

RM ROADMAP

D1.1 Preliminary report on ERA-wide landscape

This preliminary report aims to provide an overview on the current state-of-the-art of the profession of Research Management (RM) within the European Research Area (ERA), focusing on the following topics: 1) definition and terminology of Research Management, 2) job categories in Research Management, 3) professional development and career path, 4) relevant skills and competences of Research Managers (RMs).

WP1 Intelligence, HETFA Research Institute, August 2023



RM-ROADMAP project has received funding from the European Union's Horizon Europe programme under grant agreement number 101058475.



Project full title

“Creating Framework Conditions for Research Management to Strengthen the European Research Area”

Project acronym

RM Roadmap

Grant Agreement no.

101058475

D1.1 Preliminary report on ERA-wide landscape

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Dissemination level ¹ :	PU
Submission date:	August 24 th , 2023
Start date of project:	September 1 st , 2022
Duration of the project:	36 months
Organisation name of lead contractor for this deliverable:	HETFA

¹This project has received funding from the European Union's Horizon Europe programme under grant agreement No 101058475

PU – Public (fully open, automatically posted online on the Project Result platforms);
 SE – Sensitive (limited under the conditions of the Grant Agreement);
 CO – EU classified : EU restricted, EU confidential, EU secret under Decision 2015/444.



Document metadata

Version	Date	Modification reason	Modified by
1.0	4 July 2023	First draft	Blanka CSITE, Virág ZSÁR
2.0	16 August 2023	Second draft	Blanka CSITE, Virág ZSÁR based on the comments received from NOVA team, Ana Marušić, Andjela Pepic, Borana Taraj, Teodora Konach
3.0	24 August 2023	Final version	Blanka CSITE, Virág ZSÁR

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List of Abbreviations

AI	Artificial Intelligence
APM	Association for Project Management
ARMA	Association of Research Managers and Administrators (UK)
ARMS	Australasian Research Management Society
ASTP	Association of European Science and Technology Transfer Professionals
CSA	Coordination and Support Action
EARMA	European Association of Research Managers and Administrators
EC	European Commission
EDI	Equality, Diversity, Inclusion
ESCO	European Skills, Competences, Qualifications and Occupations
ERA	European Research Area
FP	Framework Programme
H2020	Horizon 2020 – 8 th FP for R&I
HEI	Higher Education Institution
HEU	Horizon Europe – 9 th EU FP for R&I
IPMA	International Project Management Association
PCF	Professional Competence Framework
PDF	Professional Development Framework
PI	Principal Investigator
PMI	Project Management Institute
RAAAP	Research Administration As A Profession – survey
RFO	Research Funding Organisation
RM	Research Management
RMs	Research Managers
RMA	Research Management and Administration
RMAN-J	Research Manager and Administration Network Japan
RPO	Research Performing Organisation
RSO	Research Support Office
RSS	Research Support Services
RTTP	Registered Technology Transfer Professional
R&I	Research and Innovation
SARIMA	South African Research and Innovation Managers' Association

1. Executive Summary

1.1. Introduction

The preliminary report at hand aims to provide an overview on the current state-of-the-art of the profession of Research Management (RM) within the European Research Area (ERA). The investigation consisted of multiple methods serving qualitative research, including literature review and desk research, focus group discussions, online interviews and the summary of the results of an in-person workshop. The research focused on the following topics: 1) definition and terminology of Research Management, 2) job categories in Research Management, 3) professional development and career path, 4) relevant skills and competences of RMs.

Following the literature review and the presentation of the preliminary results, the main gaps and needs are highlighted in order to give orientation to the project work for the upcoming two years. The richness of the preliminary results enables us to formulate recommendations to the various stakeholders which can be found in the end of the report.

1.2. Terminology used

Terminology used for the groups of professionals under investigation: Research Managers (RMs). In line with the efforts taken by ERA Action 17, this term aims to serve as an umbrella term, covering (and not replacing existing terms for) a wide range of experts at different professional levels bearing specific knowledge

- (a) to streamline/facilitate the planning, the development, management, administration, communication and valorisation of research and innovation,
- (b) to ensure compliance with policy objectives, funding programme requirements, financial rules and legal regulations,
- (c) to improve the efficiency and effectiveness of Research & Innovation (R&I) projects/system, and/or
- (d) to enhance the impact of R&I on the society.

Research Managers are based in all types of research performing organizations, including public and private universities, research institutes, research funding organizations, agencies, related policy making bodies, medical institutions, NGOs, as well, as companies.

1.3. History and policy context

Research Management emerged after World War II, first, in the Anglo-Saxon world, predominantly in Higher Education Institutions (HEIs). It was closely linked to the rise of investment to research activities, the growing requirements of research funding and the rising of competition for these funds (Campbell, 2010, pp. 6-9).

In the continental Europe, the enhanced European cooperation on research was fuelled by the economic crisis and lowering competitiveness of the European Community. The first framework programme for research (FP) was adopted by the Council for the period of 1983-1987. With the adoption of the forthcoming framework programmes and the evaluation of the FPs, both the portfolio and the selection criteria have increased, the latter in terms of excellence and cohesion. This has led to the growth of competition towards funding of research activities – as a result to the growing need of professionals dealing with the preparation of the proposals, management of the project and addressing the so-called cross-cutting issues, such as equality, diversity, and inclusion (EDI), ethics, data management.

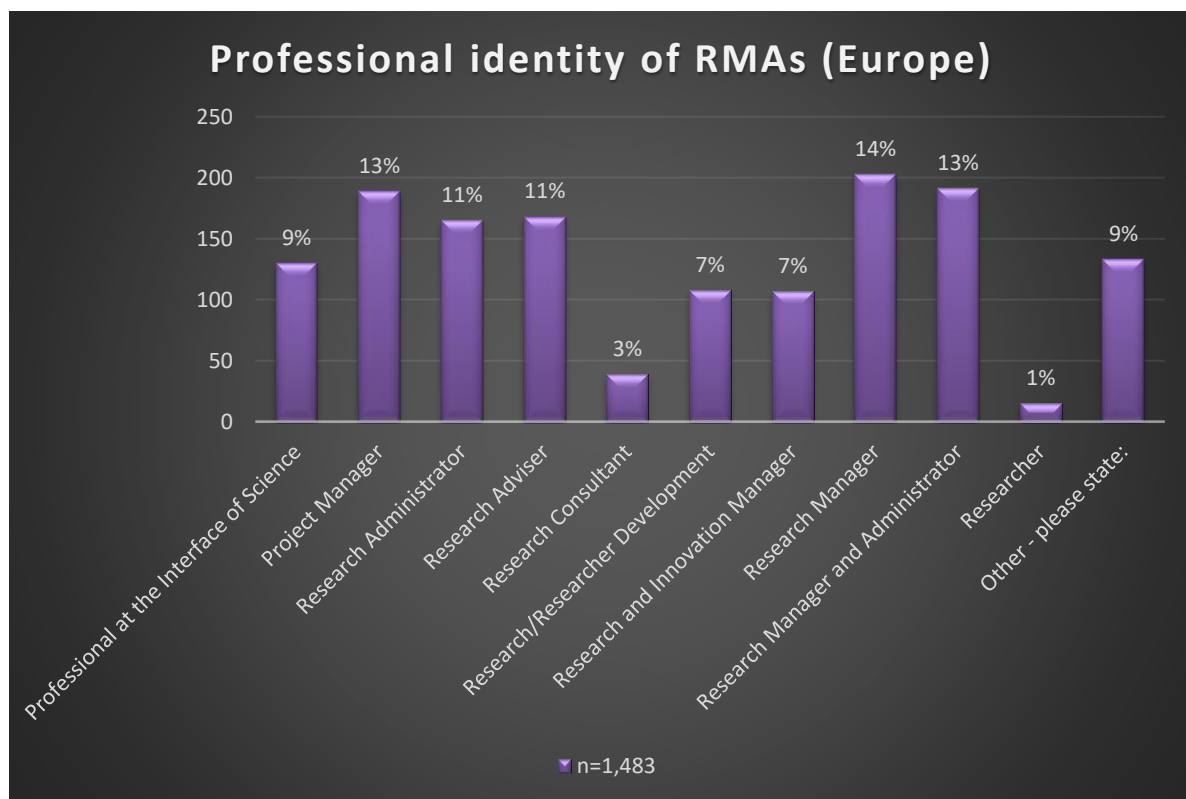
In the 2000s, the European Research Area was initiated in the framework of the Lisbon Strategy, aiming

to address the fragmentation of different research and innovation systems across Europe and to build a common scientific and technological area for the EU. In 2020, the European Commission published the plan for the New ERA. The ERA Policy Agenda defined for the period 2022-2024 included specifically one action, Action 17: Enhance the strategic capacity of Europe’s public research-performing organisations (Research Management Initiative) which aims to improve the situation of Research Managers across the ERA through upskilling, recognition, networking and capacity building.

1.4. Definition and terminology

Defining Research Management is a complex task due to the diverse and constantly evolving nature of the profession. The complexity of RM roles and responsibilities makes clear identification challenging, hindering the establishment of a professional identity. The literature depicts different approaches and terminologies without generating a consensus on any of them. The definition of Agostinho et al. (2018) is considered, however, the one which is formulated in line with the inclusive approach initiated by the European Commission (EC). They introduced the broader term of **Professionals in the Interface of Science** whose “activities are intrinsically embedded and specific to the R&I ecosystem, albeit not including performing research per se but developing differentiated responsibilities that goes far beyond general administrative roles” (Agostinho et al., 2018, p. 2).

The results of the RAAAP survey (extracting responses from Europe, n=1,483) shed light on the professional identity of RMs in Europe (see Figure 1). There is not a single term selected by the majority of the respondents, rather there are three terms that help people connect with their professional identity, namely the term of Research Manager (14%), Project Manager (13%) or Research Manager and Administrator (13%). (Kerridge et al., 2023b).



Professionals bearing vast experience in the field having been involved in the focus group discussions and the online interviews reported different approaches to explain and define their role. To do so, they used metaphors, such as “flower with growing petals”, “octopus”, “babushka doll”, “babysitter” or even



the concept of “spy” was mentioned. Participants also relied on misconceptions when illustrating their job to outsiders, using the term “secretary”, for instance. The context also matters: when they are talking to colleagues from the same professional fields from different institutions it is easily understandable, however, it can be challenging when they have to explain internally to their researcher colleagues what their tasks are consisted of. Nevertheless, all participants and interviewees underlined their support role using various terms, such as “help”, “connect”, “translate”, “guide”, “facilitate”, and “link”. Participants even added that they often provide “psychological” support for researchers beyond the professional guidance.

Summing up the terms expressing the support feature of research management, the most frequently used terms were counted in the transcripts of the focus group discussions and in the interviews (see Table below). Although in some countries the term support is considered in a downsizing manner, it was used the most frequently.

	Focus group discussions	Interviews
Support	68	135
Help	47	33
Connect	7	22
Translate	12	12
Guide	2	9
Facilitate	1	16
Link	0	11
Enable	2	2

Our findings underscore how Research Managers often perform “invisible work”, contributing significantly to the research and innovation activities and the ecosystem, but often without recognition. Clarifying RM’s role and value is vital for its better integration into the research landscape.

1.5. Categorisation

Professionals in Research Management have to be creative when positioning themselves and set the boundaries of their work. In the last decade the constant changes and emerging needs in the R&I ecosystem forced RMs to create and come up with their own understanding of their roles, diversifying and expanding their support, as well as specialising in the fields and topics necessary for delivering excellent research support.

As a result, nowadays, RMs provide support in a vast range of fields along the project lifecycle, including pre-award, contracting, post-award, finances, communication, legal issues, knowledge and innovation management, and beyond, in research policy, research funding, data management and the management of research support services.

Based on our findings, there is a significant diversity of job roles and categories across Europe: even the same job categories have different naming in the different institutions and countries. Moreover, the level of specialisation is also different: while one institution has broader profiles, others might have professionals with niche expertise, i.e. data steward vs open science specialist or technology transfer officer vs licencing manager. Both the size of the institution and the Research Support Office matters when it comes to the specialisation of RMs across different job categories.

Therefore, our preliminary findings underline that the recognition of the profession necessitates the creation of an umbrella term and definition of RM which is understood and recognised by relevant stakeholders, including policy-makers, university leadership, management as well as researchers. To do so, it is inevitable to understand first the complexity of these roles and then make this umbrella term embraceable by all these professional groups and categories, instead of replacing them. Due to the mixed profiles, generalisation can be done only to that extent that support recognition.



1.6. Professional development and career path

The desired recognition can be achieved through the identification of the profession as such, the launching of training and educational programmes, establishment of associations, and the creation of a professional development framework which clearly defines the possible career paths for RMs. However, as the literature points out, so far “each research administrator experienced a unique and personalized professional journey” (Zink et al., 2022, p. 136). The report provides an overview on the existing Professional Development Frameworks (PDFs) developed by national RM associations, such as ARMA in the UK, SARIMA in South Africa, ARMS in Australia, BestPrac COST Action across Europe, RMAN-J in Japan and summarises the main stages of RM included in these frames in a table. Table 4 in section 4.1.5 clearly demonstrates the different understanding of RMs’ roles and the extent to which they are addressed in the PDFs.

The preliminary findings of the study highlight the lack of clear career paths for research managers within European countries, forcing individuals to create their own paths for career advancement and others to leave the profession. Both our interviewees and focus group participants highlighted that there are Research Managers who are proactive and use the constantly changing ecosystem to improve their position and develop their expertise, however, this is not the case for all. Despite the fact that there are several opportunities for professional development, in most cases professionals do not have time or resources to exploit them and build their professional career.

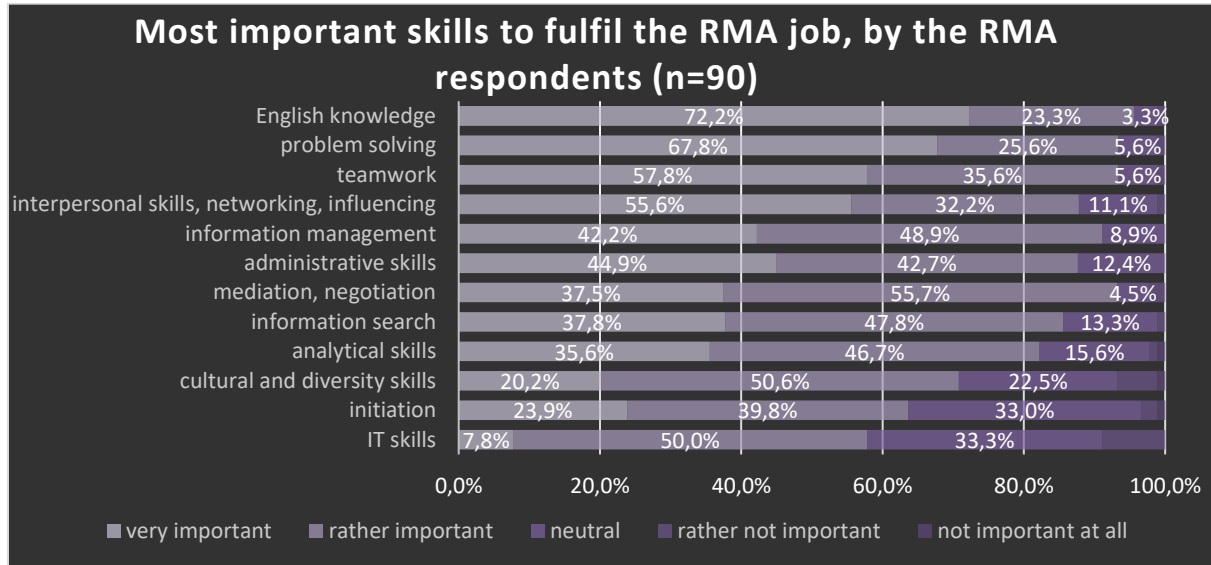
This situation is exacerbated by limited opportunities for promotion or career progression, particularly in public organizations where salary scales and job categories are defined on a national level without recognising RM as a profession. Private entities offer more flexibility in career development but lack structured paths. The study also points out the scarcity of specialized training and certification programs for research management, which hinders skills development and professionalisation.

Therefore, to make RM as a recognized profession, beyond creating a common professional identity, it is important to establish and reinforce professional associations, make available and incentivise opportunities for professional development, including certification programmes, trainings. Last but not least, providing clear career path which includes financial remuneration and job security is also important to overcome the today’s reality when professional research support depends on the self-motivation of RMs and their commitment to make impact in the R&I ecosystem.

