

### Researcher Development in a Rapidly Changing World – A Strategic Approach for Navigating Disruption

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#### **A**BSTRACT

What is new?

The rapidly evolving research landscape, driven by technological advancements, shifting institutional priorities, and increasing accountability, has disrupted traditional approaches to researcher development. Higher education institutions (HEIs) and research management administrators (RMAs) must navigate these complexities while ensuring research excellence, sustainability and global competitiveness. In this dynamic environment, RMAs and researchers have become co-creators, jointly responsible for shaping researcher development. A structured researcher development framework (RDF) is essential for systematically addressing researcher capacity challenges and aligning institutional objectives with national and global research priorities. However, existing RDFs often lack the contextual adaptability required for diverse institutional settings. This paper presents a structured roadmap for RMAs to develop a contextualised RDF that is responsive to institutional realities while maintaining global relevance.

What was the approach?

Causal layered analysis (CLA) was used to guide the phased process of developing a contextualised RDF and to explore and analyse systemic, cultural and structural challenges in researcher development. From this process, a structured roadmap or blueprint for RDF development emerged, based on five key components – the 5Cs: collaboration, cocreation, contextualisation, consultation and consensus-building. This roadmap provides RMAs with a structured

#### Researcher Development in a Changing World

approach to developing institution-specific RDFs systematically.

What is the academic impact?

The study contributes to research management and administration (RMA) by providing a replicable model for RMAs developing contextually relevant RDFs. Additionally, it highlights the role of RMAs in shaping research ecosystems and emphasises the importance of balancing global best practices with local institutional and national priorities.

What is the wider impact?

The implications of this study extend beyond a singular institutional setting. The phased model presented here offers a replicable strategy that has the potential to be adapted by RMAs in various higher education contexts, particularly in resource-constrained environments. Future research will focus on developing evaluation instruments to assess the effectiveness and impact of RDFs across diverse

academic contexts.

Keywords Researcher Development; Research Management; Causal

Layered Analysis; Researcher Development Framework; Five

Phased Model

### **INTRODUCTION**

The research landscape is evolving rapidly, influenced by technological advancements such as the digital transformation in research processes, automation and analytics, changing research norms, and a broader recognition of the impact of research. In response to the global imperative for the production of high-quality research with measurable impact (Niemczyk & Rossouw, 2019; Niemczyk, 2024), many countries have developed national systems to monitor and evaluate research being conducted by higher education institutions (HEIs). Examples include the Research Excellence Framework 2029 (REF, n.d.) in the UK, Excellence in Research for Australia (ERA) in Australia (Australian Research Council, n.d.), and the Double First-Class Initiative (Department of Education, Australian Government, n.d.), all of which have been developed to assess, promote and enhance the quality of research to foster academic excellence and driving innovation.

As the landscape continues to evolve, propelled by technological advancements and shifting societal priorities, opportunities arise for research managers and administrators (RMAs) to play a pivotal role in shaping the future of inquiry and innovation, particularly in response to the increasing complexity of research funding landscapes and the growing demand for accountability and impact in research (Labuschagne, 2024). However, the profile of researchers expected to produce innovative and impactful research outputs varies significantly based on geographical location. Data from the

World Population Review (2024) on the number of doctorate degrees per country highlights considerable discrepancies among countries, with developed economies generally having a much higher percentage of doctoral degrees per capita compared to developing countries.

In the South African context of this study, Naidoo (2023) notes that approximately 40% of all current PhD candidates are academics, and only about half of all academics hold doctoral degrees. In addition, while statistics indicate a steady increase in researchers employed between 2010 and 2017 in South African higher education, the numbers have since declined due to various factors such as the attrition of senior researchers and an ageing academic workforce (Van Schalkwyk, 2021). Higher education institutions face persistent challenges in strengthening their research pipelines, including a shortage of academic staff with doctoral qualifications and uneven research productivity (Science Times, 2024; Van Schalkwyk, 2021). Furthermore, the sector faces high turnover rates among early-career researchers, with many struggling to meet increasing institutional and global expectations (Science Times, 2024). Globally, only 17% of Sustainable Development Goal (SDG) targets are on track, highlighting the pressing need for research capacity that can effectively address complex societal challenges (UN Stats, 2024). Empirical data from the Human Sciences Research Council (2024) indicate that just over 60% of South African doctoral graduates over the past 19 years were employed full-time while actively pursuing their doctoral studies. This underscores the considerable pressure on academic staff to balance teaching duties with research training responsibilities.

This dual-expectation model has not produced the desired outcomes, as evidenced by the Council on Higher Education's Doctoral Degrees National Report (CHE, 2022). National reports (National Advisory Council, 2022; Universities South Africa, 2018) further concluded that HEIs must implement deliberate strategies to increase the number of researchers to remain globally competitive. They recommended that the changing nature of knowledge production requires new and intensified forms of capacity-building for researchers.

These recommendations have led to a shift from the traditional model where researchers were solely responsible for their professional development. Universities are now expected to create an enabling and supportive research environment and must partner with researchers as co-creators in their professional development journey. Consequently, the responsibility for developing academic staff into independent researchers capable of producing high-quality research has been delegated to many universities' RMA/research support units. These RMA units must adopt this expanded vision of shared responsibility. They are also expected to fulfil this role through innovative methods and the implementation of new approaches to the capacity development of researchers at different levels of their career trajectory.

According to Labuschagne (2024), society's expectations of researchers have undergone a profound transformation. There is a growing emphasis on the societal impact of research. Researchers are increasingly expected to engage with communities

in novel ways, embracing concepts like engaged scholarship and the scholarship of integration. By widening circles of academic reflection and dialogue beyond the realm of higher education to include knowledge, insight, and experiences of communities, the resultant scholarship becomes enriched by encoded, explicit, tacit, situated, and subjugated knowledge that resides outside of the academy. Labuschagne (2024) explains that this shift entails involving communities in problem definition and actively collaborating on solution development and implementation. It underscores the need for researchers to transcend traditional academic boundaries and forge meaningful partnerships with diverse stakeholders.

