Scaling up Professionalization of Research Management in Southern Africa

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Abstract: *In the furtherance of knowledge, researchers and research are supported organizationally, but sometimes organically. Yet the research enterprise needs to be systemically managed. Research managers, however, are still striving to define their functions. Is research management part of the continuum of research itself? Is it an occupation? Is it a profession? Increasingly scholars are problematizing what the professionalization discourses mean for research management. Alongside other professionalization initiatives, the Southern Africa Research and Innovation Management Association (SARIMA) developed a Professional Competency Framework (PCF) for research management. The article addresses at a micro-to-meta level of analysis, the conceiving of the PCF, and then posits how the developmental journey towards a PCF may fit into a macro impetus towards professionalization. The findings extend theorising around competencies, professionalization and attendant methodologies.*

Keywords: *Research Management; Professional Competency Frameworks; Professionalization; Majority World; Organizing Reflection.*

Curnow & McGonigle (2006, p. 288) recognise that professions, generically, evolve from occupations undergoing diverse stages such as: formalising associations, providing professional development, inculcating a body of knowledge, as well as honing codes of ethics. Specifically, however, they may follow different trajectories. Appointees in research administration and/or management (hereafter management) may certainly identify with these stages and the common, yet differentiated, pathways that have grown the either nascent or mature research management profession. Atkinson et al. (2007) took up these concerns and postulated both a model for normative behaviour of research managers and normative influences on research management behaviour to theorise a model of research management as a public service profession. Yet, Derrick and Nickson (2014), while arguing for a "professional base," put forward the debate as to whether research management may even claim itself as a "distinct occupation group" (p. 26-27).

Professionalization developments have again been problematized as recently as the 50th Anniversary, in 2017, of the Society of Research Administrators International. In this commemorative issue of *The Journal of Research Administration* (Spring 2017), the currency, as well as the history of research management, were probed. Both Brandt and Porter's "Forwards" (p.17; p.15) to their retrospective articles argue that many of the research management issues of the past are still relevant today and continue to command onward examination.

This paper therefore responds to additional enquiry into the evolution of research management as a profession (Atkinson et al., 2007; Brandt; Porter; Linker, 2017). Research management stakeholders have energized to define their work more strategically, occupying as they do a particular space in a powerful continuum directed by academia. This is demonstrated by recent diagnostic and systematic studies (see Atkinson et al., 2007; Green & Langley, 2009; Derrick & Nickson, 2014; Jowi & Mbwette, 2017), as well as professional frameworks (Derrick & Nickson, 2014). Saks (2012), arguing from a professionalization perspective, also highlights the requirements for "delineating professional boundaries" while conserving "flex" [and] "flux" (pp. 5-6).

Research Context

Practitioners in research management in Southern Africa, or who occupy what Alam (2008) describes as part of the Majority world, may be said to identify with the concerns expressed globally. On the side of Southern Africa, many of these concerns are exacerbated by geo-political inequalities. Stakeholder groupings signal that research management, and the persons who fulfil these roles, lack a slate of collectively accepted definitions and empowering architectures which would have convening power (Derrick & Nickson, 2014; Freidson, 1986). There are ongoing questions as to what is normative for these roles, situated as they are with expertise, but often lacking resource, informational or referent power to fulfil all the requirements of their mandates (Raven, 2008). Within the literatures of "normalisation" (Rabinow & Rose, 1994; Taylor, 2009), this debate might well be familiar in that research management is nested within a broader space of power and groupings, that of university management, external collaborators and academia. Therefore, existing "adjacent" (Lester, 2016, p. 1) to such a long-standing demarcated and defended space, such as the academic tradition, it is not surprising that research management seeks to accelerate its claim to professional identity. Owing to such embedded power concerns (Freidson, 1986; Raven, 2008), research management seems to be asserting credentials, while, awkwardly, at the same time establishing exactly what competencies set it apart as a distinct profession. This ambiguous pathway is evident when, from within the work of research management, the nebulous concept of "third space" (Whitchurch, 2008 pp. 377; 384) was used to capture the dilemmas faced by the both the functions and the functionaries of research management. Pressures emerged from both within and without research management to create what amounts to a research management taxonomy (Wilensky, 1964). (See Green & Langley, 2009). This was to cement research management beyond the association stage found in the process model of professionalization (Curnow & McGonigle, 2006, p. 288). Kerridge (2012, p. 6) states such concerns when he reflects that although there is much activity in support of

Research Management Associations (RMAs) around the world, this in itself is not sufficient to cement the moniker of "profession" to its practitioners.

Given this posited direction, there has been the emergence of professionalization frameworks (See Association of Research Managers and Administrators [ARMA] and Southern African Research and Innovation Management Association [SARIMA] as well as European-wide and North American accreditation of levels of professionalization). Accreditations and frameworks respond to the need for additional professionalization security, yet could be argued to be counterintuitive to the responsiveness required across the broad range of socio-political processes inherent within disciplines and multi-inter-trans-disciplinary work (Saks, 2012) for which academia stands, an issue alluded to in different instances of this article.

Based, however, on taxonomic definitional needs, SARIMA draws members and stakeholders from 15 Southern African states and works collaboratively with global counterparts and/or RIMAs or Research and Innovation Management Associations as they are known. There are many known by their acronyms, such as ARMA, EARIMA, CARIMA, CabRIMA, WARIMA, NCURA, EARMA, SRA, et al)[1]. In response to globally caucused expert viewpoints and requests from members, SARIMA arrived at a strategy from 2010/11 onwards to professionalize research management. This strategy paved the way for the development of a Professional Competency Framework (PCF) (Dyason, 2016). This is consistent with the call from Derrick and Nickson (2014, p. 11), who motivate for more efficient research management strategies as a means to achieve competitive research strengths. Parallel to the PCF, SARIMA undertook a meta-view of the process and posed the following research question:

> "How does SARIMA accomplish a regionally relevant, yet globally applicable, Professional Competency Framework?

