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RM COMP

A COMPETENCE BASED APPROACH FOR RESEARCH MANAGER CAREER DEVELOPMENT IN THE EUROPEAN RESEARCH AREA

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Executive summary

The policy developments highlight the critical role of Research Managers (RMs) in the EU research and innovation ecosystem. This recognition became explicit in May 2021, and by December 2021, the Council formally included "**science management**" in EU policy, underscoring the importance of roles such as data stewards and innovation managers. The culmination of this progression occurred in December 2023 with the Council Recommendation on a European framework aimed at attracting and retaining research talents, explicitly **identifying research management careers** and outlining specific measures for their development, thereby confirming the essential nature of RMs in the European Research Area (ERA).

Research Managers are now defined broadly to encompass a variety of roles within both public and private sector research organisations, highlighting their essential function in enabling, facilitating and supporting research. Despite all these developments, there remains a **lack of a structured career path** and professional recognition across the EU. Surveys like the Research Administration as a Profession (RAAAP), CARDEA and RM ROADMAP have shown that RMs in Europe are highly educated and predominantly female, whereas lack certification related to Research Management (RM). Challenges such as unclear career progression, insufficient professional development, and non-competitive salaries persist.

It must be also noted that the evolving complexity of research and innovation funding has significantly impacted the roles of Research Managers (RMs), leading to **the emergence of new roles and the need for expanded expertise**. Historically viewed as generalists, today's RMs are increasingly specialized, formalized, and advanced, reflecting a diversification of the workforce. This trend necessitates a detailed analysis of RM roles and the associated skills and competencies.

Thus, the relevance of a European Competence Framework is evident, one that can adapt to the diverse and evolving responsibilities of RMs while ensuring consistent recognition of their roles across the ERA. The **European Competence Framework for Research Managers (RM Comp)** was developed to provide a consistent, user-friendly framework for RMs across various career stages and organisational contexts. This framework, which aligns with other European Commission competence models, outlines seven core competence areas, across four proficiency levels from foundational to expert.

1. **Cognitive Abilities/Personal Attributes** include essential skills such as creativity, critical thinking, and strategic planning that are necessary for effective leadership and adaptability. focus on interpersonal abilities crucial for positive workplace interactions, such as stress management, conflict management, and reliability
2. **Technical Proficiency** encompasses specialized skills like data analysis, legal skills, and AI applications relevant to research contexts.
3. **Research Project Oversight** covers skills necessary for managing research projects effectively, including project planning and evaluation.
4. **Stakeholder Engagement** involves developing and maintaining productive partnerships with various stakeholders.
5. **Line Management and Talent Development** emphasize team performance, change management, and talent identification.
6. **Communication skills** are crucial for maintaining relationships and disseminating research findings.
7. **Subject Matter Expertise/Specialised Knowledge** involves deep knowledge in specific sub-type Research Management roles.

These categories collectively ensure RMs are well-equipped to navigate and excel in their roles.

RM Comp facilitates professional development by offering clear learning outcomes and progression models, encouraging RMs to enhance their skills through diverse training methods. The framework aims to standardize RM competencies, support career planning, and promote the recognition and value of RM roles across Europe. The comprehensive identification of competencies for Research Managers (RMs) was achieved through a co-creation process involving surveys, expert discussions, and HR practitioner insights. These competencies are categorized into nine key areas.

Given the fluid and flexible nature of the research management profession, with constantly emerging roles and fields, RM Comp must account for several key aspects:

- Entry into the profession can occur at various levels based on educational background and expertise, with recognition that higher-level entrants may need development in certain competency areas
- Professional development should be possible both vertically and across specializations, enabling movement between roles at the same or higher levels
- Leadership in research support services should be recognized as a specialized expertise, and leadership skills should be acknowledged across all competency areas
- RM Comp should remain a dynamic document that evolves with the profession

RM Comp: A Simple Guide

What is RM Comp?

RM Comp is a **competence-based framework** for Research Managers in the European Research Area (ERA).

It identifies key skills and competencies needed for effective research management and supports professional growth.

RM Comp provides consistency across roles and institutions, helping key stakeholders to enhance their career development and enabling organisations to align research management practices with European standards.

Who Does RM Comp Apply To?

- **Research Managers (Individuals):** Whether early-career or advanced, RM Comp helps identify career paths, skill gaps and training needs.
- **Institutions:** Public and private research performing organisations employing research managers, aiming to standardise practices and support staff development.
- **Research Funding Bodies and Policy advisors**: Ensures consistency of funding policies, promotes capacity building and facilitates collaboration across sectors.

How to Use RM Comp?

For Individual Research Managers:
✓ **Self-Assessment**: Identify your current skills and areas for improvement using the RM Comp framework.
✓ **Professional Development**: Use the outlined competencies to plan training or mentorship opportunities.
✓ **Daily Application**: Align your work practices with RM Comp standards to improve efficiency and collaboration.
For Research Performing Organisations and Industry:
✓ **Integrate RM Comp into Policies**: Embed it in hiring processes (e.g., job specifications), training programs, and performance reviews.
✓ **Enable Staff Development**: Provide RM Comp-aligned resources, platforms, and budgets (where possible) for professional growth.
✓ **Monitor Impact**: Use RM Comp to track the effectiveness of research management practices and identify gaps.
For Funding Agencies and Policy Advisors:
✓ **Set Standards**: Use RM Comp competencies as criteria for funding applications and evaluations.
✓ **Promote Capacity Building**: Fund training programs and conferences focused on RM Comp skills.
✓ **Facilitate Collaboration**: Work with institutions to develop RM Comp-aligned policies and share best practices.

Introduction

Policy Context[1],[2]

In the Treaty on the Functioning of the European Union and the policy developments that followed (as indicated below), a strong argument is created in support of acknowledging and developing the role of Research Managers (RMs) as essential to European Union research. The **evolving policy narrative indicates a progression in EU policy from acknowledging the importance of various roles within the research and innovation ecosystems to clearly acknowledging the specialised role of Research Managers**. The policy development clearly acknowledges a commitment to defining, recognising, and supporting these diverse roles within the European Research Area, with **a specific focus on research management as a key factor for successful research and innovation activities**.

It all begins with the Treaty on the Functioning of the European Union, specifically Article 187. This progressive article of the treaty enables the European Union to create structures necessary for the efficient implementation of research and the programs that accompany this development. The inclusion of the term "any other structure" provides the possibility to acknowledge and develop specialised roles, including that of research manager, to facilitate the effective implementation of European Union research activities.

The narrative takes a step forward in May 2021 with the inclusion of a recognition that highlights the significance of researchers and R&D personnel working within the European Research Area (ERA) research and innovation (R&I) context. While this underlines the significance of personnel within the research ecosystem, it does not explicitly identify the unique role played by research managers.

A **notable shift takes place in December 2021, when the Council recognises the need for the inclusion of "science management" within EU policy**. This marks an important step in **acknowledging "science management roles"** for successful science management, including digital skills for participation in collaboration networks. This policy inclusion of science management roles sets the stage for the recognition of research management as a distinct and essential role within the ERA Ecosystem.

The Council further develops this policy by noting the **"diverse and essential roles of highly skilled talents in research and innovation systems"** and roles such as data stewards, research infrastructure operators, and, innovation and technology transfer managers and coordinators, are included amongst others. The call to Member States to support these roles through training and career development instruments reflects an **appreciation of the contributions made by different "science management" professionals** within the European Research Area.

Then in December 2023 the narrative takes an important leap with the **Council Recommendation on a European framework** to attract and retain research, innovation and entrepreneurial talents in Europe. This document clearly **identifies research management careers**. It goes further to outline the specific measures required, including the importance of the definition of skills and competences, "development of relevant training, fostering comparability, and enabling effective management and support for research and innovation". This recommendation is a significant indicator from the European Council which explicitly focuses on acknowledging and developing the role of Research Manager. The recommendation not only recognises the importance of Research Management (RM) but also provides a **broad description of the tasks that Research Managers can perform**. These tasks encompass "streamlining, planning, ensuring compliance with various requirements, improving

[1] All References to EU Policy in Appendix 1

[2] Throughout this document, any reference to 'Research Managers' specifically refers to 'Research Managers in Europe'

project efficiency, enhancing the impact of research on policy and society, and supporting the design and implementation of research and innovation policies, programmes and projects". This definition confirms the role of research managers within EU policy and describes them as versatile enablers to the success of research and innovation within the European Research Area.

In 2021, the framework of the revamped European Research Area (ERA Policy Agenda) 20 action points were set out to achieve the defined objectives. **Action 17,** under the title "Enhance the strategic capacity of Europe's public research-performing organisations", the so-called **Research Management Initiative aims to support specifically the RM community in Europe in four key areas:** upskilling, recognition, networking and capacity building. During 2023 and 2024, four workshops were held, each of them focusing on one of the key areas of the action providing a platform to gather information from Member State representatives and discuss the most crucial issues. Moreover, a process was also launched to create a consensus-based definition for the profession of Research Managers which can ease the communication towards stakeholders inside and outside the profession, including policymakers, institution leaders, researchers, but research managers themselves.

In addition, the Commission demonstrated its commitment to supporting the recognition and professionalisation of RMAs in Europe by **issuing a call in 2021** "HORIZON-WIDERA-2021-ERA-01-20: Towards a Europe-wide training and networking scheme for research managers". **Two** Coordination and Support Action (CSA) **projects started in 2022**, RM ROADMAP (coordinated by EARMA) and its sister project CARDEA (coordinated by University College Cork). These two projects are involved in ERA Action 17 by channelling in their results and streamlining the actions taken in favour of the recognition of the profession.

In conclusion, the policy narrative describes a clear evolution in EU policy, progressing from a general acknowledgment of the importance of research personnel to the actual naming and recognition of research managers. This policy journey reflects a commitment to defining, recognising, and supporting diverse talents within the European Research Area, with research management highlighted as an essential part of the European Union research and innovation ecosystem.

Definition of Research Manager

It is important to define what is meant by the term Research Manager. Research Manager is an "umbrella term" which encompasses a wide range of research management roles and specializations at the "interface of research"[3] under a single classification. It serves to group together multiple research management roles and specialised subject matter experts that share common role objectives and competencies. Research Managers are based in all types of research performing organisations, including public and private universities, research institutes, research funding organisations, medical institutions, NGOs, companies, public authorities, and so on.

This is our definition: ***Research Managers enable, facilitate and support the performance of research in all its applications. Research Managers hold generalist or specialized roles within the research and innovation ecosystem.***

Based on the policy contexts, the results of recent investigations as well as a Europe-wide co-creation in the frame of ERA Action 17 and RM Roadmap, we initiate an inclusive and flexible approach enabling the reflection of constantly emerging fields and job profiles when defining Research Management. Thus, Research Managers can work as research policy advisers, pre-award and post-

[3] Agostinho, M., Moniz Alves, C., Aresta, S., Borrego, F., Borlido-Santos, J., Cortez, J., … Vidal, S. (2018). The interface of science: the case for a broader definition of research management. Perspectives: Policy and Practice in Higher Education, 24(1), 19–27. https://doi.org/10.1080/13603108.2018.1543215

award officers, project managers, impact managers, science communicators, financial managers and advisors, legal advisors, contract and compliance managers, data stewards, open science officers, research infrastructure managers and operators, equality, diversity and inclusion advisors, research ethics advisors, knowledge and technology transfer officers, innovation managers and business developers, knowledge brokers, human resource managers in research, AI experts, and leaders of research development/grant offices, etc.

Current Context

Currently there are **no European Union structures for Research Managers** and **Europe lacks an acknowledged Research Manager Career path** with accompanying competency, accreditation and training architecture. Even though there are professionals performing this role throughout Europe, it is only since 2021 that the role has been named in EU policy.

However, the increasing demand towards professionalisation and recognition of the profession also require evidence about the current status, needs and challenges. Increasing efforts have been done to **conduct surveys in recent years to enrich the knowledge base about the profession**. The Research Administration as a Profession (**RAAAP**) is an international survey seeking to identify the key skills, attitudes and behaviours of successful research management and administration (RMA) leaders. The survey had 3 iterations in 2016, 2018 (including a section on impact) and 2022 (including a section on the routes to the profession). More than 2600 responses were collected in each year around the world.[4] The **CARDEA** launched the survey in September 2022 and collected 855 responses.[5] The **RM ROADMAP** survey was launch in November 2023 and collected over 1700 complete responses from Europe.[6] The results of these surveys provide not only robust data but indicate certain trends.

Research Manager Career architecture is emerging at sector-specific, national and institutional level in an ad hoc fashion answering specific institutional and research needs. The lack of career path is generally lagging behind in most European countries. Without the proactiveness of individual research managers in creating new positions by merging or expanding the current ones, sometimes it is almost impossible to move forward within the institutional hierarchies. Some Member States have started to develop national professional development mechanisms for their Researchers taking example from the EU R1 to R4 and the newly published ResearchComp. These organisations are in some instances including Research Support Professionals such as Research Assistants and Research Officers, for example the IUA Researcher Career Development Framework in Ireland. However, this is rare. As a result**, very few research organisations have established their own frameworks** and if they do, they are nearly always directly aligned to actual job descriptions within those institutions and organisations. The focus and terminology of the various contexts may differ, but there is a substantial overlap in content and purpose when hiring and retaining Research Managers.

The importance of Research Managers in the institutional and policy knowledge space plus continuity of expertise cannot be overestimated within the current context of the "suboptimal balance between

[4] Learn more about RAAAP at: https://inorms.net/activities/raaap-taskforce/
[5] Learn more about the CARDEA survey at Knowledge Space | University College Cork (ucc.ie)
[6] Learn more about RM Roadmap survey at_ https://figshare.com/articles/dataset/RM_ROADMAP_survey_dataset/26503675 where the RM ROADMAP Survey dataset and codebook available

institutional and project-based funding led to short-term, project-based contracts that do not give a long-term perspective for researchers."[7]

The profile of Research Managers based on survey data

All survey results show that **Research Managers in Europe are a diverse group of professionals** sharing several characteristics. That **vast majority** (over 70%) of Research Managers are **female** which is interesting to consider in light of equality, diversity and inclusion needs.

The results of the CARDEA Survey suggests that with an average age of 43 years, Research Managers speak two languages and mainly live and work in the country they were born in. Research Managers are a very **experienced cohort of professionals**, with half of them having at least six or ten years of work experience. An increasing number of research managers can be found beyond the academia, i.e. at research funding organisations, at companies, and at NGOs.

Both the CARDEA and RM ROADMAP surveys demonstrate that the professionals who responded to the surveys are **highly educated,** with over 90% of Research Managers having a postgraduate qualification. This may sound surprising, given that there is no EU level requirement for such high level of education for research management roles. Moreover, most of these professionals have greatly diverse educational background, whereas they **do not have specific research management qualification**, meaning that their educational background is not strictly related to their job. **73% do not possess certification related to Research Management** despite world-wide efforts aiming for the standardisation of the qualification in the profession, as introduced by Ritchie et al (2023). These results should be contextualised in the increasingly shrinking options available for Researchers in the academic job market.[8] As permanent jobs in academia have become the exception rather than the norm, or increasingly less secure, PhDs and post-doctoral Researchers have been looking for an alternative career path. They found it in Research Management. Trends indicate that a growing percentage of research managers now have permanent contracts (75%), compared to previous years. This suggests a shift from project-based employment to more stable, institutional positions.

Most Research Managers are **employed full-time** and half of them are required to complete **involuntary overtime** hours with no extra compensation. The average salary for Research Managers is lower than the average salary in many EU Member States.[9] Moreover, comparisons with researcher salary scales reveal that Research Managers do not earn what they should according to their educational level and work experience. The lack of bespoke salary scales for many Research Managers is a further issue. Where these scales do exist, they are mostly linked to administrative scales that, do not reflect the highly skilled profiles of Research Managers within the ERA.

The RM ROADMAP survey reveals that Research Managers work in a great diversity of areas, starting from pre-award, post-award, research policy and strategy, training and researcher development, just to name the most important ones. Almost half of them (45%) **work in at least 2, 3 or 4 different areas on a daily basis,** which suggests that they need a vast range of expertise, skills and competencies to fulfil these different roles.

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[7] https://www.era-learn.eu/news-events/news/new-pact-and-governance-structure-for-the-european-research-area-era

[8] Knowledge ecosystems in the new ERA - Publications Office of the EU (europa.eu)

[9] Cardea_Report_Summary_FINAL_Discl.pdf (ucc.ie)

Routes into Research Management

It is noted that "the researchers' labour market is fragmented" and "that it can be very difficult to move between sectors." Evidence from CARDEA's survey suggests that Research Managers transition from Post-Doctoral (Researcher) Roles to Research Manager Roles within the European Research Area enhancing Europe's Research Agenda. Further evidence of this type of career mobility is provided by the RAAAP-3 Survey[10] results which suggest that 44.5% of respondents in the EU indicated that they moved from a research career to a Research Manager career.[11] Dutta et al (2023) provides an in-depth assessment about the routes to Research Management.

In line with that, the RM ROADMAP survey results reveal a **lack of awareness about the profession** as the vast majority (over 60%) did not consider research management as a profession during their studies and/or they just applied for an open position without any background knowledge about it (45% agree). Almost all respondents (81%) agreed that **it was a profession they felt their skills would match.**

Challenges for Research Managers

Challenges such as a **lack of promotional opportunities, career progression architecture, guaranteed long-term financing, uncompetitive salaries, busy work schedules, and a lack of professional esteem persist**. Research Managers often feel like outsiders[12] within their organisations, with limited involvement in decision-making processes. The absence of formal recognition and professional development opportunities impacts their job satisfaction and long-term career outlook. The lack of commitment from organisations to provide training exacerbates the situation, with many research managers seeking (but unable to find) accessible and free accreditation for shorter programs. The intertwined issues of professional development and the absence of promotional schemes make career progression challenging, particularly for those on temporary contracts, leading to a sense of being stuck in their careers.

Research Managers have to create their own career path if they want to advance in their career. According to RM ROADMAP survey results, the most important challenge is the unclear carrier path (63% agree) so that research managers see two main options: strive for leadership positions (46.4%) or move to another institution (39.5%). This is a pity for institutions investing significant resources to train their Research Managers who become highly skilled and are then sought in the private sector.

CARDEA also revealed that one of the main challenges for Research Managers within their work environments is the **lack of a definition of the role**. Research management as a role does not correspond to a defined job title in many countries, especially EU member states, and is not recognised by most national legislation or funded by national funding agencies. Research management is an umbrella term that describes a wide range of roles and levels of responsibility, with some overlapping with research activities. Most Research Managers surveyed by CARDEA would describe their job as the provision of specialised professional services to a range of projects. In conclusion, the absence of a clear definition for the role of Research Manager poses a significant challenge, as the profession lacks standardised recognition across countries, particularly within EU member states, and is not established in national legislation or funding structures.

[10] https://inorms.net/activities/raaap-taskforce/raaap-survey-2022/

[11] Based on responses 4 or 5 on the 5-point Likert type scale

[12] CARDEA Survey DOI Knowledge Space | University College Cork (ucc.ie)

Existing Competence Frameworks and Tool Kits

Competence frameworks[13]designed for Research Managers, if available, are varied, reflecting the diverse nature of the role and its responsibilities. These frameworks provide valuable guidance in describing the skill sets and competences of research managers and **should be regarded as exemplars of good practice, leading the way in acknowledging the essential expertise, skills, and attributes** for successful research managers. Some frameworks are specialised, and this specialisation can be beneficial for professionals in certain contexts, providing clear guidelines for the development of these roles. However, this also presents a challenge when considering the broad range of responsibilities that research managers often undertake across member states and in various contexts within the European Union.

Only a few professional development frameworks (PDF) or competence frameworks have been developed recently by associations of Research Managers.[14] The **ARMA** (Association of Research Managers and Administrators, UK)[15] **PDF** encompasses 21 different functions performed by administrators supporting research activities. The RM functions are divided into 7 headings and described from three perspectives: Operational, Management, and Leadership.

SARIMA (Southern African Research & Innovation Management Association) developed a **Professional Competency Framework (PCF**) consisting of nine competency areas at three levels within the Research Management environment: administrative/operational, management, and leadership/strategic. (SARIMA, 2019) (Williamson et al., 2020).

ARMS (Australasian Association of Research Management Professionals) **Professional Development Framework** (PDF) identifies six core areas of knowledge and categorizes them into three levels of knowledge enhancement: Foundation, Management, and Leadership.

The **BESTPRAC Research Support Staff (RSS)** Framework is structured around the project lifecycle. Instead of defining professional levels, the framework identifies three types of staff based on the research support provided: Research Administrator, Funding Advisor/Liaison Manager, and Project Manager.

The **diversity of roles within research management requires an adaptable competence framework** that can accommodate a multitude of profiles of research management professionals working in different institutional and national contexts. There is a need for a European competence framework that acknowledges the diverse and constantly emerging tasks and duties undertaken by research managers. Such a framework should allow for flexibility while providing a common foundation that ensures consistency and recognition of the role's significance across the ERA.

[13] The RItrain organisational competency profiles
The ESA Core behavioural Competencies
A Professional Development Framework for Research Managers ARMA UK
A Competencies Tool Kit for Research Managers and Administrators ARMA UK
Knowing, Doing and Being: Transferable Competencies for the Research Management Profession
A Framework for the Management of Research and Innovation Projects in Academic Settings

[14] More detailed introduction and assessment of these frameworks can be found in Romano et al (2023).

[15] See: https://arma.ac.uk/

Aims of developing a European Competence Framework for Research Managers (RM Comp)

An interoperable and easy to understand Research Manager Competence Framework applicable across diverse RM career stages is essential for several reasons:

- provide consistency and coherence across different organisational and national contexts and career levels, **facilitating an understanding of research management competences**. This consistency is essential as Research Managers often work in various roles and organisations throughout their careers.
- **Is user-friendly by clustering competencies** into a manageable framework allowing Research Managers to easily identify and address specific skill set needs based on their career stage.
- provide Research Managers and employers of research managers with a basis to **enable career training and development**.
- Establish a **shared understanding of the RM career architecture "language"** within the European Research Area. By providing a standardised reference point, the framework promotes consistency in the expectations and standards for Research Managers across member states, enhancing collaboration and communication within the research community.
- Serve as **a tool for encouraging the importance of research management careers,** encouraging stakeholders to appreciate the diverse contributions Research Managers make to the success of research and innovation endeavours within the European context.

ISCO

"ISCO-08 is a four-level hierarchically structured classification that allows all jobs in the world to be classified into 436-unit groups. These groups form the most detailed level of the classification structure and are aggregated into 130 minor groups, 43 sub-major groups and 10 major groups, based on their similarity in terms of the skill level and skill specialization required for the jobs. Each group in the classification is designated by a title and code number and is associated with a description that specifies the scope of the group."[16]

Following a review of the data sets which can be downloaded here: ISCO-08 | ISCO-08 (ilo.org) 9 roles were identified as partially or somewhat analogous to the role of Research Manager. These roles are identified in the table of **Appendix 6**. While each role is distinct, they do share tasks and competencies in common with the role of Research Manager as outlined within RM Comp. One role was identified as correlating with the role of Research Manager as identified in RM Comp: **Research and Development Managers**. Of interest here are the tasks aligned to the role as per the ISCO which are included in the table below. These align to the learning outcomes connected to the competencies as identified within RM Comp.

Level[17]	**ISCO 08 Code**	**Title EN**	**Definition**	**Tasks include**	**Included occupations**
4	1223	Research and Development Managers	Research and development managers plan, direct and	Tasks include - (a) planning, directing and coordinating research and development activities, in-house or commissioned from external research	Examples of the occupations classified here: - Product development

[16] ISCO-08 | ISCO-08 (ilo.org)
[17] ISCO-08 | ISCO-08 (ilo.org)

			coordinate the research and development activities of an enterprise or organisation or of enterprises that provide related services to other enterprises and organisations.	organisations, to develop new or improved technical processes, products, knowledge, or utilization of materials; (b) planning the overall research and development programme of an enterprise or organisation, specifying goals and budgetary requirements; (c) leading and managing the activities of research and development staff; (d) establishing and managing budgets, controlling expenditure and ensuring the efficient use of resources; (e) establishing and directing operational and administrative procedures; (f) planning and directing daily operations; (g) overseeing the selection, training and performance of staff; (h) representing the enterprise or organisation at conventions, seminars and conferences.	manager - Research Manager

ESCO

"ESCO (European Skills, Competences, Qualifications and Occupations) is the European multilingual classification of Skills, Competences and Occupations. ESCO works as a **dictionary,** describing, identifying and classifying professional occupations and skills relevant for the EU labour market and education and training. Those concepts and the relationships between them can be understood by electronic systems, which allows different online platforms to use ESCO for services like matching jobseekers to jobs on the basis of their skills, suggesting trainings to people who want to reskill or upskill etc. ESCO provides descriptions of **3,039 occupations and 13,939 skills** linked to these occupations."[18]

Following a review of the ESCO data sets which can be downloaded here: Download | ESCO (europa.eu) and connecting the ISCO 08 Codes as identified above and in Appendix 6, 7 ISCO codes and associated roles were identified as (i) not, (ii) partly or (iii) wholly analogous to the role of Research Manager. For the 2 roles Manager (generic) and Information and Communications Technology Service Managers this author could not cross reference them from ISCO to ESCO due to the differences in the level of the hierarchically structured data. The 7 usable codes are identified in the table in Appendix 7 with various associated roles. While not every role is analogous, some do share competencies in common with the role of Research Manager as outlined within RM Comp.