Researcher development programmes and initiatives have the potential to equip researchers with the skills, knowledge and resources to conduct high-quality research, drive innovation and generate solutions for the complex challenges faced by society (Flinders & Anderson, 2019). RMAs have to develop policies and strategies in response to researchers' evolving needs and requirements, linking them to capacity-development initiatives and research productivity. Through resource allocation, mentorship, and strategic planning, RMAs are becoming responsible for the holistic development of researchers by creating a supportive and dynamic researcher development ecosystem. Creating such an innovative researcher development ecosystem requires a systemic consultative approach that embraces inclusivity, challenges traditional paradigms and embraces context and diversity among various stakeholders and role-players. Researcher development must be firmly grounded in scholarly practice and institutional support and aligned with national strategic imperatives.

While numerous researcher development frameworks exist globally, context-specific frameworks that address the unique socioeconomic, institutional, and technological realities HEIs face in developing countries, particularly in South Africa, are lacking. This paper describes the development of a bespoke RDF at an open and distance learning higher education institution aligned with international and global standards. By outlining the process of developing a contextualised RDF, this paper offers insights into integrating institutional realities, management expectations, socioeconomic factors, and technological advancements into researcher development initiatives.

Additionally, it provides a blueprint or roadmap that may assist RMA professionals in designing, evaluating, and refining RDFs tailored to their institutional contexts. This approach is intended to support efforts to foster research excellence, improve institutional support systems, and align researcher development with national and regional priorities. This, in turn, has the potential to contribute to a deeper understanding of future-focused, sustainable approaches to researcher development in resource-constrained environments. It may also inform the ongoing evolution of research capacity-building practices and enrich the broader global discourse on research management and administration.

### Shifting sands – The Need for Researcher Development in Times of Change

Researcher development is a multifaceted concept that is difficult to define as existing academic literature tends to view the concept from a wide range of interpretations of areas of focus and importance (Evans, 2011). For example, Coleridge et al. (2004) define researcher development within a framework of capacity-building policies and practices, while Adams (2004) views it as the acquisition and development of specific skills and knowledge. The professional development of academics includes a myriad of literature on the consideration of career paths and progression and the development and advancement of researchers at various stages in their research careers (Tien, 2008). According to Vitae (n.d.), researcher development seems to be about the professionalisation of the researcher based on the quality of performance and supported by skills development. Evans (2011) argues that three important questions need to be addressed by researcher development research, namely:

- (1) How might researchers be developed?
- (2) What does the researcher development process involve?
- (3) What is researcher development?

How these questions are answered indicates an institution's interpretation and conceptualisation of researcher development: whether it is considered a process or a product, and how widely (or how narrowly) it is interpreted. The researcher development conceptual model of Evans (2011) presents a fundamental deconstruction of the concept into three main components or elements: firstly, behavioural development, which includes the process whereby people's behaviour or performance is modified; secondly, attitudinal development, which is the process whereby people's attitudes are modified; and lastly, intellectual development, or the process whereby people's knowledge, understanding or reflective/comprehensive capacity or competence is modified. In other words, researcher development refers to the process of enhancing the knowledge, skills, and attributes of individuals engaged in research. It encompasses various activities and initiatives designed to support researchers' professional and personal growth, enabling them to become more effective and successful in their roles (Evans, 2012). Thus, besides technical skills, researcher development also focuses on broader professional development aspects such as leadership, collaboration, networking, and interdisciplinary engagement.

Researcher development has the potential to equip researchers with the skills, knowledge, and resources to conduct high-quality research, drive innovation, and generate solutions for the complex challenges faced by society (Bornmann, 2021). The complexity and multifaceted nature of researcher development necessitates diverse perspectives to address the vast array of competencies required for research excellence. HEIs have increasingly adopted structured frameworks to cultivate these competencies, such as the UK-based Vitae Researcher Development Framework. This RDF delineates competencies in four key domains with specific attributes essential for researchers,

ranging from subject-specific expertise to broader skills like personal effectiveness and ethical considerations (Vitae, n.d.). In addition to adopting established frameworks, universities have proactively developed their own researcher development frameworks tailored to their unique contexts and strategic objectives. For instance, the University of Canberra has implemented the Researcher Development Skills Framework (RDSF), which aligns its Higher Degree by Research (HDR) development workshops with specific skills outlined in the framework (University of Canberra, n.d.). By developing and implementing these tailored frameworks, HEIs have attempted to address their research communities' diverse and evolving needs effectively, thus promoting excellence and innovation in research practices.

As HEIs refine and implement researcher development frameworks to address the dynamic needs of their research communities, the roles and responsibilities of RMAs have become increasingly diverse.

Research managers and administrators are increasingly recognised as professionals who provide strategic, tactical, operational, and administrative support across the entire research lifecycle. Their roles span a variety of institutional contexts, including HEIs, research councils, funding agencies, and, increasingly, the commercial sector, where they work to ensure that research is conducted efficiently, ethically, and with demonstrable impact.

The International Network of Research Management Societies (INORMS) broadly defines RMAs as individuals involved in research management and administration at all levels and across a diverse range of organisations engaged in the management of research (INORMS, n.d.). The Association of Research Managers and Administrators (ARMA UK) characterises RMAs as professionals who support the research process by providing expert advice and practical assistance, frequently operating at the intersection of research, policy, and funding (ARMA UK, 2023). Similarly, the National Council of University Research Administrators (NCURA) in the United States describes research administrators as professionals responsible for the administration of sponsored programmes within academic and research institutions (NCURA, n.d.).

