



CARDEA Matrix Framework for Research Manager Careers

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1. Introduction

The Treaty on the Functioning of the European Union¹ 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.”

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 the Council conclusions on the New European Research Area 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.*”²

Currently there are no European Union structures for Research Managers and Europe lacks an acknowledged Research Manager Career profile with accompanying competency, official accreditation and training architecture. Even though there are professionals performing this role throughout Europe it is not acknowledged from a policy perspective. According to a recent survey (CARDEA) the vast majority of Research Managers are female which is interesting to consider in light of equality, diversity and inclusion needs. It is noted that “the researchers' labour market is fragmented” and “that it can be very difficult to move between sectors.” Evidence suggests (inclusive of the CARDEA Survey both qualitative and quantitative) that Research Managers transition from Post-Doctoral (Researcher) Roles to Research Manager Roles within the European Research Area enhancing Europe’s Research Agenda. The importance of Research Managers in the institutional and policy knowledge space plus

¹ <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:12012E/TXT:en:PDF>

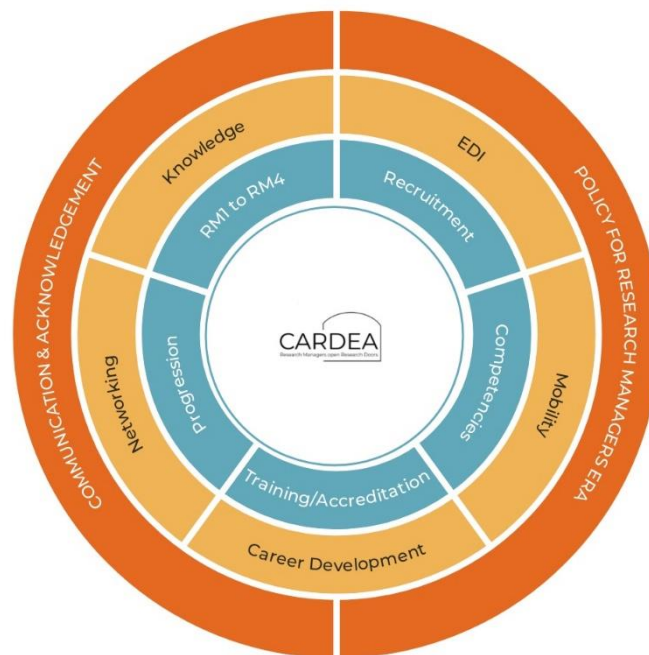
² <https://www.era-learn.eu/news-events/news/new-pact-and-governance-structure-for-the-european-research-area-era>

continuity of expertise cannot be overestimated within the current context of the “suboptimal balance between institutional and project-based funding led to short-term, project-based contracts that do not give a long-term perspective for researchers.”³

ERA Action 17 as a priority within the New ERA Policy Agenda is (*Enhancing the strategic capacity of Europe’s public research performing and funding organisations*) and creates a mechanism to introduce a framework to provide empowering career architecture for Research Manager Careers. This framework will enhance and strengthen the quality of R&I systems, create better working conditions and foster employability, and other relevant framework conditions at all levels of the European Research Area.

This draft framework aims to communicate the various characteristics that Research Managers (included in “other research and development personnel” in the EU Treaty) may have throughout their careers. It intends providing a classification that is independent of a

CARDEA MATRIX



particular sector. It defines characteristics typically required for highly diverse careers in Research Management in the education, research and innovation activities in both the public and private sectors.

³ <https://www.era-learn.eu/news-events/news/new-pact-and-governance-structure-for-the-european-research-area-era>

2. The CARDEA Framework Basic Outline

The Framework describes four broad profiles, 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

The Framework is "sector neutral." The descriptors apply to all Research Managers, independent of where they work in the private or public sector (i.e. large companies, NGOs, SME's research institutes, research universities or research hospitals amongst others). Regardless of any particular profession or research manager specialisation, one can outline broad profiles that describe the different characteristics Research Manager roles possess incorporating level of responsibility.

It is envisioned that direct entry through open competition (recruitment) can occur at any level. Opportunities for career development and progression are integrated into the Framework. It is envisaged that qualifications will not be a barrier to entry into the profession.

See section 8 for a more detailed description of the roles RM 1 to RM 4.

3. Connection with Existing and Proposed EU Policy

Research Manager Career architecture is emerging at sector-specific, national and institutional level in an ad hoc fashion answering specific institutional and research needs. Some Member States have started to develop national professional development mechanisms for their Researchers and 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, many individual research organisations have established their own frameworks directly related to job descriptions within those institutions and companies. The focus and terminology of the various frameworks differ, but there is a substantial overlap in content and purpose.

The CARDEA Matrix Research Manager Framework is expected to have a bridging function for the sector-specific, national and institutional frameworks, EU Policies and Recommendations providing a common language to a wide variety of actors across the continent and beyond. The obvious connectivity and synergies between existing EU frameworks and policies is an invitation to include the interoperable and key role of **Research Manager within existing and recognised architecture.**

A. The European Charter for Researchers and the Code of Conduct for Recruitment

The European Charter for Researchers and the Code of Conduct for Recruitment of researchers (hereafter Charter and Code) is being revised. As the current draft reads, “a **new Charter for Researchers** will replace the 2005 Charter and Code for Researchers and will support the provision of good working conditions and research environments in relevant organisations. It will be a single document addressing simultaneously researchers, employers, funders, and policy makers, and featuring a limited number of principles to facilitate implementation in all sectors. The new Charter can be the opportunity to launch the process for the revision of the current implementation mechanism Human Resources Strategy for Researchers (HRS4R).” Within this draft document the following is noted: “**research management careers should be adequately framed and recognised at European level to strengthen their capacity, develop relevant training, and foster comparability.**”⁴ The CARDEA matrix (RM1 to RM4) is this framework. Within it there are obvious synergies to the existing career architecture for researchers incorporating inclusivity and recognition of the role of Research Manager as “performing high-level research and innovation requires the support of a multitude of research management roles, undertaken by researchers or other professionals. These highly valuable professions deserve proper recognition, including by way of further analysis and alignment at European level, with a view to strengthening their capacity, developing relevant training, fostering comparability, and allowing them to effectively manage and support research and innovation.”⁵

The current inclusion of Research Manager Careers within the Charter and Code now paves the way for a connected Charter for Research Managers. Introducing the CARDEA Framework at this juncture is a forward-thinking and proactive step in ensuring futureproofing and recognising the pivotal role of Research Manager within ERA Research and Innovation systems. By connecting with the inclusion of the role of Research Manager in the revised Charter and Code, the CARDEA Framework is pre-emptively paving the way for acknowledging the significance of Research Manager roles and setting a solid foundation for the future of this career. Thus, the introduction of the CARDEA Framework aligns perfectly with this EU strategic vision. In addition to this high-level research is supported by research managers. Therefore, the research environment must include and acknowledge the role of Research Manager.

B. HR Excellence in Research⁶

As with the revision of the European Charter for Researchers and the Code of Conduct for Recruitment⁷ of researchers, so the HR Excellence in Research Award is being revised to move with the times, and evolve as required, informed through evidence-based data and research. **It is an important step to include the role of Research Manager in the revision as it is included in the**

⁴ Draft Document EC

⁵ Draft Document EC

⁶ <https://euraxess.ec.europa.eu/jobs/hrs4r>

⁷ <https://euraxess.ec.europa.eu/jobs/hrs4r>

New Charter and Code. This will enable HRS4R to connect with other ERA actions (e.g., action 17) and future proof efforts to encompass, and support the proposed but not finalised policy framework for Research Managers at EC level.

The existing architecture of HRS4R is sympathetic and easily adaptable to the role of Research Manager. In fact, very little amendment would be required to include Research Manager Roles in the process. The HR Strategy for Researchers supports research institutions and funding organisations in the implementation of the Charter & Code in their policies and practices. Hence the inclusion of Research managers in the new Charter and Code is an invitation to render the Role of Research Manager more attractive to all stakeholders within the ERA Research Ecosystem. Including the role of a research manager in the HR Excellence in Research policy process promotes EU policy interoperability by aligning research-specific policies (Action 17) with broader HRS4R architecture. It leads to streamlined processes, effective implementation, and acknowledgement of the role. By incorporating the expertise of research managers within the HRS4R framework, practicing organisations in Member States can work within a cohesive policy framework that supports both research management and researcher objectives, ultimately enhancing the research environment and the success of research initiatives.