Of interest here are the skills and competencies aligned to the roles of:

1. Research and Development Manager
2. Research Manager
3. ICT Research Manager
4. Project Manager
5. Strategic Planning Manager
6. Financial Manager

[18] https://esco.ec.europa.eu/en/about-esco/what-esco

7. EU Funds Manager
8. Human Resources Manager
9. Innovation Officer
10. Policy Manager
11. Clinical Informatics Manager

Please note in Appendix 7 that the ESCO competences correlate to the competences as identified within RM Comp.

Role Categorisation within Research Management

It is important to note that the rising complexity of research and innovation funding has an impact on the role fulfilled by Research Managers. The trend shows that research management **roles are expanding** (Kulakowski, 2006), **new roles are emerging** (Allen-Collinson, 2009), **and professionals have to expand the boundaries of their work** (Whitchurch, 2008). Whereas till the last decade most professionals were considered as "the jack of all trade but master of none" (Kerridge, 2016), nowadays "**the research administration workforce has diversified in several directions with formalized, specialized and advanced professional roles and new roles for new services**" (Zink et al., 2022, p. 120).

Recent investigation carried out by RM ROADMAP confirms that it is important to analyse the different role categories within Research Management and the related skills and competencies. An overarching but detailed categorisation of Research Managers can provide an example and a clear path for professional development for both Research Development/Grant Offices and RMs themselves. Thirteen categories were developed originally – based on the literature review, outcomes of workshops and focus groups discussions – within the project (see the full list and related definitions in Appendix 3).

Then the RM ROADMAP survey gathered evidence and revealed the most important skills and competences needed by professionals working in these RM categories. This was then validated by the co-creation exercise taking place between 14 March and 7 May 2024. National and thematic communities of Research Managers agreed with these areas of Research Management. In addition, some argued for highlighting additional areas, such as support in finances, legal issues, open science, AI and emerging technologies, collaboration with stakeholders as well as managing and assessing impact. These areas were considered as subareas of the originally defined 13 areas, however, based on the feedback it is important to specifically list them and make more inclusive the categories of the management of human resources in research and innovation and business management.[19]

The table below presents the top 5 skills and competencies indicated highly important by RMs working in one or more of the listed areas. Important to note that **there are skills and competencies that appear repeatedly** in case of different categories (such as communication, problem solving, time management, prioritisation) which demonstrates that these transversal or soft skills are equally important for all RMs. Nevertheless, in some cases, **there are very specific ones** (understanding politics and policy cycles, lobbying) **which require specialisation and specific subject matter expertise**. The co-creation exercise resulted in a rich compilation of specialisation and role related skills and competences – added to the table below and highlighted in red - providing a solid foundation for the specific competencies and learning outcomes of the RM Comp.

[19] More details about the results of the RM ROADMAP co-creation exercise can be found here: https://www.rmroadmap.eu/co-creation-results

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills, i.e. technical proficiency	Specialisation or role related skills, i.e. subject matter expertise
PRE-AWARD	• Written communication • Problem solving • Flexibility • Openness • Oral communication	• Prioritisation • Adaptability • Time management • Reliability • Trustfulness	• Knowledge of rules and regulations of funders • Language skills • IT skills • Ethics, integrity • Understand research and the R&I ecosystem	• Administrative skills • Appreciating values and understanding interests • Building and maintaining networks • Financial skills • Understanding politics and policy cycles • **Basic business and commercial knowledge** • **Understanding relevant field of science** • **Understand the impact and the value of projects** • **Legal skills**
POST-AWARD	• Written communication • Oral communication • Interpersonal skills • Intrapersonal skills • Flexibility	• Prioritisation • Time management • Information management • Efficiency and effectiveness • Reliability, trustfulness •	• IT skills • Ethics, integrity • Knowledge of rules and regulations of funders • Understand research and the R&I ecosystem • Managing resources	• Administrative skills • Financial skills • Appreciating values and understanding interests • Building and maintaining networks • Legal and regulatory skills • **Understand project management frameworks and practices** • **Communication, dissemination and exploitation of project results to relevant stakeholders**
RESEARCH DATA, RESEARCH INFORMATION, INTELLECTUAL PROPERTY MANAGEMENT INCL. DATA STEWARDSHIP	• Assertiveness • Openness • Flexibility • Interpersonal skills • Oral communication	• Adaptability • Negotiation • Time management • Conflict management • Reliability, trustfulness •	• Understand research and the R&I ecosystem • Knowledge of rules and regulations of funders	• Administrative skills • Legal and regulatory skills • Building and maintaining networks • Understanding politics and policy cycles • Appreciating values and understanding interests • **IPR knowledge and management**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills, i.e. technical proficiency	Specialisation or role related skills, i.e. subject matter expertise
			• Understanding institutional governance • Management skills • Ethics, integrity	• **Awareness of conflict of interest, data protection policies & ethics** • **Data management and open science** • **Outreach and communication**
KNOWLEDGE VALORISATION/ TECHNOLOGY TRANSFER	• Oral communication • Problem solving • Interpersonal skills • Critical thinking • Assertiveness	• Prioritisation • Planning, strategic thinking • Time management • Information management • Adaptability	• Understand research and the R&I ecosystem • Knowledge of rules and regulations of funders • Language skills • Management skills • Understanding institutional governance	• Building and maintaining networks • Administrative skills • Stakeholder engagement and management • Financial skills • Legal and regulatory skills • **Translate science to business and business to academics, knowledge valorisation** • **Understand TT models and channels, innovation management** • **Evaluating the economic value of research results and impact assessment** • **Data management, IPR management**
MANAGEMENT OF HR RESEARCH, INCL. TRAINING, RESEARCHER DEVELOPMENT, POSTGRADUATE RESEARCHERS (PGR)	• Assertiveness • Oral communication • Written communication • Openness • Flexibility	• Adaptability • Time management • Reliability, trustfulness • Working in teams • Efficiency and effectiveness •	• Language skills • Knowledge of rules and regulations of funders • Ethics, integrity • Understand research and the R&I ecosystem • IT skills	• Administrative skills • Building and maintaining networks • Appreciating values and understanding interests • Understanding politics and policy cycles • Cross-cutting issues in HEU • **Teaching skills and learning techniques** • **Mentoring and coaching skills** • **Understanding the academic environment** • **Evaluation and assessment** • **Strategic foresight**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills, i.e. technical proficiency	Specialisation or role related skills, i.e. subject matter expertise
RESEARCH INFRASTRUCTURE MANAGEMENT	• Flexibility • Openness • Written communication skills • Multitasking • Cultural and diversity skills	• Teamwork • Stress management • Diplomatic skills • Conflict management • Time management	• Understand research and the R&I ecosystem • Understanding institutional governance • IT skills • Language skills • Ethics, integrity	• Stakeholder engagement and management • Building and maintaining networks • Administrative skills • Understanding politics and policy cycles • Legal and regulatory skills • **Financial skills** • **Facility management** • **Development of policies and procedures** • **Logistics and procurement management** • **Data and resources management**
RESEARCH ETHICS AND INTEGRITY	• Written communication • Multitasking • Interpersonal skills • Cultural and diversity skills • Openness	• Reliability, trustfulness • Adaptability • Time management • Efficiency and effectiveness • Planning, strategic thinking	• Ethics, integrity • Language skills • Knowledge of rules and regulations of funders • Management skills • Understand research and the R&I ecosystem	• Administrative skills • Appreciating values and understanding interests • Building and maintaining networks • Stakeholder engagement and management • Legal and regulatory skills • **Understanding GDPR and data management, open science principles** • **IPR management** • **Ethics and integrity** • **Training skills**
RESEARCH STRATEGY AND POLICY DEVELOPMENT	• Written communication • Oral communication • Problem solving • Self-motivation, proactiveness, initiation • Critical thinking	• Prioritisation • Time management • Efficiency and effectiveness • Reliability, trustfulness • Planning, strategic thinking	• Understand research and the R&I ecosystem • Knowledge of rules and regulations of funders	• Appreciating values and understanding interests • Understanding politics and policy cycles • Building and maintaining networks • Stakeholder engagement and management • Administrative skills • **Data analysis and interpretation**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills, i.e. technical proficiency	Specialisation or role related skills, i.e. subject matter expertise
			• Understanding institutional governance • Ethics, integrity • Language skills	• **Financial skills** • **Strategy development, setting and monitoring KPIs** • **Lobbying** • **Strategic foresight**
RESEARCH SUPPORT DELIVERY	• Assertiveness • Written communication skills • Interpersonal skills • Intrapersonal skills • Oral communication skills	• Time management • Prioritisation • Adaptability • Reliability, trustfulness • Efficiency and effectiveness	• Knowledge of rules and regulations of funders • Language skills • IT skills • Understanding institutional governance • Managing resources	• Administrative skills • Appreciating values and understanding interests • Financial skills • Understanding politics and policy cycles • Building and maintaining networks • **Knowledge of research methodologies**
INTERNATIONAL COLLABORATION, INSTITUTION BRANDING	• Intrapersonal skills • Flexibility • Assertiveness • Openness • Critical thinking	• Reliability, trustfulness • Stress management • Time management • Resilience • Adaptability	• IT skills • Knowledge of rules and regulations of funders • Understand research and the R&I ecosystem • Understanding institutional governance • Ethics, integrity	• Appreciating values and understanding interests • Lobbying • Building and maintaining networks • Administrative skills • Understanding politics and policy cycles • **Legal and regulatory skills** • **Marketing skills** • **Understanding GDPR and data management** • **Strategy and business insight**
COLLABORATION WITH INDUSTRY	• Cultural and diversity skills • Problem solving • Oral communication • Assertiveness	• Time management • Prioritisation • Planning, strategic thinking	• Understanding institutional governance	• Building and maintaining networks • Administrative skills • Appreciating values and understanding interests

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills, i.e. technical proficiency	Specialisation or role related skills, i.e. subject matter expertise
	• Openness	• Stress management • Working in teams	• Knowledge of rules and regulations of funders • Management skills • Language skills • Managing resources	• Nurturing innovation • Stakeholder engagement and management • **Understand TT models and channels** • **Evaluating the economic value of research results and knowledge valorisation** • **Legal and regulatory skills** • **IPR knowledge**
SCIENCE COMMUNICATION & IMPACT	• Flexibility • Oral communication • Interpersonal skills • Self-motivation, proactiveness, initiation • Problem solving	• Adaptability • Prioritisation • Time management • Reliability, trustfulness • Efficiency and effectiveness	• Language skills • IT skills • Understand research and the R&I ecosystem • Knowledge of rules and regulations of funders • Ethics, integrity •	• Building and maintaining networks • Appreciating values and understanding interests • Understanding politics and policy cycles • Stakeholder engagement and management • Administrative skills • **Understanding citizens & science** • **Strategic and business** • **Publishing and open access skills** • **Communication of the project results to relevant stakeholders and the public** • **Interdisciplinary approach**

The European Competence Framework for Research Managers (RM Comp)

Scope of the European Competence Framework for RMs

This Framework presents the development of a European Competence Framework for Research Managers based on feedback gained from the surveys described above, desk-based research and Action 17 working groups. In collaboration with RM Roadmap, the co-creation exercise involving national and thematic RM communities have added to the body of knowledge. The European RM competence framework should be viewed in tandem with the Framework Profile for Research Managers in **Appendix 8**.

Key components of the European Competence Framework for RMs

Drawing inspiration from the structure of ResearchComp[20], The Digital Competence Framework for Citizens (DigComp)[21] and the Competence frameworks for policymakers and researchers[22] the RM Comp is designed to align with the overarching principles and structures articulated in these documents and frameworks.[23]

The European Research Manager Competency Framework has 3 main areas:

- **7 competence areas:**
    - Cognitive Abilities/Personal Attributes
    - Technical Proficiency
    - Research Project Oversight
    - Stakeholder Engagement
    - Line Management and Talent Development
    - Communication
    - Subject Matter Expertise/Specialised Knowledge

- **50 competencies**
- **800 learning outcomes along 4 proficiency levels** (foundational, intermediate, advanced, expert)

[20] ResearchComp: The European Competence Framework for Researchers - European Commission (europa.eu)
[21] DigComp 2.2 update: The Digital Competence Framework for Citizens | Digital Skills & Jobs Platform (europa.eu)
[22] Competence frameworks for policymakers and researchers | Knowledge for policy (europa.eu)
[23] Many other competency frameworks were reviewed, and a list of these will be included in the bibliography. Please see the CARDEA Data Set and the CARDEA Play Book and all survey documentation which elaborates on the methodology for identifying the competences for Research Managers. It can be found here Cardea (zenodo.org)

Each competency[24] includes learning outcomes for each proficiency level. It is not envisaged that Research Managers acquire the highest level of proficiency or have the same proficiency across all the 7 competency areas. However, Researcher Managers should develop their skills in all 7 competency areas where possible.

Examples of research manager competencies as per CARDEA[25] are **not intended to be exhaustive but serve as an indication of the types of competencies held by Research Managers** across all sectors. Research Managers should have the option to move horizontally also, and this framework enables that movement. Each competency level indicator reflects the variance in complexity, scope, and responsibility across the roles RM1 to RM4.

Research Manager Competence Areas[26]

Core competencies are those capabilities that are important across all levels and within the framework RM1 to RM4. The importance of core competencies may vary according to individual RM job duties and requirements within sectors. The core competencies for Research Managers as identified by the CARDEA and RM Roadmap surveys are indicated below.

[24] Competence & Competency Frameworks | Factsheets | CIPD and Civil Service competency framework - GOV.UK (www.gov.uk)
[25] Cardea (zenodo.org)
[26] CARDEA Data Set Cardea (zenodo.org)

How to view the European Competence Framework for RMs

Each proficiency level[27] of the competencies outlined has individual learning outcomes that suggest how an individual can demonstrate that competency. Indicators are designed to show the requirements for successful performance.[28][29] It is important to acknowledge that **competency proficiency levels may vary depending on the specific role, and it is not expected that every Research Manager possesses full expertise in all competencies**. **Direct entry through open competition can occur at any level**.

As with the Competences for Policymaking the RM Comp progression is made up of two aspects:

1. **Developing increasing autonomy and responsibility within the role of Research Manager,**

2. **Developing the capacity to perform in the role from entry level to expert level** whereby the research manager will be able to **execute complex actions and tasks** that require an expert perspective.

RM Comp does not intend to provide a linear sequence of steps that every Research Manager must complete to become competent. Instead, it highlights the Research Manager competences to be developed by the individual leading to more personal effectiveness in the role. RM Comp provides a reference for the development of proficiency starting at foundational and leading to expert.

As this conceptual model is in line with other competence frameworks developed by the European Commission particularly Research Comp it follows a similar structure, including four levels of proficiency for each of the 50 competences that specify where research managers can position themselves and what is required to progress to the next level:

- **Foundational**: developing expertise with guidance;
- **Intermediate**: building independence;
- **Advanced**: taking responsibility and guiding others;
- **Expert**: driving transformation, innovation and growth.

European Career Framework for Research Managers (RM 1 to RM 4- Progression Model)

Please note: The European Career Framework for Research Managers (RM 1 to RM 4) is a progression model framework and operates independently of the European Competency Framework RM Comp.

Europe currently faces challenges with its internal labour market for research managers. The absence of standardised career structures (***career architecture***) has led to a fragmented evolution of the role of Research Manager at the member state and institutional level and segregation between careers in

[27] What is the CEFR? - cefr.eu
[28] competency_framework_en.pdf (oecd.org)
[29] Mep_interieur (oecd.org)

academia, industry, and other sectors. While there is some cross-country and cross-sector mobility, significant obstacles still exist (including visibility of the role) making career transitions between sectors challenging. Research manager careers often lack clear and transparent pathways for both upward and lateral progression and mobility. As a result, early-career research managers may not be fully aware of the diverse opportunities available across various employment sectors. Employers are also not always aware of the skills that research managers hold and the benefits they could bring to their organisations.

To address this fragmentation, a European Career Framework for Research Managers (RM 1 to RM 4) is proposed herein. This framework describes the general aspects of the research manager career in commonly understood terms, helping to create comparable career structures across employment sectors and member states. This **voluntary instrument** aims to make research manager career structures more comparable. The framework will be periodically reviewed, its impact monitored, and it will be adapted as necessary in the appropriate time.

Importantly, the framework is not intended to create barriers to entry. Individuals can join the profession at any stage and are free to progress or transition between levels (upward and laterally) based on their skills, experiences, and career aspirations.

The link between the competency framework and the various phases in a research management career, (e.g. RM1 to RM4)[30], do exist, but it is not an absolute rule. Users have the flexibility to adapt the progression model RM 1 to RM 4 according to their organisation's policies and practice. It is within their discretion to determine the level deemed suitable for both early to mid-stage and leadership level research managers based on their specific organisational needs. Direct entry through open competition can occur at any level.

[30] See Appendix 2 for descriptions RM 1 to RM 4

For the purposes of the Framework, RM 1 and RM 2 profiles should be considered early to mid-stage research managers and RM 3 and RM 4 profiles should be considered senior and/or expert level research managers.

Progression across levels (although not necessarily automatic) may be the result of:

- dedicated training courses incl. certificate programmes
- on-the-job experience
- on-the-job-training and or job-shadowing
- peer-to-peer learning
- coaching
- mentoring

These levels provide a way for the user, e.g., research manager or an employer of a research manager, to plan training, establish organisational capacity building or other activities that would enable the role of research manager. So, for example the Research Managers can move from foundational where they are developing their expertise to driving transformation and growth. This framework and the accompanying competence framework are tools that can be adapted to individual organisational and member state needs.

Why Introduce RM Comp?

This Framework serves as an empowering tool applicable at both organisational and individual levels, fulfilling various functions such as[31]:

1. **Recognising the essential competences** required in Research Management roles, both within and beyond academic settings.
2. **Emphasising the value of Research Manager experience** by highlighting activities that effectively address the competences outlined in the framework.
3. **Generating awareness** on both the employer (demand) and Research Manager (supply) sides.
4. **Creating job descriptions and assessing job applications** from a standardised perspective.
5. Assisting Research Managers in mapping their competencies **to establish personalised development and training plans** which will enable continuous monitoring of career progress.
6. **Mapping the collective competences within a team** to identify any gaps or redundancies, ensuring alignment with mission/organisational objectives.
7. **Identifying skill needs and shortages** at regional, national, and European levels through ongoing monitoring.
8. **Supporting the planning and design of training programs**, aligning with desired learning outcomes.
9. **Tailoring career planning programs** to meet the specific needs of research managers.

[31] ResearchComp: The European Competence Framework for Researchers - European Commission (europa.eu)

Provision on the use of RM Comp

Given the fact that the profession of Research Management is not standardised, but fluid, flexible, there are constantly emerging roles and fields, and many of the professionals working in the profession proactively shape their roles, when introducing the RM Comp, it is important to take into consideration the following aspects:

- **entry point is possible at all levels**, depending not only on the educational background, but on the expertise – entering to a higher level does not necessary mean that the person has all the knowledge of that level in all competency areas, but is able to identify in which competency areas (s)he needs development.
- **professional development is possible not only vertically** by moving from foundational to intermediate level, **but across the different specialisation areas**. It might happen, that an advanced level post-award manager does not move to post-award expert level but to impact management or technology transfer at the same or higher level.
- RM Comp includes explicitly the **leadership of research facilitation services** as subject matter expertise covering the management and coordination of research management and/or development/grant offices. However, lead**ership as such can be present in all other competency or specialisation areas**, which should be also recognised and awarded at institutional level.
- RM Comp aims to be a l**iving document able to incorporate the reflections on the future developments** of the profession and be adapted to the diverse institutional settings.
- the ultimate aim is not to provide strict categories and upper limitations but **potential and diverse pathways towards career development.**

RM Competencies

A co-creation[32] process which involved comprehensive surveys of research managers, discussions with subject-matter experts and HR practitioners has resulted in the identification of the competences in the areas indicated below.

Cognitive Abilities/Personal Attributes[33]

Cognitive abilities generally refer to a set of skills that are relevant across various tasks and situations. These skills are often considered necessary for effective leadership, management, and collaboration in diverse organisational environments, including research. Personal attributes are essential for personal and professional growth, as they enable individuals to work effectively, build strong relationships, and achieve their goals in a rapidly changing world.

Examples of Cognitive Abilities/Personal Attributes included but are not limited to:

- Creativity
- Cultural Sensitivity
- Critical Thinking
- Strategic Planning

[32] For further information see link to open data Cardea (zenodo.org)

[33] Transversal skills: what are they and why are they so important? : Skills and Education Group

- Problem Solving
- Decision Making
- Prioritization, Time Management and Multitasking
- Conflict Management
- Stress Management
- Reliability and Trustfulness
- Professional Flexibility and Adaptability

Technical Proficiency[34]

Technical proficiency refers to the ability to use specialised tools, methods, and technologies relevant to the research field/area/organisation. Individuals with technical proficiency can successfully navigate and contribute to the resolution of complex problems within that technical context.

Examples of technical proficiency competencies included but are not limited to:

- Research Data Collection and Collation
- Data and Statistical Analysis
- Legal Skills
- IT Skills for Research Activities
- AI for Research Managers

Research Project Oversight[35]

Research project oversight refers to the planning, execution, monitoring, and general management of research activities to achieve specific research project results within pre-defined constraints such as time, budget, and research scope.

Examples of Research Project Oversight competencies included but not limited to:

- Research Project Management
- Managing Research Project Deliverables
- Designing Monitoring and Evaluation Frameworks and Indicators
- Establishing Research Project Plans

Stakeholder Engagement[36]

Stakeholder engagement refers to the strategic and organised approach to developing, nurturing, and maintaining positive and productive relationships with various stakeholders involved in or impacted by research initiatives. These stakeholders may include members of the research team, funding agencies, industry partners, public and private organisations, not for profit, research hospitals, collaborators, regulatory bodies, and the broader community. Examples of Stakeholder Engagement included but not limited to:

[34] What Are Technical Skills? | Coursera
[35] Project Management: What It Is, 3 Types, and Examples (investopedia.com)
[36] Why, What and How of Community Outreach and Engagement | Extension (unh.edu)

- Engagement with Key Stakeholders
- Building Trust within Relevant Research and Strategic Partnerships
- Diplomacy, Negotiation, and Mediation Skills
- Handling Difficult Conversations and Partnerships
- Business and Commercial Liaison Management
- Research Outreach
- Academic Community Relationship Collaboration
- Community Engagement with Research

Line Management and Talent Development[37]

Line management and talent development are two important factors both of which are critical within a research project, a research organisation, a research team and/or other specific team leadership activity.

Examples of Line Management and Talent Development included but not limited to:

- People Management and Managing Team Performance
- Team Building
- Change Management
- Coaching Skills
- Research Talent Identification and Development

Communication[38]

Communication refers to the exchange of information, ideas, and feedback both within the research team and with external stakeholders.

Examples of Communication included but not limited to:

- Building and Maintaining Relationships with Research Funders, Partners or other Stakeholders
- Designing and Implementing Research Communication Plans
- Media Liaison and Associated Activities
- Preparing and Writing Reports (Including Evaluation Reports and Funder Reports)
- Social Media Engagement

Subject Matter Expertise/Specialised Knowledge[39]

Subject matter expertise/specialised knowledge refers to a thorough understanding of the specific specialised area or field associated with an organisation and/or individual roles within an organisation. As it has been discussed above, the professional development of Research Managers does not

[37] Talent and Talent Management (leadershipacademy.nhs.uk)
[38] What Is Communication Competence? (Plus Benefits and Tips) | Indeed.com
[39] L-1B Visa: Specialized Knowledge Professional - Immihelp

necessarily follow a vertical path, but can be horizontal as well enabling specialisation in one or more subfields of RM. These subfields require subject matter expertise that can be divided to the four levels of expertise, with the exception of research facilitation service delivery who are not in a position to lead research facilitation services. Examples of subject matter expertise/specialised knowledge competencies included but not limited to:

- Pre-Award
- Post-Award
- Managing Equality, Diversity and Inclusion (Including Gender, Disability and Racism)
- Data Stewardship
- Knowledge Valorisation (Technology Transfer)
- HR for Research – Employment, Training etc of research staff.
- Research Finance
- Research Infrastructure Management
- Clinical Research Management
- Research Ethics and Integrity
- Research, Strategy and Policy Development
- Managing the Research Grant/Support Office

For learning outcomes on Subject Matter Expertise please see Subject Matter Expertise/Specialised Knowledge Section of this document.

Learning outcomes 50 Competencies[40]

For RM Comp the **Learning outcomes are indicators of what a Research Manager knows, understands,** and can do after completion of dedicated training, on the job experience, on the job training, peer-to-peer learning, coaching or mentoring. **These indicators can be designed and used for professional development planning** and **the development of training for research managers** or for different types of tasks such as creating **job descriptions** for example. The learning outcomes have been aligned along the proficiency levels as above.

The learning outcome table has been created, edited, and agreed by CARDEA partners, RM Roadmap, various focus groups, HR professionals and other interested parties. The draft document was circulated widely for feedback and consultation. As this is "uncharted territory" to some extent for Research Managers we have also applied our specialised knowledge in this area. See Appendix 4 for further details.