A key distinction between RMAs and researchers lies in their respective roles and purposes within the research ecosystem. While researchers are principally concerned with generating new knowledge through inquiry and investigation, RMAs focus on creating and maintaining the enabling environment in which such research can thrive. As INORMS (2020) aptly notes, "while researchers focus on the content and questions of research, RMAs provide the context and conditions under which research thrives".

The role of RMAs has undergone substantial transformation in recent decades, paralleling the increasing complexity of the global research landscape, the diversification of funding sources, and heightened expectations for research accountability and impact. Modern RMAs are now actively engaged in strategic planning, policy formulation, and institutional research leadership. They contribute to

shaping research agendas, aligning research projects with institutional priorities, and advising on matters related to risk, compliance, and societal relevance (INORMS, 2020).

Furthermore, RMAs play a critical role in facilitating researchers' abilities to articulate and evidence the societal, economic, and policy impacts of their work, a practice that is essential for engagement with national research assessment frameworks such as the Research Excellence Framework (REF) in the United Kingdom and the National Research Foundation (NRF) rating system in South Africa (Belcher et al. 2017).

RMAs are increasingly expected to facilitate the development of researcher development frameworks and to play a crucial role in ensuring their alignment with institutional priorities and global research standards. The shift towards structured researcher development has expanded the scope of RMAs, positioning them as key role-players in increasing research productivity. This evolving role necessitates strategic planning, interdisciplinary collaboration, and the effective allocation of resources to sustain a conducive research environment (Derrick & Nickson, 2014). However, with these expanded responsibilities come new challenges and disruptions that influence the traditional functions of RMAs.

### CHALLENGES AND DISRUPTION IN RESEARCHER DEVELOPMENT

The pace of change in the higher education environment during the last decade brought about new challenges in institutions' capacity and capability to adapt to a myriad of competing demands. Research leaders have had to reflect and review researcher development policies and strategies in response to researchers' evolving needs and requirements, how they were linked to professional development and research productivity, and the outcomes they were ultimately seeking to achieve. Changes in national policies and institutional strategic objectives have placed increasing pressure on RMA offices to drive innovation to increase research productivity (Boggs et al., 2022). A more agile approach requires those overseeing institutional research policies and processes to develop greater trust and foster collaborative ways of innovating and working with stakeholders.

Integrating various frameworks and models allows institutions to create holistic development pathways that cater to the diverse needs of researchers. Such integration fosters both individual growth and collective advancement within the research community, enabling researchers to navigate and excel in a complex and dynamic environment. Therefore, a multifaceted development approach is imperative for researchers to thrive in their respective fields (Niemczyk, 2018; Niemczyk, 2019).

The multifaceted nature of researcher development is further complicated by the unique demands of various disciplines and the challenges inherent in interdisciplinary collaboration. As new research areas emerge, traditional disciplines often struggle to adapt to or accept new approaches (MacLeod, 2018). Interdisciplinary research, while essential for addressing complex real-world problems, introduces challenges such as differing terminologies, methodologies, and quality standards across fields. Moreover, institutional structures and academic cultures are often organised around established

and/or traditional disciplines, posing additional barriers to interdisciplinary initiatives (Shanableh et al., 2022). Developing flexible frameworks and support systems that foster cross- and trans-disciplinary understanding and cooperation is crucial to navigating these complexities.

Evaluating the effectiveness and impacts of researcher development initiatives over time presents challenges to HEIs. The longitudinal aspect of researcher development necessitates continuous medium- to long-term monitoring to ensure that acquired skills and competencies are effectively integrated into research practices. Niemczyk and Rossouw (2019) explain that the pressure to produce measurable research outputs can sometimes lead to compromised ethical decision-making among researchers pressured to produce measurable outputs, underscoring the need for comprehensive evaluation mechanisms that go beyond quantitative metrics (Holden et al., 2012).

In addition, many HEIs, particularly those that are publicly funded, have been grappling with rising expenses and diminishing income dilemmas (Shanableh et al., 2022). This financial strain often leads to new initiatives, with long-term returns being considered a lower priority than those that address immediate needs with short-term returns (Cebula & Koch, 2021). While there is often in-principle support for researcher capacity development, the lack of resources can hinder the implementation of these initiatives. Consequently, fostering research excellence through researcher development initiatives becomes challenging, as a sustained financial investment in researcher development is essential for long-term impact.

Prioritising professional development for researchers is essential for cultivating a new generation of skilled and innovative scholars. However, academic staff are often tasked with many responsibilities, encompassing teaching, research, and administrative duties. This diverse range of responsibilities can diminish their capacity to engage in professional development activities related to teaching and learning, and research activities. These competing demands can lead to challenges in prioritising professional development, despite its recognised importance in supporting the development of the next generation of academics (Mdletshe, 2023).

Integrating these challenges and emerging trends presents challenges for RMAs already navigating the complexities of providing research support. The evolving landscape of research administration demands that RMAs remain adaptable, innovative, and equipped with the necessary skills to manage change effectively. This includes embracing digital transformation, fostering interdisciplinary collaboration, and focusing on research outcomes and impact.

The University of Strathclyde has implemented a structured and institution-wide Researcher Development Programme (RDP) designed to strengthen the research competencies of both postgraduate researchers and academic staff (University of Strathclyde, 2013). A significant challenge during the programme's implementation was securing sustained engagement across a diverse array of faculties, each characterised by distinct disciplinary norms and developmental priorities. Further complexity arose

from the need to ensure that the programme's content was aligned with the heterogeneous professional development needs of the research community. In response, the University adopted a collaborative delivery model that integrated contributions from faculty academics and professional services, thereby fostering institutional ownership and disciplinary relevance. This model enabled the programme to be adaptive and context-sensitive, supporting a broad spectrum of researchers. Additionally, the RDP incorporated a customised suite of workshops, training sessions, and learning resources tailored to specific career stages and disciplinary contexts, which contributed to improved uptake, engagement, and developmental impact.