C. The Fifth Freedom

The CARDEA Framework also connects in with a "**fifth freedom**"⁸ based on making the labour market for researchers more mobile between sectors, open, competitive, and inclusive of better career structures and transparency. The results of the CARDEA Survey and others recognise the choice to pursue a career in research management was mostly influenced by a perceived match between the profession and their skill profiles. This suggests that the participants actively seek roles in line with their qualifications and experience. There is also clear evidence of an affiliation with research **management as an alternative to a research career**. Further evidence of this type of career mobility is provided by the RAAAP-3 Survey⁹ results which suggest that 44.5% of respondents¹⁰ in the EU indicated that they moved from a research career to a Research Manager career. Interestingly, there is little intersectoral transfer from other management administration functions to research management.

D. The European Skills Agenda

The European Skills Agenda adopted by the Commission on 30 June 2020 called to develop a European Competence Framework for researchers (ResearchComp), supporting the development of a set of core skills for researchers, skills taxonomies, and related training, in line with the European Pillar of Social Rights. As reported in the Agenda, "researchers are at the forefront of science and innovation and require a specific set of skills."¹¹ So too Research Managers. The CARDEA Framework provides this by defining the levels, core competencies and training required

⁸ <https://www.consilium.europa.eu/media/49980/st09138-en21.pdf>

⁹ <https://inorms.net/activities/raaap-taskforce/raaap-survey-2022/>

¹⁰ Based on responses 4 or 5 on the 5-point Likert type scale

¹¹ <https://ec.europa.eu/migrant-integration/sites/default/files/2020-07/SkillsAgenda.pdf>

for a successful career in Research Management. The Framework enables people to acquire the skills they need for the role of research manager by providing up to date information on the skills required for the role. The Framework is accessible, easily understandable, interoperable between sectors and thus compliments [CEDEFOP](#) as it will promote the skills and qualifications required for the role of Research Manager. It also compliments [ESCO](#) as the CARDEA Matrix Research Manager Framework supports role mobility across Europe by offering a “common language” on research manager skills and competencies that can be used by different stakeholders on employment and education and training topics.

E. EURAXESS Network and ERA Talent Hubs

The interoperability of the CARDEA Matrix for Research Manager Careers, which echoes the promotion of attractive and sustainable research careers, balanced talent circulation, and international, transdisciplinary, and intersectoral mobility across the European Research Area (ERA), is supported by the broadening of the EURAXESS services, network, and portals into an ERA Talent Platform.

The EURAXESS¹² services, network, and portals serve as a comprehensive resource for researchers and innovators seeking to advance their careers and personal development by moving to other countries. By providing tailored information and support, free of charge, to researchers, entrepreneurs, and research performing organizations, EURAXESS facilitates the circulation of talent and fosters a vibrant research ecosystem. The expansion of EURAXESS into an ERA Talent Platform, an online one-stop-shop, further enhances its structure and governance, leveraging links to [Europass](#) and the [EURES](#) network of European public employment services.

The ERA Talent Platform, with its improved structure and governance, will ensure a seamless integration with Europass, the EU platform for managing learning and careers, and the EURES network. This integration enables researchers to efficiently manage their learning, careers, and mobility opportunities through a single platform, promoting interoperability and simplifying administrative processes. Researchers will have access to a wide range of resources, including job and funding opportunities, career development guidance, and free tools, facilitating their international, transdisciplinary, and intersectoral mobility.

The ERA Communication emphasizes the importance of supporting research careers and fostering open science, inclusiveness, and access to excellence. The toolbox of support measures proposed aligns with the goals of EURAXESS and the CARDEA Matrix for Research Manager Careers, as they rely on frameworks and attractive career opportunities to enhance the overall quality and attractiveness of the research system in the ERA which aligns with the CARDEA Matrix, highlighting the need for interoperable and attractive careers for research managers.

Additionally, the ERA4You policy initiative aims to promote a geographically balanced circulation of research and innovation talents. By strengthening retaining, attracting, and return activities through favourable working conditions and improved access to mobility funding programs, ERA4You seeks to boost the permeability and employability of research and innovation talents

¹² <https://euraxess.ec.europa.eu/>

across sectors. It also emphasizes the importance of enhancing interaction between ecosystem actors for training and career development, which aligns with the objectives of the CARDEA Matrix for Research Manager Careers.

In conclusion, the interoperability of the CARDEA Matrix for Research Manager Careers is supported by the broadening of EURAXESS into an ERA Talent Platform, which offers researchers comprehensive support for their careers and mobility. This integration, along with the ERA4You policy initiative, fosters attractive and sustainable research careers, balanced talent circulation, and international, transdisciplinary, and intersectoral mobility, ultimately enhancing the overall research system within the European Research Area.

4. Benefits of the Framework

A commonly understood European Framework for Research Manager Careers will serve several practical purposes for different categories of users but is mainly intended to provide some reference to 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

- 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.

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.

5. Actors using the Framework.

The intention of having a Research Manager 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 envisages introducing 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 framework when publishing their job and funding adverts on a European scale. Commission programmes could soon start using the framework as a consistent categorisation for different funding instruments. It may also assist the proposed **Observatory on Research Careers** which will use a range of quantitative and qualitative methods to gather data on researchers and Research Managers.

6. Nomenclature European Research Manager Careers

Broad use of [ESCO](#) for the definition of Research Managers:¹³ “research managers oversee the research and development functions of a research facility or program or university. They support the executive staff, coordinate work activities, and monitor staff and research projects. They may work in a wide array of sectors, such as the chemical, technical and life sciences sector. Research managers can also advise on research and execute research themselves.” **This section will be updated further. There is currently a lot of work underway to define the role of Research Manager.**

CARDEA definition of Research Manager

Research Managers enable the performance of research in all its applications. Research managers hold specialised or generalist roles within the research ecosystem. (To be confirmed by CARDEA consortium partners).

¹³ https://esco.ec.europa.eu/en/classification/occupation_main

Nomenclature Used in Research Manager Job Adverts.

<https://www.zippia.com/research-manager-jobs/>

<https://climbtheladder.com/research-manager/>

<https://www.calhr.ca.gov/state-hr-professionals/pages/5734.aspx>

<https://www.zippia.com/senior-research-manager-jobs/what-does-a-senior-research-manager-do/>

7. Training Certification and Micro-Credentials¹⁴

The results of the CARDEA¹⁵ survey demonstrates that Research Managers need and want training in the competency areas that they think are the most important to carry out their role and that they are eager to engage in professional development initiatives that will enhance their capacities and their effectiveness as research management professionals. This is especially true for transversal skills such as attention to detail, critical thinking, decision making and relationship management skills such as collaborating for success. Developing and managing partnerships with internal and external stakeholders is also an area where there is a lack of training for Research Managers.

The inclusion of a training in the CARDEA Framework is critical. These modules will be developed further on in the Project. However, the need of upskilling for research management staff is in line with the empowerment of training and lifelong learning enshrined in the **European Skills Agenda**, launched in July 2020. The agenda sets ambitious, quantitative objectives for upskilling (improving existing skills) and reskilling (training in new skills) to be achieved within the period 2020-2025, through 12 actions. The implementation of these actions is further promoted via the launch of the initiative of **2023 European Year of Skills**, whose aim is to make sure that European workforce skills are relevant for labour market needs. Member States have endorsed the EU 2030 social targets that at least 60% of adults should participate in training every year, already presenting their national contribution to meeting this target.

Among its 12 flagship actions of the European Skills Agenda, new initiative on a European **approach to micro-credentials** aims to support the quality, transparency and take-up of micro-credentials across the EU, in order to encourage people to upskill and reskill in a fast and effective way, in line with needs of the labor market and a fast-changing society. The micro-credentials answer to the need to reskill and upskill through more flexible alternatives than a full degree in order to overcome the gap between the learning outcomes of initial formal qualifications and emerging skills needs in the labor market.

¹⁴ Chiucconi Barbara, Feliziani Erica, CARDEA Training and Development WP 7

¹⁵ https://www.ucc.ie/en/media/research/cardea/Cardea_Report_Summary_FINAL.pdf

Within the CARDEA survey the participants were asked to rate the importance of specific skills for an effective research management activity and whether they had been offered training in these skills. Respondents chose among a list of 90 skills, that were grouped into 9 families, based on a comprehensive review of the literature on research management and RM roles.