Learning outcomes are essential to make the competence framework usable for Research Managers and employers of Research Managers. The learning outcomes are designed as thresholds of achievement. They have been developed as references for different purposes as noted above. Though comprehensive, the list of learning outcomes is not exhaustive, and it is hoped that further competences and learning outcomes could be added in the future.

Please note when the term "research team" is mentioned in the learning outcomes it also implies all other teams and staff that Research Managers work and collaborate with.

[40] Numerous Internet websites, Researcher Comp, Research Managers, HR Professionals, and ESCO/ISCO were employed to aid in the refinement of the learning outcomes.

Cognitive Abilities/Personal Attributes Learning Outcomes[41]			
1. Creativity			
Foster innovative approaches and solutions to aid problem-solving, designing methodologies and/or procedures which encourage a dynamic research environment.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Basic understanding of the importance of creativity in research and its critical role in problem solving	Ability to problem solve using methodologies and or procedures to enhance and nuance the solution	Cultivates a culture of solution-oriented thinking by fostering creativity within research teams and/or the organisation	Provides leadership and facilitates creative problem solving at team, organisational and national/international level
Shows promise in ability to generate and express new ideas coherently	Experiments with ideas and collaborates to provide solutions and ascertain risk	Introduces new or improved methodology, policy, or practice to enhance research progress and problem solve	Designs and executes comprehensive processes and strategies in various domains addressing challenging and complex issues creatively
Acknowledges the relationship between creativity and risk	Explores ideas from different discipline and domain perspectives demonstrating genuine curiosity	Uses cross-disciplinary collaborations and combined competence to address and solve organisational or systemic issues	Creates a long-lasting positive footprint in the organisation through the introduction of various policies and practice which create novel and long reaching positive impact
Can analyse information and identify key components to aid creativity	Challenges own personal and cognitive biases that would deter creativity	Considers ethical issues in creative solution decision-making	Consistently demonstrates creativity in evaluating complex problems and generating innovative solutions
2. Critical Thinking			
Able to systematically analyse information, assess the validity of research methodologies and make informed decisions. Identify potential biases, evaluate evidence objectively, and strategically navigate complex research management challenges.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the importance of critical thinking and its significance in decision making	Evaluates the credibility and relevance of information provided	Considers the long-term consequences of decisions made bearing in mind potential legacy issues	Provides expert level advice to senior management and organisational leadership to enable informed decision making
Can analyse information and identify key components and issues	Considers diverse perspectives when evaluating information to formulate decisions and	Collaboratively engages in brainstorming sessions with colleagues to investigate the unforeseen consequences of potential decisions	Designs and executes comprehensive strategies to inform organisational decision making

[41] For competence descriptions please see Appendix 2

	consequences of these decisions		
Is aware of challenges surrounding personal and cognitive biases in critical thinking	Challenges own personal and cognitive biases in critical thinking	Considers ethical issues at an advanced level in critical decision-making	Consistently demonstrates proficiency by systematically evaluating complex problems, synthesizing diverse information, and generating innovative solutions, thereby contributing to advanced decision-making processes
Demonstrates foundational proficiency in critical thinking by analyzing information, identifying logical connections, and making well-reasoned decisions	Identifies and evaluates connections between complex linked data/ information/ policy	Uses cross-disciplinary collaborations to identify potential systemic biases and evaluate issues objectively	Creates a long-lasting legacy in the organisation/nationally/internationally through improved policies and practice

3. Cultural Sensitivity

Awareness and respect for diverse cultural perspectives, values, and norms. Fostering an inclusive work environment, acknowledging the impact of cultural nuances on research design and implementation.

FOUNDATIONAL	INTERMEDIATE	ADVANCED	EXPERT
Basic understanding of the importance of cultural sensitivity in diverse research environments	Plans and delivers effective cross-cultural communication in all interactions with collaborators, partners, and team	Fosters a culturally diverse and inclusive environment within the research team and/or other teams	Provides expert level advice to senior management and organisational leadership to enhance research and organisational cultural sensitivity
Has a fundamental awareness of cultural differences, customs and traditions	Exhibits cultural intelligence and awareness whilst working with diverse research teams and/or other teams	Successfully interacts in cross-cultural research collaborations and partner consortiums	Develop and implement cultural sensitivity strategies at team, organisation, national and or international level
Communicates respectfully through all forms of communication	Recognises and addresses any issues through unintended behaviours	Empowers cultural differences via the establishment of procedures and strategies within the research team and/or other teams	Displays advanced skills in fostering cross-cultural understanding, resolving cultural conflicts, and serving as a catalyst for inclusive environments through insightful leadership and mentorship

Exhibits understanding towards individuals from different cultural backgrounds	Demonstrates the ability to navigate and communicate effectively in diverse cultural contexts, displaying awareness, respect, and adaptability towards varying cultural norms and practices	Exhibits the ability to seamlessly navigate diverse cultural environments, fostering inclusive interactions, and contributing positively to cross-cultural collaborations with a high degree of cultural awareness and empathy	Demonstrates exceptional proficiency in understanding, respecting, and navigating complex cultural dynamics

4. Problem Solving			
Develop and implement solutions to practical, operational or conceptual problems which arise in the execution of work in a wide range of contexts.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the concept of problem-solving and its importance in various contexts	Following a review of the issue, is able to identify the root cause of a problem	Guide and facilitate teams through complex problem-solving processes	Provide expert-level thought leadership in designing and executing comprehensive problem-solving strategies at leadership and organisational level
Ability to recognise and define problems, also using analytical skills to break them down into their component parts	Assesses the effectiveness of any proposed solutions	Challenge existing resolutions to issues if no longer fit for purpose and propose alternative approaches	Develop and implement policy and practice that addresses and solves problems at the organisational, national and or international level
Understands the principle of collaborating to solve a problem	Uses networking contacts and colleagues to discuss, address and resolve problems	Address interconnected and complex organisational or (research) team challenges	Exhibits leadership in guiding others through intricate problem-solving processes, showcasing the ability to anticipate, navigate, and resolve multifaceted issues with a profound understanding of organisational, research, and international dynamics
Is open to learning new skills and approaches to identify and analyse issues clearly	Engages in training and professional development to enhance problem solving skills and navigate unexpected issues	Exhibits the capability to analyse intricate issues systematically, synthesize information from various sources, and devise innovative solutions	Ability to address highly complex challenges by employing advanced analytical techniques, synthesizing interdisciplinary knowledge, and innovatively devising solutions

5. Strategic Planning			
The ability to envision and execute a comprehensive research plan aligned with agreed goals and broader organisational and or national/international strategies. Develop a vision to turn ideas into action. Obtain and synthesize information to identify and explore trends, opportunities, threats (also based on intuition and creativity) to achieve a long-term goal and to thrive in a competitive, changing environment. Identify alternative paths to turn ideas into action, select the most appropriate approach and adjust where necessary.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the fundamental principles of strategic planning and its contribution to the success of a research project	Is able to identify trends and threats within the research endeavour	Demonstrates the ability to formulate comprehensive and forward-thinking strategic initiatives	Demonstrates the capacity to integrate insight, analyse global trends, and anticipate emerging challenges, resulting in the creation of agile and adaptive strategic plans
Is able to conduct basic strategic planning analyses utilising tools such as SWOT analysis	Ensures that the research project is aligned to organisational strategy and goals	Utilises networks and expertise to connect in with national and or international research strategies	Recognised as a thought leader in the field, guiding organisations through complex strategic decision-making processes and consistently achieving positive outcomes
Understands how research project objectives align with organisational strategy	Effectively allocates approved resources to facilitate the strategy of the research	Exhibits proficiency in conducting thorough analysis, identifying key opportunities and challenges, and developing implementation plans that align with organisational goals	Develops and executes strategies that drive organisational success
Basic understanding of the strategic role of stakeholders both internal and external to the organisation	Implements strategies and procedure that increase research impact	Connects with internal and external stakeholders to devise strategies that increase the impact of the research	Works closely with stakeholders both internal and external to the organisation to advance the long-term value and strategic impact of the research

6. Decision Making			
Effective decision-making in this context is crucial for maintaining project momentum, achieving objectives, and navigating the complexities inherent in the research process.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Exhibits basic skills in gathering relevant information to inform decision-making	Demonstrates the ability to critically analyse complex situations and information	Employs innovative strategies to navigate ambiguous situations	Provides expert-level thought leadership to decision making strategies at leadership and organisational level
Understands fundamental risk assessment principles to consider potential outcomes of decisions	Analyses multiple scenarios prior to decision being made	Uses complex linked data and information to inform decision making	Introduces innovative models and methodologies for expert-level decision making

Understands the basic principle of monitoring decisions and their outcomes	Collaborates with others to ensure a unified approach to decision making process	Assesses the potential impact of the decision within the organisation	Works closely with stakeholders both internal and external to the organisation to assess the impact of critical decisions made at organisational, national and international level
Understands the basic principle of collaboration when coming to informed decisions	Understands risks attached to all potential scenarios prior to making the decision	Critically assesses the impact of critical decisions made within the organisation during a pre-defined period of time	Demonstrates astute judgment in order to consistently achieve positive results and strategic objectives for the organisation

7. Stress Management[42]

Stress management involves developing coping mechanisms and strategies, prioritizing tasks, and maintaining a healthy work-life balance.

FOUNDATIONAL	INTERMEDIATE	ADVANCED	EXPERT
Handles unfamiliar and uncomfortable situations with limited facilitation and supervision.	Identifies signs of stress at an early stage	Develops strategies for dealing with uncertainty and adversity.	Is recognised as confident decision-maker in uncertain and adverse situations.
Perseveres and moves forward in stressful and pressed situations with limited assistance.	Endures setbacks and failures.	Develops proactive responses to stressful situations	Assists others in challenging and adverse situations.
Is aware of what stress is and how to access further supports and resources to manage own stress	Manages challenges and makes decisions under uncertainty.	Is aware of the importance of action planning and taking steps as soon as possible to reduce the risk of stress	Is able to create the right climate of psychological safety to encourage open discussion about stress
Learning and applying relaxation techniques such as deep breathing, meditation, and mindfulness.	Applying principles of positive psychology to enhance well-being and resilience. Applying cognitive-behavioural strategies to manage stress-related thoughts and behaviours.	Teaching and implementing techniques for setting boundaries between work and personal life.	Implementing effective time management strategies to reduce stress.

[42] Based on Research Comp

8. Prioritisation Time Management[43] and Multitasking			
Involves identifying the most critical tasks and focusing on them first. This skill helps individuals focus on what is most crucial, manage their time and resources efficiently to achieve their goals.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Identifies tasks and prioritise them in order to develop an individual schedule and perform the work efficiently.	Establishes own time management system	Identifies synergies between projects to use own time efficiently and productively.	Integrating time management practices into all aspects of personal and professional life.
Works autonomously but actively seeks guidance when necessary.	Has the ability to break down projects into manageable tasks and create detailed project plans. Is forward thinking.	Aligning daily tasks and projects with long-term strategic goals and manages several complex projects to time.	Developing and using advanced metrics to measure productivity and efficiency.
Is able to assess personal strengths and weaknesses in time management.	Recognizing common distractions and learning strategies to minimize them.	Understanding and applying techniques to manage personal energy levels to match tasks with optimal times of day.	Functions as role model and a coach in questions about time management

9. Adaptability and Professional Flexibility			
Involves adjusting to new situations, technologies, and workflows. Adaptable individuals can thrive in dynamic environments, handle unexpected challenges, and maintain a competitive edge.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Identifies potential risks associated with change and developing mitigation strategies and is able to ask for clarification during transitions or seek out additional information or resources	Develops a growth mindset to positively take on new challenges, find new opportunities during transition	Demonstrates readiness to embrace change and inspires others to do the same	Creates a safe and supportive environment for colleagues to share thoughts, concerns, and ideas
Be aware of changes in your environment, accepts them and is ready to make adjustments	Understands the dynamics of change and transitions.	Request opportunities to work on tasks that may be new or offer to take	Discusses own learning experiences and is transparent about the journey and challenges experienced in adapting to change.

[43] Based on Research Comp

		on responsibilities that require creative approaches.	
Is committed to continuous learning and professional development in the field of adaptability.	Is able to observe and analyse how to make adjustments or improvements in case of changes or during transition	Finds and develops new ways and approaches to adapt to new situations and challenges	Provides support through mentoring or coaching for individuals who may struggle with adapting to change

10. Conflict Management

The practice of handling or resolving disputes and disagreements in a constructive manner. It involves identifying and addressing the underlying issues, employing strategies such as negotiation, mediation, and problem-solving to achieve mutually acceptable solutions.

FOUNDATIONAL	INTERMEDIATE	ADVANCED	EXPERT
Identifies positive and negative conflicts, learns and practices the skills necessary to uncover with conflict	Learns and practices the skills necessary to deal with conflict	Develops personal action plans for conflict situations back at work	Develops and uses different conflict management strategies
Understands the key questioning and listening skills needed to conduct high quality conversations with members of their team.	Utilises the key questioning and listening skills needed to conduct high quality conversations with members of their team.	Prepares and conducts difficult conversations, using a collaborative approach to move towards a positive outcome	Enable others to develop strategies for dealing with conflict when it happens
Assesses a range of responses to conflict situations and understand the importance of early intervention	Understands various theories and models of conflict, including structural, functional, and process theories.	Analyses the underlying causes, actors, and stages of conflict.	Assesses successfully the effectiveness of conflict management interventions.

11. Reliability and Trustfulness

Involves being dependable and trustworthy in one's work. Reliable individuals consistently deliver high-quality results, meet deadlines, and maintain a strong reputation. It involves demonstrating honesty, integrity, and transparency in actions and communications. Trustfulness is a foundational element in building and maintaining relationships, whether personal or professional.

FOUNDATIONAL	INTERMEDIATE	ADVANCED	EXPERT
Understands the basic elements of building trust, such as reliability, openness, and consistency.	Identifies behaviours that build trust or mistrust.	Develop strategies for building or rebuilding trust	Creates a high-trust environment where people are more willing to accept change and work together toward successfully integrating the effects of change.

Examines the personal capacity to trust and to generate trust	Developing trustful relations with colleagues	Engaging with stakeholders to build trust and ensure transparency and accountability.	Developing constructive relationships with other stakeholders to ensure effective cooperation
Is familiar with ethical standards and guidelines in management, including honesty, integrity, and transparency.	Develops and adheres to standard operating procedures to maintain consistency and reliability.	Implementing continuous improvement processes to enhance reliability and trust in operations.	Establishing systems and processes that ensure the highest levels of reliability and trustworthiness in all aspects of operations.
Maintains consistent and thorough documentation of processes, decisions, and communications.	Producing detailed and comprehensive reports that provide a clear and accurate account of operations and decisions.	Effectively resolving conflicts in a manner that maintains and builds trust.	Developing and promoting innovative practices that enhance reliability and trustworthiness.

Technical Proficiency **Learning Outcomes**

1. Research Data Collection and Collation

Implement (and develop) robust data collection methodologies, coordinate data acquisition efforts among team members, and oversee the organised collation of diverse research datasets leading to evidence-based decision-making.

FOUNDATIONAL	INTERMEDIATE	ADVANCED	EXPERT
Understands and applies basic data collection techniques such as surveys, interviews, and observations	Develops structured instruments for data collection, such as surveys and questionnaires	Conducts advanced statistical analyses of complex linked data	Ability to apply advanced analytical techniques to large datasets, utilising tools like machine learning and artificial intelligence
Demonstrates proficiency in accurately entering data into spreadsheets or databases	Effectively manages and organises data using databases, ensuring data integrity and security	Integrates and analyses data from various sources, including qualitative and quantitative data	Establishes and leads data governance practices, ensuring ethical and responsible data management
Understands basic statistical concepts to describe and summarise data	Applies coding schemes and other tools to categorise and organise qualitative data	Uses cross-disciplinary collaborations and combined competence to address and solve organisational data or systemic issues	Creates a long-lasting positive footprint in the organisation through the introduction of policies and practices concerning the responsible use and management of research data
Recognises the importance of data quality and applies basic data validation and cleaning techniques	Is aware of data management policies at organisational, national and international level (i.e. GDPR)	Designs and implements databases tailored to specific research project needs, considering scalability and data relationships	Understands and addresses challenges related to interoperability and diverse data formats

2. Data and Statistical Analysis			
Apply rigorous statistical methods to ensure the accuracy and reliability of data and its interpretation.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands basic concepts related to data, variables, and datasets	Conducts and interprets simple linear regression analysis	Applies advanced regression techniques, such as logistic regression or hierarchical linear modelling	Can apply advanced multivariate techniques like structural equation modelling or cluster analysis
Computes and interprets basic descriptive statistics, such as mean, median, mode, and standard deviation	Utilises statistical software (e.g., R, Python, SPSS) to perform analyses and generate reports	Conducts time series analysis to model and interpret temporal data patterns	Can apply Bayesian statistical methods to complex research questions
Able to create simple data visualizations, including bar charts, histograms, and scatter plots	Able to apply basic multivariate analysis techniques, such as multiple regression or factor analysis	Applies machine learning algorithms for predictive modelling and classification tasks	Designs and implements strategies for causal inference in observational studies
Is eager to learn and engage with methods of data and statistical analysis	Understands and designs basic experimental and observational study designs	Understands and conducts meta-analyses, synthesizing findings from multiple studies	Provides expert-level statistical consultation, including study design, data analysis planning, and interpretation

3. Legal Skills			
A nuanced understanding of legal concepts, ethical considerations, and a keen awareness of the legal landscape as it pertains to the research ecosystem.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands foundational concepts of legal principles and their application	Analyses and drafts complex contracts	Identifies and manages legal risks within research project or at organisational level	Introduces innovative legal techniques and methodologies, contributing to advancements in the field
Develops knowledge of basic legal terminology	Conducts legal due diligence in various situations	Ability to draft legal pleadings or documents	Integrates legal processes and ethical considerations into the broader research landscape, collaborating with interdisciplinary teams
Understands the basic principles of contract analysis and interpretation	Uses negotiation within legal contexts	Manages multiple legal cases simultaneously, overseeing timelines, resources, and collaboration with research team and or all team members	Contributes to the publication of research findings, effectively communicating methodologies and results

Ability to draft basic legal documents	Communicates legal nuances clearly and precisely	Diagnoses and troubleshoots complex legal issues	Provides mentorship to junior researchers and research managers, guiding them in legal procedures and troubleshooting

4. IT for Research Activities			
Leveraging Information Technology (IT) and overseeing the integration of advanced technologies to enhance data management, analysis, security and collaboration. Implementation of robust IT infrastructure, such as data storage solutions, analytical tools, AI and collaborative platforms, to optimise research processes.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Demonstrates basic computer literacy, including proficiency in operating systems, file management, and software installation	Utilises specialised research software for data analysis, statistical calculations, and visualisation	Conducts complex data analyses using advanced statistical methods and machine learning techniques	Develops custom software applications tailored to specific research needs
Conducts basic internet research to gather information relevant to research topics	Designs and manages databases for organising and storing research data	Develops and implements scripts or workflows for automating repetitive research tasks	Applies advanced techniques for handling and analysing large datasets (big data)
Uses word processing software for basic document creation and formatting	Develops proficiency in a programming language (e.g., Python, R) for automation and data manipulation	Uses collaborative platforms and version control systems for team-based research projects	Manages and optimises IT infrastructure for large-scale research projects
Inputs and manages research data using spreadsheets or basic database applications	Uses bibliographic management tools for literature review and citation management	Demonstrates awareness of cybersecurity best practices to protect research data and systems	Stays abreast of and integrates emerging technologies, such as artificial intelligence or blockchain, into research workflows

5. Artificial Intelligence			
Ability to leverage AI technologies and algorithms to optimize research processes, analyse complex datasets, and derive meaningful insights for informed decision-making.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands what AI is and its basic applications in research management.	Can assess different AI technologies for research tasks.	Can create customized AI solutions for complex research challenges.	Develops and enforces comprehensive policies and ethical guidelines for AI use, ensuring responsible and fair AI practices
Knows about basic AI tools and how they can be used in research.	Applies basic AI tools (e.g., data visualization, predictive analytics) to facilitate research management.	Critically evaluates AI solutions and vendors, making informed decisions about which tools and technologies to adopt.	Identifies and facilitates innovative AI solutions that can transform research practices and drive significant advancements.

Recognizes ethical concerns related to AI use in research.	Data Interpretation: Understands how to interpret AI-generated insights for decision-making.	Establishes rules for responsible AI use in research management.	Guides others in using AI effectively for research management.
Demonstrates a willingness to learn about AI and its integration into research workflows.	Can identify where AI can be helpful in research tasks.	Works with AI experts and teams to integrate AI effectively.	Shows how AI can make a real difference in research management. (Acts as a leader in the integration of AI in research management, sharing knowledge through industry forums, publications, and workshops)

Research Project Oversight **Learning Outcomes**			
1. Research Project Management			
Overseeing the entire lifecycle of research projects. Defining objectives, developing timelines, allocating resources including Human Resources, and ensuring the project stays on course. Coordinating diverse aspects of project execution, fostering collaboration, and adapting strategies to overcome challenges			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Grasps foundational concepts and principles of project management within a research context	Develops and refines project plans, including detailed task lists, resource allocation, and risk assessment	Identifies, assesses, and manages risks proactively, implementing strategies to mitigate potential issues	Contributes to strategic planning for multiple research projects, aligning them with organisational goals
Understands the basics of initiating a research project, including defining objectives, scope, and stakeholders	Administers project budgets, including tracking expenses, forecasting, and financial reporting	Navigates and manages changes in project scope, timeline, or objectives, ensuring minimal disruption	Provides leadership within project teams, fostering a collaborative and innovative project culture
Develops basic skills in creating project timelines and managing research project tasks	Engages with stakeholders effectively, including research teams, funders, and collaborators	Provide guidance to senior management on strategic opportunities, project and portfolio design, and risk management for large-scale projects and portfolios	Manages a portfolio of research projects, optimising resource allocation and project synergies
Demonstrates foundational communication skills for project updates, coordination and dissemination	Administers quality assurance processes to ensure the integrity and reliability of research project outcomes	Utilises advanced project management tools and software for collaborative project planning and tracking	Implements continuous improvement strategies, incorporating lessons learned from previous projects into current practices

2. Managing Research Project Deliverables			
Ensure that project milestones and outcomes align with established goals. Establish clear deliverables, monitor progress, and address any deviations from the project plan promptly.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Basic understanding of the project's objectives and how they align with broader research goals	Coordinates and manages multiple tasks simultaneously, ensuring they align with project objectives	Ensures that project deliverables align strategically with the overarching research objectives	Provides leadership in the delivery of high-impact deliverables, guiding the team to excellence
Demonstrates basic skills in executing individual tasks according to project plans	Assists with the production of deliverables with a focus on quality, accuracy, and adherence to project requirements	Can identify and proactively address potential risks that could impact the achievement of deliverables	Contributes strategically to the development of deliverables, ensuring they contribute to broader research and organisational goals
Develops foundational documentation skills for recording progress and outcomes	Using a portfolio of competencies, develops problem-solving skills to address challenges that may arise during the project	Collaborates with cross-functional teams, integrating various perspectives and expertise into deliverable execution	Ensures that project deliverables have an impact beyond the immediate project, contributing to the broader scientific community or society
Understands and adheres to the project timeline for timely deliverable delivery	Communicates progress and challenges effectively with research team members and stakeholders	Using a portfolio of competencies, introduces innovative approaches or methods to enhance the quality or impact of project deliverables	Leads initiatives for continuous improvement in the processes and methodologies used to achieve research project deliverables

3. Monitoring and Evaluation Frameworks and Indicators			
Administering systematic processes to assess the progress and impact of research projects and initiatives. Define key performance indicators, establish data collection methods, and implement evaluation frameworks to measure project success. Ensure the effective tracking of research outcomes, facilitating data-driven decision-making and continuous improvement in the research process.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the foundational concepts of M&E and their importance in research project results	Selects and refines indicators based on relevance, feasibility, and measurability	Implements results-based management approaches, aligning M&E with project outcomes and impact	Able to select and refine performance indicators and apply sophisticated methodologies to assess the effectiveness, efficiency, and impact of these indicators
Identifies and understands the key components of a monitoring and evaluation framework	Develops plans for systematic data collection, considering methods, frequency, and responsible parties	Administers advanced performance measurement frameworks to track progress and achievements	Engage stakeholders in the design and implementation of M&E frameworks, ensuring their perspectives are considered

Develops foundational skills in creating basic indicators that align with research project goals	Implements agreed quality assurance measures to ensure the reliability and validity of collected data	Implements evaluations, including impact assessments and formative evaluations	Lead complex evaluations involving multiple variables, methodologies, and data sources
Understands basic methods for data collection relevant to monitoring and evaluation	Participates in the implementation of M&E governance frameworks and policies	Demonstrates the ability to design, implement, and critically assess comprehensive monitoring and evaluation plans for complex research programs	Contribute to building the capacity of research teams and organisations through the implementation of advanced M&E practices and methodologies