Given the stated metacognition of this initiative, the research is theoretically located within the collective and organizing of reflection, hitherto not necessarily directly articulated with the sociology of professionalization literatures. Reynolds and Vince (2004) describe this as spaces for concerted and collective deliberations. Furthermore, the applicability of this theoretical base is underlined when Reynolds and Vince (2004) question how such reflection may bestir established practices, as well as challenge and expand on opportunities for practitioner learning. Within professionalization literature, organizing reflection acts in response to the neo-Weberian calls around professionalizing, which argue for reflecting on thoughtful meta-level ("holistic") perspectives beyond pragmatic practice-lenses (Saks, 2012, p. 6). For research management, Campbell (2010) advocates for the ongoing need to explore theory to universalise the knowledge frames, given that there are different approaches for different modes of research management.

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[1]ARMA: Association of Research Managers and Administrators; EARIMA: Eastern Africa Research and Innovation Management Association; CARIMA: Central Africa Research and Innovation Management Association; CabRIMA: Caribbean Research and Innovation Management Association; WARIMA: West African Research and Innovation Management Association; NCURA: National Council of University Research Administrators; EARMA: European Association of Research Managers and Administrators; SRA: Society of Research Administrators International.

This paper, then, extends the scholarship through the case of writing up of the development of a professionalization initiative, within a Majority world context. This is achieved specifically, through the knowledge generation and reflective work of mainly Southern African stakeholders. It also responds to calls for more specific, yet studious, means to operationalize cases of professionalization, beyond reified policy or being influenced by dominant professionalization exemplars (Derrick & Nickson, 2014; Lester, 2016). This is made alongside the need for investigation of research management practice and theory (Poli & Toom, 2013; Trindade & Agostinho, 2014).

The outcome of SARIMA's research was an approved PCF for the public sector's research management, which SARIMA is now taking forward through both regional and international partnerships. The narratives of reflective learning and organizing, as well as the processes to attain a PCF, are offered in this article to respond to the research apertures hereby introduced. While the case does centre on research management, extrapolations might be made to other professions. This is in consideration that, as with research management, more and more work has to span professional and disciplinary boundaries. Research management is well versed in navigating these blurred boundaries (Whitchurch, 2008; Trindade & Agostinho, 2014). The article covers two central facets: at a micro-to-meta level, the development of the PCF. This is followed by a discussion, at a macro level, of how the PCF fits into an unfolding trajectory of the professionalization of research management in the Southern African context.

Background

SARIMA is a stakeholder organization that formed in 2002 to a felt need by Southern African academics, research management practitioners and their institutions to associate around common research and innovation management concerns. SARIMA began, and has contributed, to research management and innovation through encouraging practice and knowledge bases that include, but are not limited solely to: advocacy; leadership, policy and knowledge platforms; working within respective national and regional systems of innovation; facilitating inception and development activities of other RIMAs; an annual international conference, capacity development programmes, study exchanges, mentorship. Based on the patterns of three professionalization models as argued by Curnow & McGonigle, (2006, p. 289), SARIMA reached a juncture where 1) defining the shift from occupation-to-profession and 2) specifying such professional "skills sets" using explicit criteria could well be visibly amplified in support of the burgeoning of research management from occupational to professional orientation. As such, it would produce a first of its kind for Africa (SARIMA, 2016).

The 2010/11 strategy for professionalization was therefore adopted and attracted funding from two central conduits, soon to be followed by additional partnerships (2015 onwards).

SARIMA was able to set the project in motion, albeit through volunteer leadership and only one part-time project manager, whose portfolio extended across most of SARIMA's activities. In the light of familiar resource constraints, research management professionalization approaches and frameworks were explored so as not to "reinvent the wheel" and leverage economies of scale.

Upon the collective reflection (Reynolds & Vince, 2004) of the SARIMA membership as they began implementation of the strategic decision, the members decided not to "cut and paste" any existing framework, but instead to use such knowledge as a benchmark. The way forward was therefore to enter the professionalization cycle (Curnow & McGonigle, 2006) and to embark on self-regulation (Lester, 2016) through working collaboratively and co-creating an indigenous framework that could reflect, what some deem, as a global South or Majority World view (Alam, 2008). The project inception included setting up a strongly regional Project Advisory Committee (PAC) as the governance structure, and Project Working Group (PWG), respectively that entailed drawing both from members of SARIMA and external role-players. A methodology was conceptualised within open-ended responsive parameters.

The initial groundwork for the development of the PCF thus took place between 2010 and 2014 and incorporated surveys that allowed SARIMA to get a better understanding of the capacity needs and professionalization preferences of the Southern African research management community. In 2015, SARIMA initiated, as a first phase of its professionalization impetus, a consultative project to design the PCF for research managers and administrators in Southern Africa.

Conceptual Framing of the PCF

The notion of competencies which match distinctive skills to achieving professional and organizational success was coined by Selznick in 1957 and was taken up by various professions within a deliberate and intentional logic. Chomsky, in 1968, inculcated it within educational trends with educational approaches going through stages of competency-based progressions (Butova, 2015), yet with little change in the rational goal-oriented underpinnings. The specificity and deliberateness of the logics for framework development were deliberated on and seen to be conceptually integral to the formation of SARIMA's regional framework.

