allowed SARIMA

¹WARIMA – <https://warima.org/>.

²AESA – <https://www.aasciences.africa/programmes>.

³DSI – <https://www.dst.gov.za/>.

⁴TDR – <https://tdr.who.int/>.

to embark on a journey to pave the way for the professionalisation of RMA in the Southern African region and beyond.

Literature has mooted the complexity of RMA. RMAs often come from a variety of backgrounds and experiences (Bertero et al., 2012; Poli & Toom, 2015) and have been referred to as blended professionals (Poli et al., 2014) who often 'fall into the career' (Green & Langley, 2009). They fulfil a range of roles, with new roles constantly emerging (Bertero et al., 2012; Green & Langley, 2009; Hockey & Allen-Collinson, 2009) requiring them to expand the boundaries of their work (Whitchurch, 2008a). It becomes more complex in the absence of a common understanding of what RMA is. Some efforts made globally to scope and define RMA are documented by Keridge (2021a) and Poli (2021d). In Africa, RMA is often still very narrowly defined. A Wellcome Trust commissioned report concluded that RMA in Sub-Saharan Africa often equates primarily to good grant management (Consort, 2017). SARIMA aimed to define the profession for the African continent through the first phase of its professionalisation project. The aim of the Professional Competency Framework (PCF) for RMA was to unify RMAs through a common understanding of the scope and nature of the developing profession in the region.

It is worthy to note that SARIMA, from its inception, has been an integrated organisation covering both research management and technology transfer management.⁵ While appreciating the complementary role of research and technology transfer management at an organisational level, SARIMA acknowledges that different skill sets and competencies are required and treat research management and technology transfer management as distinct professions. While this case study only focusses on SARIMA's journey to professionalise RMA, there is a parallel journey to professionalise technology transfer management. SARIMA is a member of the Alliance of Technology Transfer Professionals (ATTP)⁶ providing access to the Registered Technology Transfer Professional (RTTP) designation for technology transfer professionals who are members of SARIMA. SARIMA has been represented on the Council of ATTP, allowing the association to participate in shaping the profession (Southern African Research and Innovation Management Association (SARIMA), 2022a).

Professionalisation Journey Phase I: A PCF for Southern Africa

The PCF was developed through a qualitative, socially constructed study following an action research design with organised reflection (Reynolds & Vince, 2004) as the overarching approach. This section will draw on Williamson et al. (2020) who reported on the conceptualisation and development of the PCF.

The inception included setting up a Project Advisory Committee with representation from key stakeholders, including government, funding agencies, private sector and public research institutions, to guide the study. Through collaboration with the Association of Research Managers and Administrators (ARMA) in the United Kingdom (UK), SARIMA used an existing framework developed for the UK context (ARMA, 2011) as the foundation for a contextualised version for Southern Africa.

⁵Involving knowledge transfer and commercialisation practitioners.

⁶ATTP – <https://attp.global/>.

A methodology was conceptualised within open-ended responsive parameters and the contextualisation was done through an action research project working with purposefully sampled participants in the RMA profession (Williamson et al., 2020).

An initial exploration of extant competency frameworks provided a draft framework with seven functional areas which was explored and refined through a pilot phase. Pilot focus group participants reflected on their roles, level of operation, technical competencies and the competence gaps they need to fill to better perform in their roles. They also had to reflect on the gaps in the functional areas, how these could be structured to best define RMA in their context and support a dynamic and growing profession. The outcome was nine key competency areas (KCAs) and three levels of competencies (administrative/operational, management and leadership/strategic) that provided the resource for the data gathering and analysis (Williamson et al., 2020). During subsequent focus groups, participants confirmed the validity of the nine KCAs. ATLAS.ti, a qualitative data analysis software, provided for an integrated project management base. Each of the nine KCAs and the three levels of operation were populated with the findings of the focus groups' contributions. Where they emerged from the data, distinct sub-areas associated with the KCAs were included. Principles for the analysis were that the participants must be able to 'see their thinking and words in the PCF', yet also the vast data must be rationalised to achieve a user-friendly and contextualised framework. The literatures were also themed against the nine KCAs and an interweaving of the empirical data and secondary data applied to each competency area (Williamson et al., 2020). The nine KCAs are:

1. Organisation and delivery of a research management service.
2. Research planning, strategy and policy development.
3. Researcher development.
4. Partnerships and collaboration.
5. Research funding.
6. Research ethics and integrity.
7. Managing funded research.
8. Research data and research information management.
9. Research uptake, utilisation and impact.