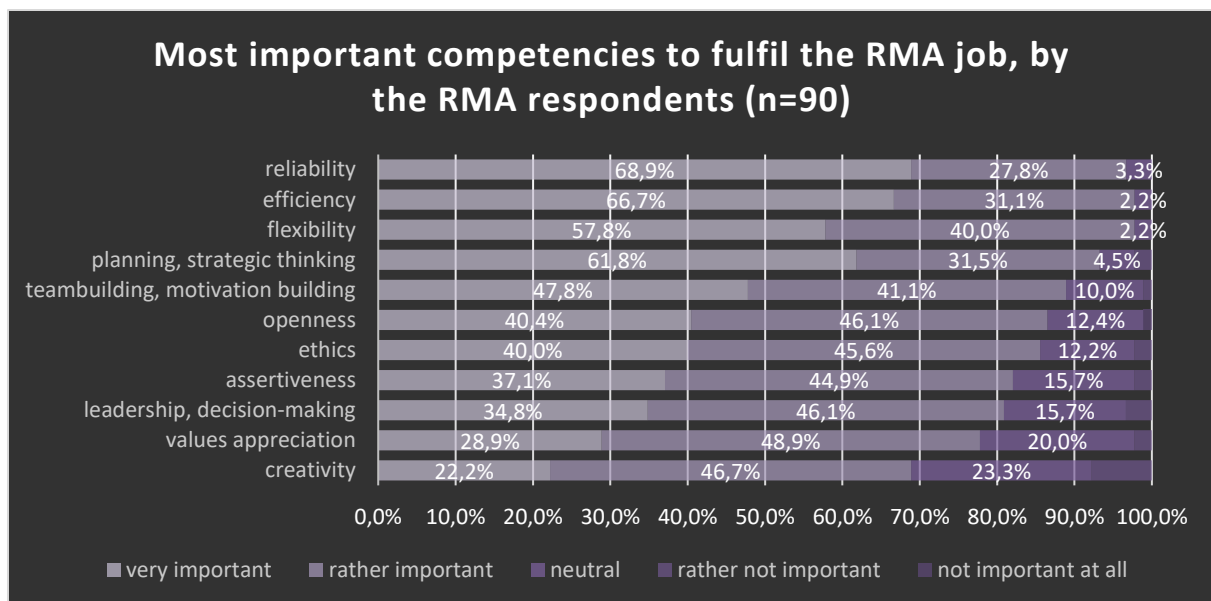
1.7. Skills and competences

The literature agrees on the fact that RM professionals “possess a wide range of skills and abilities and do everything under the sun” (Zink et al., 2022, p. 126) and that these skills and competencies contradict the traditional role of scientists (Schuetzenmeister, 2010, p. 6). All previous surveys aimed to depict the most important skills and competencies needed for RM, and despite the different categorisations, there is an agreement on the strong need for transversal skills beside technical and fields related skills.

The results of the survey conducted by Virágh et al. (2020) among European research managers reconfirm what has been already pointed out by the literature: the most important skills for professionals are soft skills, i.e. problem solving, teamwork, interpersonal skills and information management (Figure 6).



As regards competencies, results of the same survey highlight the importance of reliability, efficiency, flexibility, planning and strategic thinking, teambuilding and motivation building. The authors point out that the last two is especially interesting considering the relatively low rate of leaders among respondents (10%) suggesting that these competencies were marked as important also by RMs not in a leader role. On the other hand, high rates of “rather important” and “very important” answers show that this profession needs a wide variety of different skills and competencies (see Figure 7) which is again in line with the statements of the literature.



Based on discussions with RM ROADMAP ambassadors and ERA Action 17 workshop participants, a preliminary table of skills and competencies was generated, revealing variations in skill needs across different research management roles. The identified skills were categorized into four groups: 1) transversal skills, 2) RM related soft skills, 3) RM related hard skills, and 4) specialisation or role related skills (See Table 5 and 6 in section 5.2).

Our preliminary findings also underlined the importance of transversal skills and RM related soft skills. As there is an enormous competition in the labour market for people having transversal skills, meaning that if RPOs and RFOs are not able to recognise RMs possessing these skills, professionals can easily



find other jobs with better recognition, including salaries. Thus, keeping the motivation of these professionals and recognising their added value is a key for retainment.

Beside the transversal skills and RM related skills in general, the different job roles or categories require different skills and knowledge. Therefore, the development of career path, professional development frameworks and clarification of roles and responsibilities of the different job categories necessitates the definition of professional categories or segments to which the necessary knowledge and skills can be related.

An overarching but detailed categorisation of Research Management jobs can provide the example and a path for development for Research Support Offices (RSOs) regardless their level of maturity: those which are having still limited staff and services can understand the opportunity for development, whereas those which are working already with greater staff can understand the possible niche fields where they can specialise their support. To ensure a comprehensive understanding of required skills, it's recommended to formulate a Europe-wide competence matrixes aligned to the specific job roles, addressing both general and tailored skills. Thus, further investigation will involve a Europe-wide survey and validation from the research management community.

1.8. Case studies

Thanks to the first round of the online interviews conducted with experienced RMs and leaders of Research Support Offices across Europe, it was already possible to grab several good practices which can be potentially adopted by other RSOs across Europe to improve their profile, their services and their recognition. The identified case studies are as follows:

- a. Providing tailor-made and professional support,
- b. Developing in-house consultancy,
- c. Constantly improving profile of the RSO,
- d. Defining a clear portfolio of the RSO,
- e. Building partnership with researchers and leadership,
- f. Developing projects for the networking and capacity-building of RM colleagues,
- g. Partnership among RSOs,
- h. Monitoring and evaluating the performance of the RSO,
- i. Providing incentives to motivate colleagues in RM.

Almost each of them can contribute to clarify and develop the relation with other colleagues at the research performing organisations, including researchers, university leadership and management. However, internally, they can also enable to make supportive and motivating environment for the colleagues working in RM. Some examples also showcase how RSOs can increase their strategic role and demonstrate their value added.

1.9. Recommendations

1.9.1. The European Commission

- Strengthen the recognition of the RM profession through adopting an inclusive and overarching definition and terminology of Research Management backed by a frame for career and professional development in RM including skill and competence matrixes;
- Facilitate the recognition of Research Managers through a Charter and/or a Code of Conducts for RMs;
- Allocate dedicated budget line and sufficient resources within funded projects for Research Management related tasks;



- Develop a common EU software designed specifically for R&I project management.

1.9.2. National R&I Funding Organisations and Policymakers

- Support the creation/reinforcement of RM associations/networks and enable national community building of professionals.
- Secure the necessary funding for RM associations/networks to offer training, networking and capacity building opportunities for RMs.
- Allocate dedicated budget line and sufficient resources within funded projects for Research Management related tasks.

1.9.3. Research Performing Organisations

- Understand and recognise the added value of the work carried out by RMs, value and compensate their expertise, skills and competencies.
- Acknowledge the need for investment in RMs, enable their upskilling and capacity-building, recognise and reward the accomplished accreditations and/or certifications.
- Avoid precarious working conditions, reinforce job security of RMs
- Find solutions for the sustainability or, even, for the profitability of Research Support Services.
- Follow the discussions related to the categorisation, career development and professional development framework of RMs carried out by the ERA action 17 and the projects.

1.9.4. Research Managers

- Build and deepen their own professional identity.
- Find the ways to benchmark and showcase the added value of Research Support.
- Strive to professionalise the Research Support. Seek proactively professional development opportunities.
- Leverage strategic capacities by building knowledge and experience in R&I policy planning and cross-cutting issues requested by funded projects.
- Try to build partnership among RSOs of different RPOs at the national and international level.
- Acknowledge the importance of networking and information sharing among colleagues at the national and the international levels.
- Engage with your national RM ROADMAP Ambassadors and take part in the co-creation process to create the joint future of Research Management across Europe.

1.10. Next Steps

Further investigations in the frame of RM ROADMAP are planned by circulating a survey and conducting a second round of interviews. The aim is to gather more evidence to make our results more specific and enable the development of an overarching terminology and definition, then the differentiation of specific job categories. A general and job category-based skill and competence matrix will be developed paired with a possible frame for professional development. All these results will be then validated through the co-creation exercise with the involvement of national RM communities through the RM Ambassadors.



2. Introduction, aim and methodology

2.1. RM Roadmap

RM Roadmap will chart a course for the future of research management (RM) in Europe and a community to support its delivery. It will be conducted over 36 months and is funded to the amount of €1.5m by the European Commission Horizon Europe funding programme.

The overarching objective of RM Roadmap is to identify and adapt the research management capital base of the EU, including the widening countries, and emerging needs of its current and future research management workforce to improve the EU's competitiveness and sustain its economic performance.

RM Roadmap will allow existing European networks to connect on a smart community platform which will enable an unprecedented consultation process in research management. This co-creation process will gather the existing communities and expand upon them to reach two main objectives: to create and inform a bottom-up consensus on the future of RM in a roadmap, and to inform the community about existing training, networking, funding, and career mobility opportunities.

Eight partners are working together on this project: European Association of Research Managers and Administrators (Belgium); HETFA Research Institute (Hungary); Nova University Lisbon (Portugal); Association of European Science & Technology Transfer Professionals (Netherlands); Crowdhelix Limited (Ireland), The Cyprus Institute (Cyprus) and associated partners Janssen Pharmaceuticals (J&J) and Una Europa (Belgium).

2.2. Aim and scope of the preliminary report

The preliminary report at hand aims to provide an overview on the current state-of-the-art of the profession of Research Management within the European Research Area (ERA). It is based on the in-depth study of existing literature, assessment of previous surveys and results, as well as the outcomes of dedicated activities of the first year of the project. Following the introduction of the first results, the main gaps and needs are highlighted in order to give orientation to the project work for the upcoming two years. The richness of the preliminary results enables us to formulate recommendations to the various stakeholders which can be found in the end of the report.

2.3. Terminology used

Terminology used for the groups of professionals under investigation: Research Managers (RMs). In line with the efforts taken by ERA Action 17 (see more in section 3.1.2), this term aims to serve as an umbrella term, covering (and not replacing existing terms for) a wide range of experts at different professional levels bearing specific knowledge

- (e) to streamline/facilitate the planning, the development, management, administration, communication and valorisation of research and innovation,
- (f) to ensure compliance with policy objectives, funding programme requirements, financial rules and legal regulations,
- (g) to improve the efficiency and effectiveness of R&I projects/system, and/or
- (h) to enhance the impact of R&I on the society.

Whether they are generalists or specialised in a particular field, Research Managers are involved in different phases of the research and innovation projects/system including, but not limited to:

- research policy advice, evidence-based policy making, foresight and strategy development
- planning strategy for R&I funding,
- pre-award phase management,



- contracting phase management,
- post-award phase management,
- knowledge and innovation management, intellectual property management, technology transfer, incubator coordination and business development,
- data-based research support, such as data stewards and data analysts, exploitation of research data, data protection,
- data management & open science,
- science communication,
- ethical compliance management,
- specialised research infrastructure operation,
- scientific integrity and ethics expertise, legal support,
- research assessment and evaluation,
- research and complementary training programme management,
- and so on.

Research Managers are based in all types of research performing organizations, including public and private universities, research institutes, research funding organizations, agencies, related policy making bodies, medical institutions, NGOs, as well as companies.

Due to the diverse maturity level of the profession, a number of country-specific features influence both the terms used and the responsibilities assigned to these professionals.

2.4. Methodology

This report relies on multiple methods serving qualitative research, including literature review and desk research, focus group discussions, online interviews and the summary of the results of an in-person workshop. The methods introduced below aimed to support the collection and interpretation of the data in an open and flexible manner in order to

- explore the inner experience of professionals,
- explore how meanings are formed and transformed,
- explore areas not yet thoroughly researched, (Corbin & Strauss, 2015, p. 5).... and
- develop a complex picture of the problem by reporting multiple perspectives, identifying relevant factors involved, and drawing a holistic picture (Creswell, 2009, p. 164.)

Although there is an in-depth literature review for each topic subject to the investigation, in each case the limitations and gaps of the existing literature are highlighted. Therefore, even if not strictly, the current investigation relies on “grounded theory” elaborated by Strauss where the concepts supporting the construction of the findings and related recommendations are derived from the collected data itself. Moreover, the way how the different steps of the analysis are built on each other, also helps that data collection and assessment represent an ongoing cycle during the whole work within the project (Corbin & Strauss, 2015).

2.4.1. Literature review and desk research

The literature on the profession of Research Management is scarce, but constantly growing. Poli et al (2023 forthcoming) argues that Higher Education Management is one of the precursors of knowledge about RM meaning that the university context can be regarded as the basis for the RM knowledge. In addition, Project Management, Science, Technology, and Innovation and RM Specific literature do also belong to the constantly developing field. Materials elaborated by RM certification bodies, associations, and post-graduation courses considering several particularities of the area and blend the sources of knowledge are understood as RM Specifics by Poli et al (2023 forthcoming).

In order to get a holistic understanding of the current state-of-the-art of the research in the field, both academic papers and grey literature, including studies, presentations and reports of practitioners, were



collected and investigated along the following topics:

- 1) history of the profession,
- 2) existing and/or possible definitions of RM,
- 3) job roles and categories of RMs,
- 4) existing career frames and professional development frameworks in RM,
- 5) skills and competences needed by RMs, and
- 6) research support structures.

As the profession is emerging worldwide and it has a longer history in the Anglo-Saxon world, the studied literature covers authors based in Europe and beyond. Moreover, studies from the “Emerald Handbook of Research Management and Administration Around the World”¹ which is forthcoming in the end of 2023 were also relied on related to the topics under investigation.

Besides, the policy context is summarised briefly since the project as a whole and the investigation within the current Work Package aims to deliver such recommendations which can be adopted and adapted by policy- and decision-makers at the EU and national levels. A more in-depth agenda for the literature review is included in Annex 2.

Last but not least, for each section, the authors queried two different AI softwares, ChatGPT and Perplexity.ai. The exact questions and the given answers are included in Annex 5.

2.4.2. Focus group discussions

In the frame of RM ROADMAP, more than 110 ambassadors and associate ambassadors were selected through an open call. These ambassadors represent their country or their region, or in case of national/regional RM associations, they represent the respective associations. The primary role of these ambassadors is to make sure that information from the project flows into the relevant national research management communities and vice versa, knowledge and needs of national communities are fed into the project activities and results. The ambassadors are supposed to advocate for the national community to join the co-creation exercise launched by the project in an active manner and make the interconnection between the national communities and the project.

The RM ROADMAP ambassadors were selected based on the following criteria: experience in RM, experience in national or international associations or networks, experience in delivering trainings, in community building and community leadership, communication, outreach and networking as well as proficiency in English.²

In order to exploit the knowledge and the experience of the selected ambassadors, focus group discussions were conducted at the 1st Ambassador Meeting in Budapest on 9 May 2023. The main aim was to gather empirical data for the terminology and categorisation of RMs, formulating the value proposition, identifying the conditions of successful research support services and obstacles to recognition across the countries.

The selection of the ambassadors involved into the focus groups was based on their professional background, current positions and job roles, years of experiences in the field. The selection was done based on the final list of registrants to the event aiming to involve professionals having expertise in diverse fields, including pre-award and post-award phases, knowledge and innovation management, data management, communication, research infrastructure, and legal advising. As a result, participants of the focus group discussions work as research or innovation advisors, project managers, grant writers, experts in technology/knowledge transfer and are members of research management or knowledge

¹ See at <https://books.emeraldinsight.com/book/detail/the-emerald-handbook-of-research-management-and-administration-around-the-world/?k=9781803827025> retrieved on 24 June 2023.

² See more details at <https://www.rmroadmap.eu/faqs>



transfer associations. Their roles include performing tasks like project development, project management, and coordination with various stakeholders such as industry partners, universities, and SMEs. 70% of the participants were female and 30% of participants were male which corresponds to the average proportion of gender division among Research Managers (Kerridge et al, 2023b, for Europe (n=1483): 78.9% of RMs are female). Ambassadors represented 35 European countries including EU and non-EU countries as well.

Participants were divided into five country groups divided along the maturity level of the profession, performance in EU Framework Programmes (FPs), countries' position on the Innovation Scoreboard, such as follows:

- Group 1 – Southern European countries: Italy, France, Malta, Portugal, Spain, Greece, Cyprus, Israel,
- Group 2 – Central European countries: Czechia, Hungary, Poland, Slovakia, Slovenia, Croatia, Romania, Bulgaria,
- Group 3 – Northern European countries: Denmark, Sweden, Norway, Finland, Iceland, Estonia, Latvia, Lithuania,
- Group 4 – Western European countries: Austria, Belgium, Germany, Switzerland, Ireland, Luxemburg, Netherlands, UK,
- Group 5 – non-EU countries: Albania, Bosnia-Herzegovina, Kosovo, North-Macedonia, Moldova, Serbia, Ukraine, Moldova, Turkey.