#### REIMAGINING RESEARCHER DEVELOPMENT

The context in which researcher development takes place is important because of its crucial role in equipping future researchers. It is essential in Africa to build research capacity, address societal challenges, promote local knowledge, facilitate collaboration and partnerships, retain talent, and drive economic growth and innovation (African Capacity Building Foundation, 2017). By prioritising researcher development, African countries can harness the potential of their researchers, address local needs and contribute to sustainable development on the continent (Vitae, n.d.).

A well-thought-out researcher development framework (RDF) provides a structured approach to supporting researchers' growth, skills, and competencies to develop a robust researcher development environment where researchers can thrive. A robust RDF should be adaptable and responsive to the changing needs of researchers and the specific research landscape. The development of such an RDF requires a systemic consultative approach that embraces inclusivity, challenges traditional paradigms, and is grounded in a process of reflexivity and sense-making of the lived realities of researchers to effect real, inclusive, and sustainable change.

In reimagining researcher development and the development of a researcher development framework, the largest comprehensive open distance and e-learning (CODeL) institution on the African continent undertook a structured and methodologically sound approach to develop a "bespoke" RDF in 2022 – one that was aligned with institutional and societal values. The RDF needed to address social inequalities and have the potential to promote diversity, equity, and inclusion. It would thus provide opportunities for researchers from previously disadvantaged backgrounds and marginalized communities to access training, resources, and opportunities, leading to more inclusive and equitable research outcomes. Thus, in considering the development of a bespoke RDF, it became important to develop a unique lens to address the contextual and societal factors of what it means to be a university on the African continent.

By embracing the inclusion of Indigenous perspectives throughout the development process, the bespoke RDF aligned itself with community priorities, respecting Indigenous rights and protocols and was grounded in the principles of reconciliation, decolonization, and social justice. It was also recognised that the RDF must maintain

global relevance by balancing local contextual factors with international best practices. It should thus enhance researcher mobility and enable internationalisation while ensuring that researchers can effectively engage on a global platform. This dual approach would enrich the institutional research environment, align with global research paradigms, and facilitate cross-border collaborations and knowledge exchanges. By acknowledging and incorporating international frameworks, the RDF can bridge local realities and global expectations, thereby promoting a dynamic and globally competitive research culture.

# The Processes for Developing a Bespoke Researcher Development Framework (RDF)

A researcher development ecosystem refers to the interconnected network of resources, divisions, support departments, and initiatives that support researchers' growth, training, and professional development (Preuss et al., 2018; Eck & Roney, 2023). It includes various stakeholders and components contributing to the overall environment and infrastructure for researcher development. Structured RDFs are central to this endeavour as they serve as a foundational blueprint guiding the integration and coordination of various resources, support departments and initiatives (Institute for Academic Development, University of Edinburgh. n.d.).

A structured and phased approach was adopted to develop the researcher ecosystem in the context of the study reported in this article. The critical futures methodology of causal layered analysis (CLA) was used to guide the inquiry into the causes of phenomena surrounding current developmental practices and identify both enabling and constricting aspects and factors that may contribute to the development of the RDF. CLA seeks to integrate empiricist, critical, interpretive, and action-learning methods of analysis based on the assumption that how a problem is framed changes the policy solution and the actors responsible for creating transformation (Inayatullah, 2004).

CLA offers a structured framework for analysing complex issues by examining them across four distinct layers (Inayatullah, 1998; Inayatullah, 2004). The litany level represents the most superficial layer, encompassing widely accepted aspects of a problem, including facts, statistics, and data. In the context of researcher development, this layer/level addresses questions such as: What is the current form and structure of researcher development? The second layer, known as systemic causes, delves deeper into the structural and systemic factors contributing to the issue. This involves exploring underlying causes, patterns, and trends by examining enabling and constrictive systemic factors that affect researcher development within a specific context. The worldview or cultural assumptions layer analyses the cultural and societal beliefs, narratives, and assumptions that shape perceptions of the issue. It seeks to uncover deeper social, linguistic, and cultural structures, focusing on how researchers perceive and experience the concept of being professional researchers. At the deepest level, the metaphor and myth layer involves examining the symbolic and mythological

dimensions of the issue. This includes exploring archetypal stories, metaphors, and influences from the collective unconscious that underpin the problem.

The aim of utilising CLA is to move up and down through these layers/levels of analysis to create more authentic and alternative views of the future and map the inner dimension and perceptions of the institution and its researchers. Thus, the inner dimension links the litany of the organisation (its official policies and implementation plans), the system of the organisation (what it does, how it rewards), its worldview (culture and ideologies of its researchers), and, finally, myths surrounding what it means to be a researcher in a tech-enabled CODeL higher education environment (Inayatullah, 2004). The CLA method enables RMAs to systematically identify and address the underlying challenges and assumptions that may impede researcher development, and it aids in developing an RDF that is responsive to overt issues and subtle cultural narratives influencing researcher experiences and contextual realities.

In developing the bespoke RDF in this context, the first three layers of CLA, namely the litany, systemic causes, and worldviews, were employed to ensure a comprehensive and context-sensitive approach. The CLA inquiry used quantitative and qualitative data collection methods within a convergent parallel design to investigate the causes of phenomena surrounding current policies and practices regarding the development of researchers. By applying these three layers of CLA, the development of the RDF was grounded in a nuanced understanding of the complex realities faced by researchers, allowing for a framework that is not only responsive to immediate needs but also adaptable to systemic and cultural shifts within the academic landscape to ensure a comprehensive and context-sensitive approach.