Besides the technical competencies associated with each KCA, the participants repeatedly identified transferable ('soft') skills. Initially, these were collated and reviewed holistically, but as the PCF took shape, they were organised according to the competency areas and level of work (Williamson et al., 2020). Using the PCF as the basis, Holmes-Watts and Engelbrecht (2021) explored the critical RMA competencies required for the 'new normal' during and post-Covid. They too have emphasised the critical role transferable competencies play and will play in being a RMA professional. A SARIMA study conducted in 2021 further explored this dimension, reflecting on what RMA practitioners offer as 'human-being' professionals and not only knowledgeable experts (Williamson & Dyason, 2023).

The PCF was firmed up through several feedback sessions from the Project Advisory Committee and additional consultations, including online consultations, to broaden the scope for inputs. The PCF was formally adopted in December 2016 (Williamson et al., 2020).

Although the PCF was initially designed for the Southern African context, the participation of representatives from sister organisations in Africa and from other

low- and middle-income counties in consultation sessions provided a platform to test its relevance to other contexts.

SARIMA has actively been using the PCF as the basis for targeted training interventions and for the competency assessment of RMAs applying for professional recognition (discussed in the next section). SARIMA advocates for a contextualised use of the PCF considering aspects such as the level of specialisation and the capacity of a RMA team. Likewise, SARIMA views the PCF as formative, and at its crux, it is to be kept relevant through feedback and revision. The PCF should be a dynamic framework that keeps track of the developing profession.

In 2022, SARIMA completed a study that is now being prepared for publication, exploring how the PCF enters the university RMA system and builds learning outcomes. The case studies confirmed the usefulness of the PCF for personal learning, for universities to map out the professional development learning pathways for their RMA staff and, in general, for deepening individual professionalisation.

Data gathering during this first phase of SARIMAs professionalisation project provided the opportunity to supplement the data of previous surveys and consultations mentioned in the Background section. The collective data confirmed that research managers in our context are highly qualified (over 70% had a doctorate or masters qualification) (Williamson et al., 2020) and that professional certification and post-graduate qualifications in RMA were high on their list for professionalisation. These inputs and the insights of research management leaders were incorporated in the PCF (Williamson et al., 2020) and in the design of professionalisation routes that were at the centre of the second phase of the SARIMAs professionalisation project. Research management leaders were clear that the more professional we are as RMAs, the more credibility we have. They also viewed a balance between the hard and the soft competencies as essential.

Professionalisation Journey Phase II: Professionalisation Pathways Beyond Southern Africa

The implementation of three key initiatives, through partnerships and collaboration, formed part of the second phase of SARIMAs professionalisation project. These initiatives are offering different pathways for recognising professional competence, not only for research managers in Southern Africa, but across the African continent.

A University Accredited Certificate in Research Management

SARIMA and its partners developed a suite of six online courses through the multi-funder supported Science Granting Councils Initiative (SGCI).⁷ Expert practitioners sourced from research institutions in Southern, East, West and Central Africa developed the course content using the PCF as a reference and incorporating regional perspectives. Implementing the courses was guided by quality, accessibility and relevant and needs-based content. Each module provides a balance between theoretical content and practical application, and is reinforced through case studies, work-based assignments and facilitated online discussions (Jackson et al., 2020).

⁷SGCI – <https://sgciafrica.org/>.