On the basis of SARIMA's own core rationale as a stakeholder organisation, a further concept, to inform the project, was stakeholder reflection. The research team specifically saw their role as surfacing the deep, yet often conflicted (Whitchurch, 2008), expertise that is embedded in the research management field and then enabling discussions that entailed experiential reflection on research management practitioners' roles, contributions and challenges. The research team took these participants' rich data and organized the reflections into a defined, yet flexibly-oriented outcome. The concept of "organising reflection" (Reynolds & Vince, 2004, p. 6) is built on Schön's (1983) thesis around: "on-the-spot surfacing, criticizing, restructuring, and testing of intuitive understanding of experienced phenomena…[taking] the form of a reflective conversation with the situation" (pp. 241-242). This was complemented by the experiential learning model of Pfeiffer and Jones, (1983). At an operational level, the conceptual framework that guided the workings of the research may be depicted as follows:
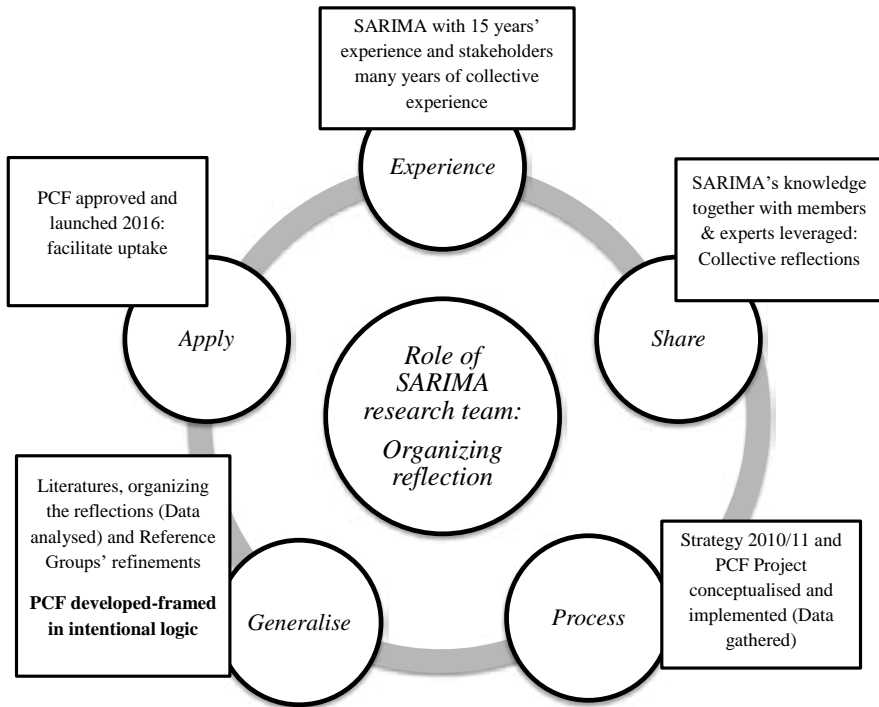
Note: Adapted from Reynolds and Vince, (2004), "organizing reflection" and Pfeiffer and Jones's, (1983) "experiential learning framework".

Figure 1. Conceptual Framework for PCF Research.

Literature and Situational Review

The project filled both an applied and theoretical gap in research management. On an applied level, there was no PCF that was in existence for Africa, let alone Southern Africa. SARIMA has relationships and enjoys the counter-part support of other professional associations for research management. While similar associations have different accrediting frameworks or arrangements (See ARMA: Olsson & Meek, 2013, p. 54), these are bespoke to their needs, including their support of their membership. The importation of a developed framework, while pragmatic, would be intricate on a number of levels; two considerations of proximate relevance are cost and the impetus to locate the PCF in more localised experiences. Stakeholders of SARIMA, at each of SARIMA's international conferences, are recorded as requiring of a more deliberate framework to guide their current and future strategies and to strengthen professionalization of their work. The delegates indicated that they want to benchmark their work, performance, expertise, power and/ or status in the organization. Reports from participants, who work across the Continent, spoke

to the unevenness of research management across Africa. This included the lack of understanding of what research management may potentially and actually achieve, minimal resources set aside for the specifics of research management, and the dearth of skilled human resources who both understood and could practice the craft of research management. Others reflected on the constant negotiation that their offices had to engage in to demonstrate their roles, relevance and the strategic value they add to research outputs. Hence SARIMA adopted the development of the PCF going forward with the main thrust of formalised conceptualisation taking place from 2015-2016.

Theoretically, a systematic review of research management (Derrick & Nickson, 2014) confirmed that role-players outside of the profession were not clear on what research management actually is, what benefits it brings and how it can deliver within research contexts. This concern holds resonance across a number of boundary spanning and "nascent" worlds of work (Whitchurch, 2008; Lester, 2016, p. 3). Derrick and Nickson (2014) conclude with a bid for future research into "characteristics of successful research management" which SARIMA translated into understanding the competencies, as at least (or most) a starting point.

The concept of research management as a profession has also been problematized. Practitioners have asked how does one define the fluidity and multiplicity of the work of research management, amidst consideration of the tighter lines of (self-) regulation that are asked of within professions themselves (Whitchurch, 2008; Saks, 2012; Lester, 2016)? This question is indeed not only relevant to research management, but increasingly to multi-sectoral occupations/professions that have adapted or emerged based on globalisation and more complex work conditions (Faulconbridge & Muzio, 2011).

In other views, research managers are reflected as being "occupational groups" "shaping a new profession" (Poli et al., 2014, pp. 55; 54). The concept of "third space", as described by Whitchurch (2008), is postulated as being the future environment for the incubating profession (Langley, 2012). Trindade and Agostinho (2014) indicate that more explicit framing and a more defined conception of research management is needed for the career structure and progression of research managers so as to deliver ultimate benefits for research itself. Lester's (2016) prism states that novel lessons are opened through looking at the experiences of less mainstream occupations-to-professionalization trajectories.

McIntyre-Hite (2016) further states that there has been considerable variance in research on competency-based development itself. Few studies have been undertaken in terms of a broader programme basis. The same author indicates that the various investigations across multiple disciplinary fields are in agreement that multiple stakeholder perspectives are important—a central area that underpins SARIMA's membership-informed approach.

Given these views, and that there is little scholarship published on research management within a Southern African context, SARIMA took on a convoking role hereto. Kirkland, as early as 2005, made two central points: how "developing countries" are in "urgent need" of enhanced research management networks and systems. He argues specifically about how SARIMA, as a niche Association, is well-placed to be responsive to such need (Kirkland, 2005, p. 65).

Given these clear directives for emboldening the agenda of research management, the project unfolded using dual lenses: 1) providing a defined professional and practical competency framework as well as 2) tracing the meta narrative of the project to build the bodies of knowledge on professionalization; methodology of framework development and organizing reflection, with research management, in particular, being the unit of analysis.

Methodology

The devising of a PCF within a Southern African setting entailed methodological decision-making that balanced rigorous research norming with coverage of multi-national contexts. Given the above considerations and that competencies in themselves are content-rich, a qualitative, socially-constructed study following an action research design, provided a dialogical line of inquiry that was philosophically justifiable. An initial exploration of extant competency frameworks provided a schedule which was explored and refined through a pilot. This entailed that the research team went into the subsequent focus groups with pre-existing scaffolds that would be further co-constructed through localised insights.