The aim of the focus group discussions was to understand

- how RM professionals define their job and explain it to others,
- what kind of job roles and categories they are aware of,
- how they articulate RMs' value proposition,
- their perceptions on professional recognition.

The group discussions lasted for approximately 45-60 minutes, were led by two colleagues of HETFA and attended by 6-8 ambassadors. The discussions were recorded and afterwards transcripts were prepared. Ethical considerations and measures related to the focus groups are elaborated in Annex 1 Research Data Management. The guide for the focus group discussions can be found in Annex 3.

The analysis of the group discussions started with the preparation of the raw data. Transcripts of each discussion were created by a specific feature of MS Windows and then corrected manually. Transcripts were then coded both manually and with an IT software (NVIVO). This was followed by the interpretation of the results and feeding them into the sections of preliminary results to start the concept building process. This will be continued by the quantitative research through the survey.

When assessing the outcomes of the focus group discussions it has to be taken into consideration that the participants cannot be regarded as a representative sample of the broader community of RMs as almost all of them are seniors, in leadership positions, involved previously in a number of different positions and job roles. Their experience at institutional level and their overview on the institutional and national situation, however, was considered an important source for the investigation. In addition, it also has to be noted that even though the aim was to ensure an equal representation of all European countries and all the different fields of expertise and professional categories involved in the project, some ambassadors could not take part at the event and the focus group discussions, i.e. the ones from the UK, Luxemburg or Bosnia and Herzegovina. However, their absence did not jeopardise the collection and assessment of the main ideas and perceptions of the broader community considered important for the focus group discussions.

2.4.3. Workshop in the frame of ERA action 17



Ambassadors of the RM ROADMAP project were invited to the workshop organised in the frame of ERA Action 17 which followed the project's first in person meeting on 10 May 2023. The aim of the workshop was to map the skills and competencies of RMs working in different areas, assess their training needs as well as map the current offer. As all ambassadors have several years of expertise and a good overview on the operation of the institutional research support services, this was a unique opportunity to feed their knowledge into policy-making and use it for the preliminary investigation in the frame of the project. The workshop was attended by 50 ambassadors in addition to the representatives of the ERA Action 17 and the project.

The workshop consisted of two sessions. First, participants were divided into geographical groups and had to discuss four topics one-by-one. One of these topics asked them to identify the most important skills and competencies of RMs in general. To support the discussion, the skills and competencies of the ARMA Professional Development Framework was provided (see more details about the framework in section 4.1.1). Then they were divided into 8 groups according to different RM job categories – taken from the ARMA PDF – and had to identify the most important skills and competencies of the given job category. The selection of participants was made in line with their current position and professional experience.

The outcomes of the workshop were documented through pictures and notes. These raw materials were then analysed both manually and by using NVIVO by focusing specifically in summarizing the skills and competencies relevant for RMs in general and across the different job categories.

2.4.4. Online interviews

The main aim of the interviews was to identify and analyse institutional good practices in the field of recognition, professional development and career frames. During the project's lifetime, based on the interviews at least 16 case studies of institutional RM best practice and capacity adoption will be elaborated, 8 from Widening and 8 from non-Widening countries.

The interviewees are conducted in two phases: first, through the network of the consortium and the recruited ambassadors, network of professional associations' relevant committees, such as EARMA Professional Development and Recognition Committee, ASTP Professional Development Committee. The second phase will follow the circulation of the survey and target those respondents who are willing to share their experiences.

Interviewees are expected to work in RM for at least 5 years OR leading Research Support Office (RSO) OR being responsible for the coordination of Research Support Services (RSS) and work in an institution meeting one of the following criteria:

- operating with strongly centralised research support,
- operating with decentralised research support,
- relying on outsourced research support,
- having RM(s) alone in the office,
- operating with one RSO covering various expertise along the project lifecycle (and beyond),
- operating with several offices with specific expertise,
- having RSOs which are delivering their services for fees/shares in the project budget,
- RSOs running projects for professional development/training/networking of RMAs,
- other.

RSOs under investigation shall be based in universities, public and private research organisations, companies, and governmental institutions.

The aim of the interviews is to identify both success and failure factors along the following topics:

- 1) definition;
- 2) job profiles;



- 3) institutional practices and challenges in the operation of research support,
- 4) career frames,
- 5) opportunities for professional development,
- 6) professional recognition.

The interviews last about 60 minutes, were recorded and afterwards the transcripts were created. Ethical considerations and measured related to the interviews are elaborated in Annex 1 Research Data Management. The interview guide can be found in Annex 4.

For the report at hand in total 7 interviews were carried out in June and July 2023. The remaining interviews will be carried out in the first half of 2024, following the circulation of the survey. Table 1 summarises the main characteristics of the interviewees:

Table 1: Overview of Interviewees

Country	Organisation	Type	Gender	Areas covered	Size of Personnel
Cyprus	University	Public	Male	Pre-award, contracting, post-award, innovation management	25
Spain	University	Public	Female	Pre-award, contracting, post-award	25
Romania	Research Institute	Public	Female	Pre-award, post-award, contracting	4
UK	University	Public	Female	Pre-award, contracting, post-award, innovation management	16
Portugal	Company	Private	Female	Pre-award	7
Portugal	Research Institute	Private	Female	Pre-award	3
Croatia	Research Funding Organisation	Public	Male	National research funding	35

The second round of interviews will ensure a more balanced geographic coverage and the involvement of more males.

The analysis of the interviews started with the preparation of the raw data. Transcripts were created by a specific feature of MS Windows and then corrected manually. Transcripts were then coded both manually and with an IT software (NVIVO). This was followed by the interpretation of the results and feeding them into the sections of preliminary results and to the case studies to start the concept building process.

3. Terminology, definition and professional categories

The discussion over the terminology and common definition for research management is ongoing, causing many debates within the community of the professionals working in the field itself and the wider research community (Santos et al, 2021). In light of this, the objective of the RM ROADMAP project and the preliminary report is to provide an overview of the current state of the art, including existing definitions with particular attention to the already existing frameworks and initiatives. The main objective is to address the challenges associated with defining the profession and finding a common terminology.

3.1.Literature

The literature review aims to offer a synthesis of the existing research on the topic. Defining what research management is a complex task, since many different terms and definitions are used across the disciplines, but a universally accepted definition has not yet been created. One conflicting issue is the fact that RM encompasses constantly changing wide range of activities connected to the research and innovation (R&I) lifecycle and beyond. To get a common understanding of the profile of RMs and the evolving nature of their tasks, it is essential to outline the relatively short history of the profession.

3.1.1. Brief historical overview of research management

Despite the fact that RM is an under-studied field (Collinson, 2006a), there is an agreement that the profession first emerged after World War II first in the Anglo-Saxon world, predominantly in higher education institutions (Virágh et al., 2019, p. 11). It was closely linked to the rise of investment to research activities, the growing requirements of research funding and the rising of competition for these funds (Campbell, 2010, pp. 6–9). The competition for securing research funding became core mission of universities, hence researchers and research groups. This was accompanied with the increasing administrative burdens which led the development of research administration (Beasley, 2006, p. 11; Campbell, 2010, p. 6).

Research management became more prominent in the United Kingdom in the 1980s partly due to Thatcher government's monetary policies and its implications on higher education institutions (Collinson, 2006, p. 268) and partly to the emergence of a new managerial approach called New Public Management (Schuetzenmeister, 2010, pp. 3–4). This accelerated higher accountability towards the management of research fundings and resulted in the higher need for specialized administrative research function (Collinson, 2006, p. 269). Kirkland (2009) highlights that in this period, external revenue became more significant for higher education institutions (HEIs). Winning the grants "*became an indication of relevance and quality*", and the reporting obligations on the performance increased (Kirkland, 2009, p. 33). All these factors influenced the processes of research funding and assessment, which commanded in the investment in research services (Shelley, 2010, p. 43).

In the continental Europe, the enhanced European cooperation on research was fuelled by the economic crisis and lowering competitiveness of the European Community. The first milestone took place in 1983, when the first framework programme for research (FP) was adopted by the Council for the period of 1983-1987. One of the main criteria of the support was to facilitate the establishment of a common European Research Area (ERA, see more details in section 3.1.2). Research policy became a fully horizontal policy when the Maastricht Treaty entered into force in 1993. With the adoption of the forthcoming framework programmes and the evaluation of the FPs, both the portfolio and the selection criteria have increased, the latter in terms of excellence and cohesion. This has led to the growth of competition towards funding of research activities (European Parliament, 2017).

Moreover, in the last few decades, the expectation towards higher education institutions has expanded, and university-industry relationships have become a new normal to stimulate economic growth (Algieri et al., 2013). Research findings are being transferred to the market to foster competitiveness and business



innovation (Algieri et al., 2013, p. 383). The commercialization of research results is carried out with the active contribution of technology and knowledge management professional, who are also part of the broader RM community.

3.1.2. Policy context

In the 2000s, the European Research Area (ERA) was initiated in the framework of the Lisbon Strategy, aiming to address the fragmentation of different research and innovation systems across Europe and to build a common scientific and technological area for the EU. Article 179 of the Treaty on the Functioning of the EU specifically addresses the objective of achieving the ERA. In 2020, the European Commission published the plan for the New ERA, aiming to relaunch the ERA which can answer the current and future societal, ecological and economic challenges (A New ERA for Research and Innovation, 2020). The ERA Policy Agenda with 20 action points sets out voluntary ERA actions for the period 2022-2024 to achieve the ERA. The following actions are relevant primarily for the research management community, although their involvement in the implementation of most Actions are significant:

Action 17: Enhance the strategic capacity of Europe's public research-performing organisations (Research Management Initiative)

Action 17 aims to support specifically the RM community in Europe in four key areas: upskilling, recognition, networking and capacity building. Building upon the already existing activities, such as the work of national and European level associations, Action 17 aims to develop better R&I management capacity across the entire ERA, including regions and organisations where RM expertise and networks are not that strong (EC, 2022).

The Commission has further demonstrated its commitment to supporting the recognition and professionalisation of RMAs in Europe by issuing a call in 2021 "HORIZON-WIDERA-2021-ERA-01-20: Towards a Europe-wide training and networking scheme for research managers". Two Coordination and Support Action (CSA) projects started in 2022, RM ROADMAP (coordinated by EARMA) and its sister project CARDEA³ (coordinated by University College Cork).

Action 4: Promote attractive and sustainable research careers, balanced talent circulation and international, transdisciplinary and inter-sectoral mobility across the ERA

A proposal for a Council Recommendation on a European Framework to attract and retain research, innovation and entrepreneurial talents in Europe was adopted by the European Commission on 13 July 2023. The framework highlights several measures, for example, The European Competence Framework for Researchers (ResearchComp), a new Charter for Researchers, where researchers are framed into the following four profiles, R1-R4, R1-R2 featuring early-career researchers and R3-R4 considering senior researchers. The Charter outlines the rights and responsibilities of researchers, employers, funders and policymakers under 20 key principles under the following four pillars:

- (a) Ethics, Integrity, Gender and Open Science;
- (b) Researchers Assessment, Recruitment and Progression;
- (c) Working conditions and Practices;
- (d) Research careers and Talent development (EC, 2023b).

The recommendations highlight that research professions include careers in research management, which can be undertaken by researchers or professionals to manage and support research and innovation activities. The task of research managers can involve any of the following non-exhaustive tasks:

³ CARDEA (Enabling professionalisation of research management) funded by the European Union. More information: <https://www.ucc.ie/en/cardea/>



- streamlining or facilitating the planning, development, management, administration, communication and valorisation of research and innovation;
- ensuring compliance with policy objectives, funding programme requirements, financial rules and legal regulations;
- improving the efficiency and effectiveness of R&I projects/system;
- enhancing the impact of R&I on the society.(EC, 2023b)

The recommendations underline that research managers “deserve proper recognition, including by way of further analysis and alignment at the level of the Union, with a view to strengthening their capacity, developing relevant training, fostering comparability, and allowing them to effectively manage and support research and innovation”.(EC, 2023b)

Action 7: Upgrade EU Guidance for a better knowledge valorisation

The valorisation of knowledge transfer activities needs to be renewed in order to improve knowledge sharing and valorisation in Europe. To do so, Guiding Principles for Knowledge Valorisation and a new Code of Practice on the management of intellectual assets for knowledge valorisation were set up, in which the role of knowledge transfer professionals in the dissemination and uptake of the initiatives was highlighted. (EC, 2023a)

3.1.3. Terminology and definition

Throughout the past decades, a number of terminologies have been developed by the literature and professionals themselves. The following paragraphs aim to introduce the most common terminologies and definitions to provide an overview and a better understanding on the different approaches. Important to highlight that both the terminology, the definition and the meaning behind vary from one country or continent to the other.

Research administration, used mainly in the Anglo-Saxon world, is described as a “process that takes place during the entire lifecycle of a research project” (Spencer & Scott, 2017, p. 2). Collinson argues for a broader understanding saying that research administrators contribute to the formulation, development, monitoring, evaluation and promotion of research activities at various levels (Collinson, 2006a, p. 268).

Schuetzenmeister (2010) defines **research management** as “the day-to-day activity in which the complex and permanently changing institutional environment of scientific work has to be taken into account in order to make research possible” (Schuetzenmeister, 2010, p. 2). He argues that “research managers can be considered specialists who deal with the social, organizational, and political context of research and work on complex projects in a given societal and organizational environment” (Schuetzenmeister, 2010b, p. 23)

As indicated, the terminology as such can differ from one country to the other. Müller et al (2022) use the term **science management** and highlight that there are diverse debates about the definition in the presented countries (DE, HU, PL) (Müller et al., 2022, p. 3). The authors also highlight that in the German HE system, there have been considerable efforts to define and describe the group of science managers as „*Neue Hochschulprofessionelle [New (university) professionals] or Hochschulmanagement [university management]*” (Kehm et al., 2010; Müller et al., 2022a).

With regards to **knowledge exchange, technology transfer and knowledge transfer**, Alliance of Technology Transfer Professionals (ATTP) proposed the following definition: “A collaborative, creative endeavour that translates knowledge and research into impact in society and the economy”(ATTP, 2020, p. 2) Suggested roles and activities by ATTP: “partnership building, managing partnering services, IP exploitation, knowledge economy, innovation leadership” (ATTP, 2020, pp. 2–3).



SARIMA, the Southern African Research & Innovation Management Association gathers professionals working in the two main fields and elaborated dedicated certification programme for both of them. As far as the definition is concerned, SARIMA defines **research management** (working definition) which “involves the capabilities that research-focused organisations harness to optimise and amplify the processes and impacts of their research activity and outcomes. Research Management consists of, inter alia: research planning, strategy and policy development; research ethics and integrity researcher development; partnerships and collaboration; research funding; managing funded research; research data and research information management; research uptake and utilisation; organisation and delivery of a research management service. Research Management also includes transversal areas such as societal and research values, innovation, utilisation of technologies, internationalisation, knowledge management as well as simultaneous mainstreaming for equity and equality (Drennan, 2018).

This leads us to Agostinho et al. (2018), who uses a broader term and describes that **Professionals in the Interface of Science** perform “activities they develop are intrinsically embedded and specific to the R&I ecosystem, albeit not including performing research per se but developing differentiated responsibilities that goes far beyond general administrative roles” (Agostinho et al., 2018, p. 2). They also argue for the creation of an umbrella term for the different professional groups working at the Interface of Science by underlining that such an approach shall strengthen their common role, voice and contribution to research and innovation.

Authors of the most influential international survey in the field of RM research called RAAAP⁴ uses the terminology of the “**Research Manager and Administrator (RMA)** (research manager in some countries, research administrators in others - research support, and research advisors are also common terms)” and defines the profession in a broad manner, saying that an RMA is “someone whose role (or a significant part of it) is devoted to supporting some part of the research lifecycle, including, but not limited to identifying funding sources and customers, preparing proposals, costing, pricing and submitting funding proposals, drafting, negotiating and accepting contracts, dealing with project finance, employing staff on research contracts, reporting to funders, advising on research impact, knowledge exchange, technology transfer, supporting short courses, postgraduate research student administration, research strategy and policy, research assessment, ethics and governance, information systems, audit, statutory returns, and research office management. It also includes research development and researcher development professionals. Research managers and administrators mostly work in universities and research institutes and centres but many also work in hospitals, charities, government, funding organisations and elsewhere” (Fischer et al., 2023).