Within the target group of RMs, CARDEA training modules will target both **senior** and **early-stage research managers**, including **newcomers**. The goal is to develop several training modules that are all together a comprehensive training to people new in the profession – a sort of **core learning** common to all categories of RMs - but concomitantly useful to more expert staff that could choose some topics according to their own needs. Also, CARDEA training will provide support to those RMs migrating to other Research Management tasks or specialisation (inter-area mobility).

The CARDEA training programme will consist of 16 **modules** to be delivered through **free on-line webinars**. The format of webinar embraces both the possibility to attend it in real time, but also the possibility to record the training and enjoy it on-demand.

CARDEA training modules will be certified through micro-credentials which are, according to the EU definition, the record of the learning outcomes that a learner has acquired following a small volume of learning (an EU approach to micro-credentials, December 2021). The micro-credentials will be recorded in an open badge that will be issued by the University of Macerata, leader of CARDEA WP 7 “Training and development”. The choice of **micro-credentials** and **open badge** are justified by its flexibility and practicality, especially for the participants to the training. Indeed, they can select the modules according to their needs and easily show the competences acquired through the open badge. The micro credentials recorded in the open badge will be a proof of the acquired competences.

8. The CARDEA Matrix Framework for Research Managers

Profile Descriptions

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**

The framework identifies both necessary and desirable characteristics which could be applicable across a wide range of careers including those in higher education, the private and public sectors. The necessary competencies focus on those that are associated directly with research manager activity regardless of whether it is in the public or private sector. Many of these are transferable to other careers, for example, Project Managers, Data Analysts, Scientific Communicators etc. Clearly there are other skills that are sector dependent and are classified under the heading of

desirable competencies. These may include HR Research Specialisation, Research Finance Specialisation etc.

The 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 or universities of applied sciences). Regardless of any particular profession or specialisation, one can outline broad profiles that describe the different characteristics Research Managers possess.

CARDEA Levels of Research Managers

It is envisioned that direct entry through open competition (recruitment) can occur at any level. Opportunities for career development and progression are integrated into the Framework.

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 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 includes 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 is formal responsibility for research/business areas and his / her actions and decisions have a high-level strategic impact.

For the purposes of this document, 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.

Competency Proficiency Levels Key¹⁶

These levels identify the competency proficiency required for RM 1 to RM 4. 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 competition can occur at any level.

Foundational

Foundational level represents the starting point or the basic level of proficiency in a competency. At this level, individuals possess fundamental knowledge and skills related to the competency but may require guidance and supervision to perform tasks effectively. They are likely to have limited practical experience in applying the competency and may still be developing their abilities.

Intermediate

Intermediate level denotes a moderate level of proficiency in a competency. At this stage, individuals have acquired a more comprehensive understanding and practical experience in applying the competency. They can work independently and handle tasks of moderate complexity but may still seek guidance or support for more challenging aspects.

Advanced

Advanced level represents a high level of proficiency and expertise in a competency. Individuals at this stage have demonstrated significant mastery of the competency, possessing a deep understanding and substantial experience. They can handle complex tasks with confidence and may also be capable of guiding and mentoring others in the competency area.

Expert

Expert level represents the highest level of proficiency in a competency. Individuals at this stage are considered masters in the field and possess exceptional knowledge, skills, and experience. They can handle the most intricate and challenging tasks with ease and are often sought after for their expertise and leadership in the competency area. Additionally, experts can innovate, develop new approaches, and contribute significantly to advancing the field.

¹⁶ For more details on how the RM competency levels have been defined, please see the following sources: <https://hr.nih.gov/working-nih/competencies/competencies-proficiency-scale>; Russo, D., 2016, May. Competency measurement model. In *European Conference on Quality in Official Statistics* (Vol. 29); <https://www.cimaglobal.com/Studying/Becoming-a-cgma/Practical-experience-requirements/Updated-requirements/CGMA-Competency-Framework/>; <https://journals.sagepub.com/doi/pdf/10.1177/21582440211006124>.

9. Research Manager Key Competency Areas (Job Families)

Following a comprehensive review of the literature on Research Management and Research Manager roles the following key competency areas or job families within Research Management were identified.¹⁷ CARDEA cites the competencies as identified by SARIMA in their publication *Scaling up Professionalization of Research Management in Southern Africa*.

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

¹⁷ <https://www.srainternational.org/blogs/srai-jra1/2020/05/03/scaling-up-professionalization-of-research-managem>
 Charmaine Williamson University of South Africa Karin Dyason Southern African Research and Innovation Management Association Jose Jackson Michigan State University

Research Manager Core Competencies

Core competencies capture the capabilities that are important across all levels and within the key competency areas of RM1 to RM4 roles. The importance of core competencies may vary according to individual RM job duties and requirements within sectors. The core competencies for RM1 to RM4 as identified by CARDEA are indicated below.

The following core competencies for Research Management and Research Manager Roles have been identified through the CARDEA Survey¹⁸ and the Ad hoc Action 17 Working Group in Budapest:

- Technical Skills
- Specialised Knowledge
- Project management
- Outreach and community
- Financing/Contracting/Compliance
- Line management and Talent Development
- Communication
- Relationship management
- Traversal Skills

Core Competencies and individual Skills as per CARDEA Survey

Technical skills, e.g., subject matter expertise

Data collection and collation, and analysis

Discipline-specific skills

IT skills

Knowledge of the research systems

Language skills

Legal skills

Understanding and using research evidence

Specialised knowledge for research performing organisational contexts

Finding funding

Lobbying

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

Open access scholarship

Organisational behaviour

EU Policy Drivers

Preparation of bids (interinstitutional)

Preparing funding applications

Tech transfer/patents

Understanding the funding ecosystem

Understanding unconscious bias

HR Research

¹⁸ CARDEA Data set <https://zenodo.org/record/7882908#.ZE-Edc7MKHs>

Project Management

- Achieving project deliverables
- Designing monitoring and evaluation frameworks and indicators
- Establishing project plans or policies
- General Project Management
- Knowledge of databases
- Knowledge of Microsoft projects (or other PM software)
- Meeting management
- Relationship management
- Time management

Outreach and Community

- Academic and community relationship support
- Business and commercial liaison
- Community and/or public outreach
- Provision of training
- Responsibility for engaging with key stakeholders

Line management of others (Talent Development)

- Coaching skills for managers
- Delivering coaching/mentoring
- Mentoring
- People management and managing team performance
- Recruitment and selection
- Reporting or evaluation taking account of differing needs of target audiences
- Staff review, performance, and development

Financing/contracting/compliance

- Audit trails, reporting on finance to funders or management
- Conducting due diligence on partners/collaborators
- Contract negotiation
- Developing budgets
- Ensuring adherence to funders' terms and conditions
- Financial Management
- Monitoring budget, tracking expenditure or cashflow forecasting
- Navigating funding responsibilities
- Processing financial claims and payments
- Procurement

Communication

- Building and maintaining relationships with funders, partners or other stakeholders
- Coordination of communication
- Designing and implementing communication plans
- Media Liaison
- Preparing and writing reports (including evaluation reports and funder reports)
- Preparing briefings
- Presentation skills
- Public speaking/ presentation
- Social Media
- Website planning and design

Relationship Management

- Building trust within partnerships
- Collaborating for success
- Contributing to fair working environments, e.g., anti-bullying initiatives
- Diplomacy and negotiation, and mediation
- Facilitation skills
- Handling difficult conversations
- Managing competing demands
- Networking
- Promoting or supporting mutual learning
- Teamwork

Transversal skills

- Attention to detail
- Autonomy
- Creativity
- Critical thinking
- Cultural sensitivity
- Decision making
- Diversified knowledge set
- Efficiency
- Flexibility
- Leadership
- Motivation
- Openness
- Proactivity
- Problem-solving
- Reliability
- Research integrity/ethical behaviour
- Strategic thinking
- Stress management
- Values appreciation

Each Research Manager role involves competency level requirements that reflect the variance in complexity, scope, and responsibility across the roles RM1 to RM4.

Core Competencies as per CARDEA Survey, including Proficiency Levels (See Annex 1)

10. Conclusion

Research Managers may be involved fully or partially in different types of activities (e.g., project management, funding/grant adviser, research communication, technical transfer, data steward etc.) in any sector of the economy or society.