4. Establishing Research Project Plans			
Outline project objectives, timelines, and resource allocation. Collaborate with research team members to define clear goals, delineate tasks, and establish milestones. Develop comprehensive project plans to provide a roadmap for successful execution of the project. Facilitate effective coordination among research team members.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the foundational concepts of project planning, including its importance in research	Can develop a detailed and comprehensive project scope, considering all relevant aspects	Aligns the project plan with broader research and organisational strategies	Provides leadership in developing research project plans that contribute to organisational goals
Assists with defining the scope and objectives of a research project at a basic level	Can create a realistic project timeline, including milestones and deadlines	Engages with stakeholders to gather input and ensure their perspectives are considered in the project plan	Using a portfolio of competencies, introduces innovative approaches and methodologies into project planning to enhance efficiency and effectiveness
Develops a simple work breakdown structure to outline project tasks	Allocates resources effectively, considering personnel, equipment, travel and budget constraints	Utilises project management tools and methodologies to enhance planning and tracking	Manages complex resource allocations, including human, financial, and technical resources
Identifies basic resources required for a research project	Using a portfolio of competencies, identifies and documents potential risks that may impact the project	Assists with the development of a detailed and accurate budget, considering all project costs and funding sources	Facilitates collaboration among diverse teams and stakeholders in the establishment of project plans

Stakeholder Engagement Learning Outcomes			
1. Research Outreach			
Develop strategies to disseminate research findings and engage with diverse stakeholders. Create outreach plans that encompass effective communication channels, collaborations with external partners, and the dissemination of research outcomes to relevant audiences. Foster meaningful connections and promote the visibility of research initiatives thereby contributing to the broader impact and relevance of the research within the research community and beyond.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Demonstrates knowledge of the foundational concepts of research outreach and its significance in dissemination	Develops skills in tailoring communication messages to different audiences, considering their interests, knowledge levels and backgrounds	Using a portfolio of competencies, including EDI and Ethical principles, develops and implements strategic plans for research outreach, aligning them with organisational goals	Provides thought leadership in the field through influencing trends and leading discussions on importance of outreach
Implements basic oral and written communication skills for engaging with diverse audiences	Plans and coordinates intermediate-level research outreach events, such as workshops, webinars, or seminars	Collaborates with external organisations and stakeholders for outreach initiatives	Develops and implements outreach strategies at the organisational level, considering cultural nuances and international contexts
Can identify and understand needs of target audiences for research outreach.	Engages with multiple media channels for dissemination of research findings	Implements metrics and assessment strategies to measure the impact of research outreach activities	Leads collaborative initiatives that bring together diverse stakeholders for impactful research outreach
Familiarises oneself with basic outreach channels, including social media, presentations, and written materials	Uses online platforms effectively for outreach, e.g. blogs, podcasts, and web content	Engages in policy outreach, influencing decision-makers and contributing to policy discussions	Using a portfolio of competencies, introduces innovative techniques and technologies for research outreach, whilst staying at the forefront of communication trends
2. Academic Community Relationship Collaboration			
Building and maintaining strong relationships with academic institutions, scholars, and researchers. Facilitate partnerships, joint initiatives, and knowledge exchange, to enhance the research ecosystem. Contribute to a collaborative environment, fostering innovation, resource sharing, and the advancement of research agendas within and beyond the academic community.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the importance of collaboration within academic and community contexts	Initiates collaborative programs that align with academic and community goals	Leads the development of strategic partnerships with the academic community	Establishes and leads collaborative networks involving academia, research associations and research communities

Exhibits communication skills for engaging with academic peers and community stakeholders	Engages with diverse stakeholders, including academic faculty, students, and community leaders, in collaborative projects	Measures and assesses the impact of collaborative initiatives	Develops and implements strategies for collaborations that address complex research and societal challenges
Establishes foundational relationships with academic and community partners, recognising mutual interests	Using a portfolio of competencies, develops a productive relationship with the academic community	Co-designs and/or collaborates to produce methods and practice that address academic community needs	Introduces innovative models and approaches to academic-community collaboration, contributing to the field's advancement
Develops an awareness of basic academic community needs and challenges through initial engagement	Liaises with relevant research associations, also attends conferences and networking events	Takes on representative roles within research associations, contributing to the development of research culture and communities	Demonstrates the ability to strategically cultivate and sustain robust collaborations, leveraging extensive networks to foster interdisciplinary research initiatives, secure grant funding, and facilitate knowledge exchange

3. Community Engagement with Research

Establish meaningful connections with diverse communities affected by or interested in the research. Develop strategies for inclusive communication, solicit community input, and ensure the research aligns with community needs and values. Foster open dialogue and collaboration, contribute to the ethical and socially impactful conduct of research, promote community participation and the translation of research outcomes into tangible benefits for the broader community.

FOUNDATIONAL	INTERMEDIATE	ADVANCED	EXPERT
Understands the foundational concepts of community engagement in the context of research	Develops coherent plans for community engagement in research and research projects	Able to apply sophisticated participatory techniques that engage communities throughout the research process	Aligns community engagement frameworks with research strategy, contributing to the advancement of socially impactful research
Exhibits the communication skills for engaging with various communities about research	Identifies develops links, and engages with diverse stakeholders within communities for research collaboration	Using a portfolio of competencies, empowers communities through research partnerships	Engages stakeholders in the design and implementation of community engagement frameworks, ensuring all perspectives are considered
Employs and practices cultural sensitivity when engaging with diverse community groups	Establishes feedback mechanisms and channels for community input into research design and implementation	Is aware of policy trends and frameworks concerning community engagement and research impact more broadly	Leads complex engagements involving multiple variables, methodologies, and data sources
Understands the potential impact of research on communities and vice versa	Contributes to efforts to build community capacity for research participation	Fosters transparent and bidirectional communication, ensuring community input is integral to study design, implementation, and dissemination of findings	Uses ethical considerations, cultural sensitivity, and collaborative approaches, contributing to the establishment of sustainable, mutually beneficial relationships between researchers and the communities they serve

4. Engagement with Key Stakeholders			
Build and sustain collaborative relationships with influential partners, including academic institutions, industry leaders, policymakers, funders, industry, and community representatives			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands fundamental concepts of stakeholder engagement and its importance to the research ecosystem	Develops skills in strategic stakeholder mapping, considering power dynamics and influence	Builds and sustains strategic relationships with key stakeholders	Provides leadership in designing and executing stakeholder engagement strategies that align with organisational goals
Develops skills in identifying and mapping key stakeholders	Works to foster collaborative decision-making processes involving key stakeholders	Facilitates cross-functional collaboration among diverse stakeholder groups	Introduces innovative models and approaches for expert-level stakeholder engagement
Understands basic principles of effective communication with stakeholders	Can negotiate with and address the interests of a multitude of stakeholders	Using a portfolio of competencies, utilises data and analytics for stakeholder engagement strategies	Ensures the sustainability of stakeholder engagement efforts and leaves a positive legacy in stakeholder relationships
Develops an awareness of the interests and concerns of different stakeholder groups	Applies conflict resolution skills to address issues that may arise during stakeholder engagement	Implements complex communication strategies tailored to diverse stakeholder needs	Drives transformative impact by leveraging extensive networks, facilitating dialogue, and fostering long-term relationships that advance the organisation's mission and objectives

5. Building Trust within Relevant Research and Strategic Partnerships			
Build trust within relevant research and strategic partnerships for successful collaboration. Deliver on commitments, foster transparent communication, and prioritise the mutual interests of partners.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Demonstrates a basic understanding of the importance of trust in professional relationships with key stakeholders in research, including strategic partners	Demonstrates the ability to identify strategic partnerships that align with organisational and research goals	Develops strategies for fostering strategic collaborations that enhance trust	Provides leadership and direct relationship management initiatives for enable trust within strategic partnerships
Shows promise in ability to network and build positive professional relationships	Cultivates meaningful partnerships with organisations and funders aligned with research goals and outcomes	Employs risk mitigation strategies to maintain trust in complex partnerships	Ensures the organisation delivers on commitments made in agreements with partners
Shows awareness of the importance of reliability and consistency in partnerships	Understands the importance of open and transparent communication to build trust	Resolves conflicts and challenges while preserving trust	Creates a long-lasting positive footprint in the organisation through the introduction of good practice which has a long reaching positive impact

Understands the research landscape and the importance of effective communication	Coherently conveys mutual benefits of a proposed partnership	Using a portfolio of competencies, utilises all forms of communication for informed trust building	Employs advanced interpersonal and negotiation skills to navigate complex dynamics, cultivating a culture of mutual respect and shared goals
6. Diplomacy, Negotiation, and Mediation Skills			
Employ tactful communication, adept negotiation strategies, and effective mediation to reconcile differing perspectives and align interests among research team members or stakeholders.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Has foundational concepts of diplomacy, negotiation, and mediation	Is skilled in planning and executing tactful communication strategies within research teams	Aligns interests among research team members and stakeholders	Introduce innovative conflict resolution models and approaches.
Has foundational communication skills for effective interaction in diplomatic and negotiation settings	Utilises a variety of negotiation techniques with ability to compromise	Resolves through diplomacy and mediation unforeseen differing perspectives within the research team	Executes strategies at organisational level to mitigate the effect of differing perspectives within the research team, organisation or with stakeholders.
Has an awareness of conflicts and the need for mediation in various contexts	Uses mediation processes and techniques	Inspires others in the use of effective and organisation-compliant negotiation and mediation strategies	Exhibits a sophisticated understanding of cultural nuances, power dynamics, and psychological factors that influence negotiations
Understands basic principles of active listening as a skill in negotiations	Exhibits cultural sensitivity for effective diplomacy in diverse settings	Navigates complex negotiations, employing advanced tactics to achieve mutually beneficial outcomes	Demonstrates a track record of successfully resolving multifaceted disputes and negotiating agreements that advance organisational objectives

7. Handling Difficult Conversations and Partnerships			
Navigate challenging discussions with tact, empathy, and problem-solving skills. Address conflicts, manage expectations, and seek resolutions to maintain positive relationships within the research team/ organisation and or external partners.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Demonstrates a basic understanding of the importance of having structured difficult conversations and their importance to partnerships	Anticipates and prepares ahead of time for challenging discussions with members of the research team	Implements strategies to maintain trust and collaboration within the team and with external partners	Provides leadership in designing and executing comprehensive strategies for difficult partnerships
Adapts communication skills for navigating difficult conversations	Employs conflict resolution techniques to navigate challenges	Using a portfolio of competencies, manages expectations and seeks conflict resolution within the team	Introduces innovative conflict resolution models and approaches at the organisational level
Communicates respectfully and ethically through all forms of communication	Negotiates to find common ground in addressing conflict, managing expectations and seeking resolutions	Engages with diverse stakeholders and partners to address complex issues and resolve differences	Creates a long-lasting positive footprint through open and transparent practice and the maintenance of positive relationships
Demonstrates evidence of emotional intelligence when managing difficult conversations	Escalates to conflict resolution procedures and policy when needed	Demonstrates the ability to navigate challenging discussions with sensitivity, tact, and respect for others	Demonstrates an unparalleled ability to navigate highly complex and sensitive discussions with finesse and strategic acumen

8. Business and Commercial Liaison Management			
Facilitate collaborations between the research team and industry partners or commercial entities. Navigate the intersection of academia and business, identifying opportunities for knowledge valorisation, licensing, or joint ventures.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the importance of business and commercial liaison within the research agenda	Demonstrates proficiency in planning and structuring strategic business partnerships	Cultivates strategies to promote and nurture strategic commercial collaborations	Demonstrates leadership skills overseeing the design and execution of comprehensive business liaison strategies
Develops communication skills for effective collaboration with business partners	Engages in cross-functional collaboration to align business and research goals effectively	Executes partnership strategies with industry considering diverse and international perspectives	Pioneers' commercial collaboration models and approaches driving innovation and effectiveness in partnerships
Understands basic principles of negotiation for business-related interactions	Employs negotiation techniques for navigating complex business and research interactions	Introduces forward-thinking liaison models and approaches to elevate and enrich industry relationships within the context of research dissemination and output	Formulates and implement business liaison strategies considering the shifting landscape of global business and research trends
Gains proficiency in identifying and establishing initial connections with commercial partners, understanding basic contractual considerations, and participating in introductory discussions	Uses data and insights to guide decision-making with business and commercial partners	Demonstrates a nuanced understanding of complex business dynamics, market trends, and strategic partnership development	Able to navigate intricate business landscapes, formulate and execute highly sophisticated strategies for partnership development, and foster long-term commercial relationships

Line Management and Talent Development **Learning Outcomes**			
1. People Management and Managing Team Performance			
Effectively leading and coordinating a team, providing guidance, and fostering a collaborative work environment to ensure the successful execution of research projects. Includes setting clear expectations, monitoring progress, offering constructive feedback, and implementing strategies to enhance individual and collective productivity within the context of the research objectives.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the concepts of teams and their role in research success	Plans and executes team building activities	Anticipates and plans for future challenges within the team	Manages culturally diverse and geographically dispersed teams
Able to identify common sources of conflict within a team	Adapts communication styles to different team members and situations	Fosters adaptability and resilience within the team	Navigates complex global research environments
Able to set and communicate clear and achievable goals for the team	Proactively addresses and seeks to resolve conflict within the team	Uses organisational performance analytics tools and methodologies for tracking team and individual performance	Demonstrates resilience and adaptability in challenging team and or organisational circumstances
Ability to monitor and report on basic performance metrics	Implements organisational reward and recognition policies	Fosters a learning culture within the team or organisation	Pioneer and implement cutting-edge leadership practices inclusive of training initiatives
2. Team Building			
Cultivating a collaborative and high-performing research team by fostering a positive work culture, aligning team members with common goals, and recognising and utilising individual strengths.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Demonstrates knowledge of the foundational concepts of team building and its importance to the research agenda of the organisation	Understands and applies team development models e.g., Tuckman Team Development Model	Aligns team goals with that of the organisation	Develops and leads collaborative strategies for teams working across multi-partner projects within multinational contexts
Shows awareness of basic team dynamics	Clarifies roles and responsibilities within the research team for better coordination	Fosters cultural competence within the team, considering diverse perspectives	Develops and implements positive work culture strategies at the organisational level, considering cultural nuances and international contexts
Understands basic conflict resolution practices	Implements communication strategies to enable and foster	Able to address and resolve complex issues within the research team	Leads collaborative initiatives that bring together diverse stakeholders

	collaboration within the research team		for impactful research within common goals
Has basic communication skills for effective team interaction	Works to develop and encourage problem-solving skills within the research team	Empowers team members to take ownership of research tasks and contribute to decision-making	Using a portfolio of competencies, introduces innovative techniques for recognising and utilising individual strengths to enhance research team output

3. Change Management

Navigating and facilitating transitions within the research environment/organisation. Effectively communicate changes, address concerns, and facilitation the research team/organisation in adapting to new methodologies or project directions.

FOUNDATIONAL	INTERMEDIATE	ADVANCED	EXPERT
Understands the context of change management and its potential impact on the research or the organisation	Develops plans for managing team and or organisational change	Leads cultural transformation efforts to embed change within the organisational culture	Introduces innovative change models and methodologies for senior level change management
Develops an awareness of basic change models and frameworks	Engages with diverse stakeholders to garner support for proposed change initiatives	Provides leadership in executing and overseeing change initiatives	Develops and implements strategies that address complex changes within the research ecosystem
Understands common concerns during change in the workplace or within the research team	Communicates proposed changes simply and effectively to the team or the organisation	Using a portfolio of competencies, utilises advanced data analysis to inform and enhance change management strategies	Introduces innovative models and approaches to change management contributing to the field's advancement
Able to identify key stakeholders and their roles in the change process	Able to identify potential obstacles, and develop strategies to mitigate resistance to change	Develops advanced strategies for mitigating resistance to change at individual and organisational levels	Exhibits advanced proficiency in analyzing complex organisational dynamics, identifying potential challenges, and designing tailored interventions to address resistance effectively

4. Coaching Skills			
Guide and develop the professional capabilities of research team members and or research leadership.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the foundational concepts of coaching and its importance in researcher or team member development	Understands and applies coaching models and frameworks e.g., GROW model	Develops coaching plans aligned with organisational and individual goals	Introduces innovative coaching approaches and methodologies at team and organisational level
Provides constructive feedback to facilitate peer growth	Assists team members and/or employees in setting and achieving performance and development goals	Applies cultural sensitivity in coaching to accommodate diverse perspectives	Engages organisation and research leaders in the implementation of organisation wide coaching frameworks to build capabilities
Develops trust-building skills essential for effective coaching	Uses effective questioning techniques to guide employee reflection	Conducts in-depth assessments, providing nuanced feedback that inspires self-reflection and meaningful change	Navigates organisational complexities to facilitate researchers, research managers and teams effectively
Works towards a positive impact of coaching on the individual researcher and peers	Develops the ability to conduct insightful assessments of individuals' strengths and areas for growth, providing constructive feedback and guidance	Adapts coaching approaches to diverse individuals and complex situations	Contributes to the advancement of coaching as a discipline through the development of new methodologies, the publication of influential work, and the mentorship of other coaching professionals

5. Research Talent Identification and Development			
Recognise and nurture the potential of individual researchers. Implement strategies for identifying key skills, provide targeted training, and create opportunities for professional growth within the team/organisation.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the importance of talent identification, acquisition and development in the research context	Develops skills in strategic talent mapping for research teams and projects	Develops strategies for succession planning in research teams and within the organisation	Designs and executes talent management strategies for researchers and research managers within the organisation
Develops skills to assess the potential of individual researchers	Identifies and nurtures individuals with the potential for leadership	Develops and implements programs, including mentoring programs, that enable research talent and facilitate cross-disciplinary skill development	Using a portfolio of competencies introduces innovative models and

	roles in research and research management		approaches for talent development and professional growth in research
Shows awareness of various research career trajectories both within and beyond the research ecosystem	Contributes to mentoring programs to facilitate research talent	Provides leadership development opportunities for emerging research leaders	Contributes to building the overall research capacity of the organisation through the identification of key skills and targeted training initiatives
Understands basic principles of creating development plans for early-career researchers and peers	Assists researchers and research managers to create individual development plans based on career goals	Applies various metrics for evaluating the impact of talent development initiatives within the team or organisation	Demonstrates a sophisticated understanding of diverse research skill sets and potential at the individual and organisational level

Communication **Learning Outcomes**			
1. Building and Maintaining Relationships with Research Funders, Partners, or other Stakeholders			
Cultivate strong connections by ensuring clear communication, delivering on commitments, and understanding the needs of collaborators. Foster trust, secure ongoing support, and contribute to a collaborative research environment.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Demonstrates basic understanding of the importance of key stakeholders in research, including funders and partners	Provides evidence of skills in strategically engaging with research funders, partners, and stakeholders	Aligns research goals with the building of strategic partnerships inclusive of funding opportunities	Provides leadership and direct relationship management initiatives for research success
Shows promise in ability to network and initiate and sustain professional relationships	Cultivates meaningful partnerships with organisations and funders aligned with research goals	Facilitates cross-sector collaboration, engaging with diverse stakeholders	Develops and implements strategies for managing relationships and collaborations on a national and international level
Is able to clearly convey research agendas and results	Discusses and negotiates agreements with stakeholders	Resolves conflicts and negotiates agreements with research partners and funders	Creates a long-lasting positive footprint in the organisation through the introduction of good practice which has a long reaching positive impact
Understands the research landscape inclusive of funding and collaborations	Coherently conveys complex and nuanced research policy/prioritisation/trends etc.	Using a portfolio of competencies, utilises data and analytics for informed relationship management and decision-making	Demonstrates an unparalleled ability to navigate complex dynamics and foster long-term collaborations
2. Designing and Implementing Research Communication Plans			
Design and implement research communication plans by crafting strategies to effectively disseminate research findings. Identify target audiences, select appropriate communication channels, and tailor messaging to maximise impact. Create clear and engaging communication, to enhance the visibility of research outcomes, foster collaboration, and contribute to the broader understanding and application of research within academic, research, professional, and public/private spheres.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the importance of communicating research	Crafts strategic communication plans aligned with research objectives	Develops integrated communication strategies that align with overall organisational goals	Designs and executes communication strategies that drive research impact

Can identify target audiences for research communication	Uses traditional and digital media to amplify research messages	Develops crisis communication plans for addressing unforeseen challenges	Introduces innovative communication models and approaches at an expert level
Shows awareness of basic communication channels, including traditional and digital media	Implements strategies to engage with a multitude of stakeholders	Innovates in the use of available communication strategies to maximise research impact	Develops and implements strategies for managing overall organisational research communication on a national and international level
Has an overall awareness of ethical considerations in research communication	Considers and uses data visualization techniques for effective communication of research findings	Fosters long-term relationships through open and transparent communication practices	Consistently demonstrates a sophisticated understanding of diverse communication strategies and channels

3. Media Liaison and Associated Activities

Establish and manage relationships with the media to promote research activities and results. Engage with journalists, facilitate interviews, and strategically communicate research findings to the public. Contribute to the dissemination of accurate information, enhance the visibility of research projects, and foster a positive public perception of the research group, institution, or organisation.

FOUNDATIONAL	INTERMEDIATE	ADVANCED	EXPERT
Demonstrates a basic understanding of the importance of liaising with the media and its role in disseminating research results	Crafts strategic approaches for engaging with the media	Develops plans for crisis communication with the media	Provides leadership in designing and executing media engagement strategies that align with organisational needs and goals
Demonstrates an understanding and awareness of the online and offline media landscape	Creates and adapts key messages for effective communication with the media	Implements media training programs for researchers, research managers and others	Develops and implements media engagement strategies at team, organisation, national and or international level
Communicates respectfully and ethically through all forms of communication	Engages with a variety of media channels, including print, broadcast, and online	Using a portfolio of competencies utilises data and analytics for informed media engagement strategies	Creates a long-lasting positive footprint with the media through open and transparent practice
Has a good grasp of the basic principles of effective research communication with media representatives	Able to effectively and accurately respond to media inquiries and requests related to the research	Engages with diverse stakeholders at an advanced level through media channels	Excels in cultivating relationships with media outlets, positioning oneself as a trusted source for accurate and insightful information

4. Preparing and Writing Reports (Including Evaluation Reports and Funder Reports)			
Synthesize complex research findings into clear and compelling narratives. Ensure reports align with guidelines, effectively communicate project outcomes, and demonstrate the impact of research initiatives.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the importance of writing clear and compelling narratives to disseminate research to various audiences	Uses citation and referencing techniques for accuracy and credibility	Able to synthesize complex information clearly and accurately in reports	Provides expert-level thought leadership in designing and executing comprehensive narration techniques and strategies at leadership and organisational level
Can present research results effectively and coherently to funders and other stakeholders	Is able to plan and outline reports quickly and accurately	Uses visual elements for enhanced data communication in reports	Provides clear steps and guidelines to assist all researchers and research managers within the organisation to align reports and research outcome narratives with organisational goals
Has an awareness of guidelines and standards for various types of reports	Uses data analysis skills for meaningful data presentation within reports and narratives	Effectively incorporates stakeholder feedback into reports	Demonstrates skills in strategic report design, ensuring alignment with audience expectations and effectively communicating research outcomes, impact, and recommendations
Presents compelling research narratives to diverse audiences	Effectively presents complex research project outcomes and narratives to diverse audiences	Employs an ethical and quality assurance approach for all reports and narratives	Demonstrates the ability to distill intricate research findings into clear reports that not only meet the highest professional standards but also contribute to strategic decision-making

5. Social Media Engagement			
Leverage digital platforms to disseminate research findings, engage with the public, and build a broader audience. Develop and implement strategies for effective communication on social media, including creating compelling content, participating in relevant discussions, and fostering connections with diverse stakeholders.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the importance of utilising different social media platforms	Plans and schedules social media content strategically	Develops and executes social media campaigns aligned with organisational goals	Designs and executes comprehensive social media strategies at the organisational level
Creates and manages social media profiles for the research project	Implements strategies to engage and interact with audiences on social media	Collaborates with influencers and key stakeholders for enhanced social media reach	Develops and executes highly sophisticated and targeted social media campaigns that effectively communicate research findings to diverse audiences
Demonstrates ability to identify, understand and target specific audiences on social media	Uses analytical tools to measure and analyse social media performance	Implements crisis management strategies in handling challenging issues on social media	Defines and or creates codes of conduct and ethical guidelines for the use of social media by members of the organisation
Demonstrates basic understanding of creating and posting content on social media	Maximises social media impact through links and content references in multiple platforms	Uses advanced data and insights for informed decision-making in social media strategies	Demonstrates a deep understanding of evolving digital landscapes, algorithms, and audience behaviors

Subject Matter Expertise/Specialised Knowledge[44]

Following consultation[45] with the Research Manager community RM Comp has (for ease of use) separated out the roles associated with Subject Matter Expertise. Please note that all these roles also demand a broad suite of competencies inclusive of those indicated above. Individual roles and associated competencies are included just as they are included within the umbrella of roles within Research Management. A role refers to the specific position or job title within an organisation. It outlines the primary responsibilities, duties, and tasks that an individual is expected to perform. Subject Matter Expertise refers to a thorough understanding of the specific specialised area or field associated with an organisation and/or individual roles within an organisation. As previously mentioned, the professional development of Research Managers can progress not only vertically but also horizontally, allowing for specialisation in one or more subfields of Research Management. These subfields demand subject matter expertise. The competencies associated with these roles are included below. The competence framework includes the following roles with associated competencies under foundational, intermediate, advanced and expert:

Research Manager Roles

- Pre-Award
- Post-Award
- Managing Equality, Diversity and Inclusion (Including Gender, Disability and Racism)
- Data Stewardship
- Knowledge Valorisation (Technology Transfer)
- HR for Research – Employment, Training etc of research staff.
- Research Finance
- Research Infrastructure Management
- Clinical Research Management
- Research Ethics and Integrity
- Research, Strategy and Policy Development
- Managing the Research Grant/Support Office

Please note that as the roles associated with research management expand, additional areas and roles within subject matter expertise will be incorporated into the above.