It has to be noted, that this overarching and inclusive approach was created by Bushaway (2003) as early as in the beginning of the 2000s who identified the “following functions for the offices that employ **research support staff**: (i) contributions to the definition of research strategy and themes, and ‘horizon scanning’; (ii) managing research performance metrics and benchmarking; (iii) pre-award tasks (such as research proposal development, internal peer review, costing methodologies, networking with funders); (iv) post-award management (such as contract negotiation and adherence to funder and statutory terms and conditions, project management, knowledge transfer and Intellectual Property); (v) ensuring compliance with audits from funders (e.g. European Union, research councils, research governance); (vi) portfolio management and reporting, trend analysis; and (vii) support to spinouts and commercialization” (Bushaway, 2003).

Before concluding, it is worth to mention the in-depth analysis of De Jong and Del Junco (2022) carried out on existing terms and definitions for professional research support staff through the existing literature. They analysed 7 book chapters, 52 articles from 25 different journals and 75 unique authors. The investigation revealed 22 definitions out of which a few were not clearly defined or referred to broader groups of professionals working in the academia. More elaborated pieces of definitions included

⁴ Research Administration as a Profession (RAAAP) Taskforce. <https://inorms.net/activities/raaap-taskforce/>



reference to the identity, the academic degree, the organisational roles, the nature of work, or even specific works of these support staff (de Jong & del Junco, 2022). The term they used is **professional staff** in 5 main organisational roles, i.e. research administrators, research managers, technology transfer officers, international staff, grant office advisers, directors of development and alumni advisors and faculty managers. The definition they came up with is the following: “degree holding university employees who are primarily responsible for developing, maintaining and changing the physical and social infrastructures that enable education, research and knowledge exchange”(de Jong & del Junco, 2022, pp. 5–7). Interesting to note that the proposed definition places these professionals to universities, although in case of the previously presented definitions, some of them explicitly highlight that the HEI sector is not the sole one which employs RMs.

It also has to be pointed out that there is **diversity to what extent the job categories and the related fields are established research fields or not**: whereas knowledge management, technology transfer, financial management, higher education management and science communication can be regarded as being established research fields, this is not completely the true in case of Research Management and Administration (Dyason & Pillay, 2023) and all the other areas of expertise which have emerged in recent fields, such as open science, responsible research and integrity, among others.

The results of the RAAAP survey (extracting responses from Europe, n=1,483) shed light on the professional identity of RMs in Europe (see Figure 1). There is not a single term selected by the majority of the respondents, rather there are three terms that help people connect with their professional identity, namely the term of Research Manager (14%), Project Manager (13%) or Research Manager and Administrator (13%). (Kerridge et al., 2023b).

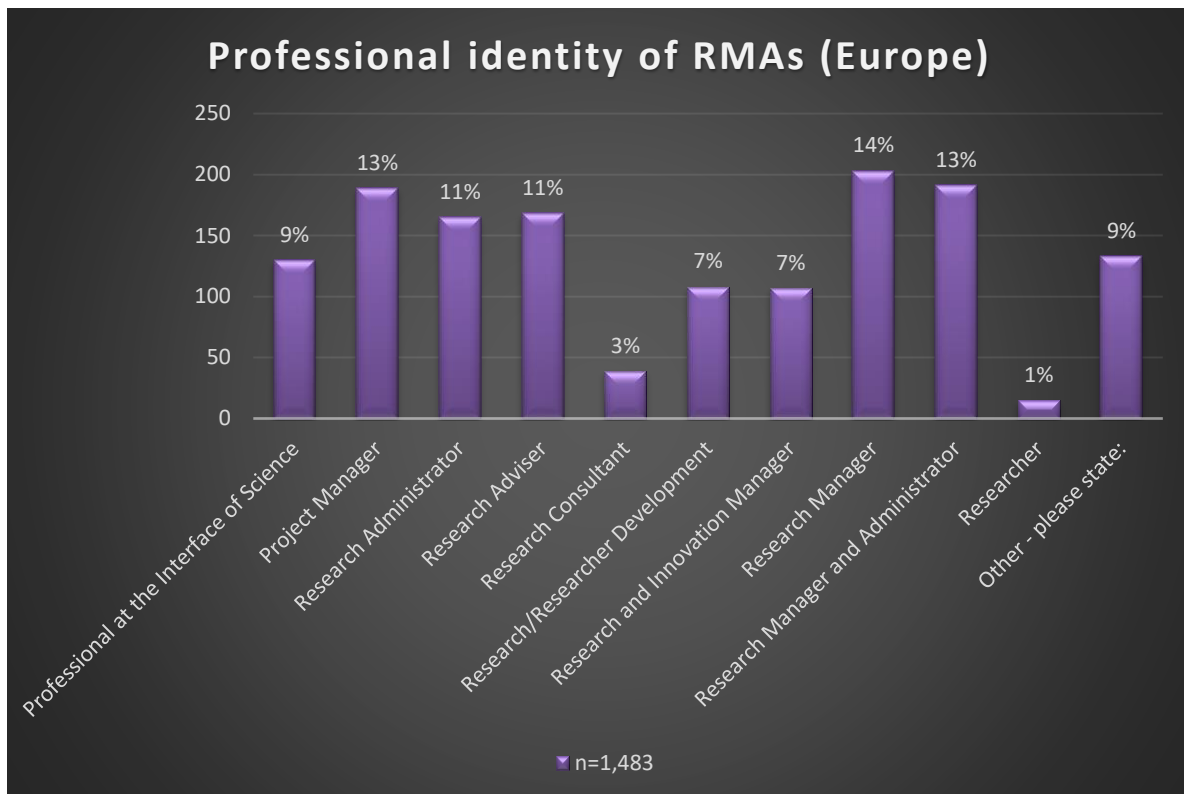


Figure 1 Professional identity of RMAs in Europe (datasource: Kerridge et al., 2023b)

Based on the results of the CARDEA survey it is also highlighted that **research management** is an ill-defined term that describes a wide range of roles and levels of responsibility, with some overlapping research activities” and “they would describe their jobs as the provision of specialised professional services to a range projects” (O’Regan, Chrualaioich, et al., 2023, p. 6) (CARDEA, 2023).



The European Skills, Competences, Qualifications and Occupations (ESCO) classification describes and classifies professional occupations and skills relevant to the EU labour market and education and training. A **research manager** is defined as a professional “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”(European Commission, 2023c).

The emergence of **Artificial Intelligence (AI)** will change and influence the work of RMs in the future, therefore it cannot be ignored when seeking for the definition and terminology as well. The results of the queries underline the overarching character of the profession and the lack of common terminology and definition. Despite the fact that Perplexity.ai lists the possible activities of RMs, it limits the focus of RM to research projects. ChatGPT provides a more inclusive approach and understanding of the profession. The detailed findings **can be found in Annex 5 14.1.**

3.1.4. Categorisation

It can be observed that the literature points out three tendencies regarding the emergence of professional categories and the level of their specification as a reply to the emerging needs for professionals supporting research and innovation. Following the emergence of the need of professional staff in research management, these professionals had to create and come up with the own understanding of their roles, diversify and expand their support, and specialise in the fields and topics necessary for delivering excellent research support. The next paragraphs aim to summarize highlights of the related literature.

Authors such as Schuetzenmeister (2010), Agostinho et al. (2020) agree that the constantly growing complexity of research and the increasingly competitive requirements of research funding create the **significant demand for professionals supporting and facilitating research and research projects.** While Schuetzenmeister (2010) refers primarily to the appearance of dedicated organizational structures, such as user boards, technology transfer offices and stakeholder engagement organisations, Agostinho et al. (2020) explicitly list the different categories of research management professionals who are involved “in the management of programmes of science, technology and innovation, communication and dissemination of science, and to the monitoring of the scientific, technological and higher education systems” (Agostinho et al., 2020, p.2).

Whitchurch explains in several articles the “boundary”, “hybrid” and “blended” types of roles in RM referring to the fact that in the 2000s and in the 2010s most of these **professionals had certain freedom to set their own boundaries and create their own job profile** (Gordon & Whitchurch, 2007, 2010; Whitchurch, 2006, 2007, 2008, 2009, 2010, 2012). These roles were often “interpretive ones”, referring to the linkage between professionals in RM and other parts of the academic staff, i.e. that of the academics and administrative staff (Gordon & Whitchurch, 2007, p.12). Research Management is then described as a “third space between professional and academic domains”(Whitchurch, 2015) and which integrates research with that of multiple constituencies in order to maximise research impact. (Whitchurch, 2015). Similarly, Schuetzenmeister (2010, p.24) argues that “the professional autonomy of research managers depends still on their ability to create their own profile of tasks by rendering specific services”.

Both Schuetzenmeister (2010) and Collinson (2006) highlight that **these job roles and responsibilities varies highly among the research performing organizations** depending on job descriptions and responsibilities, organizational and departmental contexts, personal experiences, forms of “identity negotiations and identity work they selected to undertake (Collinson, 2006, p. 271), and shows “not-yet stabilized role expectations” (Schuetzenmeister, 2010, p.7).

More than a decade ago, Research Managers were expected to possess up-to-date knowledge and provide information on grants, financial opportunities for research; distribute such information by



various means; help researchers prepare proposals, budget drafts; resolve legal questions: they had to take the roles of manager, lawyer, financier, or quasi researcher (Tauginiene, 2009). In line with this, recent investigation carried out by Zink et al. (2022, p.119) underlines that **“traditional research administrator roles are flat”**, lacking hierarchy within the individual or collective research support offices.

Compared to this, as it is argued by Andersen (2015), the rising complexity of research and innovation funding has an impact on the role of RMs. The trend shows that research management **roles are expanding, have to adapt to the constantly changing contexts** (Kulakowski 2006), **new roles are emerging** (Allen-Collinson, 2009), **and professionals have to expand the boundaries of their work** (Whitchurch, 2008). Collinson (2006) underlines that though roles are getting more specific, still an important number of factors influence these roles and their degree of specialisation. The investigation of Shelley (2010) carried out among UK universities demonstrate the same: RMs had diverse role with specific expertise, but all these were “context specific”.

The **specialization** is also underlined by Schuetzenmeister (2010, p. 2) explaining that bigger research cooperation projects cross organizational boundaries, so disciplinary and functional division of labour becomes inevitable. Whereas till the last decade most professionals were considered as “the jack of all trade but master of none” (Kerridge, 2016), nowadays **“the research administration workforce has diversified in several directions with formalized, specialized and advanced professional roles and new roles for new services**, such as research development” (Zink et al., 2022, p. 120).

When summarizing his 50 years in research administration, Goodman (2019) echoes the same need for diversity of speciality of roles in research management: “The profession now requires individuals from a broad spectrum of professional backgrounds, including science, accounting, engineering, ethics, law, finance, and non-profit management. ... However, the formalized professional roles of the research administration workforce have not yet been mapped and are not fully understood (Goodman, 2019).”

When looking at the specialised roles and functions of research managers, following Starbuck (2014), (Poli, 2018b) suggests the distinction between traditional and non-traditional roles in research management. For the analysis of these roles, two different approaches are presented. One can either start by listing the work and tasks in research management or from the individual roles. As for the latter approach, one can understand how each and every research support professional **“personally shape the role and functions in RM aligned with the characteristics of their institution”** (Poli, 2018b, p. 19). As far as the organisational work and tasks are concerned, Green and Langley (2009, p. 32) identify 10 core elements in the management and administration of research, i.e. development of funding opportunities, bid support, project support, ‘production, management and use and promotion of the outputs of research’, postgraduate, research, data, research governance, research assessment, research strategy and policy, and systems and administration” (Starbuck, 2014, p.19). These fields and roles are reflected generally in the professional development frameworks presented in the following section.

To sum up, the job roles and categories of professionals in research management become more specialized (Poli, 2018b, p. 21) and complex in the absence of a common understanding of what it is (Dyason, Pillay, forthcoming in 2023). The recent investigation of De Jong and Del Junco (forthcoming 2023) also presents that next to the terminology of the professional support staff and its alternatives, 23 of the analysed documents focus on one or more particular sub groups, such as librarians, grant officers, technology transfer officers, research administrators – including research managers and research management professionals – as well as faculty managers. (De Jong & Del Junco, forthcoming 2023, p.7.)

Here we arrive again to the concept of the Professionals at the Interface of Science developed by Agostinho et al. (2020, p. 3) which gathers all those professionals working at “the upstream (of research) – to attract/advocate for/define strategy for research funding, projects and partnerships (with both academia and industry); at research level – to support the research activity itself (e.g. postaward management, technological platform management, ethical compliance management, intellectual



property management, researchers development); and downstream (of research) – to pay back society the investment made (e.g. knowledge and technology transfer and commercialisation, outreach and science communication).”

The results of RAAAP-3 also depict the vast range of fields in which RMs work. The RAAAP survey used the macro-areas of Japanese taxonomy for RMA sub-areas of work (see Takahashi & Yoshioka-Kobayashi, 2016). These four major areas are “Research Development and Policy”, “Pre-Award”, “Post-Award”, and “Other Areas”. As it is presented by Figure 2, the most common area where respondents from Europe (n=1483) work is “Pre-Award” (39.5%). The four most common sub-areas are “Pre-award Application Support” (71.41%), “Pre-award Funding Information” (65.07%), “Pre-award Internal negotiation” (64.33%) and “Other Education” (51.11%). However, it has to be noted that the RAAAP surveys were mainly circulated by professional associations of Research Managers and Administrators/Research and Innovation Managers, thus, professionals working in other job categories than the pre- and post-award RMA, such as science communication, technology transfer, research infrastructure could be not reached out to the best extent.

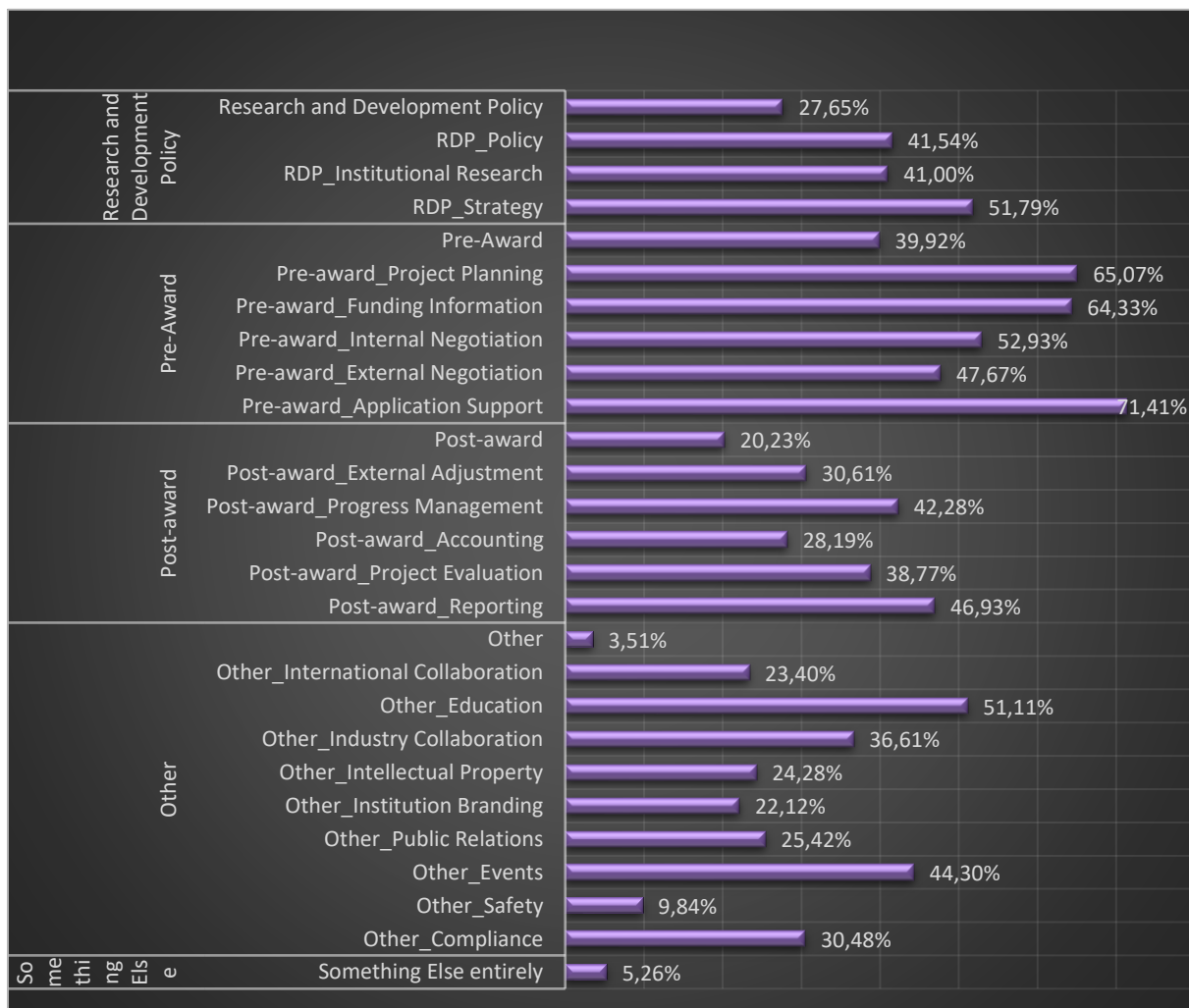


Figure 2: Areas that RMAs in Europe work in (Japanese taxonomy) (n=1483) (source: Kerridge et al., 2023b)