Researcher Managers identify options to support and/or contribute to new Research and Development activities and plan for and manage them by using high-level skills and knowledge developed through formal education and training or from practical experience in performing and/or supporting research.

For the category of Research Managers:

- The CARDEA Matrix is flexible and recognises that an individual may be involved in hybrid combinations of roles as researcher, research manager, and/or research support.
- The CARDEA Matrix also recognises that some roles may involve combinations of aspects of research, research management, and/or research support activities within the research manager job family.
- The CARDEA Matrix recognises that training in the competencies as identified by the CARDEA Survey will be included in this framework as further developed.
- This is a living document and more work in the definition and classification of the role of research manager within the ERA is currently underway.

A **simple and interoperable** career framework for Research Managers within the European Research Area (ERA) offers a multitude of benefits. The CARDEA Matrix Framework provides clarity and transparency, allowing research managers to navigate their careers from entry level. By clearly defining levels (RM 1 to RM4), proficiency levels, job families, competencies and training, it establishes a clear pathway for professional growth and development. Moreover, an interoperable framework ensures consistency and comparability across different research institutions, universities, and Member States, enables implementation, mobility, and exchange of talent within the ERA. The CARDEA Matrix Framework is a fair, open, and transparent framework for all research managers.

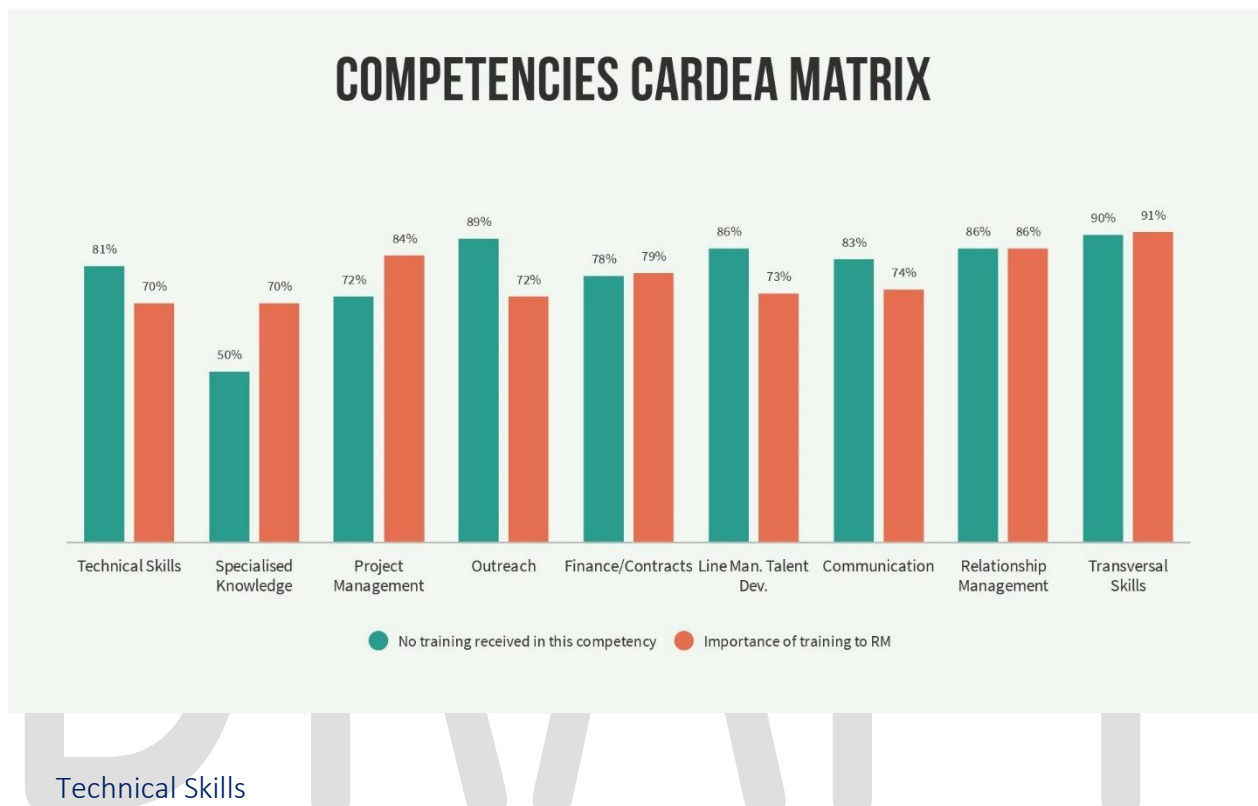
Examples of research manager competencies as per CARDEA are not intended to be exhaustive but serve as an indication of the types of competencies held by research managers across all sectors. [Link to CARDEA [Survey Results](#)]



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Annex 1

The CARDEA framework of key competencies for Research Managers consists of a set of specific competencies, bound together in an integrated approach.¹⁹



(i) Foundational Technical Skills:

1. Proficiency: possesses basic knowledge and understanding of fundamental technical concepts, tools, and techniques related to the field.
2. Application: can apply foundational technical skills to perform routine tasks and simple projects under supervision.
3. Learning ability: demonstrates a willingness to learn and develop foundational technical skills through formal training, self-study, and on-the-job experience.
4. Troubleshooting: can identify and resolve basic technical issues with guidance and support from more experienced colleagues.

(ii) Intermediate Technical Skills:

1. Competence: has acquired a solid understanding of intermediate technical concepts, tools, and techniques, demonstrating proficiency in their application.
2. Experience: has completed several projects independently, gaining practical experience in applying intermediate technical skills.

¹⁹ For further details on the competencies outlined in this section, please see the following sources:

https://search.oecd.org/callsfortenders/competency_framework_en.pdf;
<https://www.oecd.org/education/skills-beyond-school/definitionandselectionofcompetenciesdeseco.htm>;
<https://www.oecd.org/pisa/definition-selection-key-competencies-summary.pdf>;
https://www.oecd.org/education/2030-project/teaching-and-learning/learning/transformational-competencies/Transformative_Compentencies_for_2030_concept_note.pdf.

3. **Problem-Solving:** able to analyse and solve moderately complex technical problems, utilizing a combination of knowledge, experience, and available resources.
4. **Collaboration:** capable of collaborating with team members, providing technical guidance, and contributing to the successful completion of projects.

(iii) **Advanced Technical Skills:**

1. **Expertise:** possesses in-depth knowledge and expertise in advanced technical concepts, tools, and techniques, surpassing the average level of proficiency in the field.
2. **Innovation:** demonstrates the ability to think creatively and apply advanced technical skills to develop innovative solutions to complex problems.
3. **Leadership:** exhibits leadership qualities by guiding and mentoring junior team members, providing technical insights, and leading technical projects.
4. **Analysis and Optimization:** proficient in analysing complex technical systems or processes, identifying areas for improvement, and implementing optimization strategies.

(iv) **Expert Technical Skills:**

1. **Mastery:** demonstrates mastery in the field, showcasing exceptional knowledge and expertise in highly specialized technical areas.
2. **Thought Leadership:** recognized as a thought leader and subject matter expert in the industry, contributing to the advancement and development of technical knowledge.
3. **Strategic Thinking:** capable of envisioning long-term technical strategies, guiding organizational decisions, and influencing the direction of technical projects.
4. **Complex Problem-Solving:** skilled in tackling highly complex technical challenges, utilizing extensive knowledge, experience, and critical thinking abilities to devise innovative solutions.

Specialised Knowledge²⁰

(i) **Foundational Specialized Knowledge:**

1. **Familiarity:** possesses basic knowledge and understanding of the core concepts, theories, and principles in a specific specialized area.
2. **Fundamentals:** demonstrates foundational knowledge required to perform entry-level tasks and participate in basic projects related to the specialized field.
3. **Learning Ability:** shows eagerness to expand knowledge and develop a deeper understanding of the specialized area through continuous learning and exposure to relevant resources.
4. **Application:** able to apply foundational specialized knowledge to solve straightforward problems or address basic challenges under supervision.

(ii) **Intermediate Specialized Knowledge:**

1. **Proficiency:** demonstrates a solid grasp of intermediate-level concepts, theories, and practices within the specialized field.
2. **Experience:** has gained practical experience working on projects and tasks within the specialized area, developing a deeper understanding of its application.
3. **Analysis:** capable of analysing and interpreting complex information or data related to the specialized field, extracting meaningful insights, and drawing informed conclusions.