The application of CLA led to the identification of five central themes: collaboration, cocreation, contextualisation, consultation, and consensus – collectively termed the 5Cs as shown below in Figure 1. The 5Cs provided both the conceptual foundation and the structured sequencing for the phased development of the bespoke RDF. Each C was operationalised as a distinct phase, informing the design of participatory processes, instructional design elements, and iterative feedback mechanisms and ensuring that the framework evolved systematically from collaborative benchmarking through to final institutional consensus.

These themes can be translated into distinct phases in developing an RDF, providing RMAs with a structured approach to create frameworks tailored to their institutions' unique needs.

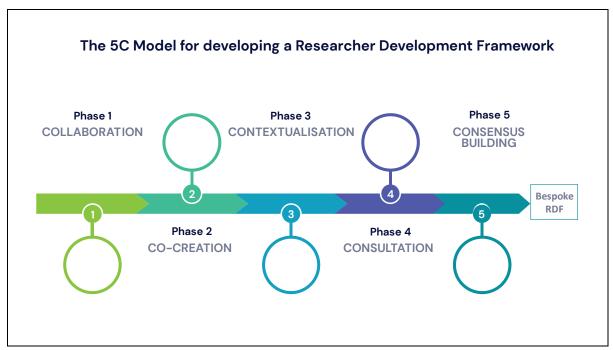


Figure 1: The 5C Model for developing a Researcher Development Framework

### Phase 1: Collaboration – Enhancing Researcher Development Through Strategic Partnerships

Collaboration extended beyond internal stakeholders to include partnerships with various stakeholders. In the 20th century, Western societies predominantly equated development with linear progress, often driven by technological advancements. Bertrand de Jouvenel (1967) referred to this perspective as "railway thinking," where societies or institutions are likened to trains sequentially passing through identical developmental stages (Institute of Futures Research, 2008). To avoid the limitations of this linear approach, universities can engage in strategic collaborations with external experts, industry leaders, and other academic institutions, thereby fostering transformative development pathways. Strategic partnerships provide RMAs with diverse perspectives, advanced knowledge, and innovative practices beyond their internal resources. They also provide access to various perspectives, cutting-edge knowledge, and innovative practices that may not be readily available within the institution. Leveraging external expertise can allow a university to bypass certain developmental stages, adopt emerging technologies, and implement novel strategies more rapidly.

Before initiating collaborative efforts, it was important to conduct both international and regional benchmarking exercises to assess the feasibility and potential effectiveness of such partnerships. In the context of an RDF for a large CODeL university, this process involved several key steps. Initially, a review of existing RDFs implemented globally was undertaken to understand various models and their applications. Subsequently, a benchmarking study, encompassing both national and international institutions, was conducted to evaluate how these frameworks were operationalised in diverse settings.

This analysis provided insights into best practices and potential challenges; then, based on the findings, recommendations were formulated to identify the most suitable RDF model that would align with institutional objectives and effectively support researcher development initiatives. The strategic decision was made to enrich the bespoke RDF's content and applicability, ensuring it met both local and global research standards, by using the UK Vitae Researcher Development Framework as a blueprint to ensure that the process adhered to international quality standards.

Following a formal consultation process with Vitae UK, a collaboration agreement was formulated that resulted in a contractual agreement to commence with the development of a bespoke RDF aligned with the global best practices of the existing Vitae RDF, while also addressing the institution's specific needs and contexts. This process spanned a period of six months and involved eight structured engagements with Vitae experts and six institutional working groups comprising researchers, academic leaders and professional staff. This inclusive approach ensured that the RDF reflected both international standards and the institution's strategic priorities, enhancing researchers' capacity to engage in local and global research environments.

Collaborating with Vitae UK not only ensured that the bespoke RDF aligned with internationally recognised standards, but allowed the institution to develop a customised RDF that reflects the University's unique context, culture and strategic objectives, thereby providing tailored support for its researchers.

It is acknowledged that access to external expertise, such as the Vitae UK collaboration that informed this study, may not be economically feasible for all institutions. However, it should be noted that the Vitae Researcher Development Framework itself is publicly available, and many universities have independently developed their own RDFs over the past two decades. These existing frameworks provide a rich resource base from which institutions can draw and adapt elements that are fit for purpose within their own academic contexts, using internal resources and expertise where necessary. While external collaboration can enrich the development process by bringing in international perspectives and best practices, it is ultimately the institution itself – and the researchers within it – who are best positioned to determine what should be included in a contextually relevant and practically applicable RDF. No external partner can fully capture the unique academic culture, strategic priorities, operational realities, and developmental needs of a specific institution. Striking an appropriate balance between globally-inspired principles and locally-grounded content should therefore form the foundation of RDF development. This ensures that the framework is not merely an imported model, but one that authentically reflects the lived realities of the institutional research community and supports meaningful, sustainable researcher development.

# Phase 2: Co-Creation – A Participatory Approach to Framework Development

The development of a bespoke RDF was a systematic and planned iterative process that involved active engagement with various groups of stakeholders, including academic

staff, researchers and research administrators. This participatory approach ensured that the framework would address the needs and aspirations of the institution, allowing for a sense of ownership and commitment among all parties.

Prior to the internal engagements and as a precursor to determining stakeholder involvement, an institutional needs analysis was conducted. The analysis utilised the different levels of CLA to investigate existing developmental practices and comprised three interrelated activities. The first activity examined the current state of researcher development at the University by identifying existing capacity-building initiatives and identifying training gaps. This resulted in the distribution of an online questionnaire to researchers to gauge their perceptions of developmental needs and assess their experiences and expectations regarding capacity development. Thirdly, more than 40 semi-structured interviews were conducted with researchers across various career stages and disciplines to gain a holistic understanding of their experiences and the challenges they face in meeting the increasing demands of the higher education environment. Insights from the institutional needs analysis report informed the development of the bespoke RDF, ensuring alignment with both institutional priorities and the specific needs of the research community.