As regards the policy level, the ERA Action 17 explanatory document for ERA forum formulates the following definition of research management:

“Research management refers to the operation (research), while science management refers to the result

of the operation (science). The initiative ERA Action 17 is pursuing intends to improve the overall R&I system across the ERA by increasing support capacity for the operation. It therefore refers to research management. “Research management takes various shapes across the ERA, and therefore, its scope is multi-dimensional:

- research policy advice, evidence-based policy making, foresight and strategy development,
- research coordination, research development, research project and funding management, financial support;
- evaluation and assessment support;
- research and complementary training programme management;
- data-based research support, such as data stewards and data analysts, exploitation of research data, data protection;
- specialised research infrastructure operation;
- scientific integrity and ethics expertise, legal support;
- science communication support;
- knowledge transfer and innovation support, knowledge brokering, incubator coordination and business development.” (European Commission, 2022)

Similarly, the Call under the title “HORIZON-WIDERA-2021-ERA-01-20: Towards a Europe-wide training and networking scheme for research managers” published in the Widening Participation and Reinforcing the European Research Area work Programme 2021-2022, aimed to initiate an innovative approach by referring to professionals in research management including research policy advisers, research managers, financial support staff, data stewards, research infrastructure operators, knowledge transfer officers, business developers, knowledge brokers, innovation managers, etc.⁵

What is generally missing from most of investigations is the community of professionals based at research funding organisations. Schuetzenmeister (2010, p. 3) refers to these “program managers” who “do not only translate societal problems in research opportunities, but they are also mediators who observe scientific development closely and try to relate new research areas to political agendas”. Similarly, (Santos et al., 2021, p. 5) emphasizes that RMAs working at research funding and policy agencies should represent an “intrinsic part of the global community” of research managers but do not go beyond and no further analysis is delivered on their role, skills or competencies.

Findings of the AI tools depict a similarly broad diversity of job categories in RM. Whereas the answers of Perplexity.ai shows a more general level, ChatGPT presents more details. See Annex 5 Section 14.2 for more details.

3.2. Preliminary findings

3.2.1. Definition, terminology

Based on the literature review, our understanding is that there is no universally accepted definition or terminology to describe research management and research managers. Moreover, their job and activities in the R&I ecosystem often lack understanding hindering the identity formulation and professionalization of RM.

RM ROADMAP Ambassadors participating at the focus group discussions were keen on sharing their

⁵ See https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/wp-call/2021-2022/wp-11-widening-participation-and-strengthening-the-european-research-area_horizon-2021-2022_en.pdf (3 July 2023)

ideas and experiences in research management highlighting various approaches and challenges in their respective contexts. All the focus group discussions touched upon the issues of the lack of definition and clear terminology representing significant challenges to create a Europe-wide definition, terminology, categorization and career frame.

Participants were asked to share their own understanding of their role and how they describe their job to someone outside of the RM profession and the R&I ecosystem. It was emphasised that it is not easy to define what research manager or research management is. It always depends on the context and various factors, such as the type and size of the institution, the level of experience and career stages, professional background and personal interest. This might come from the fact that participants are having demonstrated experience in RM such as in the pre-award, post-award phases, technology transfer, research infrastructure management, or in the strategy field. Most of them are “wearing several hats” and are involved in various activities connected to RM. Some of them have background in academia, are national representatives of ERA Actions, national contact points of Horizon Europe in their respective countries and/or contribute to the policymaking activities connected to several aspects of research management or research assessment.

“That’s a fair point for the definition of research managers: do everything besides research. I think that is failing sort of because it doesn't include the aspects that you have to have a service attitude to do the job. And I say I want to see my role sometimes as an in-house consultant” (Participant, Northern European countries).

When going into the details, participants have approached the definition of research managers by elaborating it through a) metaphors, b) the most common misconceptions, c) their support role and d) the often-invisible manner of their work.

METHAPHORS

Participants of the focus group discussions defined themselves using different metaphors, such as “flower with growing petals”, “bunch of flowers”, “babushka doll” and “octopus” to describe their multiple and continuously expanding tasks.

It has been highlighted that the scale of the tasks that a research manager performs is very broad that might include both technical and more strategic-oriented aspects. One participant explained this in the following manner: “If you compare it to real estate, it is like knowing how to clean the room and build the entire room sometimes, so it's very broad”. (Participant, Northern European countries). Another participant shared the own experience in this way:

I'm now sitting in the strategy team, it's to enable the resources to create the right decision and helping on how they are working, and what should they concentrating on. For instance, on my table are our strategic KPIs, those are meant to be the tools (...). Those are the really high-level things. And then also my role, sometimes it's very practical because I happen to have some expertise in copyrights and ethics, and so we have other people who know about those [practical- edited] things” (Participant, Northern European countries).

Participants from the Southern European group called RMs as “money honey” or “babysitter” by describing their role in helping researchers secure funding.

“I work at the post-award and I am babysitting the principal investigator on how to manage the fund in a well manner and help him or her to solve any kind of issue regarding the implementation of the project and in all aspects, of administration and finance. So sometimes it is like babysitting the principal investigators and the researchers and PhD students” (Participant, Southern European countries).

When talking to outsiders, including friends and family, who often do not understand the nature of their work, RMs can also use these metaphors to explain their job:

“If a friend asks this (...) then I am a spy, for sure. I am constantly somewhere else, I'm also travelling, I always meet a lot of people, and I am networking like crazy, so they are

convinced whatever I am saying, that I am a spy” (Participant, Western European countries).

MISCONCEPTIONS

Moving on this track, explaining and defining RM roles to insiders and outsiders of the R&I ecosystem poses several challenges for research managers. Outside of the research and innovation contexts, people hardly understand what research management is, which can lead to many misconceptions. Different strategies were shared on how they try to overcome these challenges. Firstly, it is important to make distinction among the target groups or the audience and to tailor-make the explanation according to their potential understanding.: *“So if they ask what am I doing, it depends on who is asking. For some, I help the researcher to write the project, or I help writing a project or I work with the EU” (Participant, Southern European countries).* Others attempt to simplify the description saying that *“Well, I say that I am a secretary. I don’t say a lot of words, because every time I talk to someone who is out of the context, out of the environment, they just stare at me (...) They have absolutely no idea what technology transfer is” (Participant, Southern European countries).*

Participants even outlined that when communicating with fellows or external colleagues with whom they work together at regional or country level, they do not have to explain what research management is. But when it comes to the explanation internally, within their own institution, to researchers or to the management, it is not that adequate. *“(…) universities or medical centres or the applied sciences or ministries, even they know [what research management is] immediately because we have group meeting together and we are writing position papers, lobbying, doing a lot of things together so they immediately know. Internally, [name of the position] it is the question: What do you really do?” (Participant, Western European countries).*

This experience might, however, vary in line with the attitude of the leadership and researchers towards research management. Some of the participants claimed that their colleagues or supervisors do not understand the role of research managers, and consider them as part of the “noise” which is attributed to the growing requirements of research funders.

“But then on the other side, there are many researchers who even don’t know that we exist. And even the new vice rector, the two candidates for the vice-rector to become rector at my university, one when they promoted themselves to the to the researchers, one promoted himself as lowering all the administrative burden so that researchers can read etc. and money comes to researchers, and it was all noise. I am for example part of this noise, he understands it as a noise and so the researchers, they don’t understand what we’re doing and this is also part of the problem, I would say” (Participant, Western European countries).

It is important to note that during the focus group discussions and interviews research managers from Central European and non-EU countries usually highlighted that they call themselves as project managers. This term is fairly understood in these regions, and their diverse tasks align well with the responsibilities of project managers. This choice of title helps them communicate effectively and makes sense in their specific context.

SUPPORT ROLE

Although research managers carry out various tasks across the research and innovation ecosystem, the **supporting role** of research managers was emphasised repeatedly.

Participants agreed that research managers provide valuable support to researchers, helping them navigate complex systems, write proposals, manage projects, and address legal and financial aspects, thus the research support offices *“work like a single-entry point ... But we do not do anything, we just try to find the right office or the right competence in the university that can help the principal investigator with that kind of thing.” (Participant, Southern European countries)*

Another participant explained it in the following manner: *“the core part of my job is to try to make researchers’ life easier. I am a support person actually, giving them time to focus on their research” (Northern European countries).* Others view themselves as the *“voice of the researcher, who tells the*



researcher what is missing when conducting research. What should be done in order to do better, I don't know, procedure, to formalise and someone who has deep knowledge of research projects and research" (Participant, non-EU countries).

Another participant described the job in the following manner:

"...there are many complicated problems in the world that need the answer of science like microplastics, and vaccines problems. The European Union here set up a very complicated and very rich structure of research topics like thousands of research topics which are very interesting for researchers participating. But this system is very complex so what I'm doing is basically help our researchers to navigate this system and to make sure that the great concept, the great idea they have is written in a great proposal format" (Central European countries).

The term of being "*translator*" often emerged in the focus groups, reasoning that research managers are the translator(s) between industry and the research community. Participants agreed that research managers are "*connecting the researchers to the outside world*" (Participant, Western European countries). As one participant explained, "*It [research management] is about making researchers understanding funding and language, needs, it goes a bit around that, translation and making bridges*" (Participant, Central European countries). Another participant highlighted that "*I think it's a lot of the part that you translate not just between industry and researchers, but also within the research community*" (Participant, Western European Countries).

Participants even elaborated that despite the fact that they are not trained or employed for that, they offer "*psychological*" or mental health support in their offices as they sometimes feel that they need to support researchers in this manner. "*It's kind of like, not always a just project support office, you're also a psychological support office. That point, yeah, but we always joke about that*" (Participant, non-EU countries).

"...most of my time I am being a psychologist to the researcher. My peers, my manager is coming to me with problems and I am the one that provides them advice, but I don't have any mandates to enforce anything. And it demands a lot of us to be diplomatic and convey our message and our opinions in the right way. When it comes to the researchers, we are basically psychologists. They come up with an idea, they want to put all their heart and their ideas. And they want advice. You can either tell them that this idea is just terrible and they will be devastated, or you can you have to say it in another way and help them and guide them to the right path. And they are really different, different people, different personalities, different disciplines. So, I spent most of the time being a person, that they can cry on my shoulders. And besides that, I have some technical skills as well. How to write the grant how to avoid the economic and legal pitfalls, and how to make it cohesive at all so that the hard skills I spent sometimes only the soft skills are really demanding." (Participant, Northern European countries)

"Sometimes I consider ourselves like the psychologist like we have the sofas in our offices and just let them talk. And during the conversations, convince them that they're ... that what we are talking about and what we are advising are their own thoughts" (Participant, Central European countries).

Finding the ways how professionals define their work was also central part of the interviews. The results showcase that the interviewees also defined their role in a similar manner, featuring their support role.

"I'm the link between research and budget or research and reporting, let's say. I'm the one that translates the administrative stuff to researchers and science to the administrative part, so I work in all the fields" (Interviewee, Romania).

"I think it is my role in the whole innovation and research ecosystem to be a facilitator. I am a facilitator, if they want to get funding. I help them navigate that." (Interviewee, Portugal, research institute).

Interviewees revealed that the way they are explaining their work also changes over time.

“So, I used to really describe it more as project management, but now I would describe it as research facilitation. So, I can match researchers, businesses, across disciplines and sectors around European funding opportunities. And we help them get the money to do the research, to generate social, environmental and economic impact. So, I then just sort of summarise it as facilitating research, so I actually don't describe it really as research management or administration. I've learned research facilitation sort of sometimes to somebody outside the sector can be a bit clearer that we help researchers.” (Interviewee, UK)

“... You know, I find the researchers like the artists. They know exactly what they are going to do, but they don't know exactly how and they don't care about that. They need someone else to guide them, but they are not asking for help. They think that someone will just read their minds and come up with a great idea without even expressing it.” (Interviewee, Romania)

Some interviews shed light on a frequently featured problem in the literature, highlighting the conflicting link between emphasising the support role of research managers and recognition. One interviewee from Portugal highlighted they prefer to use the term “professionals in the interface of science”, since the term “research management and administrator puts us in a lower, in a kind of, position to support others and not to belong to the ecosystem. (...) Maybe I like to see myself as someone that translates different words in this kind of finding and what's going on at the political way to a language where the researchers can understand”. (Interviewee, Portugal, research institute)

Summing up the terms expressing the support feature of research management, the most frequently used terms were counted in the transcripts of the focus group discussions and in the interviews (see Table 2). Although in some countries the term support is considered in a downsizing manner, it was used the most frequently. It is followed by the term help. Interesting to see that the terms facilitate and link were used in most of the interviews repeatedly, whereas they were hardly mentioned in focus group discussion.

Table 2 Word frequency of terms related to the support role of RMs in transcripts

	Focus group discussions	Interviews
Support	68	135
Help	47	33
Connect	7	22
Translate	12	12
Guide	2	9
Facilitate	1	16
Link	0	11
Enable	2	2

INVISIBLE/SHADOW WORKER

Participants of the focus group discussions agreed that research management is a challenging job, posing many (even unwelcome) responsibilities as well on research managers, often without a clear mandate to enforce decisions. Based on their experiences research managers are often required to perform invisible work or emotional labour at their workplace (see the citation from the Northern European country group participant above).

Research managers generally put a lot of efforts in building and professionalising the research support which is hardly acknowledged.

“I needed this extra work so that people would find the office as something important, not another burden that they have to go through, but in an office that they can look up to assist them in the project. Use the fruits of these successful mini projects that now the professors see as a door to knock, as an open door where they can enter and get the assistance needed. So, these small success stories were helpful in order for the people to see the importance of research management” (Participant, non-EU countries).

However, participants unequivocally agreed on the fact that their significance becomes apparent mostly in time of crisis. One participant shared a story about a mock-up audit exercise initiated at their institution by the Research Support Offices which first was seen by researchers and the management as an unnecessary procedure. But a few months later, when an actual audit occurred, the institution was prepared, and the colleagues were not afraid of the situation while other RPOs, also subject to the audit, failed to accomplish the procedure in an sufficient manner.

Focus group participants agreed that their contribution to the institution is often not valued properly. Research managers rarely get the opportunity to receive praise or recognition from upper management. As one participant highlighted:

“In this academic culture, is not very common when high management is praising you and saying you: like wow, you did so much good things. It's always very quiet and you don't hear it from them directly, but from colleagues from corridors, you hear that this action and this action was quite useful” (Participant, Northern European Countries).

“I think that one problem is that as long as everything works out fine or without problems, you don't see that you maybe need help or you need a profession” (Participant, Northern European Countries).

Participants also explained that the only time they feel appreciated or valued by the upper management is when “money comes in” by winning grants. Therefore, winning grants is one of the key moments of their job, which also enhances their recognition and self-esteem.

“When you win projects, basically, or both from the researcher side and the management. Basically, when money comes in then suddenly you appear on the stage and you're like there she is and she can do stuff.” (Participant, Southern European countries)

“That actually motivates the research managers that you know, we can do it as well because it's kind of like many days many times in your daily life, you're seen as “administrative” personnel, but I mean you actually research managers are very talented people. It's just that, we're not always given the opportunity to show that. And I kind of think that I like to think that the cofound project that our office wrote, you know, from scratch and got in the end, gives a nice motivation that you know, it can be done and you're not just administrative” (Participant, non-EU countries).