[44] L-1B Visa: Specialized Knowledge Professional - Immihelp

[45] Validation meetings EC April and November 2024 and other events.

Subject Matter Expertise/Specialised Knowledge Learning Outcomes			
1. Pre-Award			
Identify and disseminate funding opportunities; develop and implement funding optimisation strategies; facilitate the writing of funding proposals, including alignment with stakeholder requirements, budgeting and costing and review; coordination of approvals and submissions			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Demonstrates a basic understanding of the research landscape and ecosystem as well as understands the foundational aspects of regulatory and funder compliance related to research proposals and grant applications	Analysis regularly research funding opportunities, is aware of the current calls and disseminates information to relevant researchers and research groups	Aligns organisational research mission and priorities with funding opportunities, develops individual plans for researchers and research teams to enable applicant grant success	Contributes to the development of institutional research funding strategies, aligning them with organisational, national and international objectives
Comprehends the main components of the research proposal, i.e. including the research statement, objectives, and budget and is familiar with online and e-platforms used for the submission of research proposals	Has in-depth knowledge of the grant application, can advise on its own or knows, who should be contacted for specific expertise	Develops and facilitates consecutive proposals of individuals and team in a coordinated manner to maximise the absorbed funding, benchmarks funding mobilisation best practices	Leads the development and implementation of innovative approaches to proposal development, set standards and targets for grant proposal submission.
Handles efficiently the basic administrative tasks related to the development and submission of research proposal and maintains the documentation in an accurate manner	Facilitates and assesses the development of grant proposals which could include identifying research team members, preparing the budget, writing and reviewing text	Analyses competing proposals and funding trends to enhance the competitiveness of the proposal.	Design financial and other incentives/research income allocation models to promote excellence and delivery against strategies
Adheres basic communication skills for interacting with researchers, stakeholders and team members	Engages with stakeholders to gather necessary information and facilitate for the proposal.	Leads and/or represents the organisation in discussions with funding agencies, government bodies, industry partners and other relevant stakeholders	Builds and manages strategic partnerships with key stakeholders and organisations to facilitate proposal development and funding mobilisation.

Is familiar with the financial requirements of funding programmes, including the main budget lines and eligibility of costs	Is able to proactively facilitate the preparation of the budget of the grant proposal at partner levels and manages complex budgets	Is able to proactively facilitate the preparation of the budget of the grant proposal at consortium level and manages complex budgets	Secures a balanced and diversified funding portfolio in order to secure strategic, sustainable and predictable organisational funding inclusive of third stream income
2. Post-Award			
Negotiate contracts, manages amendments, as well as the internal setup of the project, the consortium and communication within, liaises with funders, provides administrative facilitate, progress management, accounting, carries out project evaluation, funder reporting, legal advice.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Demonstrates a basic understanding of the processes involved in research management, including planning, execution, monitoring and closing	Develops detailed research project plans, including tasks' timelines, milestones, and deliverables and manages resources efficiently to meet project objectives.	Ensures that research projects align with the strategic goals and priorities of the organisation, benchmarks and implements good practices in post-award	Provides expert guidance in research project management and leads the development and implementation of innovative project management practices and solutions.
Demonstrates a basic understanding of post-award processes and requirements, understands types of contracts, clauses and implications	Ensures compliance with applicable regulations and guidelines throughout the research lifecycle and prepares progress and final reports	Negotiates and finalises grant agreements with funding agencies, addressing terms, conditions, and budgetary considerations	Oversees multi-institutional or multi-disciplinary research projects with diverse funding sources, influences research policies and standards at institutional, national, or international levels.
Handles administrative tasks efficiently related to research project management and maintains accurate and organized documentation of project activities and milestones, is able to contribute to progress and final reporting	Uses information to generate organisational reports including progress updates on the research portfolio	Prepares and presents comprehensive research project reports to senior management and funding agencies	Initiates and implements processes to enhance research project outcomes and efficiency, articulates and rewards key performance indicators/metrics for managing funded research
Has basic communication skills for interacting with team members, consortium partners, stakeholders, and funding agencies.	Demonstrates ability to liaise with colleagues from other units in the management of research awards and interact efficiently with	Manages partner and consortium relationships effectively, including	Leads and/or represents the organisation in discussions with funding agencies, government bodies, industry partners and other relevant stakeholders

	team members, consortium partners, stakeholders	agreements, compliance, and reporting	
Understands the basics of budgeting and financial management for research projects and is able to document project costs	Ensures compliance with financial requirements of funding programmes and manages detailed project budgets, including forecasting and financial reporting.	Manages complex project budgets, conducts financial analysis to prepare decisions and improve financial performance.	Masters the allocation and management of resources to maximize efficiency and effectiveness in project management.

3. Managing Equality, Diversity and Inclusion (Including Gender, Disability and Racism)			
Promote diversity in research teams, value varied perspectives, and ensure equal opportunities for all members. Champion EDI principles and contribute to a more inclusive research culture.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands foundational concepts related to equality, diversity, and inclusion (EDI), including key terms and definitions	Enhances cultural competence, understanding and appreciating differences in backgrounds, experiences, and perspectives	Develops inclusive leadership skills, actively promoting diversity and inclusion within teams and the organisation	Leads and drives organisational change initiatives to embed diversity, equality, and inclusion in the culture and practices of research within the organisation
Recognises and acknowledges personal biases and stereotypes and understands their potential impact on workplace dynamics	Able to apply comprehensive practices to foster a more inclusive and respectful workplace environment	Implements diverse and advanced strategies to mitigate biases in decision-making processes	Contributes to the development and implementation of comprehensive diversity and inclusion policies and practices
Gains awareness of relevant laws and policies related to equality, diversity, and inclusion in the workplace	Works exclusively in teams and collaboration partnerships that respect inclusiveness and diversity[46]	Assists with the delivery and organisation of training programs on diversity and inclusion for employees at various levels of the organisation	Engages with external communities and all research stakeholders to promote diversity, equality, and inclusion at national and international level
Develops basic communication skills that promote inclusivity and avoid unintentional biases	Exhibits the ability to analyze and assess diversity-related challenges and propose inclusive solutions	Advises less experienced colleagues about working with diversity[47]	Contributes to thought leadership in the field of diversity and inclusion, influencing practices and standards

[46] Research Competency Framework
[47] Research Competency Framework

4. Data Stewardship			
Responsible and ethical handling of research data throughout its lifecycle. Robust data management practices, data security, compliance with privacy regulations, and transparent documentation.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Can define Research Data Management (RDM) and describe its relevant and benefits. Is familiar with data management plans.	Understands the research data lifecycle and what RDM measures are taken at different stages of research. Contribute to the development of a Data Management Plan.	Confident in applying RDM principles and practices to a project or unit	Can develop and implement a data management plan across a unit or project with reference to funder requirements and mandates, relevant legislation and polices nationally and internationally (GDPR, DPIA, Ethics, IP etc)
Is aware of the policy and legislative landscape in relation to research data. (data protection, HRR, FOI, FAIR, CARE, IP, copyright, licensing)	Applies or outlines compliance requirement with legislation and policy across a unit or project	Can identify and capture relevant metrics in relation to research data. Ability to advise on the responsible use of metrics	Can evaluate and analysis compliance and can solve them in consultation with relevant experts
Recognises basic principles of data quality and the impact of poor data quality on outcomes	Ability to run reports and capture metrics using available dashboards and data sources	Validates data models schemas and standards, with the ability to verify data quality and integrity	Provides leadership in establishing and leading organisational data governance initiatives and develops strategies to successfully embed data governance in an organisation
Understands basic data compliance requirements and their implications for stewardship	Able to describe how to identify data quality and how to implement quality control methods such as reproducible workflows	Recognises a DMP is a living document to be updated throughout a project	Introduces innovative approaches to data management, including the integration of emerging technologies machine readable data and metadata

5. Knowledge Valorisation (Technology Transfer)			
Facilitate the successful transition of research innovations from the academic, research or laboratory setting to practical applications in the market. Identify commercialisation opportunities, establish collaborations with industry partners, and navigate the legal and regulatory aspects of transferring technologies leading to societal impact and the economic value of research outcomes.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Grasps foundational concepts and principles of knowledge	Evaluates the commercial potential of intellectual property assets and technologies	Develops and implements strategic plans for knowledge	Provides leadership in developing and executing comprehensive technology commercialisation strategies for the organisation

valorisation, including its role in research and innovation		valorisation within an organisation or institution	
Understands the basics of intellectual property (IP) rights, including patents, copyrights, and trademarks	Understands the process of negotiating and drafting licensing agreements for knowledge valorisation	Uses developed negotiation skills to address complex issues in knowledge valorisation agreements	Contributes to the development of institutional and national policies related to knowledge valorisation
Gains awareness of legal and regulatory frameworks related to knowledge valorisation activities	Advises on the implementation of market analysis to assess the feasibility and potential of transferring a technology to specific industries	Can identify and pursue new opportunities for technology commercialisation	Navigates and facilitates knowledge valorisation on an international scale, considering cultural and legal differences
Develops basic documentation skills for recording and managing knowledge valorisation processes	Interacts with industry stakeholders to understand their needs and facilitate successful knowledge valorisation	Able to implement risk management strategies for knowledge valorisation projects, addressing legal, financial, and technical risks	Contributes to building innovation ecosystems and policy that facilitate seamless knowledge valorisation and commercialisation

6. HR Research – Employment, Training and Terms & Conditions			
Ensure the effective functioning of the HR aspects facilitating research teams groups and/or organisations. This may include contract administration, salary administration, talent acquisition, performance management, training and development and fostering a positive work environment through initiatives aligning with HR Excellence in Research and others. Align organisational and research goals, optimise individual and research team dynamics, and facilitate the professional development of researchers.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Grasps foundational concepts of human resources, including employment laws and organisational policies as they pertain to research staff	Issues contracts of employment and enables salary placement. Updates internal organisational HR IT systems accordingly	Using a portfolio of competences, works to resolve non-routine issues relating to the employment cycle of research staff in the organisation	Leads initiatives to shape and cultivate a positive organisational person culture within the research environment
Understands the basics of the recruitment process, including job postings, applicant screening, and interview coordination	Develops skills in resolving conflicts within research teams and or staff, promoting a positive work environment	Contributes to strategic workforce planning, aligning human resources with research goals and organisational strategy	Contributes to the development and refinement of HR policies tailored to the unique needs of research staff

Demonstrates basic skills in onboarding new research staff, including orientation and introduction to policies	Facilitates training and development opportunities for research staff to enhance their skills and career growth	Implements agreed strategies to enhance employee engagement and job satisfaction within the research context using initiatives such as HR Excellence in Research	Possesses expertise in navigating legal and ethical considerations in HR management, particularly within research contexts
Maintains personnel records and ensure compliance with HR and institutional regulations	Addresses routine and non-routine queries relating to the employment cycle of researchers in the organisation	Contributes to career development programs for researchers and research managers	Contributes to thought leadership in the field of HR Research nationally and internationally influencing policy, practices and standards

7. Research Finance			
Oversee budgetary aspects, financial planning, and compliance within research projects and or at organisational level. Effective allocation of funds, monitor expenditure, and adhere to financial regulations, funding guidelines, having overall fiscal responsibility within research projects at local and or organisational level.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Grasps foundational concepts in finance, including budgeting, financial statements, and cost accounting	Manages research project budgets, considering both direct and indirect costs	Develops advanced financial forecasting models for research projects, considering long-term financial implications	Develops advanced financial forecasting models for the organisation, considering long-term financial implications
Understands basic types of research funding sources and their implications for financial management	Generates and interprets financial reports for research projects, ensuring accuracy and compliance	Implements advanced cost accounting methodologies to allocate costs accurately across research projects	Contributes to the development of financial policies tailored to the unique needs of research finance
Comprehends foundational financial compliance requirements related to research grants and projects	Contributes to budget development for grant proposals, aligning financial plans with project goals	Prepares for and participates in audits, ensuring compliance with financial regulations and funder requirements	Contributes to the finalising of complex financial agreements, including terms and conditions of research funders and collaborating partners and organisations
Develops basic skills in financial documentation and record-keeping for research projects	Understands the financial aspects of partners and collaborations within research projects	Assesses and advises on mitigation for financial risks associated with research projects	Provides organisational leadership in research finance, including mentoring and guiding junior research finance professionals

8. Clinical Research Management			
Oversee and coordinate clinical research activities within a healthcare or pharmaceutical setting. Ensure the successful implementation of research protocols, managing study budgets, and maintaining compliance with regulatory guidelines. Facilitate communication with stakeholders and contribute to the ethical and efficient execution of clinical trials.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Demonstrates basic knowledge in understanding clinical research protocols, including key components such as inclusion/exclusion criteria and study endpoints	Exhibits a nuanced understanding of regulatory requirements, ensuring that all aspects of clinical research adhere to relevant guidelines and standards	Develops advanced capabilities in designing and planning complex clinical research studies, considering scientific, regulatory, and logistical factors	Serves as an expert in regulatory affairs, developing and executing comprehensive strategies for obtaining approvals and ensuring ongoing compliance
Understands basic ethical considerations in clinical research, including the importance of informed consent and protecting participant confidentiality	Demonstrates proficiency in coordinating multiple aspects of clinical trials, including participant recruitment, data collection, and study timelines	Engages with key stakeholders, including principal investigators, sponsors, and regulatory authorities, contributing to strategic decision-making	Oversees multiple clinical studies and aligns them with broader organisational goals
Develops foundational skills in maintaining accurate and organised study documentation, such as participant records and regulatory submissions	Able to provide guidance in the day-to-day management of clinical studies	Oversees quality control measures, assists with thorough internal audits and ensures high standards of data integrity throughout the research process	Contributes to disseminating research findings through publication in reputable journals and/or presentations at conferences, contributing to the advancement of scientific knowledge
Able to collaborate effectively with research teams, learning to communicate study updates and addressing routine operational challenges	Gains skills in budget management, ensuring that clinical trials are conducted within financial constraints and policy whilst maintaining study quality	Contributes to the implementation of innovative research protocols, incorporating the latest methodologies and technologies into study design	Serves as a mentor to junior colleagues, actively contributing to the professional development of the team and influencing the broader clinical research community through educational initiatives

9. Research Ethics and Integrity			
Ensure that all research activities adhere to ethical standards, protecting the rights and well-being of participants. Promote transparency, honesty and accountability whilst fostering a culture of integrity within the research team.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Upholds integrity in data collection and analysis, and adheres to established ethical guidelines in research practices	Can identify and manage conflicts of interest that may arise in the course of research activities	Ability to analyse and address complex ethical dilemmas that may arise during the course of the research	Exhibits leadership in promoting a culture of research integrity, including mentoring others, and contributes to the advancement of ethical standards in the broader research community
Understands the basic principles of research ethics and educates oneself to prevent forms of research misconduct, including plagiarism and fabrication of data	Implements practices for secure data management and storage, ensuring the confidentiality and integrity of research data	Develop expertise in managing research involving vulnerable populations, ensuring additional safeguards and considerations	Contribute to the development of institutional, national and or international polices and practice on research integrity and ethical matters
Grasps the importance of honesty, transparency, and confidentiality in research practices	Understand issues related to authorship, intellectual property, and publication ethics, including proper citation practices	Able to propose informed solutions that uphold integrity and compliance with ethical standards in a research context	Contribute to the advancement of ethical knowledge through scholarship, presentations, and leadership.
Fosters a commitment to responsible conduct throughout the research process	Can apply ethical principles to diverse research scenarios	Demonstrates a sophisticated understanding of the ethical implications of various research methodologies and apply this insight to design and conduct ethically robust studies	Exhibits a profound understanding of the ethical implications in interdisciplinary and cutting-edge research, influencing policy development and implementation

10. **Research Infrastructure Management**			
Responsible for security and risk management, plans research infrastructure & develops sustainable funding model, infrastructure, and resource management, as well as business development and innovation in research infrastructure.			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the fundamental concepts and importance of research infrastructures. Is familiar with different types of research infrastructures (physical, virtual, and data infrastructures).	Manages resources (human, financial, and material) efficiently within research infrastructures, as well, as develops and implements operational plans for the effective functioning of research infrastructures.	Approves resource allocations for funded research including research infrastructure, develops and implements strategic plans for the long-term development and sustainability of research infrastructures.	Leads the development and implementation of innovative practices in infrastructure management by applying European/global standards and best practices in the management of research infrastructures.
Identifies key components and functions of research infrastructures and understands basic maintenance and operational procedures for research infrastructures. Is familiar with basic safety protocols and procedures.	Implements quality control measures to ensure high standards in infrastructure operations and processes for continuous improvement of infrastructure management.	Develops and monitors the planning and oversight of research facilities and infrastructure	Initiates and implements strategic plans for evaluation of research infrastructure management services to ensure their continuous improvement and alignment with institutional and stakeholder needs.
Understands basic regulatory and compliance requirements relevant to research infrastructures and is familiar with the documentation and reporting requirements of research infrastructure and related activities.	Ensures compliance with regulatory requirements and industry standards, as well as identifies and manages risks associated with the operation of research infrastructures.	Develops and applies advanced metrics to measure and improve the performance of research infrastructures.	Develops and implements strategic plans to ensure the sustainability of research infrastructures.
Provides efficient support to the researchers, innovators and other users of research infrastructures.	Engages with stakeholders to understand their needs and ensure the infrastructure meets their requirements. Enhancing collaboration within the infrastructure management team.	Builds and manages strategic partnerships with key stakeholders and organisations.	Advocates for the importance of research infrastructures and influencing decision-making processes.

11. Research, Strategy and Policy Development			
Facilitate and facilitate the development, implementation, monitoring and evaluation of research and/or knowledge valorisation policies and strategies			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
Understands the fundamental concepts and importance of institutional research and/or knowledge valorisation policies and strategies.	Collects and examines data for research management intelligence, conducts analysis to evaluate the effectiveness and impact of existing research and/or knowledge valorisation policies and strategies.	Scans the environment to assess the impact and trends, develops long-term research and/or knowledge valorisation policies and strategies by setting clear, measurable goals	Conducts benchmarks, evaluation and impact assessment of institutional research and/or knowledge valorisation policies and strategies to gather evidence and enable their further development
Is aware of the key indicators relevant for the monitoring and evaluation of the research and/or knowledge valorisation policy and strategy	Gather evidence enabling the monitoring and evaluation of the institutional research and/or knowledge valorisation policy and strategy.	Contributes to the assessment and development of indicators used for the monitoring and evaluation institutional research and/or knowledge valorisation policy and strategy.	Leads the assessment and development of indicators used for the monitoring and evaluation institutional research and/or knowledge valorisation policy and strategy.
Contributes the development and implementation of the institutional research and/or knowledge valorisation policy and strategy	Ensures that the institution is meeting its legal and quality assurance obligations	Gathers intelligence to help develop research and/or knowledge valorisation policy and strategy	Developing strategies and policies to maximise the organisation's research and knowledge valorisation portfolio and promote the institutional research agenda
Is aware of the key stakeholders relevant for the institutional research and/or knowledge valorisation policy and strategy.	Engages with stakeholders to gather input and build consensus on research and/or knowledge valorisation policies.	Builds and manages strategic partnerships with key stakeholders and organisations to facilitate research and/or knowledge valorisation policy development.	Responds to differentiated thematic and sectorial stakeholder interests, influences political institutions and public officials for the benefit of the organisation.
Understands the fundamental concepts and purposes of research assessment, including basic assessment methods and metrics.	Executes detailed research assessment plans, ensuring they align with organisational goals and utilize appropriate metrics and methodologies.	Performs in-depth analysis and interpretation of assessment data, using advanced techniques to derive meaningful insights and inform strategic decisions.	Demonstrates expertise in leading comprehensive, innovative research assessment initiatives that influence policy, drive continuous improvement, and adhere to global best practices.

12. Managing the Grant/Research Support Office			
Organise, structure, manage, monitor and review institutional Research Support service(s)			
FOUNDATIONAL	**INTERMEDIATE**	**ADVANCED**	**EXPERT**
	Co-ordinates research support services, develops staff and resources to provide effective research support services	Develops innovative systems and processes to implement the research support service strategy, and monitors key performance indicators	Develops and implements evidence-based strategies to improve within the institution aligned with organisational goals. Influences research policies and standards at institutional, national, or international levels.
	Manages a research support service structure that is cost-effective, `joined up' and `fit for purpose'	Translates institutional and sectorial practices and policies, maps and reviews facilitation functions, mitigates risks and initiates adjustments, if necessary	Maintains an effective, efficient and well-respected service and masters the management of resources to maximize efficiency and effectiveness of services
	Enables effective collaboration within the research support team.	Develops leadership skills to guide and motivate the research support team including its professional development, identifies and develops talents	Develops and implement strategies enabling the continuous upskilling and capacity building of the research support team, mentors the research facilitation staff
	Gathers user feedback and implements quality control measures to ensure high standards in research support services.	Develops and implements continuous improvement processes to enhance the quality and efficiency of research support services, including benchmarking, the adoption of best practices, new working methods and technologies to improve research facilitation operations.	Masters the allocation and management of resources to maximize facilitation for research activities and ensures the sustainability of research support services through strategic planning and resource management.
	Engages with researchers and stakeholders to understand their needs and provide tailored support.	Builds and manages strategic partnerships with key stakeholders and organisations	Creates an organisational culture where research support service is respected and valued, and influences decision-making processes.

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Appendix 1 EU Policy References

The Treaty on the Functioning of the European Union[48] states in article 187: "*The Union may set up joint undertakings or any other structure necessary for the efficient execution of Union research, technological development and demonstration programmes*." In May 2021, The Council of the European Commission on Deepening the European Research Area "*RECOGNISES that researchers and other research and development (R&D) personnel across the public and private sectors are at the heart of research and innovation (R&I) systems*."

In December 2021, in the Council conclusions on the New European Research Area[49] the council recognises ***"the growing need for the professionalization of science management at research performing and funding organisations, including through digital skills in order to improve their ability to participate in ERA-wide collaboration networks;"*** It is now broadly recognised that Research Managers are an integral part of the Union research infrastructure and as per Article 187 the Union may set up "any other structure necessary for the efficient execution of Union research."

Furthermore, the Council of the European Commission "*NOTES the diverse and essential roles of highly skilled talents play in successful research and innovation systems across the ERA like data stewards, research (e-)infrastructure operators, research facilitators, knowledge brokers, innovation and technology transfer managers and coordinators, among others; NOTES* ***that these roles need to be acknowledged and supported via training and career development instruments to optimise job opportunities****; and INVITES Member States and the Commission to develop measures in support of career diversification and multiple career paths*."[50]

In 2020, the European Commission published the plan for the New ERA, aiming to relaunch the ERA which can answer the current and future societal, ecological and economic challenges (A New ERA for Research and Innovation, 2020). The ERA Policy Agenda with 20 action points sets out voluntary ERA actions for the period 2022-2024 to achieve the ERA.

Action 17, under the title "Enhance the strategic capacity of Europe's public research-performing organisations", the so-called **Research Management Initiative aims to support specifically the RM community in Europe in four key areas:** upskilling, recognition, networking and capacity building. During 2023 and 2024, four workshops were held, each of them focusing on one of the key areas of the action providing a platform to gather information from Member State representatives and discuss the most crucial issues. Moreover, a process was also launched to create a consensus based definition for the profession of Research Managers which can ease the communication towards stakeholders inside and outside the profession, including policymakers, institution leaders, researchers, but research managers themselves.

In addition, the Commission demonstrated its commitment to supporting the recognition and professionalisation of RMAs in Europe by **issuing a call in 2021** "HORIZON-WIDERA-2021-ERA-01-20: Towards a Europe-wide training and networking scheme for research managers". **Two** Coordination

[48] https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:12012E/TXT:en:PDF
[49] New European Research Area: Council adopts conclusions - Consilium (europa.eu)
[50] https://www.era-learn.eu/news-events/news/new-pact-and-governance-structure-for-the-european-research-area-era

and Support Action (CSA) **projects started in 2022**, RM ROADMAP (coordinated by EARMA) and its sister project CARDEA3 (coordinated by University College Cork). These two projects are involved in ERA Action 17 by channelling in their results and streamlining the actions taken in favour of the recognition of the profession.

In December 2023, the **COUNCIL RECOMMENDATION on a European framework to attract and retain research, innovation and entrepreneurial talents in Europe[51] (18.12.2023)** states

"Performing high-level research and innovation requires the support of other professionals. Amongst them, **research management** and research technician careers deserve proper recognition, including by way of further analysis and alignment at the level of the Union. Research management capacity should be strengthened by defining required skills and competences, developing relevant training, fostering comparability, and allowing their holders to effectively manage and support research and innovation."