The fully online short courses, certified by a highly ranked South African University, provide a flexible learning solution. It is constituted by the following courses and learning outcomes:

- (i) Fundamentals of research management – equips learners with a range of knowledge and experiences that promote the value of the RMA profession.
- (ii) Intellectual property, technology transfer and commercialisation – provides a foundation for the management of intellectual property, the technology transfer process and the commercialisation process within a public research organisation.
- (iii) Programme evaluation – provides learners with the core knowledge and skills to capably design, guide and implement effective programme evaluation.
- (iv) Research grants and contracts management – explains how post award management fits into the entire grant management process and how best to set up and manage projects in line with budgets and funder expectations.
- (v) Ethics and integrity – helps learners develop the competence to promote, foster and support research ethics and integrity, compliance and responsible research conduct to understand the ethical challenges of research work.
- (vi) Research and gender in science, technology and innovation – examines the mutual shaping of gender and science, technology and innovation (STI) in the national systems of innovation in Africa and explores how gender becomes imprinted in new scientific knowledge and new technologies, and how women and men encounter the products of science and technology differently.

The programme is targeted at early- to mid-career RMA professionals and was designed to ensure improvement in the general level of skills in these practitioners, enabling them to perform better within their current job roles or to support their advancement to a higher-level professional role.

The courses run over a twelve-month period and the duration of each course ranges from five to eight weeks, with three to four learning hours per week. A certificate of competence is issued for the successful completion of each course.

In its pilot phase under the SGCI project (2017–2019), 69 research managers from 13 Science Granting Councils in Africa took part in the online programme. The programme was accessible to Anglophone, Lusophone and Francophone countries, representing the main official language communities across Africa. The certificate programme was launched to the general RMA community in 2020, and to date, the participants have primarily been individuals sponsored by their institutes or through capacity development projects.

A Postgraduate Diploma in RMA

A new Postgraduate Diploma in RMA – as the first formal academic qualification in RMA in and for Africa – was established through an EU Erasmus+ programme funded project entitled *Strengthening of Collaboration, Leadership and Professionalisation in Research Management in SADC and EU Higher Education Institutions (StoRM)*.⁸ The course was developed in recognition of the fact that professional RMA structures and systems within African universities are critical enablers in achieving

⁸StoRM – <https://sites.google.com/view/projectstorm/home?pli=1>.

maximum research and innovation impact in an increasingly competitive global environment, and that the effectiveness of these structures depend on skilled research and innovation managers (Langley & Theron, 2018).

Stellenbosch University (South Africa), through its Centre for Research on Evaluation, Science and Technology, offers the qualification, which provides a comprehensive introduction to RMA theory, practice and the latest trends via four modules offered over two years (<https://www0.sun.ac.za/crest/students/pgd-rma/>). Students are typically early- or mid-career staff members working in Research Offices (or equivalent structures) at research institutions. The course content is relevant to global settings but focusses on the African context. The PCF developed by SARIMA over the past decade has served as a foundation for the development of the course content.

Delivery of the course is through a combination of lecturing sessions, ongoing online support and tutor groups, self-study and written assignments to be completed within the work context of the participants. Each module includes an initial five-day face-to-face lecturing block. The modular structure of the course aims to make it accessible to working individuals.

The aim of the course is to develop a comprehensive RMA-related skills set, as summarised below:

Module 1: The research landscape in Africa – describe the unique environment, conditions and features that define African research, explain the trends in the governance, institutional landscape, R&D funding and scientific output of African countries and reflect and comment on the role of university research offices against the broader landscape of African research.

Module 2: The management of research and research-related information – identify, characterise and explain the roles and interactions between the relevant internal and external stakeholders in the management and use of research- and research-related information. Specify and describe the different types of information, and the information management systems and databases required for its collection, management and use. Develop an understanding of the basic principles of the development and management of databases with a view towards integrated reporting; and explain and demonstrate how research performance is measured using basic principles and practices of key bibliometric data sources and indicators. Develop a critical awareness of the key issues related to modern trends in scholarly publishing, as well as insight into the theory and practice of science communication.

Module 3: Research grants management – insights into the management processes required for grant-making. Understand the generic requirements of and critically evaluate research grant proposals. Understand the appropriate indicators for monitoring and evaluation of research grant impact. Understand the basic principles of project management and the application of a selected set of project management tools in the sphere of research project management. Understand the requirements of project and financial reporting, research contract negotiations and risk management, as well as the identification of intellectual property and protection thereof.