²⁰ For further details on the competencies outlined in this section, please see the following sources:
https://www.publicjobs.ie/documents/PAS_CS_Compency_Models_2017.pdf; Strong Concepts: Intermediate-Level Knowledge in Interaction Design Research
https://www.researchgate.net/publication/259823438_Strong_Concepts_Intermediate-Level_Knowledge_in_Interaction_Design_Research.

4. Collaboration: able to collaborate effectively with peers, contribute specialized knowledge to team projects, and provide guidance to less-experienced individuals.

(iii) Advanced Specialized Knowledge:

1. Expertise: possesses extensive knowledge and expertise in the advanced concepts, theories, and practices of the specialized field, surpassing the average level of proficiency.
2. Innovation: demonstrates the ability to think critically and creatively, applying advanced specialized knowledge to solve complex problems or develop innovative solutions.
3. Thought Leadership: recognized as a thought leader and subject matter expert in the specialized area, contributing to the advancement and dissemination of specialized knowledge.
4. Strategic Application: capable of applying specialized knowledge strategically to drive organizational goals, make informed decisions, and provide specialized guidance or consultancy.

(iv) Expert Specialized Knowledge:

1. Mastery: exhibits exceptional depth and breadth of knowledge in the specialized field, demonstrating an unmatched level of expertise and understanding.
2. Research and Development: actively engages in research and development activities, contributing to the advancement and expansion of specialized knowledge through publications, patents, or breakthrough innovations.
3. Thought Leadership: serves as a recognized authority and influencer in the specialized area, shaping industry trends, participating in conferences, and delivering keynote speeches.
4. Mentorship and Training: actively mentors and develops others, sharing specialized knowledge, providing guidance, and fostering the growth of future experts in the field.

Project Management²¹

(i) Foundational Project Management:

1. Understanding: possesses basic knowledge and comprehension of project management principles, concepts, and terminology.
2. Documentation: can assist in project documentation, such as developing project plans, creating schedules, and maintaining project records.
3. Coordination: demonstrates the ability to coordinate and communicate effectively with team members, tracking task progress, and providing basic project updates.
4. Risk Awareness: shows an understanding of basic project risks and the importance of identifying and escalating potential issues to more experienced project managers.

(ii) Intermediate Project Management:

1. Planning: capable of developing comprehensive project plans, including defining project scope, deliverables, timelines, and resource requirements.
2. Execution: can lead the execution of projects, assigning tasks, monitoring progress, and ensuring adherence to project milestones and quality standards.

²¹ For further details on the competencies outlined in this section, please see the following sources:
<https://nssso.gov.ie/en/publications/civil-service-competency-frameworks/>;
https://www.ops.gov.ie/app/uploads/2021/10/20211007_OPS2020-Project-Management-Competency-Framework-v4.2.pdf.

3. Stakeholder Engagement: demonstrates effective stakeholder management, engaging with project stakeholders, addressing their concerns, and providing regular project updates.
4. Problem-Solving: exhibits the ability to identify and resolve common project-related issues, applying established project management techniques and methodologies.

(iii) Advanced Project Management:

1. Leadership: displays strong leadership skills, effectively leading project teams, setting clear expectations, and motivating team members to achieve project objectives.
2. Budget Management: proficient in managing project budgets, monitoring project financials, identifying cost-saving opportunities, and ensuring project profitability.
3. Risk Management: skilled in conducting comprehensive risk assessments, developing risk mitigation strategies, and proactively managing project risks throughout the project lifecycle.
4. Stakeholder Management: capable of managing complex stakeholder relationships, anticipating and addressing stakeholder needs, and resolving conflicts effectively.

(iv) Expert Project Management:

1. Strategic Alignment: able to align project objectives with organizational strategic goals, contributing to the overall success and value realization of projects.
2. Portfolio Management: proficient in managing project portfolios, prioritizing projects, allocating resources effectively, and optimizing project selection processes.
3. Change Management: experienced in managing organizational change initiatives within projects, fostering a culture of adaptability, and minimizing resistance to change.
4. Continuous Improvement: actively seeks opportunities for process improvement, incorporating lessons learned from past projects, and implementing best practices in project management.

Outreach and Community²²

(i) Foundational Outreach and Community:

1. Communication: possesses basic communication skills to engage with community members and stakeholders effectively.
2. Awareness: demonstrates a basic understanding of the importance of outreach and community engagement in achieving organizational goals.
3. Relationship Building: shows the ability to establish basic connections and relationships with community members and stakeholders.
4. Participation: actively participates in outreach activities and contributes to community initiatives under guidance and supervision.

(ii) Intermediate Outreach and Community:

1. Stakeholder Engagement: demonstrates effective stakeholder management skills, engaging with community members, partners, and stakeholders to build relationships and foster collaboration.
2. Program Development: can contribute to the development and implementation of outreach programs or initiatives that align with community needs and organizational objectives.

²² For further details on the competencies outlined in this section, please see the following source: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/436073/cscf_fulla4potrait_2013-2017_v2d.pdf

3. Communication and Advocacy: exhibits improved communication skills to effectively convey information, advocate for community interests, and represent the organization's mission and values.
4. Community Needs Assessment: demonstrates the ability to conduct basic needs assessments to identify community priorities, challenges, and opportunities for engagement.

(iii) Advanced Outreach and Community:

1. Strategic Planning: capable of developing strategic plans and goals for outreach and community engagement, aligning them with organizational strategies.
2. Collaboration and Partnership: skilled in fostering collaborations and partnerships with community organizations, government entities, and other stakeholders to enhance outreach efforts and maximize impact.
3. Program Management: able to lead and manage complex outreach programs, including planning, implementation, monitoring, and evaluation, while ensuring effective resource allocation and stakeholder engagement.
4. Impact Measurement: proficient in measuring and evaluating the impact of outreach initiatives, using appropriate metrics and data analysis techniques to inform decision-making and improve program effectiveness.

(iv) Expert Outreach and Community:

1. Thought Leadership: recognized as a subject matter expert and thought leader in outreach and community engagement, contributing to the development of best practices and innovative strategies.
2. Advocacy and Influence: demonstrates exceptional advocacy and influencing skills, effectively representing community interests, and driving positive change at the organizational and societal levels.
3. Network Building: proficient in building extensive networks and fostering strong relationships with key influencers, community leaders, and decision-makers to leverage resources and support for community initiatives.
4. Sustainability and Empowerment: leads efforts to promote sustainable community development and empowerment, ensuring that community members have a voice, are actively involved, and have access to resources and opportunities.

Financing/Contracting/Compliance²³

(i) Foundational Financing/Contracting/Compliance:

1. Basic Understanding: possesses a basic understanding of financing, contracting, and compliance principles and concepts.
2. Knowledge Application: can apply basic financial, contractual, and compliance procedures in routine tasks and familiar situations.
3. Compliance Awareness: demonstrates awareness of the importance of compliance with legal and regulatory requirements in financial and contractual activities.
4. Documentation: capable of maintaining basic financial and contractual documentation and records.

²³ For further details on the competencies outlined in this section, please see the following sources:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/436073/cscf_fulla4potrait_2013-2017_v2d.pdf;
https://www.publicsector.sa.gov.au/data/assets/pdf_file/0020/211673/SAES-Competency-Framework.pdf.

(ii) Intermediate Financing/Contracting/Compliance:

1. Financial Analysis: demonstrates the ability to perform basic financial analysis, including budgeting, forecasting, and financial reporting.
2. Contract Management: proficient in managing contracts, including drafting, reviewing, negotiating, and ensuring compliance with contractual terms and conditions.
3. Compliance Management: exhibits the ability to identify and address compliance risks, develop compliance programs, and ensure adherence to relevant laws, regulations, and policies.
4. Stakeholder Collaboration: capable of collaborating with internal and external stakeholders to gather financial and contractual information, resolve issues, and ensure compliance.

(iii) Advanced Financing/Contracting/Compliance:

1. Financial Planning and Strategy: proficient in developing financial plans, strategies, and models to support organizational goals and decision-making.
2. Contract Negotiation: skilled in negotiating complex contracts, including pricing, terms, and conditions, while considering risk mitigation and maximizing value for the organization.
3. Compliance Oversight: capable of overseeing and monitoring compliance activities, conducting audits, and implementing corrective measures to address compliance gaps and risks.
4. Risk Management: demonstrates expertise in identifying financial and contractual risks, implementing risk mitigation strategies, and ensuring business continuity.