It notes further that:

"Researchers, **research managers** and research technicians in the European Research Area"

Research management careers can be undertaken by researchers and other professionals to manage and support research and innovation activities. Research management careers should be adequately framed and recognised at the level of the Union, by defining relevant skills and competences, in order to strengthen research managers' professional capacity, to enable the development of relevant training, and to foster comparability.

Research managers can perform different tasks, for example:

(a) streamlining or facilitating the planning, development, management, FAIR data management, administration, monitoring, communication and valorisation of research and innovation;

(b) ensuring compliance with policy objectives, funding programme requirements, financial rules and legal regulations;

(c) improving the efficiency and effectiveness of research and innovation projects or systems;

(d) enhancing the impact of research and innovation on policy and society;

(e) supporting the design and implementation of research and innovation policies, programmes and projects."

"Employers and funders of researchers should ensure that the most stimulating research or research training environment is created which offers appropriate equipment, facilities and opportunities, including for remote collaboration over research networks, and the highest level of health and safety in line with Union, national and sectoral regulations. Funders should ensure that adequate resources are provided in support of the agreed work programme. In particular, it is important to have qualified support staff – e.g. **research managers** and administrators."

[51] OJ:C_202301640:EN:TXT.pdf (europa.eu)

Appendix 2 Competence Descriptions[52]

Competency Areas	Competences	Descriptions
Cognitive Abilities/Personal Attributes	Creativity	Develop several ideas and opportunities to create value, including better solutions to existing and new challenges. Explore and experiment with innovative approaches. Combine knowledge and resources to achieve valuable effects.
	Critical Thinking	Exercise critical judgement and thinking, develop own assumptions, and establish a way of working based on critical thinking.
	Cultural Sensitivity	Awareness and respect for diverse cultural perspectives, values, and norms. Fostering an inclusive work environment, acknowledging the impact of cultural nuances on research design and implementation.
	Problem Solving	Develop and implement solutions to practical, operational or conceptual problems which arise in the execution of work in a wide range of contexts.
	Strategic Planning	Develop a vision to turn ideas into action. Obtain and synthesize information to identify and explore trends, opportunities, threats (also based on intuition and creativity) to achieve a long-term goal and to thrive in a competitive, changing environment. Identify alternative paths to turn ideas into action, select the most appropriate approach and adjust where necessary.
	Decision Making	Effective decision-making in this context is crucial for maintaining project momentum, achieving objectives, and navigating the complexities inherent in the research process.

[52] Numerous websites (see appendix 4), Researcher Comp and ESCO/ISCO were employed to aid in the refinement of the competency descriptions

Competency Areas	Competences	Descriptions
Cognitive Abilities/Personal Attributes	Stress Management	Stress management involves developing coping mechanisms and strategies, prioritizing tasks, and maintaining a healthy work-life balance.
	Prioritisation, Time Management and Multitasking	Involves identifying the most critical tasks and focusing on them first. This skill helps individuals focus on what is most crucial, manage their time and resources efficiently to achieve their goals.
	Adaptability and Professional Flexibility	Involves adjusting to new situations, technologies, and workflows. Adaptable individuals can thrive in dynamic environments, handle unexpected challenges, and maintain a competitive edge.
	Conflict Management	The practice of handling or resolving disputes and disagreements in a constructive manner. It involves identifying and addressing the underlying issues, employing strategies such as negotiation, mediation, and problem-solving to achieve mutually acceptable solutions.
	Reliability and Trustfulness	Involves being dependable and trustworthy in one's work. Reliable individuals consistently deliver high-quality results, meet deadlines, and maintain a strong reputation. It involves demonstrating honesty, integrity, and transparency in actions and communications. Trustfulness is a foundational element in building and maintaining relationships, whether personal or professional.

Competency Areas	Competences	Descriptions
Technical Proficiency	Research Data Collection and Collation	Implement (and develop) robust data collection methodologies, coordinate data acquisition efforts among team members, and oversee the organised collation of diverse datasets leading to evidence-based decision-making.
	Data and Statistical Analysis	Apply rigorous statistical methods to ensure the accuracy and reliability of data and its interpretation.
	Legal Skills	A nuanced understanding of legal concepts, ethical considerations, and a keen awareness of the legal landscape as it pertains to the research ecosystem.
	IT for Research Activities	Leveraging Information Technology (IT) and overseeing the integration of advanced technologies to enhance data management, analysis, security and collaboration. Implementation of robust IT infrastructure, such as data storage solutions, analytical tools, AI and collaborative platforms, to optimise research processes.
	Artificial Intelligence	Ability to leverage AI technologies and algorithms to optimize research processes, analyze complex datasets, and derive meaningful insights for informed decision-making.

Competency Areas	Competences	Descriptions
Subject Matter Expertise/Specialised Knowledge	Pre-Award	Identify and disseminate funding opportunities; develop and implement funding optimisation strategies; support the writing of funding proposals, including alignment with stakeholder requirements, budgeting and costing and review; coordination of approvals and submissions
	Post- Award	Negotiate contracts, manages amendments, as well as the internal setup of the project, the consortium and communication within, liaises with funders, provides administrative support, progress management, accounting, carries out project evaluation, funder reporting, legal advice.
	Managing Equality, Diversity and Inclusion (Including Gender, Disability and Racism)	Promote diversity in research teams, value varied perspectives, and ensure equal opportunities for all members. Champion EDI principles and contribute to a more inclusive research culture.
	Data Stewardship	Responsible and ethical handling of research data throughout its lifecycle. Robust data management practices, data security, compliance with privacy regulations, and transparent documentation.
	Technology Transfer	Facilitate the successful transition of research innovations from the academic, research or laboratory setting to practical applications in the market. Identify commercialisation opportunities, establish collaborations with industry partners, and navigate the legal and regulatory aspects of transferring technologies leading to societal impact and the economic value of research outcomes.
	HR Research – Employment, Training and Terms & Conditions.	Ensure the effective functioning of the HR aspects supporting research teams groups and/or organisations. This may include recruitment contract administration, salary administration, talent acquisition, performance management, training and development and fostering a positive work

Competency Areas	Competences	Descriptions
		environment through initiatives aligning with HR Excellence in Research and others. Align organisational and research goals, optimise individual and research team dynamics, and support the professional development of researchers
Subject Matter Expertise/Specialised Knowledge	Research Finance	Oversee budgetary aspects, financial planning, and compliance within research projects and or at organisational level. Effective allocation of funds, monitor expenditure, and adhere to financial regulations, funding guidelines, having overall fiscal responsibility within research projects at local and or organisational level.
	Clinical Research Management	Oversee and coordinate clinical research activities within a healthcare or pharmaceutical setting. Ensure the successful implementation of research protocols, managing study budgets, and maintaining compliance with regulatory guidelines. Facilitate communication with stakeholders and contribute to the ethical and efficient execution of clinical trials.
	Research Ethics and Integrity	Ensure that all research activities adhere to ethical standards, protecting the rights and well-being of participants. Promote transparency, honesty, and accountability, fostering a culture of integrity within the research team.
	Research Infrastructure Management	Responsible for security and risk management, plans research infrastructure & develops sustainable funding model, infrastructure and resource management, as well as business development and innovation in research infrastructure.
	Research Strategy and Policy Development	Facilitate and support the development, implementation, monitoring and evaluation of research and/or knowledge valorisation policies and strategies

Competency Areas	Competences	Descriptions
	Research Support Service Delivery	Organise, structure, manage, monitor and review institutional research support service(s)
Research Project Oversight	Research Project Management	Manage and plan various resources, such as human resources, budget, deadline, results, and quality necessary for a specific project and for a project portfolio and monitor the progress in order to achieve a specific goal within a set time and budget using project management tools.
	Managing Research Project Deliverables	Ensure that project milestones and outcomes align with established goals. Establish clear deliverables, monitor progress, and address any deviations from the project plan promptly.
	Monitoring and Evaluation Frameworks and Indicators	Administering systematic processes to assess the progress and impact of research projects and initiatives. Define key performance indicators, establish data collection methods, and implement evaluation frameworks to measure project success. Ensure the effective tracking of research outcomes, facilitating data-driven decision-making and continuous improvement in the research process.
	Establishing Research Project Plans	Outline project objectives, timelines, and resource allocation. Collaborate with research team members to define clear goals, delineate tasks, and establish milestones. Develop comprehensive project plans to provide a roadmap for successful execution of the project. Facilitate effective coordination among research team members.

Competency Areas	Competences	Descriptions
Stakeholder Engagement	Engagement with Key Stakeholders	Build and sustain collaborative relationships with influential partners, including academic institutions, industry leaders, policymakers, funders, industry and community representatives.
	Building Trust within Relevant Research and Strategic Partnerships	Build trust within relevant research and strategic partnerships for successful collaboration. Deliver on commitments, foster transparent communication, and prioritise the mutual interests of partners.
	Diplomacy, Negotiation, and Mediation Skills	Exchange ideas while analysing issues and interests at stake, enabling opposing sides to resolve disputes and reach an agreement, or making decisions to resolve disputes. Employ tactful communication, adept negotiation strategies, and effective mediation to reconcile differing perspectives and align interests among research team members or stakeholders.
	Handling Difficult Conversations and Partnerships	Navigate challenging discussions with tact, empathy, and problem-solving skills. Address conflicts, manage expectations, and seek resolutions to maintain positive relationships within the research team/ organisation and or external partners.
	Business and Commercial Liaison Management	Facilitate collaborations between the research team and industry partners or commercial entities. Navigate the intersection of academia and business, identifying opportunities for technology transfer, licensing, or joint ventures.
Stakeholder Engagement	Research Outreach	Develop strategies to disseminate research findings and engage with diverse stakeholders. Create outreach plans that encompass effective communication channels, collaborations with external partners, and the dissemination of research outcomes to relevant audiences. Foster meaningful connections and promote the visibility of research initiatives thereby contributing to the broader impact and

Competency Areas	Competences	Descriptions
		relevance of the research within the research community and beyond.
	Academic Community Relationship Collaboration	Building and maintaining strong relationships with academic institutions, scholars, and researchers. Facilitate partnerships, joint initiatives, and knowledge exchange, to enhance the research ecosystem. Contribute to a collaborative environment, fostering innovation, resource sharing, and the advancement of research agendas within and beyond the academic community.
	Community Engagement with Research	Establish meaningful connections with diverse communities affected by or interested in the research. Develop strategies for inclusive communication, solicit community input, and ensure the research aligns with community needs and values. Foster open dialogue and collaboration, contribute to the ethical and socially impactful conduct of research, promote community participation and the translation of research outcomes into tangible benefits for the broader community
Line Management and Talent Development	People Management and Managing Team Performance	Effectively leading and coordinating a team, providing guidance, and fostering a collaborative work environment to ensure the successful execution of research projects. Includes setting clear expectations, monitoring progress, offering constructive feedback, and implementing strategies to enhance individual and collective productivity within the context of the research objectives.
	Team Building	Cultivating a collaborative and high-performing research team by fostering a positive work culture, aligning team members with common goals, and recognising and utilising individual strengths.
	Change Management	Navigating and facilitating transitions within the research environment/organisation.

Competency Areas	Competences	Descriptions
		Effectively communicate changes, address concerns, and support the research team/organisation in adapting to new methodologies or project directions.
	Coaching Skills	Guide and develop the professional capabilities of research team members and or research leadership.
	Research Talent Identification and Development	Recognise and nurture the potential of individual researchers. Implement strategies for identifying key skills, provide targeted training, and create opportunities for professional growth within the team/organisation.
Communication	Building and Maintaining Relationships with Research Funders, Partners or Other Stakeholders	Cultivate strong connections by ensuring clear communication, delivering on commitments, and understanding the needs of collaborators. Foster trust, secure ongoing support, and contribute to a collaborative research environment.
	Designing and Implementing Research Communication Plans	Design and implement research communication plans by creating strategies to effectively disseminate research findings. Identify target audiences, select appropriate communication channels, and tailor messaging to maximize impact. Create clear and engaging communication, to enhance the visibility of research outcomes, foster collaboration, and contribute to the broader understanding and application of research within academic, research, professional, and public/private spheres.
	Media Liaison and Associated Activities	Establish and manage relationships with the media to promote research activities and results. Engage with journalists, facilitate

Competency Areas	Competences	Descriptions
		interviews, and strategically communicate research findings to the public. Contribute to the dissemination of accurate information, enhance the visibility of research projects, and foster a positive public perception of the research group, institution, or organisation.
	Preparing and Writing Reports (including Evaluation Reports and Funder Reports)	Synthesize complex research findings into clear and compelling narratives. Ensure reports align with guidelines, effectively communicate project outcomes, and demonstrate the impact of research initiatives.
	Social Media Engagement	Leverage digital platforms to disseminate research findings, engage with the public, and build a broader audience. Develop and implement strategies for effective communication on social media, including creating compelling content, participating in relevant discussions, and fostering connections with diverse stakeholders.

Appendix 3 RM Categories

RM categories developed by RM ROADMAP based on the literature review and focus group discussions.

- **Research, strategy and policy development** including but not limited to the development, implementation, monitoring and evaluation of research policy and strategy, the development, implementation, monitoring and evaluation of knowledge valorisation policy and strategy as well as research assessment.
- **Proposal development (pre-award)** including but not limited to the identification and dissemination of funding opportunities, general support for the application, research project planning, internal negotiations for project formulation, framing the writing process, formulation of the content to be written, external negotiations and consortium building, costing, pricing and enforcing internal budget rules, legal aspects and providing organisational legal documents.
- **Project support (post-award)** including but not limited to negotiating contracts and sub-awards, managing amendments, internal setup of the project, managing the consortium and communication within, liaising with funders, administrative support, progress management, accounting, project evaluation, funder reporting, legal advice.
- **Translation of results: science communication** including but not limited to communication and dissemination of research results, research impact, public engagement, public relations' management, stakeholder event organisation.
- **Translation of results: uptake and utilization** including but not limited to market research, mapping of business finance opportunities, business development, identification of business model, elaboration of business plan, technology transfer, intellectual property management, legal advise on business models, IP and licensing, spin-out management, negotiation of valorisation deals with university partners.
- **Management information and related functions** including but not restricted to information systems, electronic research administration, CRISs (Current Research Information System), audit processes, statutory returns.
- **Research support service delivery** including but not limited to management, organisation, structuring of research support services as well as mapping, monitoring and reviewing research support service functions.
- **Training, researcher development, Postgraduate Researchers (PGR)** including but not limited to postgraduate (doctoral) research student administration, postdoctoral affairs, training researchers, managing and effectively communicating training activities to research/academic staff, collaboration with educational programmes, delivering training for research managers.
- **Research ethics and integrity** including but not limited to ethics and integrity management, managing compliance, and dealing with Equity, Diversity, and Inclusion (EDI).
- **International collaboration, institution branding** including but not limited to mapping institutional portfolio and institution branding, promotion of the institution at national/international events, and public relations management.
- **Collaboration with industry** including but not limited to consultancy, securing access to infrastructure, coordinating R&I collaboration, coordinating internship programmes.
- **Research infrastructure management** including but not limited to security and risk management, planning research infrastructure & developing sustainable funding model, infrastructure and resource management, as well as business development and innovation in research infrastructure.

- **Research data, research information, intellectual property management** including but not limited to open access and open data, intellectual property and asset management, portfolio mapping, exploitation planning.

Appendix 4 Competency definition methodology

The competency definitions in RM Comp were established using a methodology that incorporated definitions from various reputable sources, such as dictionaries, encyclopaedias, and numerous websites (listed below). Additionally, Researcher Comp and ESCO/ISCO were utilized to refine the competency descriptions. The author conducted searches on both Google and Google Scholar to identify and find definitions pertinent to research management. The Author also referred to Skills & competences | ESCO (europa.eu)

It's worth noting that there's a scarcity of direct definitions specifically addressing many competencies in research management. Consequently, the author modified and refined existing descriptions to align them more closely with the role.

Definitions of the competencies in RM Comp were sourced and created from the below.

1. **Creativity – as per Research Comp**
2. **Critical thinking – as per Research Comp**
3. **Cultural Sensitivity**: cultural_sensitivity_wkshp.pdf (nyc.gov)

Cultural Sensitivity is defined as:

a) Being aware that cultural differences and similarities between people exist without assigning them a value – positive or negative, better or worse, right or wrong.

b) Being aware that cultural differences and similarities between people exist and have an effect on values, learning and behavior.

c) A set of skills that allows you to understand and learn about people whose cultural background is not the same as your own.

Cultural Sensitivity and Cultural Competence | SpringerLink

Trimble, J.E. (2003). Cultural Sensitivity and Cultural Competence. In: Prinstein, M.J., Patterson, M.D. (eds) The Portable Mentor. Springer, Boston, MA. https://doi.org/10.1007/978-1-4615-0099-5_2

4. **Professional Flexibility**

Flexibility in higher professional education: A survey in business administration programmes in the Netherlands | Higher Education (springer.com)

Exploring the concept of flexibility | 8 | Flexible Learning, Human Re (taylorfrancis.com)

Workforce flexibility – in defence of professional healthcare work | Emerald Insight

5. Problem Solving – As per Research Comp
6. Strategic Planning – as per Research Comp

7. **Decision Making**: Decision Making | The Complete Leader

Definition: Utilizing effective processes to make decisions.

Leaders with a well-developed decision-making ability can make quality, informed choices from a number of options. Decision-making uses other skills such as conceptual thinking, planning and organisation, and problem-solving. Effective decision-making requires making the best decision while considering the needs and interests of the group.

Decision Making Skills: Definition & Best Competency Examples (wikijob.co.uk)

8. **Research data collection and collation.**

What Is Data Collection: Methods, Types, Tools (simplilearn.com)

Data collection is the process of collecting and evaluating information or data from multiple sources to find answers to research problems, answer questions, evaluate outcomes, and forecast trends and probabilities. It is an essential phase in all types of research, analysis, and decision-making, including that done in the social sciences, business, and healthcare.

During data collection, the researchers must identify the data types, the sources of data, and what methods are being used. We will soon see that there are many different data collection methods. There is heavy reliance on data collection in research, commercial, and government fields.

9. **Data and Statistical Analysis What Is Statistical Analysis? Definition, Types, and Jobs | Coursera**

Statistical analysis is the process of collecting and analyzing large volumes of data in order to identify trends and develop valuable insights.

Data analysis is the practice of working with data to glean useful information, which can then be used to make informed decisions.

Statistical analysts take raw data and find correlations between variables to reveal patterns and trends to relevant stakeholders. Working in a wide range of different fields, statistical analysts are responsible for new scientific discoveries, improving the health of our communities, and guiding business decisions.

- Extracting and organizing large sets of raw data
- Determining which data is relevant and which should be excluded
- Developing new data collection strategies
- Meeting with clients and professionals to review data analysis plans
- Creating data reports and easily understandable representations of the data
- Presenting data
- Interpreting data results
- Creating recommendations for a company or other organisations

Data analysis process

As the data available to companies continues to grow both in amount and complexity, so too does the need for an effective and efficient process by which to harness the value of that data. The data analysis process typically moves through several iterative phases. Let's take a closer look at each.

- **Identify** the business question you'd like to answer. What problem is the company trying to solve? What do you need to measure, and how will you measure it?
- **Collect** the raw data sets you'll need to help you answer the identified question. Data collection might come from internal sources, like a company's client relationship management (CRM) software, or from secondary sources, like government records or social media application programming interfaces (APIs).
- **Clean** the data to prepare it for analysis. This often involves purging duplicate and anomalous data, reconciling inconsistencies, standardizing data structure and format, and dealing with white spaces and other syntax errors.
- **Analyze** the data. By manipulating the data using various data analysis techniques and tools, you can begin to find trends, correlations, outliers, and variations that tell a story. During this stage, you might use data mining to discover patterns within databases or data visualization software to help transform data into an easy-to-understand graphical format.
- **Interpret** the results of your analysis to see how well the data answered your original question. What recommendations can you make based on the data? What are the limitations to your conclusions?

10. **Legal Skills** What does a legal manager do? (linkedin.com)

A legal manager is responsible for ensuring that the organisation follows the relevant laws and regulations in its activities, as well as protecting its interests and rights in legal matters. Common tasks for this role include drafting, reviewing, and negotiating contracts and agreements; developing and implementing policies and procedures to comply with legal requirements and best practices; advising and supporting senior management and other departments on legal issues and risks; managing and supervising the legal team and external counsel; handling and resolving disputes and litigation cases; and researching and updating on the latest legal developments and trends.

How to Do Legal Research: A Complete Guide | Clio

11. **IT for Research Activities:**

Information Technology Competence of Business Managers: A Definition and Research Model: Journal of Management Information Systems: Vol 17, No 4 (tandfonline.com)

Tacit IT knowledge is conceptualized as a combination of experience and cognition. Experience relates to personal computing, IT projects, and overall management of IT. Cognition refers to two mental models: the manager's process view and his or her vision for the role of IT. The outcomes expected from IT-competent business managers are chiefly two behaviors: an increased willingness to form partnerships with IT people and an increased propensity to lead and participate in IT projects.

Information Technology Competence of Business Managers: A Definition and Research Model

Geneviève Bassellier, Blaize Horner Reich & Izak Benbasat

Pages 159-182 | Published online: 09 Jan 2015

12. Pre Award – Post Award

This means that awards are managed from the beginning, or "pre-award" to "post award" (management of the award) finalizing in the closeout of an award. This approach allows for understanding of the award from inception to closeout.

Pre and Post Award Life Cycle | Academic Research | CSUSB

What's the Difference Between Pre-award and Post-award Research Administration? | Cayuse

Pre-Award Research Administration

Here's what duties are typically exclusively pre-award:

Finding funding

Locating funding via search engines such as Pivot, Grants.gov, Foundation Center, individual funding agency websites, or even Google.

Budget creation

Working with the principal investigator(s) to determine what their budgetary needs are, as well as incorporating and taking into consideration other factors such as organisation and funding agency limitations or set rates (fringe benefits, indirect costs, etc.).

Filling out proposal forms

Completing forms, which depending on the funding agency, could be a simple cover page or something as involved, or more involved, than a grants.gov package.

Submitting the proposal

Submitting the final, internally approved proposal to the funding agency for consideration.

Award negotiation and acceptance

Negotiating the corresponding award and its formal acceptance by your organisation.

Compliance considerations

Making sure compliance requirements (funding agency and project specific) such as human subject, animal subject, responsible conduct of research, financial conflict of interest, etc. are satisfied. Typically this is completed by a research compliance office, but most pre-award offices still need to verify the appropriate documents are completed/approved prior to turning the project over to the post-award group.

Post-Award Research Administration

What does it mean to work in a post-award office? While this too can vary by organisation, post-award processes include the following:

Award/account setup

Establishing a central general ledger number for the principal investigator(s) to charge project expenses to.

Modifications

Managing any changes to the initial award which do not require a new proposal. Examples are a no-cost extension, change in personnel, scope revision, budget reallocation, etc.

Financial compliance monitoring

Making sure expenses charged to the project meet standards set forth by your organisation, the government, and the funding agency.

Monitoring, reporting, and billing

Generating invoices for use of research facilities or charge back centers, tracking those funds, monitoring and tracking space and equipment usage, preparing and submitting interim and final financial reports, invoicing or completing funding agency drawdowns, etc.

Project reporting

Submitting progress reports and deliverable reports as defined and required by the award document.

Project close-out

Filing all the paperwork, internal and external, to close out the project and address items such as unused funds, equipment disposition, intellectual property generation, etc. in accordance with the award document.

13. Managing equality, diversity and inclusion (including gender, disability and racism)

https://www.peninsulagrouplimited.com/ie/guides/equality-diversity-and-inclusion/

Equality in the workplace means equal job opportunities and being fair to employees and job applicants.

Everyone should be treated the same and not unfairly, because of reasons protected by discrimination law.

Equality in the workplace encourages the hosting of race, religion, sexual orientation, disability, age, sex, gender, the traveller community, family status, pregnancy and marital or civil status.

Equality, diversity and inclusion are often confused. A diverse workplace isn't always inclusive, nor is an inclusive workplace always diverse.

Gender equality refers to the equal rights, responsibilities and opportunities of men and women.

For example, gender equality in the workplace could mean being paid the same salary for equal work, regardless of gender.

Diversity is any dimension that can be used to distinguish groups and people from one another.

Diversity refers to the range of people in your workforce. This might mean employees of different ages, religions, disabilities - for both men and women.

Due to the range and variety of people in your workforce, discrimination can occur from time to time.

Inclusion in the workplace means everyone feels valued. It also allows employees to feel safe at work to:

- Produce new ideas.
- Knowing raising issues to managers is encouraged.
- Try new ways of doing things.

Inclusivity can help lower the risk of bullying, harassment and discrimination.

14. **Data Stewardship** What is Data Stewardship? - Definition from TechTarget.com

Data stewardship is the management and oversight of an organisation's data assets to help provide business users with high-quality data that is easily accessible in a consistent manner.

A data steward might function as both a *data coordinator*, who tracks the movement of data inside an organisation, and a *data corrector*, who understands and enforces internal rules on how data can be used. Regardless of how the position is structured, an effective data steward maintains agreed-upon data definitions and formats, identifies data quality issues and ensures that business users adhere to specified data standards.