Once the institutional report was disseminated among key stakeholders, four working groups were established, each corresponding to one of the four domains outlined in the Vitae RDF that would serve as a starting point for discussions and deliberations. Members were requested to participate based on their expertise and experience relevant to their assigned domain. The institutional needs analysis report served as the foundation for these groups, guiding discussions on the development of sub-domains and descriptors tailored to the University's specific context. Over a period of three months, there were eight consultative workshops involving 67 researchers and experts at different phases of their careers.

The participatory nature of the process ensured that stakeholders' immediate concerns, such as workload balance, resource availability and career development opportunities, were considered and integrated, which allowed for ongoing adjustments and iterations. In facilitating the co-creation of an institutional framework, Sager and Gastil (2006) acknowledge that achieving unanimous agreement among all stakeholders would be impractical. Therefore, the principle of reasonable consensus was applied to facilitate effective decision-making. This approach recognises that while complete unanimity is rare, a decision can still be legitimate and actionable if it reflects the collective will of the group, with no substantial objections. Furthermore, the application of the principle of reasonable consensus at this level ensured that while unanimous agreement was not expected, the most pressing and widely acknowledged concerns were addressed, thereby fostering a sense of ownership, inclusivity and commitment.

While collaboration with external partners and co-creation with internal stakeholders were essential, the strategic imperative of contextualisation emerged as the cornerstone of the initiative. Ensuring that the framework was tailored to the specific needs, challenges and realities of the local academic environment was critical to making

it more relevant and responsive. This contextualised approach not only enhanced the framework's applicability but also increased its potential to achieve positive outcomes in the professional development of researchers.

### Phase 3: A Holistic Framework for Contextualising Researcher Development

Utilising different levels of analysis or lenses in the contextualisation process was essential for developing a bespoke RDF that is both comprehensive and responsive to a multifaceted research environment. Each level offers a unique perspective that enriches the framework's relevance and applicability. By integrating these various dimensions, the contextualisation process addresses both immediate and systemic challenges, while remaining aligned to broader socio-political, economic and cultural realities. Figure 2 illustrates the various dimensions utilised in the contextualisation process for developing the bespoke RDF.

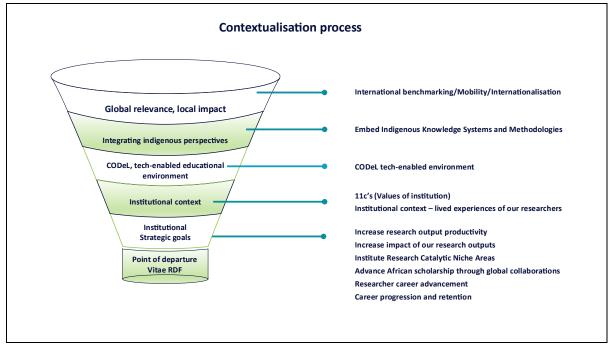


Figure 2: Phase 3 - Contextualising

Each dimension, namely institutional strategic goals, institutional context, national policies, educational environment (CODeL), integrating indigenous perspectives, and global relevance, represents a critical aspect considered during the development process. The institutional dimension focuses on internal structures, policies and resources within the University, ensuring alignment with the institution's strategic objectives. The national policy dimension incorporates governmental regulations, funding priorities and broader higher education strategies, ensuring that the RDF aligns with national imperatives. The global best practices dimension introduces international standards, opportunities for collaboration, and benchmarking, ensuring that the framework remains competitive on a global scale. One of the most important dimensions was the incorporation of indigenous perspectives and Africanisation,

ensuring that the bespoke RDF was not only globally competitive but also rooted in local realities and knowledge systems. This dimension emphasised the integration of African epistemologies, values and research priorities, fostering an inclusive framework that respects and promotes indigenous knowledge and different ways of knowing, while addressing the unique socio-cultural and economic contexts of the institution. Finally, the researcher-needs dimension emphasised the skills, career development and support systems required for individual researchers to thrive. The overlapping areas signify the integration and interdependence of these dimensions, reflecting a holistic and context-sensitive approach to RDF development.

The four working groups involved in the co-creation phase were provided with this multi-lens approach to contextualisation as a guiding framework for their discussions during two workshops held over three months to allow adequate time for reflection and refinement. The use of different lenses led to robust deliberations on the domain descriptors, ensuring that the content and scope of the bespoke RDF were both comprehensive and strategically aligned. By utilising different levels of analysis, the working groups engaged in a critical evaluation of what should be included and excluded, ensuring that the final framework was not only theoretically sound but also practically applicable. Furthermore, the integration of systemic analysis allowed the working groups to identify underlying structural drivers that affect research capacity, ensuring that the bespoke RDF was not only a reactive tool but also a proactive intervention designed to address both immediate and long-term challenges within the research landscape.

The contextualisation process culminated in the development of the first draft of the bespoke RDF. The discussions and systemic analyses undertaken in this phase allowed for the identification of key structural drivers influencing researcher capacity development, ensuring that the draft RDF was not merely a descriptive tool but a dynamic and forward-looking intervention. While this first draft represented a significant milestone in the development process, it was not yet positioned for final implementation. Instead, it served as a foundational document for further consultation within the institution, facilitating broader engagement and iterative refinement to ensure alignment with institutional priorities and stakeholder needs.

### Phase 4: Consultation – Integrating Diverse Perspectives

Consultation was integral to the development of the bespoke RDF, ensuring that its design was informed by empirical evidence, stakeholder input and disciplinary expertise from a variety of structures. Throughout the process, structured feedback mechanisms, including workshops and targeted discussions, facilitated the incorporation of diverse perspectives.