Using pilot data and literature, the specifics of nine key competency areas (for example, "research planning, strategy and policy" [see Annex A] and "managing funded research"), and three levels of competencies (administrative/operational; management; leadership/strategic) provided resource efficiencies for both the data gathering methods and analysis. Therefore, semi-structured schedules (targeted prompts) guided the focus groups. Focus groups' outcomes were a combination of small and plenary groups' discussions recorded on the schedules, facilitator's notes and news sheets. The participants delved into the textured meanings of research management following the lines of inquiry as suggested by Poli et al. (2014, pp. 54-55) with commitment to shaping the lines of this "new profession".

To gain the insights of "employers" of research management staff, a specific group interview formed a sub-section of one of the focus groups with the addition of two further meetings of Deans, Directors and Senior Managers of research management (Focus Groups [FGs] 5, 6, 10).

Both the literature and the data were collated and uploaded into ATLAS.ti, a qualitative data analysis software that provides an integrated project management base while also systemising and tracking data meaning-making. ATLAS.ti was seen to be valuable for its ability to cluster coded text as well as for its visualisation of grouped and conceptual networks (Smit, 2014). Using the nine key competency areas across three levels, the knowledge bases of the participants (their data) were deductively coded, using prefix coding (Friese, 2014). Each of the nine areas and the three levels were intensively populated with the findings of the focus groups' contributions. Principles of the research team for the analysis were that: the participants must be able to "see their thinking and words in the PCF", yet also the voluminous data must be rationalised to achieve a user-friendly and contextually-sensitive framework. The literatures were also themed against the nine competency areas and an interweaving of the empirical data and secondary data applied to each competency area.

Empirical demographic fields, useful to gain an understanding of participant profiles, were quantified and are reported herein including sex-disaggregation and number of participants (Table 1).

In addition to the deductive approach, patterns of localised reflections around research management competencies were inductively traced, capturing the breadth of the knowledge of Southern African research management stakeholders. The literatures were also invoked for these looser pronounced areas to build a more scholarly "template".

Organized reflection (Reynolds & Vince, 2004, p. 6) formed the bedrock beneath the more formulaic research processes. The collective years of experience of the reference group and the two main researchers were harvested for participant observation actualities. Instances of organized reflection were: doing word counts; questioning logics; playing devil's advocate; imaginative exercises of what would one do, for instance, if one was the strategic leader, or the administrator; mulling over details, seeking commonalities as well as distinctions; differentiating the data across the nine areas and three levels; balancing the data with the literatures; seeking appropriate verbs and words; reframing and summarising. Aside from the methodology producing a defensible and collaborative framework, we believe a modest claim may be made of how to invoke thoughtfulness, articulated experience and technology to create a robust process logic that may be used in resource-limited contexts.

This alternative logic was in line with the PCF's ambitions: to develop a framework that is "pragmatically-oriented [within]...everyday [research managers] arguments" (Rich, 2013, p. 5). This entailed, as Rich (2013, p. 5) indeed argues, "techniques for translating a messy reality" into competency-based theoretical thinking and "language", which, in turn, should be translated back into that same messy actuality of the same "everyday" manager.

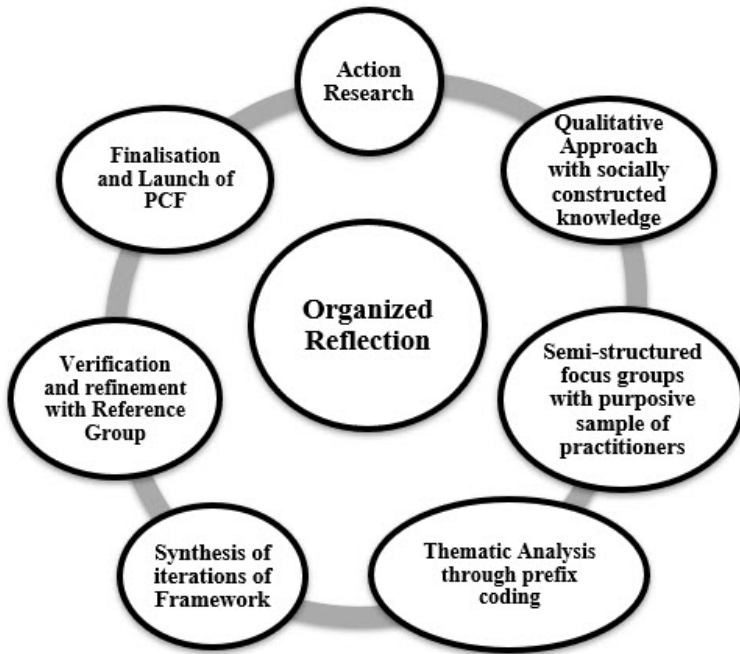The methodology for the project is depicted in Figure 2.

Figure 2. Methodology for the PCF.

Following this methodology, SARIMA worked with purposively sampled participants to co-construct the output of the SARIMA PCF. The participants' profile is provided along a number of quantified and qualitative dimensions.

Firstly, the qualification profile was as follows: 45% PhD; 31% Masters; 8% Honours; 9% National Diplomas; 5% Bachelors; and 2% Grade 12 qualifications.

Secondly, additional demographic and explanatory details of the focus groups are summarised in Table 1. Mindful of the thesis of Poli (2014), SARIMA also ensured that sex disaggregated data were recorded for the initial phase. Within the substance of the project and the PCF, SARIMA advocates for gender considerations and gender mainstreaming to be considered for the adoptions of the PCF.