(iv) Expert Financing/Contracting/Compliance:

1. Financial Leadership: demonstrates exceptional financial leadership skills, providing strategic financial guidance, driving financial performance, and optimizing resource allocation.
2. Complex Contract Management: proficient in managing and overseeing complex contracts with multiple stakeholders, negotiating intricate terms, and resolving disputes.
3. Regulatory Expertise: possesses expert knowledge of applicable regulations, industry standards, and best practices, ensuring compliance at all levels of the organization.
4. Compliance Strategy and Governance: leads the development and implementation of compliance strategies, policies, and governance frameworks, promoting a culture of integrity and compliance across the organization.

Line Management and Talent Development²⁴

(i) Foundational Line Management and Talent Development:

1. Supervision: demonstrates the ability to supervise and provide guidance to individual team members, ensuring work is completed effectively and efficiently.
2. Performance Management: capable of conducting basic performance evaluations, providing constructive feedback, and setting clear performance goals.
3. Training Support: provides basic support in identifying training needs, coordinating training programs, and monitoring employee development progress.

²⁴ For further details on the competencies outlined in this section, please see the following sources:
https://www.publicjobs.ie/documents/PAS_CS_Compency_Models_2017.pdf;
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/436073/cscf_fulla4potrait_2013-2017_v2d.pdf.

4. Communication: exhibits effective communication skills to convey expectations, provide direction, and foster a positive work environment.
- (ii) Intermediate Line Management and Talent Development:
1. Team Leadership: shows the ability to lead a team, delegating tasks, setting priorities, and fostering collaboration and synergy among team members.
 2. Talent Identification: capable of identifying and assessing the skills, strengths, and development areas of team members to support talent management initiatives.
 3. Performance Coaching: proficient in providing regular coaching and support to team members, helping them overcome challenges and develop their skills and capabilities.
 4. Succession planning: participates in succession planning activities, contributing to the identification and development of high-potential employees for future leadership roles.
- (iii) Advanced Line Management and Talent Development:
1. Strategic Alignment: able to align line management and talent development strategies with organizational goals and initiatives.
 2. Talent Development Programs: proficient in designing and implementing comprehensive talent development programs, including coaching, mentoring, training, and rotational assignments.
 3. Change Management: demonstrates the ability to lead and manage change within the team or organization, ensuring effective communication, engagement, and adaptation to change.
 4. Performance Optimization: exhibits expertise in optimizing team performance, utilizing performance metrics, feedback mechanisms, and performance improvement plans.
- (iv) Expert Line Management and Talent Development:
1. Leadership Development: acts as a leader in developing and implementing leadership development programs and initiatives to enhance leadership capabilities throughout the organization.
 2. Talent Management Strategy: possesses expertise in developing and executing talent management strategies, including talent acquisition, retention, and succession planning.
 3. Organizational Culture: exhibits the ability to shape and reinforce a positive organizational culture that supports employee engagement, diversity and inclusion, and continuous learning and development.
 4. Coaching and Mentoring: serves as an expert coach and mentor, providing guidance and support to leaders and high-potential individuals, fostering their growth and career progression.

Communication²⁵

(i) Foundational Communication:

1. Listening Skills: demonstrates the ability to actively listen and understand others' perspectives and ideas.
2. Clarity: communicates information in a clear and concise manner, using appropriate language and avoiding jargon.
3. Verbal Communication: exhibits basic verbal communication skills, expressing ideas and thoughts effectively in conversations and meetings.

²⁵ For further details on the competencies outlined in this section, please see the following source:
https://www.publicjobs.ie/documents/PAS_CS_Compentency_Models_2017.pdf

4. Written Communication: capable of writing basic emails, memos, and other forms of written communication with clarity and professionalism.
- (ii) Intermediate Communication:
1. Effective Presentation: shows the ability to deliver presentations with clarity, engaging the audience and conveying information effectively.
 2. Interpersonal Skills: demonstrates the ability to build rapport and maintain positive relationships with colleagues, clients, and stakeholders.
 3. Nonverbal Communication: exhibits awareness of nonverbal cues and uses them effectively to enhance communication, such as body language and facial expressions.
 4. Active Collaboration: participates actively in group discussions, contributing ideas and opinions while respecting diverse perspectives.
- (iii) Advanced Communication:
1. Influencing and Persuasion: demonstrates the ability to influence others' opinions and decisions through effective communication techniques and compelling arguments.
 2. Conflict Resolution: proficient in resolving conflicts and disagreements through open and constructive dialogue, finding mutually beneficial solutions.
 3. Cross-Cultural Communication: exhibits cultural sensitivity and adapts communication styles to effectively engage with individuals from diverse cultural backgrounds.
 4. Negotiation Skills: possesses strong negotiation skills, understanding the dynamics of negotiation and applying effective strategies to achieve desired outcomes.
- (iv) Expert Communication:
1. Strategic Communication: exhibits expertise in developing and implementing strategic communication plans that align with organizational goals and target specific audiences.
 2. Crisis Communication: demonstrates the ability to effectively manage communication during crisis situations, providing accurate and timely information while maintaining transparency and trust.
 3. Storytelling: utilizes storytelling techniques to convey complex ideas, engage audiences emotionally, and create a compelling narrative around organizational messages.
 4. Executive-Level Communication: capable of communicating complex information and ideas to senior executives and stakeholders, tailoring messages to their needs and interests.

Relationship Management²⁶

- (i) Foundational Relationship Management:
1. Interpersonal Skills: demonstrates the ability to build positive relationships with others, displaying empathy, active listening, and effective communication.
 2. Relationship Building: shows the capability to initiate and cultivate relationships with stakeholders, colleagues, and clients in a professional manner.
 3. Customer Service: exhibits a customer-focused approach, providing assistance and support to stakeholders to meet their needs and expectations.
 4. Trust Building: displays integrity and reliability, earning the trust and confidence of others through consistent and ethical behaviour.

²⁶ For further details on the competencies outlined in this section, please see the following sources:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/436073/cscf_fulla4potrait_2013-2017_v2d.pdf;
https://www.publicsector.sa.gov.au/_data/assets/pdf_file/0019/214327/Middle-Manager-Competency-Framework.pdf.

(ii) Intermediate Relationship Management:

1. Stakeholder Engagement: capable of identifying key stakeholders and developing strategies to engage and involve them in organizational initiatives.
2. Collaboration: demonstrates the ability to collaborate effectively with diverse individuals and teams, fostering cooperation and shared goals.
3. Conflict Resolution: exhibits skills in managing conflicts and resolving disagreements through effective communication and negotiation techniques.
4. Relationship Maintenance: shows the capability to nurture and maintain relationships over time, understanding the importance of regular communication and follow-up.

(iii) Advanced Relationship Management:

1. Strategic Partnerships: proficient in identifying and establishing strategic partnerships with external organizations to leverage resources and achieve shared goals.
2. Influencing and Persuasion: demonstrates the ability to influence and persuade stakeholders to gain their support and commitment to organizational objectives.
3. Stakeholder Analysis: exhibits expertise in conducting stakeholder analysis to understand their interests, needs, and influence, and to develop tailored engagement approaches.
4. Networking: shows the capability to build and expand professional networks, utilizing relationships to access resources, information, and opportunities.

(iv) Expert Relationship Management:

1. Key Account Management: demonstrates expert-level skills in managing key accounts or strategic clients, providing exceptional service and building long-term relationships.
2. Diplomacy and Relationship Navigation: exhibits advanced skills in navigating complex relationships, managing conflicting interests, and finding mutually beneficial solutions.
3. Stakeholder Influence and Collaboration: possesses exceptional ability to influence and collaborate with stakeholders at all levels, including executives and senior leaders.
4. Relationship Strategy Development: shows expertise in developing comprehensive relationship management strategies, aligning them with organizational goals and objectives.

Traversal Skills²⁷

(i) Foundational Traversal Skills:

1. Adaptability: demonstrates the ability to adjust and thrive in different situations, embracing change and learning new skills as needed.
2. Time Management: capable of effectively managing time and prioritizing tasks to meet deadlines and achieve goals.
3. Problem Solving: exhibits basic problem-solving skills, including identifying issues, analysing information, and proposing practical solutions.
4. Resilience: displays resilience in the face of challenges, maintaining a positive attitude and persevering through setbacks.

(ii) Intermediate Traversal Skills:

1. Critical Thinking: proficient in analysing information, evaluating arguments, and making logical and reasoned decisions.