However, they also pointed out that this recognition stops at this point: generally, no promotion or salary increase follows these successes. Participants also shared their experience that their role and importance got only recognition when they quit their job and moved to another institution.

“I remember just 2 key times where I was really... I felt really useful when we got an 5,000,000 project from the EU and they really invited me as a key person of the mini party of the research group. And then and then when I moved from 1 institution to another, because while you're doing your daily job, they don't recognise you. But when we say you move, they really recognise that, well they cannot, they cannot live without. It is the only moment I felt really useful.” (Participant, Southern European countries)

“But when I left, even now, three years later, the researcher most of the researchers with whom worked for the past six or ten years that I was in the University they still keep saying, oh you are missed, you should come back. And some of the team and the director there did a mistake letting you go.” (Participant, Southern European countries)

3.2.2. Categorisation

Linked to the definition of the profession, several job categories were pointed out in the field of Research Management. The transcripts were coded both manually and by NVIVO. Table 3 includes the identified categories.

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Table 3 Job categories in the field of RM from the focus group discussions

	Manual coding	NVIVO coding
Financial Manager and/or Advisor	7	1
Head of Research Support Services	6	0
Pre-award manager	6	1
Project Manager	6	2
Post-award manager	5	1
Research (Funding) Advisor	4	2
Technology Transfer Manager	4	3
Administrator	3	2
Education, Training and Capacity Building Manager	3	0
Legal and Contracting Officer/Advisor	3	0
National Contact Point	3	0
Research Policy Advisor	3	0
Innovation Manager	2	0
Intellectual Property Manager	2	0
Knowledge Valorisation Manager	2	0
Monitoring, Compliance Specialist	2	0
Project Developer	2	0
Research Data Steward	2	4
Research Project Manager	2	7
Technology Transfer Specialist	2	2
Technology Transfer Officer	2	2
Auditing Specialist	1	0
Business Development Manager	1	0
Ethics Advisor	1	0
EU Liaison Officer	1	0
Evaluation Officer	1	0
Events Manager	1	0
Grants Assessment Officer	1	0
Grants Management Officer	1	0
Human Resource manager	1	0
Industry Agreement Manager	1	0
Industry Engagement manager	1	0
Internationalisation Officer	1	0
IT System Specialist	1	0
Licencing Manager	1	1
Open Science Specialist	1	0
Portfolio Manager	1	1
Research Infrastructure Manager	1	1
Research Strategy Advisor	1	0
Resource Manager	1	0



Science Communication, Dissemination Expert	1	0
Science Manager/Officer	1	1
Startup Development Manager	1	1
Science and Technology Manager	1	1
Account Manager	0	1
European Research Funding Advisor	0	2
Project Officer	0	1

The results include a broad range of different jobs which are all important fields covered by Research Support Services, including pre-award, contracting, post-award, finances, communication, legal issues, knowledge and innovation management, research policy, research funding, data management and the management of research support services. Some of the expressions are closely related to each other (i.e. technology transfer officer vs technology transfer specialist) demonstrating that even the same job categories have different naming in the different institutions and countries. Moreover, the level of specialisation is also different: while one institution has broader profiles, others might have professionals with niche expertise, i.e. data steward vs open science specialist or technology transfer officer vs licencing manager.

In the case of institutions, where research management services have been operating for over 10 years and went through a certain level of professionalisation, research management roles and jobs are described appropriately and this job was done by the research managers. As one participant highlighted, *“I have written every single description that what I do myself, because that nobody really understood. But when you do it and it goes well, there's like, yeah, yeah. Just do it, but they also need to understand it”* (Participant, Western European countries).

Certain differences in the field of specialisation and job categories can be also identified among the country groups taking part at the focus group discussions. In most groups participants highlighted that they are wearing *“multiple hats”* referring to the fact that they have different positions and job roles in parallel. In line with the literature, the group of Northern European countries also highlighted the boundary aspect of the profession:

“What is lovely about the profession? In many organisations, it's up to you. You can select and there's no, in that kind of, supervision. If you are an MD, I mean strictly regulated and you have to follow certain procedures and you just are allowed to do those things. While in our professional, I mean you can grow, you can organically move between pre- and post-award or be more strategically orientated.” (Participant, Northern Europe countries)

The group of Southern European countries confirmed the lack of standardisation within the profession across institutions and countries.

“Yeah, it's very difficult to standardise. We tried to do that. We actually employed the [name of company-edited] to help us. Yeah, create a standard position. So once, we're developing an innovation department, we wanted to see, OK, how do we call these people? What positions do we open for innovation? You know we tried to map other research organisations, what they did, what position they had and it was a mess, because they had for the same tasks, they were called a million different names, you know. Technology Transfer Officer, partnership manager, industry relations manager, whatever. I mean and it couldn't and we didn't find any standard that we could use. So we tried to name the position as best as we could.” (Participant, Southern European countries)

An interesting possibility of job categorisation was mentioned by a participant of the non-EU country group underlining that the emergence of new job categories and related specialisation is in line with founders' changing requirements and addressing the so-called cross-cutting issues:

“How we can distinguish the role of the research manager is through the deliverables. So, there's countless number of deliverables. Some I see there are almost like 30 different types



of deliveries of our project, whereas the researchers see the impact size so through publications or patents. There are much more deliverables, like a project management plan, like dissemination plan or data protection plan or risk management plan. And all these are more with the research manager. Whereas the researcher has only to find the end result, the impact in terms of scientific community, whereas the research manager needs to care about the administrative side, about compliance, about auditing and all these aspects. We can easily more easily distinguish and emphasise more the role of the research manager.” (Participant, non-EU countries)

A participant of the Southern European group touched upon another important aspect: both the size of the institution and the Research Support Office matters when it comes to the specialisation of RMs across different job categories. Most institutions start with a Research Manager who is alone in the office. Then this person is potentially asked to build up the RSO, meaning that can employ 2-3 colleagues who are responsible for all possible tasks in the beginning. Then, as the team grows, more specialisation is possible:

“... and another point that is important is you mentioned the matter of the size of the organisation and also, I need to add at the stage of development of it because in my organisation it was actually an interesting thing to observe. We started a research centre from scratch, and got a grant to create a new research centre. Started the Research Office where there were two people. We were doing everything from policies internships, doctoral training programmes. Then, as the projects grew and people grew, the size of the team grew, then we assigned more specific names. And as the team grows you try to specialise, so focus some key or specific things and so yeah, it’s an evolving process and if we grow more then we start bringing more expertise. Now we hire an education training manager that only does education and training, and we have an event or whatever officer. And then, yeah, then the bigger you are, the more focused or specialised, you can be.” (Participant, Southern European countries)

This development path and the different level of maturity of the Research Support Office led by the interviewees were also depicted during the interviews. In the case of the Romanian research institute, the RSO consists of 3+1 person focusing on pre-award services and financial support in post-award, lacking specialist in legal and contracting issues. The pre-award office of the Portuguese public research institute having 2 colleagues also indicated the need for a similar expert. As the number of the staff grows, more diverse profiles of RMs and more in-depth support were introduced. The lacking profiles mentioned by the interviewees include either more specific fields (i.e. data management) or possibilities to extend the profile of the RSO (i.e. innovation management for the Spanish university, policy impact for the UK university or research strategy for the Portuguese research institute).

Interviewees unequivocally agreed with the necessity of specialisation which is having implications on the training needs and relevant skills of RMs that we will analyse below.

“I think that all the jobs that we have here at the service are specialised. Some less, some more, but each one needs a specialised training, experience in order to be carried out.” (Interviewee, Cyprus).

“...the way I see the profession and the growth is happening, and I think we need to be more specialists. But there will be also a need, because if you are much specialist, you are more efficient on that. But maybe you need also broader to not to get lost and to not to see the rest of the environment.” (Interviewee, Portugal, research institute)

Lastly, when talking about job description, most of the interviews went into the details with regard to the accurateness of job categories. Most of them elaborated that in the recent month or years, these job titles and descriptions were reviewed and adjusted and nowadays they are clear and distinct. This kind of review enabled self-reflections within the office and clarifying externally the roles and responsibilities of the different RM jobs.

3.3. Gaps and needs

Agostinho et al. (2020) highlights that it is inevitable to understand the complexity of the roles under the umbrella term to be able to develop an inclusive definition. However, our understanding from previous surveys and from the literature is that **“the formalized professional roles of the research administration workforce have not yet been mapped and are not fully understood”** (Goodman, 2019).

Focus group participants claimed that the diverse profile and portfolios of research managers, along with the lack of recognition of the profession contribute to the difficulties of establishing a common understanding of research management. Nevertheless, there is a strong need for an umbrella term and definition of RM which is understood and recognised by relevant stakeholders, including policy-makers, university leadership, management as well as researchers. This term and definition are expected to meet the following criteria:

- Umbrella term for the broad range of existing (and emerging) professional groups – not replacing them, but reinforcing them;
- Inclusive but reflecting the boundaries towards other professions in management and administration not related to research;
- Decent for the different professional groups;
- Relying on co-creation and easily embraced by all;
- Easily understandable by stakeholders, decision-makers and policymakers;
- Flexible enough to overcome national differences.

All of the interviews confirmed that it is important to see the different job categories and then the related skills and competencies. An overarching but detailed categorisation of Research Management can provide the example and a path for development for RSOs regardless their level of maturity: those which are having still limited staff and services can understand the opportunity for development, whereas those which are working already with greater staff can understand the possible niche fields where they can specialise their support.

From the view of the RM ROADMAP project, following the formulation of the terminology and definition, our aim is to go beyond, and **define professional categories or segments as the complexity of professionals' roles, necessary knowledge and skills require different approaches in the development of career path, professional development and training.**

RMs have “mixed profiles” (Santos et al., 2021), therefore generalisation can be done only to a small extent. The question is what the main professional categories could be and to what extent they shall be detailed and generalised at the European and the national levels. The rough data expected to come from the RM ROADMAP survey based on which RM communities from all over Europe will be able to take part in the co-creation and the validation of the concepts.

4. Professional development framework and career path

As described above, the profile of Research Managers is not a universal profile, which hinders the formulation of a professional identity and career path (Santos et al., 2021). The desired recognition can be achieved through the identification of the profession as such, the launching of training and educational programmes, establishment of associations, and the creation of a professional development framework which clearly defines the possible career paths for RMs. There is a need to create a professional development framework (PDF) for RMs to “support, strengthen and guide the development of the profession” (Andersen & Romano, 2022). A professional development framework usually consists of the “activity areas, professional levels and hard & transversal skills of the professionals” (Andersen & Romano, 2022). This chapter outlines the existing literature on RMs’ professional development, existing PDFs and the lack of career paths.

4.1. Literature

Blümel et al. (2011) note that “professionalisation refers to the subsequent sequences every occupation has to pass through to obtain the status of the profession” (Blümel et al., 2011, p. 116). Based on the work of Blümel et al. (2011), the following criteria need to be met to be defined as a profession: “a) Existence of a socially relevant problem area urging for the development of specific knowledge. b) Academic, specialized training that provides the abstract knowledge essential for professions. c) The establishment of a professional association or a professional representation that acts as a regulating and standard-setting actor. d) Extensive autonomy of action and exclusive decision-making of the professionals in their field” (Blümel et al., 2011, pp. 116–117; Müller et al., 2022a, p. 3).

The process model of professionalization goes further: first, it implies the identification of the full-time occupation, second, the provision of trainings and this leads to the establishment of the associations. It is followed by the definition of code of ethics and the recognition of the profession by law (Curnow & McGonigle, 2006). Based on our knowledge, there is a huge diversity across the European countries with regards to maturity level and the professionalisation of RM. In some countries, there are training programmes and/or national associations. We are also aware of Europe wide association and some training programmes. However, there is no evidence so far that a code of ethics or support law would be available in any of the countries or at European level.



Figure 3: The process of professionalisation based on Flexner's attribute model (Curnow – McGonigle, 2006)

Similarly, the relevance of professionalization and professional recognition can be assessed from the view of outcome indicators as it is presented by Blümel and Szekeres (2011). Accordingly, the following



Key Performance Indicators would increase, such as 1) numbers and qualifications of professionals; 2) number of professional units and specialised staff, 3) emphasis on professional qualifications in recruitment; 4) change in self-conception of professionals, with greater autonomy and power; and 5) specialist networks and professional associations (Szekeres 2011).

In line with the above presented requirements of professionalisation, it can be stated that RM is yet to be widely recognized as a profession (Poli, 2018b, p. 25). RM has evolved and adapted to the changing field of research and innovation, however, there is an ongoing debate surrounding the recognition of RM as a separate profession (Green & Langley, 2009; Langley, 2012; Poli et al., 2014; Poli, 2018b). So far it can be stated that “proficiency in research management stems mostly from tacit knowledge, personal qualities, and experience” (Hockey and Allen-Collinson 2009: p. 145).

The absence of the recognized professional status of RMs may be attributed to several factors. Firstly, the lack of clarification on the specific tasks and services of RMs has contributed to the ambiguity surrounding the profession (Schuetzenmeister, 2010, p. 7). The results of the research conducted by Virágh et al. (2019) sheds light on the possible reasons for the lack of recognition: it includes the lack of professional identity, lack of common understanding of the tasks and responsibilities of RMs, and the lack of career perspective (Virágh et al., 2019, p. 25). Furthermore, the educational and training programmes tailor-made for RMs, especially certified ones, are scarce and rarely recognised (Virágh et al., 2020, p. 23).

As regards RM associations, networks and communities, in the framework of RM ROADMAP, in Work Package 2, the preliminary report on professional development sheds light on the already functioning RM association and communities of practice across Europe. Oliveira et. al (2023) mapped 99 RM Networks, including formal and informal associations and networks. A detailed list and more information can be found in WP2 deliverable D2.1 Preliminary report on professional development.

The RAAAP survey findings shows that the majority of respondents in Europe are usually members of none (38%) or one professional RM association (38%). Approximately 18% of respondents are members of two associations due to the existence of EARMA and BestPrac operating at transnational level, whereas several countries/regions have their own associations as well. However, these results can be biased, due to the lack of membership identity of several professionals. In the case of the investigation carried out by Virágh et al., (2019), even if the survey was distributed among the members' of the BestPrac network, not all respondents indicated their membership in the action (see Figure 4).

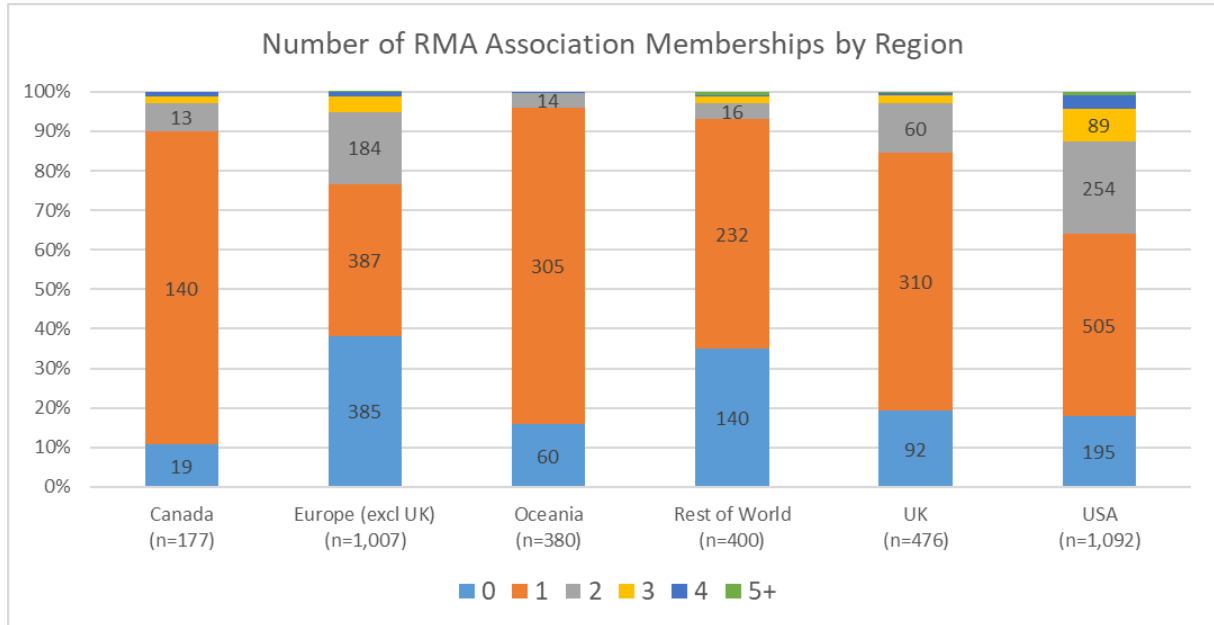


Figure 4: Number of RMA Associations Affiliations by Region (source: Kerridge et al, 2023b)

As regards professional development, RAAAP-3 results highlight that 85% of respondents (n=1,483) have no professional accreditation related to research management (see Figure 5).