Module 4: Research integrity and ethics – understand the ‘research integrity’ curriculum (including management of conflict of interest; publication, authorship and peer review ethics; collaboration ethics; ethical issues related to data management and transfer, etc.). Critically reflect and comment on the values involved in responsible research and understand the difference between a ‘compliance’ and ‘personal responsibility’ approach to research integrity. Understand the Singapore declaration of research integrity, and other international guidelines. Understand what are considered

‘questionable research practices’ and ‘research misconduct’, and how these should be investigated and reported. Understand the basic principles of research ethics in the context of research involving humans, animals and biosafety, and the systems and processes needed to implement ethics review and approval of applicable research.

The Postgraduate Diploma in RMA, as a potential first step in a professional RMA career trajectory, provides a new academic direction for graduates from various disciplinary fields, providing a link to the job market. This is of relevance in the African and potentially other developing world contexts where RMA capacity is lacking, and graduate youth unemployment is problematic.

An International Professional Recognition Council and a Professional Recognition Programme for RMA in Africa

SARIMA initiated the establishment of an International Professional Recognition Council (IPRC)⁹ as an autonomous body to lead the development of a framework for a professional recognition programme for RMA. The professional recognition process was conceptualised as a peer recognition process based on a portfolio of evidence of prior knowledge, capabilities, and work experience. This is because in Southern Africa and Africa at large, research managers and administrators enter the profession from a variety of backgrounds and experiences, and do not necessarily have any specialised qualifications or other means to acquire professional status.

The inaugural IPRC, established in 2017, was composed of 15 experienced RMAs from research and research management organisations within the Southern African region, the African continent and internationally. The mix of members provided expertise and consistency to establish and oversee the quality and standards of professional certification of RMAs, which was initially aimed at the Southern African region, but eventually expanded to include the rest of the continent.

In 2020, a nomination and election process was run to re-constitute the Council and three sub-committees were established. The Technical Review Committee conducts the peer review process on applications and confers professional status. RMA training is endorsed through the Training Endorsement Committee to encourage the participation in quality training to maintain and advance competence. The Advocacy Committee serves to address issues related to the advancement and promotion of RMA, the IPRC and the professional recognition programme.

The IPRC launched the STARS Programme in 2021 as an initiative to support the work of the Advocacy Committee. The programme participants are recognised professionals – individuals who possess the skills and experience, who were tested and affirmed as professionals and who will reach out and share their experience with others in their institutions and their broader professional communities.

The IPRC engages with SARIMA through the SARIMA Professional Recognition Committee (SPRC) that serves as the secretariat of the IPRC and supports the implementation, monitoring and evaluation, quality assurance, marketing and advocacy.

The professional recognition programme recognises prior learning, experience, functional and transferable competence and achievements of research managers at different levels. RMAs can be awarded one of three professional designations:

⁹IPRC – <https://iprcouncil.com/>.

- (i) Research Administrator Professional (RAP) – for emerging professionals.
- (ii) Research Management Professional (RMP) – for mid to advanced career research managers.
- (iii) Senior RMP (SRMP) – for research managers who serve in leadership or strategic roles.

The programme was first opened to the RMA community across Africa in August 2019 for applications in either the RMP or SRMP category. The RAP designation was introduced in 2021 based on the feedback from the RMA community that the programme also needed to instil a professional identity in early career research managers/administrators and offer them a professional development trajectory. Professional designations are valid for five years, after which it should be renewed or upgraded.

The programme has been evolving and growing steadily. An iterative process involving feedback from the applicants and reviewers is streamlining the application process. The submission process has been advanced to an automated process through an independent website of the IPRC in 2022. Although the current strategic focus of the IPRC is to roll out the programme across Africa, the vision is to extend this to other developing regions, with a similar research and RMA landscape.