Table 1. Demographic and Explanatory Details of Focus, Reference and Governance Consultations

No.	Centralised site (site chosen for pragmatic reasons in terms of centralised travel point and coupled with other key SARIMA meetings)	Number of Participants	Explanatory Details
1	Pretoria, South Africa	16	Pilot: Representatives from PWG and PAC. Representatives from research fields
2	Gaberone, Botswana	16	Southern African (outside of South Africa) SARIMA's three levels for research management (operational, management, leadership)
3	Bulawayo, Zimbabwe	13	Southern African (outside of South Africa) SARIMA's three levels for research management (operational, management, leadership)
4	Blantyre, Malawi	17	Southern African (outside of South Africa) SARIMA's three levels for research management (operational, management, leadership)
5	Durban, South Africa	40	Deans, Directors and Senior Managers of research management
6	Cape Town	20	Senior research management representative. Representatives from Central African and Eastern Africa Research and Innovation Management Associations (RIMAs)
7	Stellenbosch	15	SARIMA's three levels for research management (operational, management, leadership)
8	Port Elizabeth	12	Combination of focus group and early verification exercise
Initial data gathering completed		**149**	**62% women and 38% men**
9	Melbourne, Australia (including 3 members of the governance structure)	36	INORMS Conference Representatives from LMICs (18 different countries)
10	Cape Town	31	Post-approval verifications exercise
11	Johannesburg, South Africa	21	Post-approval verification exercise

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12	Pretoria, South Africa	15	PAC inputs and approval
13	Full Report was sent to Project Advisory Committee for review. The report plus the details of one or more specific key competency areas were sent to focus area participants and other individuals based on their respective areas of specialisation. People from countries, other than those involved in focus groups, were incorporated to broaden the inputs from the region. In particular the SARIMA SADC Focal points were asked for their review.	No indicative number (Focal points referred onward in universities)	Reference group - focus group participants, the project advisory group members and other selected individuals who are practitioners in the different competency areas

Data and what the data do: Narrative 1: Micro-to-Meta: Arriving at an Approved PCF

SARIMA commenced the discussions by positing seven distinct competency areas. As the consultations proceeded, "Ethics and Integrity" were confirmed as such an important dimension of research management that SARIMA was advised to make it a separate key competency, after the pilot group. It was also agreed that "Partnerships and Collaboration" should be a stand-alone area. Participants suggested that too much would be lost from research management focus if these two areas were mainstreamed. Thereafter, interestingly, the focus groups, while shaping terminologies, reached consensus on the nine key competency areas. Without changing the orientation of the nine areas, participants provided instead information-rich sub-competencies under the nine headings.

The collective drew on their daily experiences of "going beyond the familiar working spaces shared with academics and [exploring what it was like for them to] occupy new and unexplored spaces in today's research" (Poli et al., 2014, pp. 54-55). Qualitative data shows respective research management offices set up with business enterprise architectures, to a mere two computers to support the research management functions of a large university (FG 6). Most focus group discussions represented a continuum between "dreaming the dream" of an ideal research management function: "This is the ideal" (FG11); the demanding realities of constantly "plugging up holes" (FG 6); and being "all things to many people": "Chief Cook and Bottle-washer" (FG 11). The emphasis on soft and cross cutting talents (see discussion that follows) were not therefore a surprise and these dimensions form a strong inclusion in the PCF. Most tellingly is one remark, made by a participant, at a well-resourced university: "We are so glad SARIMA is doing this, I feel valued; what we do matters" (FG 11).

Given the notions of "blurring" and "blending" (Whitchurch, 2008, pp. 377; 388) in research

management and entertaining "wider vistas" (Saks, 2012, p. 7) for defining a profession, numerous similar and overlapping sub-competencies had to be interrogated for their meanings. The researchers, using literatures, experiential knowledge and interpreting and re-interpreting the articulated discourses, selected the best possible framing of a sub competency, often through combining a number of ideas. This included also paring out the cross cutting skills and grouping them in the levels as well as generically. Redundancies were extracted from the working PCF, but various versions of the PCF were kept so that "original thinking was not lost".

This process was constantly framed in the light of Vince and Reynold's (2004, pp. 5-6) "organized reflection" and sought to attach "importance to experience and of situating reflection as integral to working and learning"...considering the "social, cultural and organizational nature" of the data presented. As such, the PCF, as a whole, went through various iterations bringing together the collective insights and verification of the multi-disciplinary, gendered and regionally-informed project working group, the advisory group, and reference groups.

The researchers found two interesting dimensions as the data were worked. A first dimension was that each key competency area and its definition (first layer of logic) could include distinct sub areas (second layer of logic). Following on the sub areas, the researchers then listed the numerous competencies (third layer of logic), across the three different organizational levels which, in time, were decided as Level 1: administrative/operational; Level 2: management; Level 3: leadership/ strategic. A composite exemplar of these logics is provided in Annex A. "Key Competency Area 2: Research planning, strategy and policy development". The aggregated nine competency areas with their main sub competencies are described in Table 2.

Table 2. Nine Key competency area with high level descriptions including the sub-areas

Key competency area	High-level description of the area inclusive of sub areas
1. Organization and delivery of a research management service	Organize, structure, manage, monitor and review a research support function
2. Research planning, strategy and policy development	Facilitate and support the development, implementation, monitoring and evaluation of research policy and strategy across the competency areas
3. Researcher development	Support postgraduate student and researcher development across the research pipeline within different organizational settings
4. Partnerships and collaboration	Facilitate and manage national, regional, international partnerships and collaborations to advance research including with research organizations, funders, industry, government and society
5. Research funding	Identify and disseminate funding opportunities; develop and implement funding optimisation strategies; support the writing of funding proposals, including alignment with stakeholder requirements, budgeting, costing and review; coordination of approvals and submissions (usually associated with pre-award activities)
6. Research ethics and integrity	Promote, foster and support research ethics and integrity, compliance and responsible research conduct
7. Managing funded research	Research contracts negotiation and management; research financial management; funder/sponsor engagement and liaison; research project management (usually associated with post-award activities)
8. Research data and research information management	Develop research data management plans and support systems; databases and information systems; research data management; reporting
9. Research uptake, utilisation and impact	Dissemination and communication of research; knowledge transfer; business development; measuring and demonstrating research impact

The data provided rich description around a second dimension. Participants repeatedly identified and communicated transferable or so called 'soft skills' under each of the nine areas. Every participant/group provided views on soft skills and transferable competencies that cut across task domains. Again, the team oriented towards reflecting on how to do justice to such crucial data. Initially the transferable skills were collated and reviewed holistically. As the PCF took shape, however, the transferable skills were organized as follows: transferable competencies that were differentiated, specifically, between each of the three levels of work: leadership/strategic; management; administrative/operational, in relation to the nine competency areas.