²⁷ For further details on the competencies outlined in this section, please see the following source:
https://www.hiqa.ie/sites/default/files/2022-06/hiqa-competency-framework_feb-2020.pdf

2. Collaboration: demonstrates the ability to work collaboratively with diverse individuals and teams, leveraging collective strengths and expertise.
3. Learning Agility: exhibits a willingness and ability to learn new concepts, technologies, and approaches, adapting quickly to changing circumstances.
4. Decision Making: capable of making informed decisions by considering relevant factors, assessing risks, and weighing potential outcomes.

(iii) Advanced Traversal Skills:

1. Innovation and Creativity: possesses the ability to generate and implement innovative ideas, approaches, and solutions to address complex challenges.
2. Complex Problem Solving: shows proficiency in solving complex problems by analysing multiple variables, considering alternative perspectives, and designing comprehensive solutions.
3. Systems Thinking: exhibits the capability to understand and analyse complex systems, identifying interdependencies and considering the broader impact of decisions.
4. Emotional Intelligence: demonstrates a high level of emotional intelligence, including self-awareness, empathy, and the ability to manage interpersonal relationships effectively.

(iv) Expert Traversal Skills:

1. Strategic Thinking: exhibits expertise in thinking strategically, considering long-term goals, market trends, and competitive landscapes to drive organizational success.
2. Leadership: demonstrates exceptional leadership skills, inspiring and guiding others toward achieving shared objectives and fostering a culture of excellence.
3. Change Leadership: possesses expertise in leading and managing change initiatives, effectively navigating resistance and guiding individuals and teams through transitions.
4. Systems Leadership: shows the capability to lead across complex systems, collaborating with diverse stakeholders, and driving collective action to achieve systemic change.

Annex II

Generic Job Descriptions RM 1 to RM 4

RM 1 Job Description

First Stage Research Manager (RM 1) Job Description - Generic

Position: First Stage Research Manager (RM 1)

Location: [Specify Location]

Department: [Specify Department]

Reports to: [Specify Reporting Line, e.g., Senior Research Manager, Director of Research etc.]

Summary: First Stage Research Manager (RM 1)

The 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. It is recommended that the role focuses on laying the foundation for mastering research management competencies and skills.

Key Accountabilities:

1. Research Management:

- Assist senior research managers and other senior research/academic staff in implementing and coordinating research projects and programs.
- Ensure timely and accurate completion of research tasks within the assigned portfolio.
- Monitor and report on the progress of research activities to ensure adherence to set timelines and objectives.
- Provide specific research management skills to support the on-going development of the research team and to contribute to the transfer of knowledge in the specific research area.
- To coordinate lab activity to support the research area/project (where required).
- Co-ordinate day-to-day work to support the research project.
- Liaise with Principal Investigator(s) and colleagues on matters relating to the management of the research.
- Develop knowledge and understanding of the operation of the research project and related work.
- Ensure compliance with Health and Safety procedures.
- Perform other duties related to the work described herein.

2. Stakeholder Collaboration:

- Collaborate with research teams, business units, and external stakeholders to ensure seamless execution of research projects.
- Attend and participate in meetings, workshops, and seminars as a representative of the research group/unit/organisation.

- Facilitate collaboration by liaising with other research groups within the organisation and externally including industry projects.
- Develop and maintain a good working relationship with service departments in the organisation.

3. Learning and Development:

- Continuously develop skills and competencies required for successful research management.
- Attend training programs, seminars, and workshops to stay updated with the latest research methodologies and trends.

4. Operational Understanding:

- Gain a basic understanding of the research/business structures and operations.
- Assist in integrating research outcomes into operational practices and business strategies.

5. Documentation and Reporting:

- Assist in preparing project reports, documentation, and presentations.
- Ensure accurate and up-to-date record keeping for all research activities under the purview.

Please note:

- The role might require occasional travel for research meetings and seminars.
- Flexibility in working hours may be needed based on research requirements.

Essential Criteria:

- A bachelor's degree in [Relevant Field, e.g., Science, Business, Arts], Master's degree preferred or equivalent professional experience.
- Basic understanding of research/business structures and operations.
- Excellent interpersonal and communication skills.
- Demonstrated ability to work in a team-oriented environment.
- Strong organisational and time management skills.
- Demonstrable achievements in delivering results.
- Ability to interact with stakeholders from a range of disciplines.
- Attention to detail.
- Report writing and presentation skills.
- Capability of working effectively within a team to achieve results.
- Organisational and communication skills.
- Initiative.

Desirable Criteria:

- Proficiency in relevant research tools and software.
- Ability to multitask and prioritize responsibilities.
- Critical thinking and problem-solving capabilities.
- Previous experience in research management or a related field.

RM 2 Job Description

Recognised Research Manager (RM 2) Job Description - Generic

Position: Recognised Research Manager (RM 2)

Location: [Specify Location]

Department: [Specify Department]

Reports to: [Specify Reporting Line, e.g., Senior Research Manager, Director of Research etc.]

Summary: 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 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.

Key Accountabilities:

1. Research Management:

- Assist senior research managers and other senior research/academic staff in implementing and coordinating research projects and programs.
- Ensure timely and accurate completion of research tasks within the assigned portfolio.
- Monitor and report on the progress of research activities to ensure adherence to set timelines and objectives.
- Provide specific research management skills to support the on-going development of the research team and to contribute to the transfer of knowledge in the specific research area.
- To coordinate lab activity to support the research area/project (where required).
- Co-ordinate day-to-day work to support the research project.
- Liaise with Principal Investigator(s) and colleagues on matters relating to the management of the research.
- Develop knowledge and understanding of the operation of the research project and related work.
- Ensure compliance with Health and Safety procedures.
- Perform other duties related to the work described herein.

2. Strategic Research Management:

- Engage with senior leadership to communicate research findings, recommendations, and insights.
- Contribute to the development and execution of research strategies in line with organisational goals.

- Oversee and monitor the implementation of research projects, ensuring they align with the broader research strategy.

3. Stakeholder Engagement:

- Collaborate with research teams, business units, and external stakeholders to ensure seamless execution of research projects.
- Attend and actively participate in meetings, workshops, and seminars as a representative of the research group/unit/organisation.
- Facilitate collaboration by liaising with other research groups within the organisation and externally including industry projects.
- Develop and maintain a good working relationship with service departments in the organisation.

4. Learning and Development:

- Continuously develop skills and competencies required for successful research management.
- Attend training programs, seminars, and workshops to stay updated with the latest research methodologies and trends.

5. Operational Excellence:

- Utilise a moderate understanding of research/business operations to optimise processes and methodologies.
- Monitor and ensure the quality and integrity of research activities and data.

6. Team Leadership and Collaboration

- Provide guidance and mentorship to junior research team members, although formal managerial responsibilities may be limited.
- Foster a collaborative environment that encourages knowledge sharing and best practice implementation.

7. Documentation and Analysis:

- Oversee the preparation of comprehensive reports, presentations, and other research-related materials.
- Summarise the results of research data to draw actionable insights, write reports etc.
- Ensure accurate and up-to-date record keeping for all research activities under the purview.

Please note:

- The role might require occasional travel for research meetings and seminars.
- Flexibility in working hours may be needed based on research requirements.

Essential Criteria:

- A master's degree in the relevant field preferred or equivalent professional experience.
- Proven experience in research management or a related field, showcasing intermediate expertise.
- Moderate understanding of research/business structures and operations.

- Excellent communication and stakeholder management skills.
- Ability to consider broader approaches or consequences of actions.
- Excellent interpersonal and communication skills.
- Demonstrated ability to work in a team-oriented environment.
- Demonstrable achievements in delivering results.
- Ability to interact with stakeholders from a range of disciplines.
- Excellent attention to detail.
- Excellent report writing and presentation skills.
- Capability of working effectively within a team to achieve results.
- Excellent organisational and communication skills.
- Strong level of Initiative.

Desirable Criteria:

- Proficiency in advanced research tools and software.
- Demonstrated analytical and critical thinking abilities.
- Ability to handle complex research projects with minimal supervision.

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RM 3 Job Description

Established Research Manager (RM 3) Job Description - Generic

Position: Established Research Manager (RM 3)

Location: [Specify Location]

Department: [Specify Department]

Reports to: [Specify Reporting Line, e.g., Senior Research Director, Head of Research.]