To date, the professionalisation programme has benefitted through support and funding from the TDR, WHO and ESSENCE on Health Research Initiative,¹⁰ the Erasmus+ Programme of the European Union, the DSI, South Africa and the SADC Secretariat,¹¹ the SGCI and the Research Management Programme (ReMPro) in Africa,¹² among others. Although there has been progress in its strive towards sustainability, there is still a journey ahead to ensure that the professional recognition programme continues to gain traction within the RMA community across Africa.

One of the recognised professionals expressed what the recognition means to her:

RMP status is the highest honour I cherish most, as I am the only one in Zimbabwe at the moment and other research managers and administrators are encouraged now to take up research management seriously as a profession. I used the PCF to identify the competency areas that I want to improve and are now registered for the PG Dip. A highlight of my involvement in the STARS programme is that my institution has started to consider institutionalising other colleagues if they are recognised professionally, and this has increased interest from my work colleagues to initiate the IPRC application process. (Pillay & Pabla, 2022)

For this professional, receiving the professional status resulted in her project funded contract position being converted into a permanent position (Pillay & Pabla, 2022). The hope is that the examples will be a catalyst for institutional and individual buy-in across the continent.

These initiatives have placed Africa on par with global professionalisation efforts, as summarised by Poli (2021d, 2022c).

¹⁰ESSENCE on Health Research – <https://tdr.who.int/groups/essence-on-health-research>.

¹¹SADC – <https://www.sadc.int/>.

¹²ReMPro Africa – <https://www.aasciences.africa/aesa/programmes/research-management-programme-africa-rempro-africa>.

Joining the Dots: A Professionalisation Escalator

The constituent components resulting from the professionalisation journey have culminated in a professional development escalator (Fig. 4.1.1) that is currently the roadmap that is nurturing and steering the young profession of RMA in Africa.

The PCF, originally designed for the Southern African context but inherently relevant to the other African regions, has become the foundational pillar guiding various routes of professionalisation, which range from the basic building blocks (such as workshops, webinars and conferences) to a suite of articulated training and qualification offerings to the IPRCs professional recognition process. Fig. 4.1.1 shows the professionalisation tools and routes that SARIMA and its partners have developed, and are constantly evolving and enriching, and how they relate to each other and the various stages of professional development.

The concept of the escalator allows individual RMAs to identify at what point they are within their professional development trajectory and what options are available to them to advance to the next level.

Conclusions

The offerings in the African context are still relatively new and have some way to go to be formally recognised and fully adopted. The current focus of SARIMA and the other associations should be on advocating for the PCF to be inculcated into RMA units and organisations across the continent as a tool for recruitment, career planning and development, training interventions and succession planning. It is envisaged that once this has been firmly embedded within the RMA culture and practices as far and wide across the continent as possible, there will be an increase in terms of the uptake of the training interventions and the professional recognition programme. An escalation in the professionalisation of the RMA workforce will ultimately shift the paradigm of research and its impact in Africa. Chapter 2.7 by Ritchie et al. (2023) focus on RMA education, training and professional development in the United States and Europe and compares and contrasts the features of certification, certificates and degree programmes and reviews their development and growth over the past 30 years.

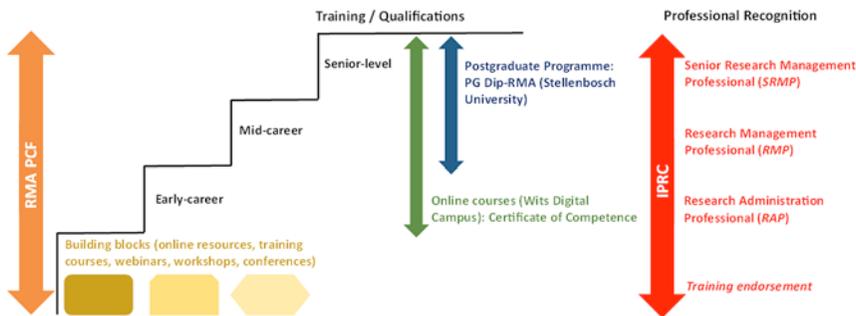


Fig. 4.1.1. Professional Development Escalator for RMA in Africa (Authors).

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