Two open, institution-wide consultation sessions were organised, allowing all staff members to provide input and a critique of the draft document. These sessions enabled broad engagement, ensuring that the framework reflected the varied research needs and priorities of the academic community.

In addition to the broader institutional consultations, a dedicated session was convened to engage scholars and experts in Indigenous Knowledge Systems, decoloniality and Africanisation to ensure that the draft RDF incorporated these critical perspectives meaningfully. This was important for alignment with the strategic imperative of embedding African epistemologies and knowledge production frameworks within the University's research development agenda. The insights obtained from this consultation informed the refinement of the draft RDF, strengthening its responsiveness to the socio-cultural and intellectual contexts that shape researcher development in (South) Africa.

The principles of engaged scholarship had to be embedded as a core element of the bespoke RDF to ensure its alignment with the University's strategic vision of socially responsive and impactful research. A dedicated session was therefore convened, bringing together scholars and divisions specialising in engaged research, knowledge mobilisation and community-driven scholarship to assess the draft RDF critically. Their input ensured that the framework not only met rigorous academic standards but also incorporated multi-, inter- and transdisciplinary approaches that strengthen the link between research, policy and societal transformation. These discussions reinforced the RDF's role in fostering contextually relevant and socially engaged research, equipping researchers with the skills and ethical frameworks necessary to navigate the complexities of collaborative knowledge production in an African and global context.

Developing the final version of the bespoke RDF required the synthesis of information from multiple sources and the integration of diverse perspectives into a coherent and strategically aligned framework. Given the complexity of balancing different priorities, achieving a reasonable consensus across stakeholder groups was a challenging task. The iterative nature of the consultations, coupled with the need to harmonise disciplinary, methodological and ideological perspectives, demanded careful negotiation and critical engagement to ensure that the final RDF was both academically rigorous and contextually relevant. The collaboration with strategic partners, particularly Vitae, played a crucial role in further refining the framework and aligning it with global best practices in researcher development, ensuring that it remained in alignment with international standards.

#### Phase 5: Consensus-Building – Building Collective Ownership

Critical reflection and the willingness to examine and challenge existing beliefs were fundamental to the consensus-building process, requiring stakeholders to engage in rigorous evaluation of current practices, challenges and future aspirations for researcher development (Leising et al., 2024). The necessity of consensus-building lies in its ability to enhance the legitimacy and credibility of the framework, ensuring that it is widely accepted by stakeholders. Through early identification and resolution of potential areas of conflict, it has the potential to minimise resistance to implementation while establishing a sense of collective ownership and shared accountability among stakeholders.

Consensus-building involved a series of collaborative decision-making opportunities aimed at achieving broad agreement among key stakeholders. It ensured that the RDF was comprehensive, widely accepted, and aligned with both the institutional and the development needs of researchers.

An iterative approach was employed, in which feedback was continuously incorporated, tested and refined through multiple rounds of discussion and validation exercises. The deliberative consultation and dialogue with the research committees of the different colleges, faculties and structures responsible for research support allowed for the clarification of expectations, negotiation of conflicting viewpoints, and alignment of priorities.

Creating awareness and implementing a structured awareness campaign played a crucial role in consensus-building. Ensuring that stakeholders across the institution were well-informed about the purpose, significance and expected impact of the framework was essential for facilitating engagement and encouraging meaningful contributions. By disseminating information through multiple communication channels and platforms – including multimedia platforms, institutional newsletters and targeted briefings – stakeholders were given the opportunity to understand the rationale behind the bespoke RDF, its alignment with institutional and national research priorities, and how it would enhance researcher development. Awareness efforts not only facilitated transparency but also helped mitigate resistance by addressing misconceptions, thereby creating a sense of ownership of the framework.

The five phases and the 5Cs framework have provided a structured roadmap for RMA professionals to develop an RDF across diverse institutional settings and contexts, as shown in Table 1. This structured approach serves as a potential blueprint for identifying, reviewing and evaluating existing RDFs, as well as for developing institution-specific frameworks that align with the unique needs and strategic priorities of universities. By offering clear guidelines, the proposed roadmap has the potential to assist RMAs in systematically addressing challenges such as resource constraints, competing institutional demands and the need for contextually relevant frameworks.

In summary, the 5Cs were operationalised through five distinct phases of RDF development, each building on the preceding phase.

Table 1: The 5C Model for developing a Researcher Development Framework

Phase	5C Component	Purpose / Role in Process	Outcome
Phase 1	Collaboration	and benchmarking (internal &	Define quality benchmarks; align with global best practice

Phase	5C Component	Purpose / Role in Process	Outcome
Phase 2	Co-creation	Engage diverse institutional stakeholders (researchers, RMAs, academic leaders) in participatory framework design	Ensure ownership, relevance, and alignment with institutional needs
Phase 3	Contextualisation	Tailor framework to institutional context (CODeL, Africanisation, Indigenous Knowledge, national policies, global relevance)	Develop draft RDF grounded in local realities and global expectations
Phase 4	Consultation	Conduct broad consultations (institution-wide, disciplinary, Indigenous Knowledge experts, engaged scholarship communities)	Refine and validate RDF content through feedback loops
Phase 5	Consensus- building	Facilitate iterative dialogue and structured awareness to build institutional ownership and commitment	Achieve reasonable consensus and readiness for institutional adoption and implementation