Figure 5 Number and proportion of respondents having accreditation related to research management and administration in Europe (n=1483) (source: Kerridge et al., 2023b)

As regards the career path, Green and Langley (2009) underlined that half of their sample from universities based in the UK felt that career development opportunities were very low or low. The authors also pointed out that in case of appointments for higher positions, institutions rather recruit from external experts instead of their staff meaning that institutions can hardly tackle the issue of professional development and promotion of their staff.

The interviews carried out by (Zink et al., 2022, p. 136) depict that “each research administrator



experienced a unique and personalized professional journey. No one chose this profession from the start but instead landed in their position through a series of happenstance situations. This 'jungle gym' approach to the career ladder is perhaps one reason it has taken so long for the profession of research administration to formalize.” They also add that the professionals interviewed lack promotion and career path meaning that neither their titles nor their wages do follow a certain set of structure.

CARDEA survey confirmed the lack of clear professional development path: 45.8% of respondents reported that they have no professional development plan at all (O'Regan, Chrualaoich, et al., 2023, p. 27). Their respondents, especially those employed by temporary contracts, feel stuck in their careers and want career pathways that would allow them to progress (O'Regan, Chrualaoich, et al., 2023, p. 4)

Checking the results of AI based investigation, the results regarding the career path rather takes us back to the different job categories and roles, instead of showing a clear progress, which is in line with the reality. Regarding the available opportunities for professional development, the available opportunities are presented by both softwares, though ChatGPT managed to provide more nuanced answers. For more details see Annex 5 Section 14.3 and 14.4.

The following sections aim to provide an overview on the professional development frameworks developed by different RM associations in the recent years.

4.1.1. ARMA

ARMA (Association of Research Managers and Administrators),⁶ the professional association for research leadership, management, and administration in the UK have around 3000 members including “research leaders, managers and administrators offering professional development and opportunities to build networks, knowledge and skills” (*The Association – ARMA*, 2023).

In 2011, ARMA developed a PDF document to support research managers and administrators (RMAs) in planning their professional development and mapping their career paths. The ARMA PDF encompasses 21 different functions performed by administrators supporting research activities. These functions cover proposal development, project finance management, knowledge exchange and business development, and support for postgraduate researchers. To provide a comprehensive overview, these functions are categorized into seven broader headings: Developing Proposals, Project Lifetime, Translation, Postgraduate Researchers, Policy and Governance, Management Information and Related Functions, and Service Organization and Delivery. Each function is described from three perspectives: Operational, Management, and Leadership. The document provides detailed information on the activities, indicative skills, underpinning knowledge, and professional behaviour associated with each function. (ARMA, 2011)

4.1.2. SARIMA⁷

SARIMA (Southern African Research & Innovation Management Association) fosters collaboration among academics, research management practitioners, and institutions in Southern Africa to address common issues related to both research and innovation management. The organization was formed in response to the perceived need for collaboration and association within the region (*About – SARIMA*, 2023).

SARIMA provide accreditation in both research management and innovation/technology transfer management through international peer organisations, the International Professional Recognition Council (IPRC) for RM and Alliance for Technology Transfer Professionals (ATTP) for IM.

SARIMA developed a Professional Competency Framework (PCF) for Research and Innovation

⁶ See: <https://arma.ac.uk/>

⁷ See <https://www.sarima.co.za/>



Managers in Southern Africa which can be later adapted (SARIMA, 2023). The PCF was developed between 2010-2014, and it was built on the results of surveys aiming to better understand the capacity needs and preferences for professionalization within the Southern African research and innovation management community. The PCF was officially adopted in 2016. (Williamson et al., 2020) SARIMA's PCF consists of nine competency areas at three levels within the Research Management environment: administrative/operational, management, and leadership/strategic. The framework also addresses transferable or crosscutting competencies, such as interactive communication, conflict resolution, personal effectiveness, researcher focus, organizational awareness, diversity valuation, technology leverage, and nurturing innovation (SARIMA, 2019).

4.1.3. ARMS⁸

ARMS stands for the Australasian Association of Research Management Professionals which brings together over 3,500 members from universities, independent research institutions, government and health organizations, and research organizations across the Australasian region, including Australia, New Zealand, and Singapore. (ARMS, n.d.-a)

The purpose of the ARMS Professional Development Framework (PDF) is to outline the knowledge requirements for individuals to become effective research management professionals in the Australasian region. It also aims to map the range of programs offered or needed by ARMS to impart this knowledge to its members. The PDF identifies six core areas of knowledge and categorizes them into three levels of knowledge enhancement: Foundation, Management, and Leadership. Advancing from one knowledge level to the next typically assumes familiarity with the knowledge from the previous level. Each section of the framework describes the broad learning outcomes relevant to the specific core area and knowledge level. (ARMS, n.d.-b)

4.1.4. BESTPRAC⁹

In 2014, BESTPRAC, a COST Targeted Network was kicked off to foster collaboration among administrative, financial, and legal staff from universities and research-driven institutions. Although under COST funding, the initiative concluded in October 2019, BESTPRAC remains active and has transformed into a thematic group within EARMA (European Association of Research Managers and Administrators). This network functions as a platform for members to exchange experiences, share best practices, facilitate knowledge dissemination and transfer, and enhance effectiveness in their respective domains (BESTPRAC, n.d.).

The BESTPRAC Network has developed the Research Support Staff (RSS) Framework which is structured around the project lifecycle, distinguishing various phases such as before the proposal, proposal preparation, grant preparation, and project phases. The framework was outlined based on the work of the three working groups, representing the main areas of research management professionals (RMA): administration, finance, and legal aspects. Instead of defining professional levels, the framework identifies three types of staff based on the research support provided: Research Administrator, Funding Advisor/Liaison Manager, and Project Manager (BESTPRAC, 2019).

4.1.5. RMAN-J¹⁰

RMAN-J (Research Manager and Administration Network Japan) was established in 2015, as a bottom-up activity of Japanese RMAs to form their own network and create platform for exchanging information. The annual conference of the association attracts approximately 600-700 people from Japan

⁸ See <https://www.researchmanagement.org.au/>

⁹ See <https://earma.org/bestprac/>

¹⁰ See <https://www.rman.jp/english/>

each year.(RMAN-J, n.d.)

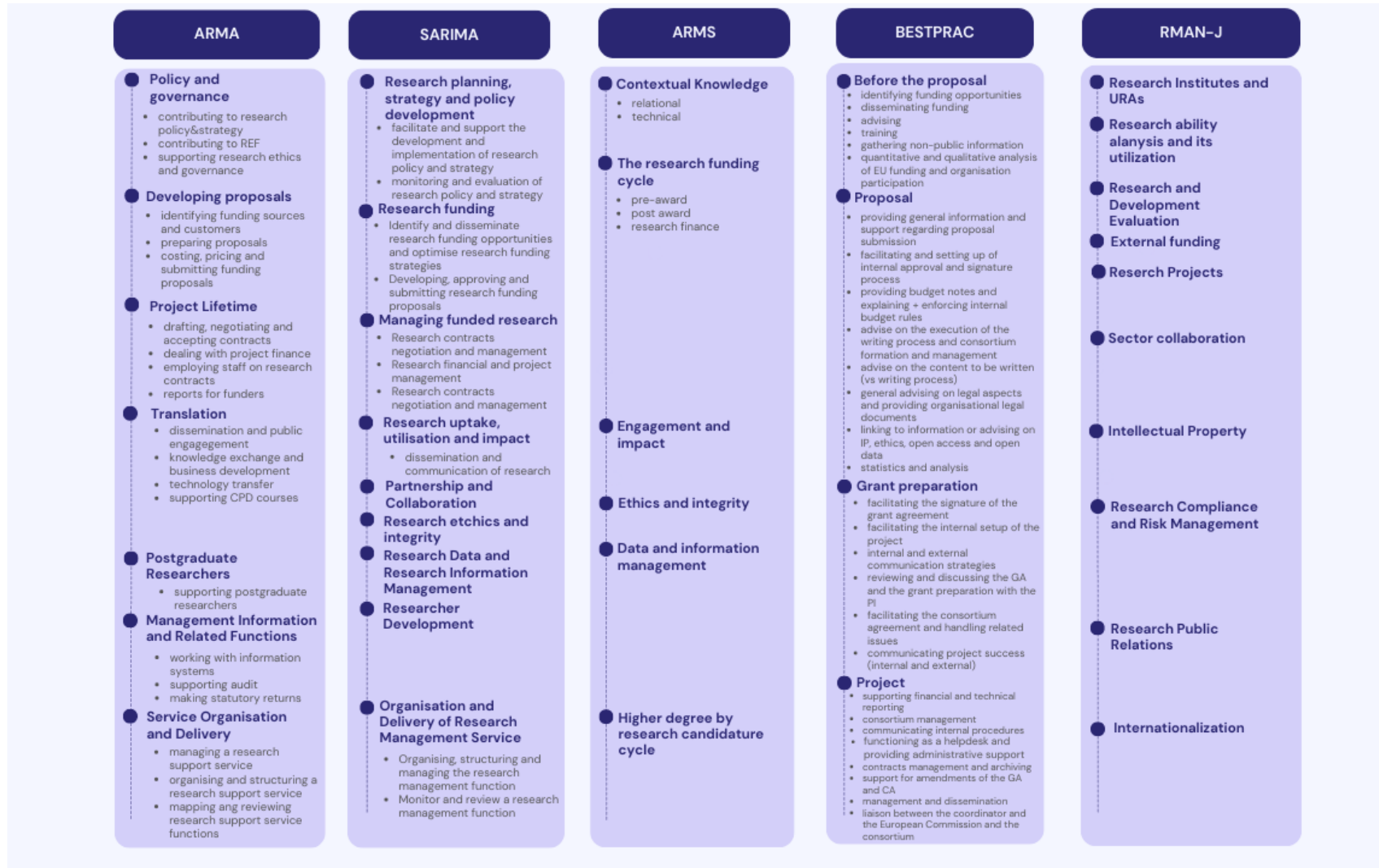
The Network has formulated their own educational training program, consisting of 15 subjects covering a full range of research management activities, including strategic planning, pre-and post-award granting, technology transfer, IR etc. professionals can be certified on two levels; the first tier is “certified” status and the second is the “advanced” certified professional. The certification process serves as a tool to communicate with stakeholders on the role of RMAs in research and innovation system of Japan. (Takahashi&Ito, 2023 forthcoming).

4.1.5. Summary of existing PDFs

Table 4 is outlining the main fields covered by the different frameworks is included below. It clearly demonstrates the different understanding of RMs’ roles and the extent to which they are addressed.



Table 4 Overview of the existing professional development frameworks



4.1.6. CARDEA

CARDEA, the sister project of RM ROADMAP was kicked off in the summer of 2022 and developed a draft career framework for Research Managers based on four levels, similarly to the division of researcher levels elaborated by ERA Action 4 (see more details above).

- (a) RM1 – First Stage Research Manager
- (b) RM2 - Recognised Research Manager
- (c) RM3 - Established Research Manager
- (d) RM4 – Senior Research Manager

The proficiency levels of RM1-RM4 competences were also drafted by CARDEA, namely at the foundational, intermediate, advanced and expert level. CARDEA in its framework works with the nine competence areas set up by SARIMA: organization and delivery of research management service; research planning, strategy and policy development; researcher development; partnership and collaboration; research funding; research ethics and integrity; managing funded research; research data and research information management; research uptake, utilisation, impact and technology transfer.

The core competences highlighted by CARDEA are the following: technical skills; specialised knowledge; project management; outreach and community; financing/contracting/compliance; line management and talent development; communication; relationship management and transversal skills. Based on CARDEA's framework, each research manager role involves competency level requirements that reflect the variance in complexity, scope, and responsibility across the roles RM1 to RM4 (O'Regan, Saporito, et al., 2023).

4.2. Preliminary findings

CAREER PATH

Both the interviews and the focus group discussions revealed that there is hardly any clear career path for research managers within European countries. Career development is rarely a single way within one institution:

"... maybe a colleague could replace me at a certain time, but I'm not thinking that I can replace the scientific director. Definitely not, because I'm not working in the ... field or something. Definitely I will not run the scientific department..." (Interviewee, Romania)

"And there are not big options because we, maybe because, we are too small, like for instance, if you realise, I'm the head of the office since [date – mid 2000s -edited], it's a lot. I don't see very well where can I develop in terms of career or position or.... The only thing is I could if they, if also I propose and they are in agreement is that we integrate other I'd say responsibilities and this maybe will allow me to grow as a team and with number of people, even the people in my team and I think also that will be, and is being a problem is going to be a problem in the future..." (Interviewee, Portugal, research institute).

Due to the lack of clear career path, Research Managers have to create their own career path if they want to advance in their career:

"I've gone from European project manager, senior project manager, head of Proposal Development, now head of the [office – edited]. So I've had a very clear and good trajectory and I'm very grateful that. But there aren't so many opportunities like that." (Interviewee, UK)

A more common career path was described by a participant of the Southern European group describing the general phenomenon according to which RMs can advance in their career by changing jobs and

RM Roadmap HETFA WP1 D1.1 Preliminary report on ERA-wide landscape organisations:

“When I was a researcher, I was doing research for a project and I would not consider myself a research manager or whatever. Then I was managing one project at a private company and then I was involved in research management of one project, I was doing the reporting, financials and maybe some event planning, maybe some administration and that’s it. Then I moved to a research centre and I was project manager, scientific coordinator for the department of a research center and then I managed 5 research teams like 10 projects and then you scale up to the responsibilities that you have. Then I moved to managing a research office and the center, a new center and then you do everything. You write policies, you try run education and training, support executives and it could be anything depending on where you are on your career stage on the type of organisation you work with, at project companies, private companies you do more focused things and the more you move up you do more policy-related stuff or more diverse staff, so yes, it depends.” (Participant, Southern European group)

The situation is slightly different in private organisations and companies: career development necessitates proactiveness and initiation of new roles and responsibilities.

“In private entities. There is no path. In private entities, everything is possible at the same time that everything is impossible. You see, the owners of the company have always the complete discretion of deciding as they please. What I find in private is that everything is possible. If they want to give you a bonus, they give. If they want to transform you into a managing director, they can, from one day to the other, it's really open.” (Interviewee, Portugal, private)

“And right now, I think I am with 20 years of this, I think I'm getting to a point where I eventually will downgrade a little bit from writing and we'll be a little bit more focused on coaching grant writers. And doing quality assessments on proposals, on advising larger teams, because I really do think that it is a little bit my responsibility to make sure that I help as many as I can.” (Interviewee, Portugal, private)

The situation is worsened by the fact that for public organisations, salary scales and job categories are defined on the national/regional level, which leaves no room for the recognition of Research Management as a profession, its particularities, possibilities for professional development, promotion or career progression.

“So, all our salary scales are aligned with the government salary scale. A research project manager, the officer here, is equivalent to an officer that is in the student affairs, that is serving students, the same career path for them. There's no difference at all, so we don't distinguish within the university between research project managers and whatever other administrative, let's say, job description we have... We don't have anything outside the service either at the university or at the national level [regarding the recognition of certification or other professional development opportunities].” (Interviewee, Cyprus)

“For me, it's just fine as it is, but there is nothing there. There is no procedure or I don't know, something to follow for that in this institution.” (Interviewee, Romania)

Participants highlighted situations or stages of their career when their salary was financed by the management budget of the project, or they were employed only on a project basis. It was discussed by participants that organisations often fund research managers from overhead budget categories or via fellowships. More participants highlighted that once they moved for another job in order to have better working conditions, and the leadership/organisations had to supplement the missing knowledge, the asset and added value of research management services was realised. As one participant claimed *“when I brought the Marie Curie, my salary was from the management fund. When the project ended, I left the university. For the Pathfinder, I entered the dissemination part because I realised that the university would not recognise my role the in the project”* (Participant, Southern European countries).