15. **Technology Transfer** https://www.twi-global.com/technical-knowledge/faqs/what-is-technology-transfer

Technology transfer is the movement of data, designs, inventions, materials, software, technical knowledge or trade secrets from one organisation to another or from one purpose to another. The technology transfer process is guided by the policies, procedures and values of each organisation involved in the process.

Also known as transfer of technology (ToT), technology transfer can take place between universities, businesses and governments, either formally or informally, to share skills, knowledge, technologies, manufacturing methods, and more. This form of knowledge transfer helps ensure that scientific and technological developments are available to a wider range of users who can then help develop or exploit it. This transfer can occur horizontally across different areas or vertically by moving technologies, for example, from research centres to research and development teams.

This commercialisation can involve the creation of joint ventures, licensing agreements and partnerships to share the risks and rewards. This can also be coupled with the raising of venture capital,

which is generally more common in the United States than in Europe, for example. Research institutions, governments and businesses may also use the services of technology transfer offices to help with the process. These offices may include economists, engineers, lawyers, marketing experts and scientists.

An important part of tech transfer is the protection of intellectual property (IP) associated with innovations developed at research institutions. This can mean licensing patented intellectual property to outside businesses or the creation of start-up companies to license the IP.

16. **HR Research** – Author's own definition.

17. **Research Finance** (3) What Are Effective Financial Practices? | LinkedIn

The term "financial practices" refers to the set of common methods or standard operating procedures you develop for carrying out accounting, financial reporting, budgeting and other activities related to business finances.

What is financial accounting? (With methods) | Indeed.com Ireland

Finance and accounting is an interesting and diverse field of expertise that ensures organisations have a solid understanding of their financial health while remaining compliant with accounting guidelines. This system is typically used by organisations to keep track of transactions, costs, sales and other changes to the organisation's finances.

Typically, traditional accounting encompasses a company's financial transactions, whereas financial accounting focuses on the reports that these transactions generate. Accountants use this kind of accounting to record, analyse and report business transactions of companies. The statements generated by these reports allow shareholders to assess their financial stability and form strategies for future dealings. After the findings detailed in these statements, a company can proceed with greater surety to set its business goals, review financial progress and allocate resources. Professionals compile the statements by following the strict guidelines developed by the International Financial Reporting Standards or IFRS.

18. **Clinical Research Management**

A clinical research manager oversees clinical trials, which involve testing new medications or medical devices. Their responsibilities include ensuring all ethical practices and legal protocols are followed and that all paperwork is filled out completely and accurately.

Everything you need to know about clinical trial management (iconplc.com)

Clinical research managers supervise clinical trials to ensure the quality of treatment methods and drugs, and the accuracy of the results. They use research, time management, and project management skills to ensure clinical studies meet ethical standards and scientific principles. Learning about various clinical research management skills can help you present yourself according to an employer's expectations to increase your employment opportunities. In this article, we define clinical research

manager skills, provide examples, explain how to improve and use them in the workplace, and discuss ways to show them during the recruitment process.

Clinical Research Manager Skills: Definition and Examples | Indeed.com Canada

19. **Research Ethics and Integrity**

Research ethics and integrity practices make sure that research is conducted according to the highest standards of practice, and with the minimal risk of adverse or harmful outcomes or consequences.

research_ethics_and_integrity_awareness.pdf (ed.ac.uk)

Research integrity touches on the ethos of science and is guided by the rules imposed on the research community by itself. As such, research integrity aims at providing a comprehensive framework for scientists as to how to carry out their work within accepted ethical frameworks as well as following good scientific practice.

Research Integrity and Research Ethics - ALLEA

Integrity in Research - Integrity in Scientific Research - NCBI Bookshelf (nih.gov)

For the individual scientist, integrity embodies above all a commitment to intellectual honesty and personal responsibility for one's actions and to a range of practices that characterize responsible research conduct. These practices include:

- intellectual honesty in proposing, performing, and reporting research;
- accuracy in representing contributions to research proposals and reports;
- fairness in peer review;
- collegiality in scientific interactions, including communications and sharing of resources;
- transparency in conflicts of interest or potential conflicts of interest;
- protection of human subjects in the conduct of research;
- humane care of animals in the conduct of research; and
- adherence to the mutual responsibilities between investigators and their research teams.

20. **Research Project Management** as per Research Comp

21. **Managing Research Project Deliverables**

Understanding project deliverables: A complete breakdown with examples (teamwork.com)

Project deliverables refer to all the outputs — tangible or intangible — that are submitted within the scope of a project. Project deliverables need to be agreed upon early during the planning stage to properly set expectations and allocate resources, and documented within a governing project charter so they can be referenced throughout the duration of the project.

- Define clear and measurable objectives

Deliverables are usually not difficult to define. But how do you define (and measure) the progress toward completing them? More importantly, how do team members know whether they're on track?

Clear project objectives are key here — and for an objective to be clear it must also be measurable. Because if you can't measure it, you may never be certain you've achieved it (and you definitely don't know how close or far you are from doing so).

- Break down deliverables

In client-facing work, deliverables are often big, ominous things. An entire marketing campaign, rebrand, or website is a big deal!

Here's the key: Your project deliverables don't have to be big. Break down that marketing campaign or website rebuild into smaller, more attainable chunks. These become deliverables (perhaps process deliverables) supporting the big-picture project.

- Set realistic deadlines

When project deliverables are smaller and related (dependent or sequential), one delay can cause a ripple effect that seems to grow and grow. You'll never eliminate every possible delay, but setting realistic deadlines (even down to the task level) will increase your chances of on-time success.

- Prioritize and sequence deliverables

One danger of breaking down deliverables into more digestible chunks is that now you have more deliverables.

Sounds obvious, we know. But more deliverables sometimes mean more blank stares from your project team. With 27 possibilities to choose from, how does your poor employee know where to focus? As you break down deliverables into smaller, more attainable sizes, rank them by overall priority and sequence (if some deliverables are dependent on others).

- Establish clear communication channels

"The single biggest problem in communication is the illusion that it has taken place. ~George Bernard Shaw, playwright and critic

Keeping deliverables on track means keeping people on track. To do this well, create an environment where your people know at least three things:

What's expected, Who's in charge, Who to go to when confused, encountering problems, or needing help.

22. Monitoring and evaluation frameworks and indicators

What is a Monitoring and Evaluation (M&E) Framework? (evalcommunity.com)

In summary, an M&E Framework is a structured plan that guides the monitoring and evaluation process of a program or project. It defines key indicators, means of verification, and acknowledges assumptions and risks.

Monitoring and Evaluation (M&E) Framework for Education Project

The M&E framework is a vital component of our education project, ensuring that our objectives are met, and the impact is effectively measured. This framework outlines the key components of M&E approach:

- Objectives and Outcomes:
- Key Performance Indicators (KPIs):
- Data Collection Methods:
- Data Sources and Responsibility:
- Frequency of Data Collection:
- Data Analysis and Reporting
- Evaluation and Impact Assessment:
- Continuous Improvement:
- Ethical Considerations:

Monitoring and Evaluation Frameworks (3 parts) (endvawnow.org)

49324_unisdrmeframeworkver1.0.pdf (preventionweb.net)

Monitoring can be defined as a continuing function that aims primarily to provide the management and main stakeholders of an ongoing intervention with early indications of progress, or lack thereof, in the achievement of results. An ongoing intervention might be a project, programme or other kind of support to an outcome.

Evaluation is a selective exercise that attempts to systematically and objectively assess progress towards and the achievement of an outcome. Evaluation is not a one-time event, but an exercise involving assessments of differing scope and depth carried out at several points in time in response to evolving needs for evaluative knowledge and learning during the effort to achieve an outcome. All evaluations, even project evaluations that assess relevance, performance and other criteria need to be linked to outcomes as opposed to only implementation or immediate outputs.

23. Establishing Research project plans

A research plan is a documented overview of your entire project, from the research you conduct to the results you expect to find at the end of the project. Within a research plan, you determine your goals, the steps to reach them and everything you need to gather your results.

How To Write a Research Plan (With Template and Examples) | Indeed.com

A research plan is a framework that shows how you intend to approach your topic. The plan can take many forms: a written outline, a narrative, a visual/concept map or timeline. It's a document that will change and develop as you conduct your research.

Components of a research plan;

- Research conceptualization - introduces your research question
- Research methodology - describes your approach to the research question
- Literature review, critical evaluation and synthesis - systematic approach to locating,
- reviewing and evaluating the work (text, exhibitions, critiques, etc) relating to your topic
- Communication - geared toward an intended audience, shows evidence of your inquiry

Research Plan - Create a Research Plan - Research Guides at Rhode Island School of Design (libguides.com)

A project plan is a series of formal documents that define the execution and control stages of a project. The plan includes considerations for risk management, resource management and communications, while also addressing scope, cost and schedule baselines. Project planning software is used by project managers to ensure that their plans are thorough and robust.

What Is a Project Plan? The Ultimate Guide to Project Planning (projectmanager.com)

24. **Research Outreach**

The act of sharing and communicating your research or profession with a wider non-specialist audience such as the general public.

https://www.animateyour.science/what-is-outreach-definition-meaning#:~:text=The%20act%20of%20sharing%20and,such%20as%20the%20general%20public.

Science outreach - Wikipedia

Outreach in research includes intellectual, creative, and problem-solving interactions between the college and external constituencies. This includes technology transfer, policy review, creative works in the arts, and other events involving information discovery and/or disseminating the results of the discovery between the college and outside audiences.

Definition of Outreach | Penn State Behrend (psu.edu)

25. **Academic community relationship collaboration**
26. **Community Engagement with research**

Community-academic partnerships offer unique opportunities to draw from the respective strengths and expertise of academic institutions and community partners to achieve health equity in socially at-risk communities.

- Develop, merge and share knowledge and expertise that promotes high quality research and capacity building
- Create systems to enable the translation of research findings into action to improve health equity

- Support new knowledge to inform policy and decision-making, and 4) use innovative interventions, critical analysis of existing systems, and pooling of resources to better address health inequity.

Community-Academic Partnerships | Johns Hopkins Center for Health Equity (jhu.edu)

1699252698-ISARJAHSS--482023-Gallery-Script.pdf (isarpublisher.com)

Full article: Features and outcomes of community–academic partnerships in social work: a scoping review (tandfonline.com)

Isokuortti, N., Julkunen, I., Jäppinen, M., Pasanen, K., & Nikula, I. (2024). Features and outcomes of community–academic partnerships in social work: a scoping review. *European Journal of Social Work*, 1–23. https://doi.org/10.1080/13691457.2024.2309526

27. **Provision of training for outreach engagement** – Authors own

28. Engagement with key stakeholders

Stakeholder engagement is the systematic identification, analysis, planning and implementation of actions designed to influence stakeholders

Stakeholder engagement | APM

Stakeholders are specific groups of people (ex: not the general public), each with different desires and needs from the organisation. A stakeholder is anyone who has a stake in your organisation, either through interest, influence or both. Stakeholders can range from shareholders, to staff, board members, volunteers, funders, government, customers and beyond.

What is Stakeholder Engagement, and Why is it Important for Strategic Planning? (smestrategy.net)

29. People Management and Managing team performance

People management is the process of training, motivating and directing employees to optimize workplace productivity and promote professional growth. Workplace leaders, such as team leads, managers and department heads use people management to oversee workflow and boost employee performance every day.

Guide To People Management: Definition, Tips and 8 Skills | Indeed.com

Performance Management | Factsheets | CIPD

Objectives and key performance indicators (KPIs) are usually clear at an organisational level, but it is often less clear what good performance constitutes for individuals or teams. It is vital to identify how organisational KPIs cascade and what the expectations are for employees and teams. It's helpful to think of three main types of performance:

- **Task performance**: how well someone carries out the core activities included in their job. This could include the number of products manufactured to specification, service quality or (for people managers) their impact on the people in their team.

- **Contextual performance or 'organisational citizenship behaviour'**: voluntary activity that benefits the organisation but sits outside one's core role – for example, helping other teams reach their targets, or contributing to ad hoc initiatives.
- **Adaptive performance**: how well employees respond to changing job demands or support innovation. This includes both how agile employees are to changing objectives and how they help the organisation become more agile in response to market needs.

All three types can be understood as results (the outcomes of activity) or as behaviour (how that activity was carried out).

Measuring performance is an important step and some industries require very detailed measures. However, targets are not the be-all and end-all. As a general rule, if they are emphasised too much, they become a time-consuming enterprise in their own right and can hinder rather than help effective working. Performance measures must therefore be carefully chosen to be necessary and relevant. They should align with organisational strategy and suit the types of job in question.

30. Team Building

TEAM BUILDING | English meaning - Cambridge Dictionary

the process of encouraging members of a group to work well together, for example by having them take part in activities or games:

Team Building: Introduction | People & Culture (berkeley.edu)

Team building is an ongoing process that helps a work group evolve into a cohesive unit. The team members not only share expectations for accomplishing group tasks, but trust and support one another and respect one another's individual differences. Your role as a team builder is to lead your team toward cohesiveness and productivity. A team takes on a life of its own and you have to regularly nurture and maintain it, just as you do for individual employees. Your Employee Relations Consultant can advise and help you.

With good team-building skills, you can unite employees around a common goal and generate greater productivity. Without them, you limit yourself and the staff to the effort each individual can make alone.

Guide to Team Building With Examples And Best Practices (monday.com)

Team building is the conscious process of improving the quality of relationships within a specific group, aiming to increase productivity, engagement, and overall efficiency in the workplace.

This is often achieved through a myriad of activities, including:

- Goal-setting
- Gamification
- Training
- Coaching
- Skill-development

31. **Change Management**

Change management is defined as the methods and manners in which a company describes and implements change within both its internal and external processes. This includes preparing and supporting employees, establishing the necessary steps for change, and monitoring pre- and post-change activities to ensure successful implementation.

Significant organisational change can be challenging. It often requires many levels of cooperation and may involve different independent entities within an organisation. Developing a structured approach to change is critical to help ensure a beneficial transition while mitigating disruption.

HOW TO IMPLEMENT CHANGE MANAGEMENT

- Define the change.
- Select the change management team.
- Identify management sponsorship and secure commitment.
- Develop implementation plan including metrics.
- Implement the change—in stages, if possible.
- Collect and analyze data.
- Quantify gaps and understand resistance.
- Modify the plan as needed and loop back to the implementation step.

What is Change Management? Organisational, Process, Definition & Tools | ASQ

What is change management, and why does change need to be managed? Change management is a process of overseeing and facilitating change at any level where it occurs. It is up to management teams to decide exactly how this change will be addressed, develop the process and how to best execute and apply.

The BNET Business Dictionary defines change management as “the coordination of a structured period of transition from situation A to situation B in order to achieve lasting change within an organisation.” Similarly, the Change Management Learning Center defines change management as “the process, tools, and techniques to manage the people-side of business change to achieve the required business outcome, and to realize that business change effectively within the social infrastructure of the workplace.”

What is Change Management? Definition and Principles (michiganstateuniversityonline.com)

32. **Coaching Skills** – Authors own

33. **Research Talent Identification and Development**

A lot of the literature involves sports. Below are some papers on research/academic talent development

Talent Identification and Development: The Need for Coherence Between Research, System, and Process | Request PDF (researchgate.net)

Academic talent development: Theory and best practices. (apa.org)

talent development is the implementation of specific resources aimed at fostering the growth of outstanding performances in specific occupational fields: natural and social sciences, technology, visual and performing arts, health and education, commerce, sports, and so forth.

Talent Development 101: Strategy & Examples for Your Business - AIHR

Talent development refers to strategically developing employees' skills based on organisational objectives. It is an organisational process that builds upon employees' existing skills and knowledge while identifying and filling skills gaps to drive business performance.

In other words, talent development helps employees advance in their careers while also achieving organisational goals. This includes focusing on learning and development (for example, through a mentorship program, leadership training, and on-the-job training), creating a tailored development plan for each employee, and more. The aim is to uncover hidden talent and grow and retain your high performers inside the business.

For employees' training and development to be successful, the talent development strategy must align with business objectives and business needs. Employees who are on board with company goals already have long-term career success in mind. They can see where they want to be in the organisation in the near future and are willing to stick around if an employer is willing to invest in their career. They also must see a clear connection between their personal goals and the long-term goals of the organisation.

An organisation that wants to secure its place in the future understands that employees need structure, support, and encouragement to maintain a high set of skills and knowledge. That's where a talent development program with a strong basis in company objectives has a better outcome than one that is limited or non-strategic.

18 Concrete Ways To Develop Internal Talent (forbes.com)

A Better Way to Develop and Retain Top Talent (hbr.org)

While training is often necessary when teaching people new skills, it's only the first step toward a more distant end. In my experience, the most impactful development happens not through formal programs, but smaller moments that occur within the workplace: on-the-job learning opportunities that are wholeheartedly catered to the worker's unique needs and challenges.

34. Building and maintaining relationships with research funders, partners or other stakeholders

Building and maintaining relationships with funders involves regular communication, transparency, and demonstrating the impact of their support. Keep them updated on your organisation's progress, involve them in relevant activities or events, and show appreciation for their contributions.

How can you build and maintain relationships with funders? (linkedin.com)

It is important to think about *why* and with *whom* you want to engage at an early stage in the project.

The reasons underlying stakeholders engagement and the type of engagement you employ is entirely context specific. Stakeholder engagement is an ongoing dialogue that requires reflective, analytical, and dynamic interaction.

Who should you engage?

- Consider who your research intended for?
- Do the stakeholder(s) you plan to engage reflect the users of your research?
- Apply an Equality Diversity and Inclusion (EDI) lens and be mindful of creating an environment that facilitates engagement with diverse stakeholders. You may wish to specifically consider diversity related to
    - Age
    - Sex
    - Socioeconomic status
    - Health status
    - Previous experience
    - Ethnicity
- How can you engage your targeted stakeholder(s)?
    - Enable an informed choice for people to get involved by providing accessible, clear and transparent information.
    - You are building a working relationship with people. You should be clear and transparent as to the goals of engagement.
    - Be very clear with regards to expectations: what should the people you are engaging with expect from you? What do you expect from them?

Identify and engage partners and stakeholders | UCD Research & Innovation

Partnerships are formed for diverse reasons, and each has a "life" of its own. Even if everything functions well, it does so within a given context: whenever the situation changes and new tasks are assigned to a partnership, the conditions for its work and success change. One of the complicated issues within the life of a partnership, therefore, is the changing of partners (or of their involvement) and of tasks.

36279186.pdf (oecd.org) Successful Partnerships a guide OECD

35. Designing and implementing research communication plans

https://www.researchretold.com/designing-a-research-communication-plan/#:~:text=In%20designing%20a%20research%20communication%20plan%2C%20there%20are,audience.%20...%203%203.%20Think%20about%20your%20messages

Researchers should chart a communication strategy to maximize the benefit of their communications to their research and career. They first need to free themselves from the attitude that they should fear communicating to lay audiences because of the inherent imprecision of lay communications. Also, they should overcome the fear of communicating beyond their peers because their peers might judge them harshly. They should have a "do-tell" strategy that they communicate as much as possible about their goals and research advances. Such a strategy ensures that their work will reach audiences that they might not have expected. They should also have a "strategy of synergy," in which they use such content as news releases to reach multiple audiences beyond the media.

Plan Your Research Communication Strategy | Explaining Research: How to Reach Key Audiences to Advance Your Network | Oxford Academic (oup.com)

A communication plan will help ensure the success of your community's OST programming planning effort by engaging stakeholders in the process and shaping the way the effort is perceived by everyone invested in or affected by this issue. Your communication plan can help you raise public awareness of your community's OST needs, challenges, and successes, and obtain needed funding and support. It can also help you to develop or enhance OST programming and increase enrollment.

Workbook-A-Communication.pdf (wallacefoundation.org)

36. Media Liaison and associated activities

(3) The importance of media liaison and building relationships with journalists | LinkedIn

How to liaise effectively with the media – more great tips on getting it right. – Parker Public Relations Melbourne

37. Preparing and writing reports (including evaluation reports and funder reports)

How to Write Evaluation Reports: Purpose, Structure, Content, Challenges, Tips, and Examples - EvalCommunity

reporting-to-a-funder.pdf (resourcecentre.org.uk)

A grant report is a document that tells the funder how you used their money and what outcomes resul Grant reporting holds you accountable. The funder wants to see what you accomplished with their money and will likely ask for a report before they give you more money.

Grant reporting helps the funder understand the impact of their investment. Your report will help the funder understand how their money is being used and what difference it's making. This allows them to make informed decisions about where to invest their resources in the future.

Grant reporting helps you tell your organisation's story. A well-written report can be a powerful marketing tool, helping you share your organisation's successes with potential donors, volunteers, and other stakeholders.ted from their investment. Grant reporting is also sometimes called "progress reporting."

How to Write a Grant Report (Including Grant Reporting Template) (societ.com)

38. Social Media engagement

Social media engagement is a **measure of how people are interacting with your social media accounts and content**. The term can cover a broad range of actions across all social platforms

Social Media Engagement: Why It's Important and How To Do It Well - The Buffer Blog

Social media engagement is a term that indicates the interaction and participation of users with published content on a social media platform, which includes activities such as liking, commenting, sharing, and clicking on links. Engagement is mainly used as an indicator of the success of **social media marketing efforts.**

What is Social Media Engagement? - The Complete Definition, Example, and Beyond (socialpilot.co)

Social media engagement is the bread and butter of social media marketing. Many brands want more engagement on their social media posts but don't know what else to do or are stuck in the same old strategy. Plus, feed algorithms are tough to maneuver given that they're changing often, sometimes without notice.

Social Media Engagement: What it is and How to Improve it | Sprout Social

39. Building trust within relevant research and strategic partnerships

a_deeper_understanding_-_building_trust_in_business_relationships_paper.pdf (economist.com)

Trust is a vital component for keeping the global economy growing. Every single transaction, from grabbing a coffee to acquiring a multinational corporation, is built on some level of trust: that the goods or services offered serve their purpose or that the buyer can pay for them. But trust does not just grease the wheels. It enables firms from different cultures and separated by continents to work together in a manner that benefits all. It helps companies to set, follow and achieve targets with a wider social or environmental purpose. It also assists with hiring and keeping outstanding workers.

Trust and Strategic Partnerships: Barriers to Developing Dynamic Capabilities in a Public Organisation | SpringerLink

Trust is a subject that can be heard almost daily in every organisation's actions and strategy work. Trust is also a valuable issue for individuals. However, trust has different dimensions in the business world, where it is usually referred to as a partnership. The aim of this chapter is to clarify and explore trust, partnerships, and dynamic capabilities. The first main objective is to clarify the causes and effects behind official partnership agreements. We also explore the main drivers for forming a partnership. The second objective is to study the role of partnerships in a dynamic capability framework. We examine how a partnership supports dynamic capabilities or serves as a barrier to developing dynamic capabilities.

Managing strategic partnerships | McKinsey

40. Diplomacy, negotiation, and mediation skills

Used Negotiation as per RM Comp

What is Diplomacy in Negotiations? - PON - Program on Negotiation at Harvard Law School

Diplomacy is the art of creating and managing relationships among nations and the art of negotiation is that of forging relationships through agreements. As such, diplomacy offers valuable tools for all business negotiators, who themselves are in the business of creating and managing relationships among companies – whether they view this as diplomacy or even as their overall goal or not.

Among the many diplomacy and negotiation skills required in negotiation, business negotiators need to be able to size each other up accurately, taking into account cultural, organisational, and other differences. To capitalize on the benefits of diplomacy, they also need to be able to present a united front.

What is Negotiation and Mediation? - PON - Program on Negotiation at Harvard Law School

Negotiation and mediation are complementary tools in the dealmaking process. But you need to use them strategically for the best outcomes.

We tend to think negotiation and mediation processes are all alike, but in fact, negotiators and mediators follow different approaches depending on the type of situation they are dealing with. There are many different kinds of negotiation and mediation you can employ to reach successful agreements.

MyEducator - Defining Negotiation, Mediation, and Diplomacy

Put most simply, negotiation is the act of having a discussion or dialogue in order to settle a matter that is in dispute. It is a fundamental way of advocating for your interests and trying to reach an agreement with others as to how you can get something that you want.

Negotiation is practiced through verbal or written communication. It typically takes the form of a back-and-forth until both parties have arrived at an arrangement that they mutually find suitable.

41. Handling difficult conversations and partnerships

Low trust and poor communication are the primary reasons why 70% of business partnerships fail. Therefore, open communication with your firm's partner helps to beat those odds.

How to handle tough talks with your business partner | QuickBooks (intuit.com)

How to handle tough talks with your business partner - Firm of the Future

How do you deal with difficult or unresponsive business partners? (linkedin.com)

Practice Innovations: What to do when you're on the receiving end of a difficult conversation - Thomson Reuters Institute

13 Tips for Handling Difficult Conversations With Tact | Indeed.com

Partnerships offer businesses numerous benefits, including more capital, shared expertise, support and greater borrowing capacity. Nonetheless, problems can arise between business partners due to several factors. If this is your case, you will need to have a conversation with your partner. Undoubtedly, it can be challenging and uncomfortable, but it's necessary.

How to handle difficult conversations with your business partner (goodspeedmerrill.com)

42. Business and commercial liaison management

A business liaison is a trained professional who performs a variety of duties designed to maintain relationships, exchange information and promote operations. Below introduces some of the drastically different duties of business liaisons who can be found in almost every commercial sector.