The PCF was then firmed up using several feedback sessions from the governance structure and additional consultations (see Table 1). At the approval stage of the PCF, an analytically sound flow of competencies was tabled for each of the key areas. The exponential nature of progress from Level 1's competencies (administration/operational), evolving through experience, learning/ qualification and career progression, to Level 2 (management) and 3's (leadership) competencies also found traction both regionally and internationally.

While this rendering of the process appears on paper as linear and neat, it belies many hours of to-ing and fro-ing between messy data, various interpretations and questioning of interpretations, cross-referencing with other frameworks and mining the literatures intensely for contrary and confirming points of view. The framing point of departure that reflections must happen, yet should be organized (Reynolds & Vince, 2004) provided a grounding touch-point for the team's work.

This confirms the contentions of Curnow and McGonigle (2006, pp. 289) and Saks (2012, p. 5) who, at the more aggregate level of professionalization, indicate that such processes are not necessarily "linear" and that, in the processing of professionalization definitions, "shifts" and "on-going flux" occurs (Saks, 2012, p. 6). Lester (2016) highlights this as the benefits of being able to pursue self- regulation.

Data and what the data do: Narrative 2: Macro: Theorising around Macro Fit

Following upon this more aggregate logic, SARIMA acknowledged that the development of the PCF is but one constituent feature of the evolving professionalization of research management. Therefore, while the stakeholders of SARIMA considered the PCF as a valuable contribution to the emerging profession, their standpoints did not end there. Using the lens of "organising reflection" (Reynolds & Vince, 2004, p. 6), the self-identified narratives shared over and above the focus groups' targeted schedule (directed questions and probes) were used to inform a broader structural arena. The research team, therefore also theorised around a macro view of where the PCF and its processes fit into a professional perspective (Lester, 2014). The models of Curnow and McGonigle (2006, p. 290) anchored the thinking.
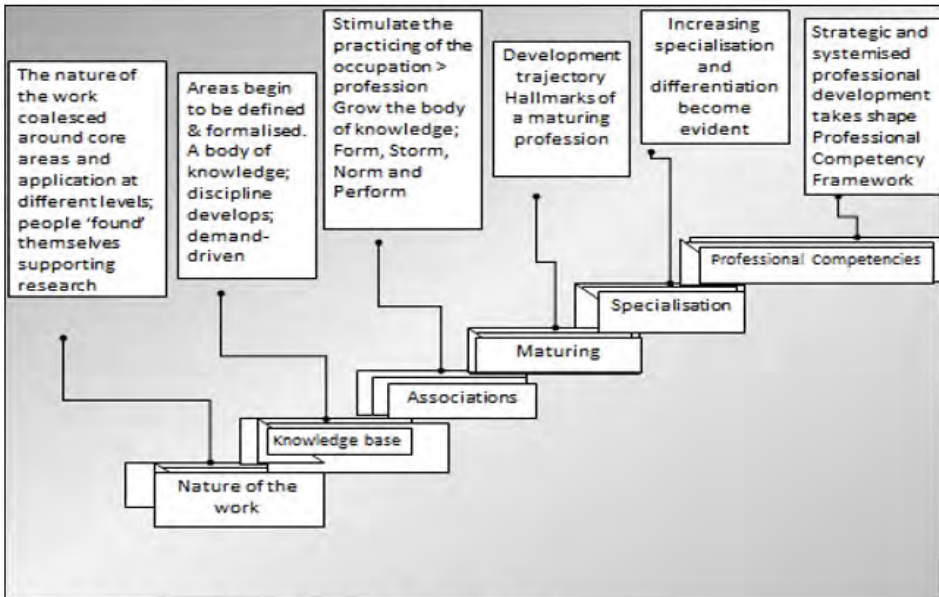
Note. Adapted from Curnow & McGonigle, 2006, p. 288

Figure 3. Macro Theorising of The PCF within a Trajectory of Forming a Profession.

The macro and structural angle in Figure 3 therefore show a mapping of the PCF against the models of Curnow and McGonigle (2006, p. 290). In so doing, SARIMA tables its fifteen years of memory around the growth of research management and how a defining project, such as the PCF, could be inculcated at the level of structure as well as micro agency.

As acknowledged by Kirkland (2005, p. 65), SARIMA does provide a centralized point of reference for stakeholders, especially within Southern Africa. SARIMA facilitated therefore its convening role. The Association populated and shaped the PCF, from the focus groups, but was also there to hear the narratives of how people coalesced around functions. The notions of Figure 3 (drawing from the figure of Curnow and McGonigle, 2006, p. 288) took shape and each stage is detailed in the vignettes below.

Nature of Work

"What do we do; what is 'normal' in our daily routine?" Phrases such as these are common. Additionally participants indicate that they "just found" themselves or almost "fell into" supporting research functions in respective sectors. The discourses of the focus group showed a range of capabilities required or suggested: such as fulfilling servant leadership (Krauser, 2003; Vargas & Hanlon, 2007), partners (Hockey & Allen-Collinson, 2009), and part of being the competitive forces of research (Kirkland, 2008). Certainly, participants dwelled on the blurring

between two main domains (research itself and providing support for research-and the power plays that characterise their ambiguous platforms), and how they are straddling responsibilities with the universities requiring a range of expertise and acumen (Whitchurch, 2008). This elasticity of roles is described by Curnow and McGonigle (2006, p. 290) within the initial stage of a profession. The research team therefore recast this coalescence as 'the nature of the work' in research management.

Knowledge Base

Attendant to this daily work, the "guises of the research manager" (Derrick & Nickson, 2014, p. 16) were debated in an evolving knowledge base. In Southern Africa, a Master qualification focusing on many research management components is in existence and one of the focus groups happened close to the home of the qualification. Participants shared their experiences of this qualification, conferences, meetings and training sessions, many of which provide impetus to SARIMA to develop the PCF. All focus groups demonstrated knowledgeable people speaking eloquently and with authority around research management. Yet after each group, the facilitators walked away with the sense of yearning "for more -and more defined career pathing" resonating in their impressions of the sessions.