Summary: 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 role necessitates a comprehensive grasp of the organisation's landscape, strategic positioning, and operational plans. Individuals in this position drive the organization's research strategy and demonstrate robust analytical abilities, playing an essential part in charting the strategic direction for research and business objectives. The role includes formal responsibility for colleagues and their actions; and the knowledge that their decisions have a wider impact.

Key Accountabilities:

1. Research Management and Operational Oversight:

- Take responsibility for the ongoing development and implementation of the Unit's operational research management systems, policies, procedures, and best practices.
- Identify and implement efficiencies and improvements within the unit/organisation operational processes and procedures.
- Oversee the daily operational management of the [include e.g., Human Resources or Clinical Trials etc] aspects of the unit/organisation including [please list], and other aspects of administration and ensuring all such activities are in compliance with organisational policy in this regard.
- Help to coordinate recruitment processes, including cost analysis of posts to be advertised and liaison with HR, as well as other relevant Offices.
- Maintain and develop the Quality Management System for the unit, including oversight and preparation of Unit's applications.
- Work with the lab manager to manage [please include] and to continuously improve the suite of SOPs relating to lab procedures as well as health and safety, ensuring full compliance across the unit/organisation.
- Lead and coordinate the preparation and submission of annual and other reports to [funders], and other stakeholders as appropriate, ensuring timely and accurate receipt of required information from units' researchers across all partner institutions.

- Assist with the tracking of unit's metrics / KPIs and the development and deployment of an impact assessment framework to track the unit's impact across various domains.
- Manage the preparation of the unit's reporting materials for internal and external accountability processes, specifically the management of the units internal biannual reporting and input of data to [Funders] bespoke grants management system (please name).
- Facilitate the development of the units funding proposals and the growth of national and international research partnerships.
- Work with the organisations Funding Manager (s) to support the development and tracking of research grant proposals by all organisation research active staff.
- Work in partnership with other groups in the organisation and beyond, and other key partners, to realise opportunities for the unit.
- Lead the preparation and dissemination of project information and promotional material for stakeholders, including newsletters and annual reports etc.
- Work with the organisations Business Development team to develop relationships with industry and assist in the management of existing industry partnerships.
- Monitor, evaluate, and enhance research methodologies to ensure relevancy and efficiency.
- Monitor and ensure the quality and integrity of research activities and data.
- Deputise for the [please name the role] as required.

2. Strategic Research Management:

- Spearhead the formulation and implementation of research strategies in harmony with organisational goals and objectives.
- Advise senior leadership/research leadership on research-based strategic options that align with the organisation's overall strategy.
- Contribute to and lead the development and execution of research strategies in line with organisational and national goals.

3. Stakeholder Engagement:

- Lead and actively participate in meetings, workshops, and seminars as a representative of the research group/unit/organisation.
- Facilitate collaboration by liaising with other research groups within the organisation and externally including industry projects.
- Develop and maintain a good working relationship with service departments in the organisation.

4. Learning and Development:

- Continuously develop skills and competencies required for successful research management.
- Attend training programs, seminars, and workshops to stay updated with the latest research methodologies and trends.

5. Team Management and Development

- Assume formal responsibility for a team of research professionals, providing mentorship, training, and performance feedback.

- Foster an environment of collaboration, innovation, and continuous learning within the research team.

6. Analysis and Reporting:

- Leverage strong analytical skills to interpret complex data, translating findings into actionable strategic recommendations and reports.
- Oversee the creation and presentation of comprehensive research reports, communicating insights and recommendations to senior leadership.

Please note:

- The role might require frequent travel for industry conferences, research collaborations, and stakeholder meetings.
- Expected to lead and participate in high-level meetings, workshops, and strategy sessions.

Essential Criteria:

- A master's degree or PhD in the relevant field preferred or equivalent professional experience.
- Proven advanced [number of years] experience in research management or a related field, showcasing senior-level expertise.
- Strong understanding of organisational structures, operational plans, and strategic direction.
- Demonstrated ability in strategic thinking and analytical problem-solving.
- Proven experience in team leadership and management.
- Exceptional communication and interpersonal skills.
- Ability to make decisions with wide-reaching impacts, considering both immediate and long-term implications.
- Experience of working in a multidisciplinary research team environment and working with people from a wide range of cultures.
- Capacity to manage and prioritise a high workload, with a track record of delivering results under pressure and on time.
- Experience of budget management and managing industry collaborations in a research environment.
- A good understanding of the research funding environment in [Member State], Europe and further afield.
- Familiarity with the process of translating scientific research into application via commercialisation, policy formation, public engagement etc.
- Knowledge of IP protection, academic publication and other established methods of disseminating and commercialising research outputs.

Desirable Criteria:

- Proficiency in advanced research tools and software.
- Ability to lead the management of complex research projects.
- Track record in raising/managing research grant income from National and European funding bodies.
- A broad understanding of the area of research and related fields including an appreciation for the needs, priorities and associated challenges for organisations within this sector.
- Experience in the generation of newsletters, annual reports and outreach materials

RM 4 Job Description

Senior Research Manager (RM 4) Job Description - Generic

Position: Senior Research Manager (RM 4)

Location: [Specify Location]

Department: [Specify Department]

Reports to: [Specify Reporting Line, e.g., Chief Research Officer, Head of Research.]

Summary: 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 is formal responsibility for research/business areas and his / her actions and decisions have a high-level strategic impact. This role drives the overarching strategic vision of the research within the organisation. Individuals in this position hold formal responsibility for significant research and/or business areas, and their decisions carry considerable strategic weight, shaping the future direction of the organisation.

Key Accountabilities:

1. Strategic Vision and Leadership:

- Develop and lead the implementation of the long-term strategic vision for research, ensuring alignment with the organization's goals and objectives.
- Provide unparalleled insights based on expert knowledge, shaping the overall direction and success of the research and organization.

2. Operational Excellence and Oversight:

- Oversee research operations, ensuring that projects and initiatives are executed with precision and in accordance with the highest standards.
- Innovate and optimize research methodologies and practices, maintaining the organization's leadership in its domain.

3. Team Management, Mentorship & Development:

- Lead, mentor, and develop a team of research professionals, fostering a culture of excellence, innovation, and continuous learning.
- Establish performance metrics and ensure that the team consistently meets or exceeds them.

4. High-Level Stakeholder Engagement:

- Engage and collaborate with top-tier stakeholders, both internal and external, to ensure the alignment and integration of research outcomes into broader organisational strategies.
- Represent the research department/unit/organisation at the highest levels, both within the organisation and in external forums.

5. Strategic Analysis & Decision Making:

- Use expert knowledge to critically analyse research findings, providing unique insights that guide strategic decision-making processes.
- Ensure that research initiatives not only meet immediate objectives but also support the long-term strategic goals of the organisation.

Please note:

- The role may involve extensive travel for industry conferences, strategic collaborations, and stakeholder meetings.
- Expected to lead high-stakes meetings and strategy sessions, shaping the trajectory of the organization.

Essential Criteria:

- A master's degree or PhD in the relevant field preferred or equivalent professional experience.
- Expert level [number of years] experience in research management or a related field, showcasing senior-level expertise.
- Comprehensive understanding of organisational structures, operational plans, and strategic direction.
- Comprehensive ability in strategic thinking and analytical problem-solving.
- Proven track record in team leadership and management.
- Exceptional communication and interpersonal skills.
- Ability to make decisions with wide-reaching impacts, considering both immediate and long-term implications.
- Comprehensive experience of working in a multidisciplinary research team environment and leading people from a wide range of cultures.
- Capacity to lead a diverse team and workload, with a track record of delivering results under pressure and on time.
- Experience of budget management and managing industry collaborations in a research environment.
- A comprehensive understanding of the research funding environment in [Member State], Europe and further afield.
- A comprehensive understanding of the process of translating scientific research into application via commercialisation, policy formation, public engagement etc.
- A comprehensive understanding of IP protection, academic publication and other established methods of disseminating and commercialising research outputs.

Desirable Criteria:

- Proficiency in advanced research tools and software.
- Proven track record in raising/managing research grant income from National and European funding bodies.

- A comprehensive understanding of the area of research and related fields including an appreciation for the needs, priorities and associated challenges for organisations within this sector.

Note: These are generic job descriptions, and specific responsibilities and requirements may vary based on the requirements of the role and its location e.g., industry, academia, and other contextual factors.