### Risks and Tensions in Conceptualising a Contextualised and Fitfor-Purpose RDF

The different phases in conceptualising and developing a contextualised RDF were marked by several inherent risks and tensions, particularly when navigating the complexities of stakeholder engagement, institutional needs and broader research imperatives. One of the key tensions in this process was achieving reasonable consensus among stakeholders, a challenge that has been well-documented in policy and framework development literature (Bryson, 2018). Reaching consensus is particularly complex when developing an RDF because it involves diverse perspectives, competing interests and institutional constraints to be negotiated. Stakeholders often have divergent priorities and expectations regarding what constitutes effective researcher development (Sørensen & Torfing, 2017). While some may prioritise the development of transferable skills for broader employability, others may emphasise discipline-specific expertise or the enhancement of research impact. The negotiation process must reconcile these varying viewpoints without compromising the framework's core principles and objectives. Epistemic differences among stakeholders create additional tensions. Researchers from different disciplinary backgrounds provide comments and input within distinct paradigms that shape their perceptions of essential competencies (Becher & Trowler, 2001). For instance, while social scientists may emphasise critical thinking and qualitative methodologies, researchers from the natural sciences might advocate for technical skills and data analytics. This epistemological divergence can make it challenging to construct an RDF that is widely accepted across disciplines (Oliver & Boaz, 2019). Institutional power dynamics also play a significant role in shaping consensus (Kezar, 2001). The involvement of senior leadership and governance bodies may introduce top-down pressures and expectations that do not always align with the needs articulated by developing and emerging researchers or academic staff's lived experiences. If consensus-building is susceptible to hierarchical decision-making, it risks alienating key stakeholders whose buy-in is essential for effective implementation of the RDF.

Despite these challenges, striving for reasonable consensus through consultation is crucial to ensuring the legitimacy, relevance and sustainability of an RDF. A framework developed without broad stakeholder agreement risks the challenge of limited adoption, the lack of institutional support and reduced effectiveness in addressing researcher development needs (Bryson, 2018). Achieving reasonable consensus ensures that the RDF remains responsive to diverse research cultures while maintaining coherence. By incorporating multiple perspectives while negotiating practical constraints, the framework aims to balance flexibility and standardisation, thereby supporting efforts to enhance researcher development across varied academic and institutional contexts (Becher & Trowler, 2001).

Another aspect of tension that emerged was the prevalence of binary or trade-off thinking, wherein decisions were often framed as mutually exclusive choices. For example, the perceived conflict between teaching responsibilities and research productivity, or the challenge of aligning global academic standards with local contextual relevance, exemplifies this rigid dichotomy (Brew, 2006). This "either-or" mindset fosters a reductionist perspective that assumes a zero-sum game, where the advancement of one priority necessitates the diminishment of another (Kezar, 2001). A prevailing example was the assumption that prioritising research excellence comes at the expense of other academic responsibilities, such as teaching, community engagement and administrative duties. Brew (2006) argues that this is a false dichotomy, as research-intensive environments can, in fact, enhance teaching quality and community impact through knowledge production and dissemination. The adoption of an "and" rather than an "either-or" perspective enables the simultaneous prioritisation of multiple academic functions, fostering a more integrated approach to researcher development. Overcoming binary thinking required a shift toward a more nuanced and intersectional approach that recognised the possibility of coexistence and integration. This approach allowed the RDF to address multiple and, at times, competing priorities simultaneously, creating a framework that reflects the complexity and multidimensional nature of academic work (Whitchurch, 2008).

#### Conclusion

This study has demonstrated that a structured and contextually responsive researcher development framework (RDF) has the potential to enhance researcher growth,

improve research quality, and align institutional goals with national and global research imperatives. By adopting a systematic, phased approach underpinned by the 5Cs – collaboration, co-creation, contextualisation, consultation and consensus-building – a blueprint or roadmap was outlined for RMAs to develop institution-specific RDFs that addressed the complexities of modern researcher development.

Utilising innovative, future-focused methods such as CLA proved particularly useful, as it allowed for a deep exploration of surface-level issues, systemic structures, underlying worldviews and cultural narratives. These methods helped uncover hidden assumptions, challenged existing paradigms and provided a more holistic understanding of the research environment, making them invaluable tools for developing a forward-looking and adaptable RDF that was sensitive to both current realities and future possibilities. It provided a roadmap or blueprint for RMAs and institutions to systematically develop an RDF that was contextually relevant, globally competitive and responsive to the evolving research landscape.

Using the 5Cs approach ensured that the development process was inclusive and reflective of the institution's varied needs and aspirations. The iterative process, characterised by continuous feedback mechanisms, provided opportunities for meaningful dialogue, helped to incorporate different perspectives and built consensus. Incorporating global and local perspectives and models was essential in developing an RDF that is both globally relevant and contextually appropriate.

This study contributes to the broader discourse on research management and administration by demonstrating how researcher development can be systematically embedded within institutional structures while remaining responsive to evolving global trends. It highlights the importance of overcoming binary trade-off thinking in research management, advocating instead for an integrated approach that recognises the interdependence of research, teaching and community engagement. Additionally, this study underscores the necessity of bridging local institutional needs with international best practices, ensuring that researcher development frameworks are globally competitive while being sensitive to contextual realities. The implications of this study extend beyond a singular institutional setting. The phased model presented here offers a strategy that may be adaptable by RMAs in various higher education contexts, particularly in resource-constrained environments, subject to institutional capacity and contextual considerations.

While this study provides a framework for developing a bespoke RDF, future research should focus on assessing the long-term effectiveness and impact of the implemented framework. Developing an evaluation instrument to measure the success of RDFs in fostering researcher development, improving research productivity and enhancing institutional research capacity would provide insights for further refinement. Additionally, comparative studies across different institutional and national contexts could enrich understanding of how various socioeconomic and cultural factors influence researcher development strategies. This, in turn, has the potential to contribute to a deeper understanding of future-focused, sustainable approaches to

researcher development in resource-constrained environments. It may also inform ongoing research capacity-building efforts and contribute to the evolving global discourse on research management and administration.

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