Associations

SARIMA and counterpart Associations/equivalents were, and are, acknowledged throughout the process. Representatives of the counterpart Associations added credibility to the PCF development. In fact, other Associations, in particular those in the rest of Africa, requested SARIMA to proceed and "proceed quickly" (FG 6) with the PCF so that other RIMAs may employ its benefits.

Maturing

During the years from the initial strategy decision of 2010/11 to the approved PCF in 2016, SARIMA and the stakeholders of the focus groups bear witness to the burgeoning of a profession. However, the focus groups also bear witness to inequities and inequality. The profession appears to be maturing, but "leaving behind" some Offices struggling with resource constraints, lack of infrastructure and competence, massification of higher education and lack of enabling technologies. Even a very well-resourced university's group reflected that it would be useful to have criteria (such as could be provided through the PCF) to find out how mature their research management functions actually are and how much they depict professionalization (FG 11).

Specialisation

During the data gather, there were constant reflections of how some Research Offices are specialised and differentiated (with one Research Office undertaking a "business process re-engineering project that automates much of the administration/bureaucracy of research management"). Juxtaposed to this, other Research Offices bemoan under-capacitated Offices where the research Office has to be "one size fits all". The team recorded stories of how only a few staff members, for

any number of large universities, cover all nine areas and are called on to be the expert on all areas of management/administration/leadership of research.

Yet, somewhat ironically, the work of research management teams (leaders, managers and administrators) is often described as an intense spanning of two domains (Whitchurch, 2008). In the one domain, the incumbent offers one set of expertise that has to do with organizational, programme and project work, essentially working within strategic and logical frameworks of management in support of research. In the other world, the research management team is invited to be immersed in conceptualisation, theorising and building the body of scholarship, using different insights that set out to extend or originate knowledge itself.

Professional Competencies

In the awareness of these situational and often discordant realities, SARIMA embarked on the PCF as both a strategic and pragmatic means to put African research management on the map. At the time of the approval of the PCF, SARIMA secured additional funding for two global projects. Both these projects have the premise of an approved PCF being a pivotal foundation into broader projects that will contribute sizeable research management capabilities and infrastructure to Africa.

Given the storied threads accompanying the posited figure (Figure 3), the authors offer that the PCF, while micro-to-meta in configuration, fits into the scheme of moving the evolving profession (Langley, 2012) forward to a more macro structure, especially in a Southern African context.

One piece of analytical evidence for this is when the researchers overlaid the initial and postulated conceptual framework of the PCF (Figure 1) with the macro theorising model of the fit of the PCF into moving a profession forward (Figure 3). This overlaying heuristic corroborated the micro with the macro. The adjacent equivalents are mapped below in Table 3.

Table 3. Equivalence Between Micro Processes of PCF Against Macro Theorising Towards Moving a Profession Forward

Figure 1: Conceptual Framework for PCF	Figure 3: Macro theorising of fit of PCF into moving a profession forward
Experience	Nature of work
Share	Knowledge base and Association
Process	Maturing with acknowledged differentiated levels of specialisation
Generalise	Professional Competencies-PCF
Apply	Professional Competencies; Maturing and evolving levels of specialisation as the PCF informs the career progression and qualifications routes for Southern African research management

Regional Relevance and Global Applicability

In response to the research question, therefore, the evidence must be judged as to whether SARIMA accomplished a regionally relevant, yet globally applicable, Professional Competency Framework.

Certainly, through a bold process of self-determination (Lester, 2016), SARIMA put professionalization discourses clearly on the map for the Majority World constituents of Africa (Aldridge & Evetts, 2003). Through a prosaic framework, the budding profession has normalized some dimensions of a blurred world of work (Taylor, 2009). There is substantiation that SARIMA elicited expert views from regional representatives, purposively sampled. The voices of the participants are translated into the text of the PCF. Parallel to the drafting, concatenated analytical and referee processes took place to develop a consolidated, consultative framework that may be used with ease. It is still publicly accepted that the PCF is not closed and may be adjusted through further inputs and changing dynamics.

The PCF, while built on the global scholarship and other best practice frameworks, is still uniquely the outcome of a mainly Southern African process and done within conservative resource means, using methodologies that could leverage extant knowledge. Other African RIMAs wishing to originate or adapt the PCF will have the framework itself and can collaborate with SARIMA for the learning processes. This consciousness and documenting fed into the conceptual marrying of the micro- to meta- level, on one hand, with the macro inquiry into the stages of professionalization of research management, on the other.

For professionalization as a disciplinary field, the research project went some way towards defining an increasingly important world of work. In addition to the framework itself, there was a conscious commitment to trace the stages of PCF development at the level of a meta- and methodological process—and this expands the case to other professionalization considerations, as Lester (2016) calls up in his article for novel means to seek self-regulation. Certainly it would seem that Associations, such as the RIMAs, and other counterparts may now more easily follow such a lead in professionalizing in a self-regulatory manner (Lester, 2016). This situation opposes the view that government interventions prescribe research management practices within the public sector. Universities do guard their highly autonomous structures, while still operating within the legal frameworks in terms of ethics, intellectual property, grant financing, and higher education, to name but a few. Research management raises interesting dilemmas around self-regulation, given that ethics and intellectual property are at the core of how it is situated and, therefore, regulated, yet with other functions more loosely and broadly stretched over the independence of research and researchers. Herein lies a fruitful area to explore the balancing between the law and research autonomies.

For the professionalization body of knowledge, research management represents a strong test case of an occupation that occupied an awkward position of spanning multiple power bases and needing to feed into different knowledge domains and interpreting a myriad of disciplines. As a situational reality, such research management experiences demonstrate a wider globalisation and changing nature of work debates (Faulconbridge & Muzio, 2011) and posit whether frameworks

could have the ability to facilitate fuzzy work spaces.