What is a Business Liaison? - The Top Business Schools and Degrees (top-business-degrees.net)

Liaison is often defined as cooperation among different entities or organisations. It is also referred to as the exchange of information among various organisations. In the corporate world, a business liaison is regarded as a trained professional who performs a variety of duties. These duties include maintaining and building relationships, exchanging information and promoting operations. These are the individuals who are appointed by the company to act as a point of contact outside or inside the company. Liaisons happen in both medium and large companies because direct communication from the top management is not practically possible. Communication often refers to imparting or exchanging information either by speaking, writing, or using some other medium. It plays an integral role as it helps to transmit information, ideas, thoughts, and emotions.

An overview of concept of business liaisons in companies - iPleaders

Liaison officers help foster professional relationships between two or more parties or organisations for their mutual benefit. Serving as representatives, they typically work in public relations departments.

What Does a Liaison Officer Do? Types and How To Become One | Indeed.com

Note

By drawing from various works, opinion papers and a multitude of websites the author ensured a comprehensive investigation of the competencies to create their descriptions for this competence framework. This methodological approach allowed the author to distil and integrate this information into understandable descriptions which were then further edited and amended by other interested parties and members of the consortium.

Appendix 5 Dissemination Events and Focus Groups

See link below for further information on some of the events and focus groups that fed into the development of the RM Comp and learning outcomes along 4 proficiency levels. To gain valuable insights into RM Comp, CARDEA's plan has taken a three-pronged approach. We engage directly by leveraging focus groups, working with diverse stakeholders and gather different perspectives to refine our understanding of the learning outcomes and proficiency levels. Additionally, our team uses its professional expertise in this field (HR Research). We also organise events through the CARDEA Academy that serve as platforms for collaboration where ideas are shared and collective responses are captured.

Dissemination | University College Cork (ucc.ie) See some of the collaborative events below:

- An online session dated 2/06/2022 entitled ***The Role of Research Manager in ERA - challenges and issues faced***
- ERA Action 17 workshop in Budapest on 9/05/2023 involving Member State representatives and RM ROADMAP ambassadors
- CARDEA Academy Event on Monday 25th September 2023 that had over 160 participants from all over the ERA.
- 17/11/2023 Research Managers in ERA
- 15/12/2023 ERA Talent Webinar Potential of Research Managers and Administrators (RMAs) within the ERA had 150 participants
- CARDEA Career & Competence Framework for Research Managers" RM Roadmap 2nd Ambassadors' Meeting, 13 March 2024, Lisbon, Portugal
- RM ROADMAP 2nd co-creation exercise held between 14/03/2024 and 7/05/2024
- ERA Action 17 - Workshops on 17/04/2024, 18/11/2024 and various meetings
- EARMA Conference Odense Denmark CARDEA Career & Competence Framework for Research Managers 24/04/2024
- CARDEA Focus Group 15/04/2024 Presentation on RM Comp with discussion
- CARDEA Focus Group 30/04/2024 Presentation on RM Comp with discussion
- RM Roadmap Third RM Roadmap Ambassador Meeting 12/11/2024
- The professionalization of research support staff: Turin Italy - Conference

Appendix 6 ISCO 08 CODES

Level	ISCO 08 Code	Title EN	Definition	Tasks include	Included occupations
1	1	Managers	Managers plan, direct, coordinate and evaluate the overall activities of enterprises, governments and other organisations, or of organisational units within them, and formulate and review their policies, laws, rules and regulations. Competent performance in most occupations in this major group requires skills at the fourth ISCO skill level, except for Sub-major group 14: Hospitality, Retail and Other Services Managers, for which skills at the third ISCO skill level are generally required.	Tasks performed by managers usually include: formulating and advising on the policy, budgets, laws and regulations of enterprises, governments and other organisational units; establishing objectives and standards and formulating and evaluating programmes and policies and procedures for their implementation; ensuring appropriate systems and procedures are developed and implemented to provide budgetary control; authorising material, human and financial resources to implement policies and programmes; monitoring and evaluating performance of the organisation or enterprise and of its staff; selecting or approving the selection of staff; ensuring compliance with health and safety requirements; planning and directing daily operations; representing and negotiating on behalf of the government, enterprise or organisational unit managed in meetings and other forums.	Occupations in this major group are classified into the following sub-major groups: 11 Chief executives, Senior Officials and Legislators 12 Administrative and Commercial Managers 13 Production and Specialized Services Managers 14 Hospitality, Retail and Other Services Managers
4	1211	Finance Managers	Finance managers plan, direct and coordinate the financial operations of an enterprise or organisation, in consultation	Tasks include - (a) planning, directing and coordinating the financial operations of an enterprise or	Examples of the occupations classified here:

Level	ISCO 08 Code	Title EN	Definition	Tasks include	Included occupations
			with senior managers and with managers of other departments or sections, or of enterprises that provide financial services to other enterprises and organisations.	organisation; (b) assessing the financial situation of the enterprise or organisation, preparing budgets and overseeing financial operations; (c) consulting with the chief executive and with managers of other departments or sections (d) establishing and managing budgets, controlling expenditure and ensuring the efficient use of resources; (e) establishing and directing operational and administrative procedures; (f) planning and directing daily operations; (g) overseeing the selection, training and performance of staff; (h) representing the enterprise or organisation in dealings with outside bodies.	- Company secretary - Finance manager
4	1212	Human Resource Managers	Human resource managers, plan, direct and coordinate policies concerning the personnel, industrial relations and occupational health and safety activities of an enterprise or organisation, or of enterprises that provide human resource services to other enterprises and organisations.	Tasks include - (a) planning, directing and coordinating the personnel and industrial relations activities, policies and practices of an enterprise or organisation; (b) planning and organizing procedures for recruitment, training, promotion, transfer and dismissal of staff; (c) planning and organizing negotiations and procedures for determination of wage structures	Examples of the occupations classified here: - Industrial relations manager - Personnel manager - Recruitment manager

Level	ISCO 08 Code	Title EN	Definition	Tasks include	Included occupations
				and level and for consultation with workers on conditions of employment; (d) overseeing safety, health and related programmes and activities; (e) establishing and managing budgets, controlling expenditure and ensuring the efficient use of resources; (f) establishing and directing operational and administrative procedures; (g) overseeing the development and implementation of management information systems; (h) ensuring compliance with standards and legislation relating to employees rights, health and safety, equal opportunity and related concerns; (i) overseeing the selection, training and performance of staff for the entire enterprise or organisation; (j) consulting with senior management and with managers of other departments; (k) representing the enterprise or organisation in dealings with outside bodies.	
4	1213	Policy and Planning Managers	Policy and planning managers plan, organize, direct and coordinate policy advice and strategic planning activities within government or for non-government	Tasks include – (a) developing, implementing and monitoring strategic plans, programmes, policies, processes, systems and procedures to achieve goals,	Examples of the occupations classified here: - Corporate planning manager

Level	ISCO 08 Code	Title EN	Definition	Tasks include	Included occupations
			organisations and private sector agencies, or manage the activities of enterprises that provide policy and strategic planning services.	objectives and work standards; (b) developing, directing, administering and participating in policy research and analysis; (c) coordinating the implementation of policies and practices; (d) establishing activity measures and measurements of accountability; (e) planning and directing daily operations; (f) leading and managing the activities of policy development and strategic planning staff; (g) overseeing the selection, training and performance of staff; (h) consulting with senior management and with managers of other departments; (i) representing the enterprise or organisation in negotiations, and at conventions, seminars, public hearings and forums.	- Policy manager - Strategic planning manager
4	1219	Business Services and Administration Managers Not Elsewhere Classified	This unit group covers business services and administration managers not classified elsewhere in Minor Group 121: Business Services and Administration Managers. For instance, the group includes occupations such as facilities manager, cleaning services manager, administrative services manager employed either as the manager of a department of a large enterprise and	In such cases tasks would include: (a) providing administrative, strategic planning and operational support, research and advice to senior management on matters such as the management of building facilities and administrative services; (b) developing and managing the organisation's administrative and physical resources; (c) developing and implementing administrative	Examples of the occupations classified here: - Administrative services manager - Cleaning services manager - Corporate services manager - Facilities manager

Level	ISCO 08 Code	Title EN	Definition	Tasks include	Included occupations
			organisation, or of an enterprise that provides such services to other enterprises and organisations.	and procedural statements and guidelines for use by staff in the organisation; (d) analysing complex resource management issues and initiatives that affect the organisation, and preparing associated reports, correspondence and submissions; (e) providing information and support for the preparation of financial reports and budgets; (f) leading, managing and developing administrative staff to ensure smooth business operations and the provision of accurate and timely information; (g) representing the enterprise or organisation in negotiations, and at conventions, seminars, public hearings and forums; (h) establishing and managing budgets, controlling expenditure and ensuring the efficient use of resources; (i) planning and directing daily operations; (j) overseeing the selection, training and performance of staff.	
3	133	Information and Communications Technology Service managers	Information and communications technology service managers plan, direct, and coordinate the acquisition, development, maintenance and use of computer and telecommunication systems,	Tasks performed usually include: consulting with users, management, vendors, and technicians to assess computing needs and system requirements and specifying technology to meet those needs; formulating and directing information and	Occupations in this minor group are classified into the following unit groups: 1330 Information and Communications

Level	ISCO 08 Code	Title EN	Definition	Tasks include	Included occupations
			either as the manager of a department or as the general manager of an enterprise or organisation that does not have a hierarchy of managers.	communication technology (ICT) strategies, policies and plans; directing the selection and installation of ICT resources and the provision of user training; directing ICT operations, analysing workflow, establishing priorities, developing standards and setting deadlines; overseeing the security of ICT systems; assigning, reviewing, managing and leading the work of systems analysts, programmers, and other computer-related workers; evaluating the organisation's technology use and needs and recommending improvements such as hardware and software upgrades; establishing and managing budgets, controlling expenditure and ensuring the efficient use of resources; establishing and directing operational and administrative procedures; overseeing the selection, training and performance of staff; representing the enterprise or organisation at ICT-related conventions, seminars and conferences.	Technology Service Managers
4	1330	Information and Communications Technology Service Managers	Information and communications technology service managers plan, direct and coordinate the acquisition, development, maintenance and use of computer and telecommunication systems, either as the manager of a department or as	Tasks include - (a) consulting with users, management, vendors, and technicians to assess computing needs and system requirements and specifying technology to meet those needs; (b) formulating and directing information and	Examples of the occupations classified here: - Application development manager - Chief information officer - Data operations manager

Level	ISCO 08 Code	Title EN	Definition	Tasks include	Included occupations
			the general manager of an enterprise or organisation that does not have a hierarchy of managers.	communication technology (ICT) strategies, policies and plans; (c) directing the selection and installation of ICT resources and the provision of user training; (d) directing ICT operations, analysing workflow, establishing priorities, developing standards and setting deadlines; (e) overseeing the security of ICT systems; (f) assigning, reviewing, managing and leading the work of systems analysts, programmers, and other computer-related workers; (g) evaluating the organisation's technology use and needs and recommending improvements such as hardware and software upgrades; (h) establishing and managing budgets, controlling expenditure and ensuring the efficient use of resources; (i) establishing and directing operational and administrative procedures; (j) overseeing the selection, training and performance of staff; (k) representing the enterprise or organisation at ICT related conventions, seminars and conferences.	- Data processing manager - ICT development manager - Information systems director - Information technology manager (IT Manager) - Internet service provider - Network manager

Level	ISCO 08 Code	Title EN	Definition	Tasks include	Included occupations
4	1223	Research and Development Managers	Research and development managers plan, direct and coordinate the research and development activities of an enterprise or organisation or of enterprises that provide related services to other enterprises and organisations.	Tasks include - (a) planning, directing and coordinating research and development activities, in-house or commissioned from external research organisations, to develop new or improved technical processes, products, knowledge, or utilization of materials; (b) planning the overall research and development programme of an enterprise or organisation, specifying goals and budgetary requirements; (c) leading and managing the activities of research and development staff; (d) establishing and managing budgets, controlling expenditure and ensuring the efficient use of resources; (e) establishing and directing operational and administrative procedures; (f) planning and directing daily operations; (g) overseeing the selection, training and performance of staff; (h) representing the enterprise or organisation at conventions, seminars and conferences.	Examples of the occupations classified here: - Product development manager - Research manager

Level	ISCO 08 Code	Title EN	Definition	Tasks include	Included occupations
2	13	Production and Specialized Services Managers	Production and specialized services managers plan direct and coordinate the production of the goods and the provision of the specialized professional and technical services provided by an enterprise or organisation either as the manager of a department or as the general manager of an enterprise or organisation that does not have a hierarchy of managers. They are responsible for manufacturing, mining, construction, logistics, information and communications technology operations, for large scale agricultural, forestry and fisheries operations, and for the provision of health, education, social welfare, banking, insurance and other professional and technical services. Competent performance in most occupations in this sub-major group requires skills at the fourth ISCO skill level.	Tasks performed by workers in this sub-major group usually include: planning details of activities in terms of output, services provided, quality, quantity, cost, timeliness and labour requirements; setting standards and objectives; controlling the operation of plant and of procedures; assuring quality of the goods produced and services provided; preparing tenders and contract bids; establishing and managing budgets, monitoring costs, and adjusting activities, procedures and resources to minimize costs; overseeing the acquisition and installation of new plant and equipment; coordinating the implementation of health and safety requirements; planning and directing daily operations; overseeing the selection, training and performance of staff; preparing, or arranging for the preparation of, reports, budgets and forecasts; representing the enterprise or organisation in negotiations with other agencies, and at conventions, seminars, public hearings and forums.	Occupations in this sub-major group are classified into the following minor groups: 131 Production Managers in Agriculture, Forestry and Fisheries 132 Manufacturing, Mining, Construction, and Distribution Managers 133 Information and Communications Technology Service Managers 134 Professional Services Managers
4	1342	Health Service Managers	Health service managers plan, direct, coordinate and evaluate the provision of clinical and community health care services	Tasks include - (a) providing overall direction and management for the service, facility, organisation or centre; (b) directing, supervising and evaluating the work	Examples of the occupations classified here: - Chief public health officer - Clinical director

Level	ISCO 08 Code	Title EN	Definition	Tasks include	Included occupations
			in hospitals, clinics, public health agencies and similar organisations.	activities of medical, nursing, technical, clerical, service, maintenance, and other personnel; (c) establishing objectives and evaluative or operational criteria for units they manage; (d) directing or conducting recruitment, hiring and training of personnel; (e) developing, implementing and monitoring procedures, policies and performance standards for medical, nursing, technical and administrative staff; (f) monitoring the use of diagnostic services, inpatient beds, facilities and staff to ensure effective use of resources, and assess the need for additional staff, equipment, and services; (g) controlling administrative operations such as budget planning, report preparation and expenditure on supplies, equipment and services; (h) liaising with other health and welfare service providers, boards and funding bodies to coordinate the provision of services; (i) advising government bodies about measures to improve health and welfare services and facilities; (j) representing the organisation in negotiations, and at conventions, seminars, public hearings and forums.	- Community health care coordinator - Director of nursing - Health facility administrator - Hospital matron - Medical administrator

Appendix 7 ESCO Competences for various roles analogous to Research Manager:

- **Research and development Manager.**

Essential Skills and Competences

analyse business plans analyse external factors of companies analyse internal factors of companies assess the feasibility of implementing developments carry out strategic research identify new business opportunities interact professionally in research and professional environments manage budgets manage intellectual property rights manage personal professional development manage research and development projects manage staff mitigate waste of resources perform market research perform project management report analysis results represent the organisation seek innovation in current practices speak different languages synthesise information think abstractly

Essential Knowledge

corporate social responsibility industrial research and development innovation processes intellectual property law market research marketing principles project management

- **Research Manager**

Essential Skills and Competences

cope with challenging demands discuss research proposals estimate duration of work manage budgets manage research and development projects manage staff perform scientific research provide project information on exhibitions report analysis results respect cultural differences in the field of exhibition study a collection study topics work independently on exhibitions

Essential Knowledge

multidisciplinary research project management research design scientific research methodology

- **ICT Research Manager**

Essential Skills and Competences

apply statistical analysis techniques apply system organisational policies conduct literature research conduct qualitative research conduct quantitative research conduct scholarly research innovate in ICT manage ICT project manage staff monitor ICT research monitor technology trends plan research process write research proposals

Essential Knowledge

ICT market ICT project management innovation processes organisational policies scientific research methodology

- **Project manager**

Essential Skills and Competences

apply conflict management build business relationships control of expenses create project specifications customise project methodologies draft project documentation ensure compliance with legal requirements ensure equipment availability ensure equipment maintenance establish daily priorities estimate duration of work follow company standards identify legal requirements liaise with managers manage budgets manage logistics manage project changes manage project information manage project metrics manage staff manage supplies negotiate with stakeholders organise project meetings perform PESTEL analysis perform project management perform resource planning perform risk analysis provide cost benefit analysis reports supervise daily information operations train employees write work-related reports

Essential Knowledge

communication principles internal risk management policy project management project management methodology (PM^2) project management principles

- **Strategic Planning Manager**

Essential Skills and Competences

advise on communication strategies advise on efficiency improvements apply strategic thinking define organisational standards develop business plans develop company strategies develop organisational policies ensure compliance with policies follow the statutory obligations impart business plans to collaborators implement operational business plans implement strategic management implement strategic planning imprint visionary aspirations into the business management integrate strategic foundation in daily performance lead managers of company departments liaise with managers monitor company policy use different communication channels

Essential Knowledge

business analysis company policies corporate social responsibility corporate sustainability hoshin kanri strategic planning management department processes organisational policies strategic planning

- **Financial Manager**

Essential Skills and Competences

advise on financial matters analyse business plans analyse financial performance of a company analyse market financial trends create a financial plan enforce financial policies follow company standards liaise with managers monitor charity's budget strive for company growth

Essential Knowledge

financial analysis financial management financial statements

- **EU Funds Manager**

Essential Skills and Competences

advise on eligibility of expenditures analyse community needs assess administrative burden comply with legal regulations decide on providing funds develop interregional collaboration strategies develop strategy to solve problems follow up the issued grants implement strategic planning liaise with government officials liaise with local authorities liaise with politicians maintain relationships with government agencies manage contracts manage government policy implementation manage government-funded programmes manage project information manage relationships with stakeholders monitor policy proposals perform resource planning use communication techniques

Essential Knowledge

EU law European Structural and Investment Funds regulations community-led local development fraud detection government policy government policy implementation indicators used in EU funds programme operations leadership principles macro-regional strategy procurement legislation project management principles state aid regulations urban planning urban planning law

- **Human Resources Manager**

Essential Skills and Competences

apply company policies build trust comply with legal regulations coordinate operational activities develop employee retention programs develop training programmes ensure gender equality in the workplace evaluate training hire human resources identify necessary human resources identify with the company's goals manage budgets manage payroll monitor company policy negotiate employment agreements negotiate with employment agencies organise staff assessment plan medium to long term objectives promote gender equality in business contexts support employability of people with disabilities track key performance indicators

Essential Knowledge

employment law human resource management human resources department processes labour legislation outplacement talent management strategies

- **Innovation Officer**

Essential Skills and Competences

carry out strategic research collaborate with engineers consult with industry professionals develop business plans identify new business opportunities identify potential markets for companies implement procurement of innovation improve business processes innovate in ICT keep updated on innovations in various business fields promote innovative infrastructure design promote open innovation in research seek innovation in current practices use consulting techniques

Essential Knowledge

business processes emergent technologies innovation processes risk management

- **Policy Manager**

Essential Skills and Competences

advise on efficiency improvements advise on sustainable management policies develop company strategies ensure compliance with policies integrate strategic foundation in daily performance monitor company policy monitor legislation developments set organisational policies

Essential Knowledge

business analysis corporate social responsibility management systems standards organisational policies policy analysis strategic planning

- **Clinical Informatics Manager**

Essential Skills and Competences

adhere to organisational guidelines analyse large-scale data in healthcare apply good clinical practices apply organisational techniques collect healthcare user's general data communicate in healthcare comply with quality standards related to healthcare practice conduct clinical software research contribute to continuity of health care contribute to public health campaigns follow clinical guidelines oversee clinical information system activities perform clinical coding procedures review patient's medical data use clinical assessment techniques use foreign languages for health-related research

Essential Knowledge

clinical reports clinical science computer science data storage database drug interaction management health care occupation-specific ethics medical informatics multi-professional cooperation in health care multidisciplinary research nursing science scientific research methodology

For more information please visit Occupations | ESCO (europa.eu) where you can search each of the roles above and find Essential Skills and Competences and Essential knowledge where the link with RM Comp is evidenced.

Appendix 8 The Framework Profile for Research Managers

Please note: The European Career Framework for Research Managers (RM 1 to RM 4) is a progression model framework and operates independently from the European Competency Framework RM Comp.

Profile Layout

As with the European Framework for Research Careers[53] in this framework there are four broad profiles for Research Managers, which are independent of any particular sector with the following working titles:

RM 1 First Stage Research Manager

RM 2 Recognised Research Manager

RM 3 Established Research Manager

RM 4 Senior Research Manager

This Profile Framework is "sector neutral." The descriptors apply to all Research Managers, independent of where they work in the private or public sector (i.e. companies, NGOs, research institutes, research universities, universities of applied sciences, university medical centres, local-, regional- or national authorities, funding organisations or consultancies). Regardless of any particular profession or specialisation, one can outline broad profiles that describe the different levels within the broad categorisation of Research Manager.

It is envisioned that direct entry through open competition (recruitment) can occur at any level. It is envisaged that qualifications will not be a barrier to entry into the profession.

Profile Descriptors

First Stage Research Manager (RM 1)

The term First Stage Research Manager refers to research managers in the first two years (full-time equivalent) of their research management activity whilst demonstrating the competencies and skills for successful performance in the role. The role requires a basic understanding of the research/business structures, operations, and includes responsibility for implementing and achieving results.

Recognised Research Manager (RM 2)

The term Recognised Research Manager refers to research managers with an intermediate level of experience in their research management activity whilst demonstrating competencies and skills for the successful performance in the role. The role requires a moderate understanding of overall research/business operations including responsibility for monitoring the implementation of research

[53] Towards a European Framework for Research Careers
towards_a_european_framework_for_research_careers_final.pdf (europa.eu)

strategy. This has limited or informal responsibility for colleagues and / or needs to consider broader approaches or consequences through own actions rather than through others.

Established Research Manager (RM 3)

The term Established Research Manager refers to research managers with an advanced level of experience in their research management activity whilst demonstrating competencies and skills for the successful performance in the role. The role requires strong understanding of the organisation's environment, operational plans, current strategic position and direction with strong analytical skills and the ability to advise on strategic options for the research/business. This may include formal responsibility for colleagues and their actions; and that their decisions have a wider impact.

Senior Research Manager (RM 4)

The term Senior Research Manager refers to research managers with an expert level of experience in their research management activity whilst demonstrating the competencies and skills for successful performance in the role. The role requires expert knowledge to develop strategic vision and provide unique insight to the overall direction and success of the research/organisation. This includes formal responsibility for research/business areas and his / her actions and decisions have a high-level strategic impact.

For the purposes of the Framework, RM 1 and RM 2 profiles should be considered early to mid-stage research managers and RM 3 and RM 4 profiles should be considered leadership level research managers.

Benefits of this Profile Framework

A commonly understood European Profile Framework for Research Manager Careers will serve several practical purposes for different categories of users but is mainly intended to provide a reference for Research Managers and their employers. The framework could notably:

Help Research Managers

- identify job offers close to their individual profile in diverse employment sectors, including academia and industry.
- present themselves (some of their individual characteristics) in a commonly understood language.
- understand what - in general terms - is expected of them throughout their career.
- benchmark with other RM's and gain directions for self-development.
- networking and training.

Help Employers of Research Managers

- define job profiles, identify candidates close to the job profile on offer ensuring the best candidate for each position.
- identify candidates from different employment sectors (academia, industry etc.).

- set priorities for staff training.
- organise career guidance.
- inform their overall institutional human resources strategies, for instance as regards the portfolio management of research management staff.

In addition, the framework could serve to:

Help public authorities

- inform strategies to train research managers to meet their regional and national R&D targets and to promote attractive employment conditions.
- make international comparisons and benchmark their research manager population.

Help Society

- appreciate research manager capacities and their role.

Help the European Research Area

- promote more mobility across borders and employment sectors, by enhancing comparability and transparency on career opportunities, thus also helping to:
    - better attract highly skilled talent from third countries and, ultimately,
    - contribute to the establishment of a single market for knowledge, research, and innovation.

Actors using the Profile Framework.

The intention of having a Research Manager Profile Framework is to support the research community: research managers, researchers, their employers (universities, research institutes and companies), funders and public authorities. These actors can voluntarily use the framework as they see appropriate within their own institutional or national context. There is no central assessment mechanism for research managers and there are no central rules on how to apply profiles.

At European level there may be an exchange of good practice, resulting in non-binding guidance for interested parties. The Commission could introduce the Framework in the future as a helpful categorisation of research manager job opportunities. This would create an opportunity for employers and funders to start using the profile framework when publishing their job and funding adverts on a European scale. Commission programmes could start using the profile framework as a consistent categorisation for different funding instruments.