The authors put forward a tentative "yes", that the project team responded to the research question. A research question, is, however, always forward looking and the criteria of relevance and applicability may really only be fully claimed in the implementation and evaluation stages of the PCF. The public sector institutions need to take up the PCF. This will include, but is not limited to: establishing routes of qualification/competence, adapting it to individualised contexts, experimenting with its usage within organizational settings, benchmarking its outcomes and impact in terms of research management, and reflecting on the pragmatic and abstracted benefits and/or drawbacks of Southern Africa's first PCF.

Concerns at the time of the writing of this article were that stakeholders were not yet running with the PCF and were receiving the PCF with the expectation that SARIMA could energise the usage phase. SARIMA's ongoing work is to emphasise that this is not a SARIMA-one-size-fits-all. The PCF must be contextually appropriated within scenarios of best fit to localised conditions. The ideal, for the next phase, is to extend the PCF into other sectors such as Science Councils and private sector research management. It is also for individual universities within the different nations of (Southern) Africa, and even, globally, to take the PCF and apply it to differing and respective contexts. Translated into organizational contexts, the PCF amounts to "already completed research and development (R and D) into research management" (FG 11) and potentially saves the organizations that uptake it much intellectual energy, funding and time.

The limitations of the research were realised within the noted resource constraints which did not open up the sample as widely as the ideal, nor allow for broader piloting and refinements. While continental and global voices did contribute to the PCF, the regional stakeholders were the main custodians; this was deliberate, yet could also be seen as problematic in that wider experiences and contexts should always deepen the thinking.

The choice of a qualitative action research project for development purposes was coherent. Yet, mixed methods research incorporating updated quantitative findings would have added methodological norms of validity, reliability and analytical generalizability. While SARIMA did draw on previous survey data that established the needs assessment for the PCF, an updated survey always adds value.

Conclusion

This article is offered within the conceptual framing of linear frameworks of the PCF and its development with the professionalization debate, inclusive of the reflective methods of organizing reflection. Other lenses, clearly, would shed other lights.

Evident from this write up of the project and its scholarship is that the study always begets additional studies. Future studies of how a "bespoke" PCF first speaks to different professional settings and evolves when it is implemented would provide universal value. The lapse of time since its adoption benefits such research directions. How will the gendered or intersectional context issues be applied? What the PCF's precise and layered details mean for research management

itself—and other inexact, changeable work—is also worthy of investigation. A comparative study of research management and innovation management competency frameworks, and the implications of their professionalization pathways, would provide a more joined-up picture for role players.

Deepening the theoretical confluences of the conceptual models of this article against the existing data, using different 'cuts' of the evidence, clearly would advance this early attempt to bring together organizing reflection, elements of competency development and the disciplines of professionalizing work and research management itself.

This study set out to address several loops of logic: the "product" of the PCF itself, the development of the PCF within a mindful methodology, the threads that link professional competencies to the overall profession as well as the strategy to start a regionally-anchored framework almost from scratch.

In December 2016, SARIMA adopted the PCF and it has since been taken up for its variety of uses across Southern Africa. Examples include a sample of Higher Education institutions that are using the PCF in collaboration with their Human Resources departments to formulate job descriptions. Additionally, the PCF has been used for the pilot rounds of SARIMA's professional recognition programme for research administrators and managers, which followed upon the development of the PCF. The PCF is an endorsement of the view that it is through genuine and comprehensive engagements that a profession may reinforce its unique identity and steer its progress. The PCF is both an impetus and an inspiration for such a journey.

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Annex A. Key Competency Area 2: Research Planning, Strategy and Policy Development

Facilitate and support the development, implementation, monitoring and evaluation of research policy and strategy across the competency areas		
Sub-Area - Facilitate and support the development and implementation of research policy and strategy		
Level 1 - Administrative/ Operational	Level 2 – Management	Level 3 – Leadership/Strategic
- Understand the research process - Contribute to team efforts in a proactive manner - Familiar with the project management cycle - Collect and examine (mine) data for research management intelligence - Recognise/identify thematic and sectoral stakeholders - Apply organizational research management governance - Administration of research incentives, benchmarks and initiatives	- Demonstrate knowledge of the full research cycle - Interpret and translate policy for research management - Apply knowledge of the full programme and project management cycle (including operational plans and implementation, budgeting for strategy implementation and monitoring, evaluation and reporting back into improving and enhancing the project management cycle) - Plan for differentiated stakeholder groups (thematic and sectoral) - Identify best practice for policy, legislative, strategic and sectoral frameworks - Interpret, translate and adapt research management governance frameworks and practices - Convince organizational stakeholder of strategic objective and invite action - Apply and manage research incentives, benchmarks and initiatives - Demonstrate knowledge of systems and processes within the research and innovation value chain - Contribute to planning for and oversight of research facilities and infrastructure	- Translate requirements for the full research cycle - Scan the environment to assess the impact of trends in the research environment - Interpret and translate policy in the research and innovation sector - Respond to differentiated thematic and sectoral stakeholder interests - Develop strategies and policies to maximise the organization's research portfolio and its ability to exploit research outcomes - Foster a public and international profile of organizational research - Lead on strategic research management governance - Exercise influence on agenda setting for policy development (national, perhaps regional and international) - Make strategic decisions within research planning, strategy and policy - Initiate research incentives, benchmarks and initiatives

Sub-Area - Monitoring and evaluation of research policy and strategy		
Level 1 - Administrative/ Operational	Level 2 – Management	Level 3 – Leadership/Strategic
• Aligns with desired outcome of organizational research strategy • Operate processes and systems to collect data for monitoring and evaluation • Familiar with bibliometrics and other evaluation measures	• Manage quality assurance and benchmarking • Apply knowledge of the full programme and project management cycle (include operational plans and implementation, budgeting for strategy implementation and review) • Interpret data, including metrics for research management intelligence • Monitor progress towards goal achievements, and acts decisively as required • Develop processes or systems for the collection of data for monitoring and evaluation • Demonstrate knowledge of and apply bibliometrics and other impact measures	• Identify and assess risks and ensure mitigation/proactive approaches • Interpret and lead for the full programme and project management cycle • Lead on quality assurance and benchmarking • Assess the impact of external factors on research policy and strategy and lead on the organizational response • Decide on appropriate action based on research management intelligence and impact measures

Source: SARIMA, 2016