Still today, professionals face challenges due to temporary contracts and lack of job security, which

RM Roadmap HETFA WP1 D1.1 Preliminary report on ERA-wide landscape affects the continuity and effectiveness of research management teams. The precarious working conditions and lack of sufficient remuneration hinders the professionalisation of the research management community. Participants of the focus group discussions and interviewees suggested that research managers should be considered an integral part of international research processes and projects making it mandatory to allocate some percentage of the project to research managers as their responsibilities are continuously growing. No focus group participants or interviewees were aware of research management/research manager being defined as a separate job title in their respective countries.

“If you talk about profession, of course it's needed to be recognised, it's needed to be recognised. ...I also discussed this with the project officers and telling them that, you know, two person months for a project that the last sixty months it's very, very low. And you know, because you are the person that I'm interacting always, and I am the project manager, not the project coordinator. So, when we are coordinating, when we as an institution are coordinating the project, the project officer sees that it's me, the one that he is discussing and not the scientist. So, he knows the amount of work that we are always doing. If you have an amendment... Oh my God, if you have 3 amendments or if you have reports that are coming back or if you have now for every report you have that review meetings that you have to prepare in advance, you have to organise another steering committee before the steering committee and before the review ... blah blah... and you have to do that rehearsal before the review meeting and everything... So, there are many months that should be given there for the people that are assisting the researchers in carrying out these activities. Definitely for the job itself, it should be recognised.” (Interviewee, Romania)

“In a period of five years from now to create secure, stable jobs for our profession [is the most important thing that should be achieved]. Yeah. And this is the vision, so this is why I hope your project [RM ROADMAP] is successful. Our profession is highly demanding. I will tell you an example that my staff members have been approached by consultancies to start immediately with a double salary that they get know here. So, you understand that this shows, yeah, a great demand for our job, yeah. So, it's a very specialised job. It's something that generates revenue and, I mean this is the improvement I've noticed. Highly skilled people with high demand, yeah.... Now, for example, that if you have Horizon project, I will say a simple example, saying that look for this project you have 5% for project management. And you should hire someone that has this qualification, which is the qualification that we envision that we will jointly create at the EU level. This is the thing that you should have. Like the other one is a lawyer, like the other one is, Yeah, doctor that is the other one has a PhD. They have this qualification. They must have this in order to be hired in your project, and this is the minimum salary. This is the five percent. And this is a dedicated fund through the projects that they can utilise only for this purpose.” (Interviewee, Cyprus)

They advocated for defining research manager as a defined job title in their countries to promote professionalism and enhance the recognition of research managers' roles in financial terms as well.

PROFESSIONAL ASSOCIATIONS

One initial step towards recognition is the creation and building of professional associations. It is worth to mention that those focus group participants (usually representing Western European and Northern European countries) that are members/representatives of research management associations have repeatedly highlighted the role of these associations in providing capacity-building, networking, training opportunities to research managers. Furthermore, representatives of such association often invited to contribute to the policy-level consultations and decision-making processes concerning research infrastructures and research processes, which positively affect the conditions of research managers.

Annual meetings and conferences and trainings provided by these associations contribute to professional recognition of research managers. It was explained by one participant as follows:

“...the annual conference that we organise each year and a competence capacity-building programme that provides courses on three levels, junior level for research managers with

RM Roadmap HETFA WP1 D1.1 Preliminary report on ERA-wide landscape from zero to three years' experience, and the ones from three and four have experience and a leader leadership seminar as well. So just two weeks, we'll have the leadership seminar. So, the idea is that we take the whole the whole value chain management." (Participant, Northern European countries).

Another participant highlighted that within their association, they are continuously looking for opportunities on how to provide professional development opportunities for its members:

"...we've been talking about that within [Association -edited] now there's a professional development... we are now talking about: is it possible to provide trainings or any kind of workshops or something to set up for juniors or even for seniors like leaderships and how can we form that? And who can do that? And can we mentor each other? And so, you could actually help people" (Participant, Western European countries).

Interviewees also highlighted the substantial role of research management associations, even if they operate as an informal ones, in influencing the national and international policies on research infrastructures and research management, such it is in the case of ERA Action 17.

"I think the (name of the organisation-edited) that is our kind of informal association was important, maybe not the only one, but was important and like these papers we wrote was also for that, for trying to have the lights among politicians and among leadership about this type of professional in the interface that are important, and I think everybody's realising we need people to be more competitive" (Interviewee, Portugal, research institute).

As one participant highlighted, there is a momentum now across Europe and research managers have the chance to contribute to the policymaking processes through these associations by lobbying and securing interests.

"Now we are expediting the process to actually get something out there in terms of a National Association, so that we can start discussing things more formally, even, through this informal body, we will be able to have a name, have a signature below these positions and we hope that this will give us the leverage to also being able to participate in the Europe wide initiative that you have undertaken under your project" (Interviewee, Cyprus).

TRAINING AND CERTIFICATION

Participants of the focus group discussions highlighted the issue of the lack of certification and training specialised for research management across countries, with limited formal training or educational programs available. They have emphasised the need for professional development programs, workshops, and mentorship opportunities to enhance skills and knowledge in the field. Participants mentioned that they are aware that there are some courses available for specific parts of research management worldwide, in their country but even in their institutions. However, there is a lack of specialised training opportunities for research managers.

Generally, participants, if certified, have certifications issued by the Project Management Institute (PMI) or the International Project Management Association (IPMA). However, these organisations offer more of a general training in project management, whereas EARMA, also mentioned in some cases, offers certification specifically for European research managers. However, one participant underlined that despite the fact they were certified as research managers by EARMA, the leadership did not recognise this in terms of promotion or salary raise. Some participants confirmed that this is why the necessity and usefulness of these trainings are not broadly acknowledged by professionals.

In countries where research management associations have a strong presence, specific seminars and trainings or capacity-building programmes are offered for research managers on different levels and in different topics.

"In [Country of Ambassador], there is the annual conference that we organise each year and

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a competence capacity-building programme that provides courses on three levels, junior level for research managers with zero to three years' experience, and the ones from three and four have experience and a leadership seminar as well" (Participant, Northern European countries).

People are eager to learn from each other and get to know more about best practices of similar organisations and RSOs. There is an evident link between the professionalisation of research management and the development of research services and infrastructures. One participant highlighted that they created an informal network and had opportunities to share best practices with professionals in the same position at other institutions.

"And I thought that all these people are leading their research infrastructures and none of them have such formal semi-formal education and they are managing a lot of funding. You see where I'm trying to go. That's expensive. It was really expensive because the. The downside of it is that you are thinking that you are doing a great job, but you could do much more if you had someone to talk to if you have a formal education or something, it exists somewhere in Europe" (Participant, Western European countries).

Participants also discussed the relevance of peer-to-peer support within the institution:

"But you see that sometimes it's a little bit more difficult just because people do not have time etc. Which is also partly facilitating and mentoring and body program, we just connect people together and they love it. They are just like somebody is listening to us because our boss is not really listening to us, so at least they have a place that they can vent their problem. But they can also ask questions: How did you do that? And how does your faculty work? Or I have an issue with this and how did you solve that? Because how do you talk to a difficult, difficult researcher etc." (Participant, Western European countries).

As regards the interviewees, some highlighted that within their units, research managers are encouraged and supported – some of them even financially, through overheads or other national fundings – to participate in conferences, assemblies, trainings or seminars connected to research management, more specifically on grant writing or project management or other specialised field of RM, such as open science or technology transfer etc. The acquirement of certification is also supported, provided either by EARMA, PMI, IPMA, the Association for Project Management (APM) or the certification as Registered Technology Transfer Professional (RTTP).

Interviewees emphasised that there is an opportunity for both technical and soft skill development at their institutions, as usually the managers acknowledge the importance of trainings and such opportunities. These opportunities are considered as useful incentives and can motivate research managers.

"And since we are very well recognised by the researchers, they allow us to do the trainings we think are appropriate and that is something I know also people want to work here because we offer a lot of opportunities, like we offer people to go to the EARMA at least once, we don't go all each year, but we try. To go to some courses here in Portugal to other course, we try even between ourselves" (Interviewee, Portugal, research institute).

Travel opportunities to project meetings can be also seen as incentives, as an interviewee from Romania highlighted.

"We do support certification in project management. It gives new ideas and ways of thinking about project management, even if it's not directly applicable to European, which has a kind of its own system. It does help in their professional development. They've moved on to other roles, and other funding programmes, still within research or other areas. So, the project management one has been a bit easier in some respects to see how they could transition up, but also in a parallel way in different sectors. (...) The other is supporting in the other skill sets, like leadership skills and in that frame of development as well, and like team management. We also try to create opportunities even if we can't sort of, even if it's a flat

RM Roadmap HETFA WP1 D1.1 Preliminary report on ERA-wide landscape structure, but can we do, some colleagues to do some mentoring, so they get a bit of line management mentoring experience and they can add that to the CV and get that expertise so that when there is a role that might include some management there, they have something that they can reference back to.” (Interviewee, UK).

Interviewees agreed that offering training and certification opportunities is one tool for motivating research managers at their institutions. However, these tools, without strengthened working conditions will not be enough to attract and retain talent at their institutions, thus they are calling on more knowledge share across institutions and creating further initiatives on the policy level. Participants and interviewees agreed on the importance of certification and specific for research managers to improve their qualifications and increase their recognition within their organizations and countries.

4.3. Gaps and needs

It can be highlighted that research managers add significant value to research projects by providing expertise in project planning, proposal development, administrative support, compliance, as well as knowledge and innovation management. Successful outcomes and recognition from researchers and institutions can contribute to the importance of research management as a profession.

Their recognition thus requires the following elements:

- **Common identity:** understanding that RMs are members of a profession, which is an important component of the R&I ecosystem and can bring in important added value. This identity shall relate to the umbrella term and definition to be developed and also to the specific professional categories.
- **Reinforcing/creating associations:** professional associations of research managers represent significant opportunity for networking at national, transnational and European levels. These associations provide unique opportunity for knowledge exchange in practical issues, networking, training, certification and last but not least, reinforce the identity of their members. As several countries across Europe still lack such professional associations, there is a strong need to establish them.
- **Opportunities for professional development, available and affordable training programmes:** research managers generally lack the time and the resources to attend training programmes and receive certifications. As training and education programmes offering certificates are recognized as important components of professional development, it is crucial to overcome this gap both at the national, but even at the transnational level as the requirements of EU FPs are the same and transnational knowledge exchange is even more beneficial for professionals. Attendance at training programmes and the accomplishment of certificates should be rewarded institutionally and even required by the funding programmes.
- **Clear career path and recognition:** although the development of the profession is at various maturity levels in the different European countries, the lack of career path and recognition, including financial recognition of the work and the added value of RMs, is generally lagging behind everywhere. It is mainly the self-motivation of participants, their commitment to make impact in the R&I ecosystem and possible the supportive environment in the RSO are those factors which keep them in the profession. However, this is not enough: if European RPOs and RFOs aim to keep or develop their competitiveness in the field of R&I, they have to recognise and invest in the RM capacities to keep the highly professional working force in-house.

As RMs have “mixed profiles” (Santos et al., 2021), a general career path and professional development framework can be created only to a limited extent. Instead, **the different RM categories and roles needs tailor-made career path, professional development framework** as well as **skill and competence matrixes**. In case of some job categories, these framework and competence tables already exist either completely or to a certain extent, in case of other job categories they are inexistent.

5. Skills and competencies

5.1.Literature

The International Project Management Association (IPMA) defines competence as “a collection of knowledge, personal attitudes, skills and relevant experience needed to be successful in a certain function” (Caupin & International Project Management Association, 2006, p. 9). Hard skills are often called as Specific competences, whereas soft skills as Generic Competences (Cimatti, 2016). The “Tuning project” divided Generic Competences into three categories: 1) Instrumental: cognitive, methodological, technical and linguistic competences, 2) Interpersonal: individual and social, and 3) Systemic: organisational, entrepreneurial and leadership skills. As it is listed by Cimatti (2016, p. 101), these Generic Competences have been called by diverse terms in the last 3 decades, starting with life skills, transversal skills, generic competences, 21st century skills, transferable skills, future work skills, and so on.

The relevance of skills and competencies are generally listed in professional development frameworks and certification programmes as requirements towards professionals. In the field of project management, the third version of the IPMA Competence Baseline describes project management competences in three different ranges: 1) technical competence range, 2) behavioural competence range, and 3) contextual competence range (Caupin & International Project Management Association, 2006). Moving to RM, the ARMA PDF makes distinction among indicative skills such as personal, professional and social and relate them to the 21 different functions in RM.

Beyond these frameworks, authors (Collinson, 2006; Davis-Hamilton & Marina, 2016; Dutta et al., 2023; Dyason & Pillay, 2023; Virágh et al., 2020; Green & Langly, 2009; Melin-Rogovin, 2013; Müller et al., 2022; Oliveira et al., 2023; Poli, 2018; Romano & Albanesi, 2021; Schuetzenmeister, 2010; Shambrook & Roberts, 2011; Tauginiene, 2009; Wedekind & Philbin, 2018) focusing on research management are also in agreement with regards to the fact that these professionals **need special skills and subject expertise** (Collinson, 2006b, p. 272). Referring to the every days of “traditional research administrators”, the investigation of Zink et al. (2022) underlines that these professionals **“possess a wide range of skills and abilities and do everything under the sun”** (Zink et al., 2022, p. 126). The reason behind is again the increasing competition for research funding and the constantly increasing complexity of projects, “so the skills and knowledge requirements to successfully complete a European grant application and project often exceed thematic scientific knowledge” (Wedekind & Philbin, 2018). Authors also highlight generally that **these skills and competencies contradict the traditional role of scientists** (Schuetzenmeister, 2010, p. 6) who are not supposed to bear all of them; this is where the rationale of having professionals in research management is lying.

As a next step, it is important to understand which skills and competences are considered important for professionals in research management. Tauginiene (2009) summarizes the three main skill and competence areas of research administrators in the following manner: 1) **generation, interpretation and dissemination of information**: RMAs have to be aware of the newest information, understanding and forwarding the information to the different actors involved in all phases of grant preparation and management; 2) **communication** at many levels, such as between researchers, researchers and RMAs, between RMAs, as well as other stakeholders; 3) **problem solving** with high level of honesty, integrity and ethics.

Other skills and competencies are also highlighted in different pieces of the literature focusing on certain particular roles of the professionals under investigation. Research management requires **“social skills like coordination and leadership competencies, frustration tolerance, tact and social robustness”** (Müller et al., 2022b, p. 6) and **“... the ability to coordinate interdisciplinary efforts...”** (Schuetzenmeister, 2010a, p. 6). Successful professionals have to be **“multi-talented and mission-dedicated”** (Shambrook & Roberts, 2011). **“Customer service and collegiality, attention to details,**

RM Roadmap HETFA WP1 D1.1 Preliminary report on ERA-wide landscape problem-solving, ability to handle pressure and to **multitask**, communication and **organization skills**, **continuous learning** are all considered important by research managers and administrators in the survey of (Davis-Hamilton & Marina, 2016). **Flexibility, adaptability and tact** is added by Collinson (2006, p. 275) as research administrators find themselves regularly between the academic department and the central administration. Starbuck argues for such values and competences as “flexibility and **capability to react to changes**”, “**to show personal interest in all stages of research and to assure post-award individual responsibility**” (Poli, 2018c, p. 20; Starbuck, 2014).

Poli (2018b) argues more for the importance of soft skills than hard skills, nevertheless, the technical and knowledge related skills cannot be ignored either. In her overview on today’s research managers, Poli (2018b) listed “an extensive range of skills” that professionals have to bear, i.e. “be strong in languages and possibly in coaching, to understand cultural communication, have diplomatic skills, cope with working with deadlines and under pressure in a setting populating by researchers and academics that tend to see all what is administration as a potential source of complication”. Research managers are also supposed to “be strategic, good planners, organizers, and able to emphasize with staff, even placed in different cultural settings”.

Beside all the listed soft and transversal skills, “they should know the rules of knowledge transfer and IP and know all about dissemination and particularly impact of research on society.” (Poli, 2018c, p. 14). “**General view on the subject matter**” (Schuetzenmeister, 2010a, p. 6), “**knowledge of rules and regulations**” (Davis-Hamilton & Marina, 2016), **specialist knowledge of EU and other funders, cross-cutting issues, ethics, communication, dissemination and exploitation of project results, Intellectual Property, and commercialization** are all considered important (Virágh et al., 2020; Wedekind & Philbin, 2018).

The results of the survey conducted by Virágh et al. (2020) among European research managers reconfirm what has been already pointed out by the literature: the most important skills for professionals are soft skills, i.e. problem solving, teamwork, interpersonal skills and information management (Figure 6).

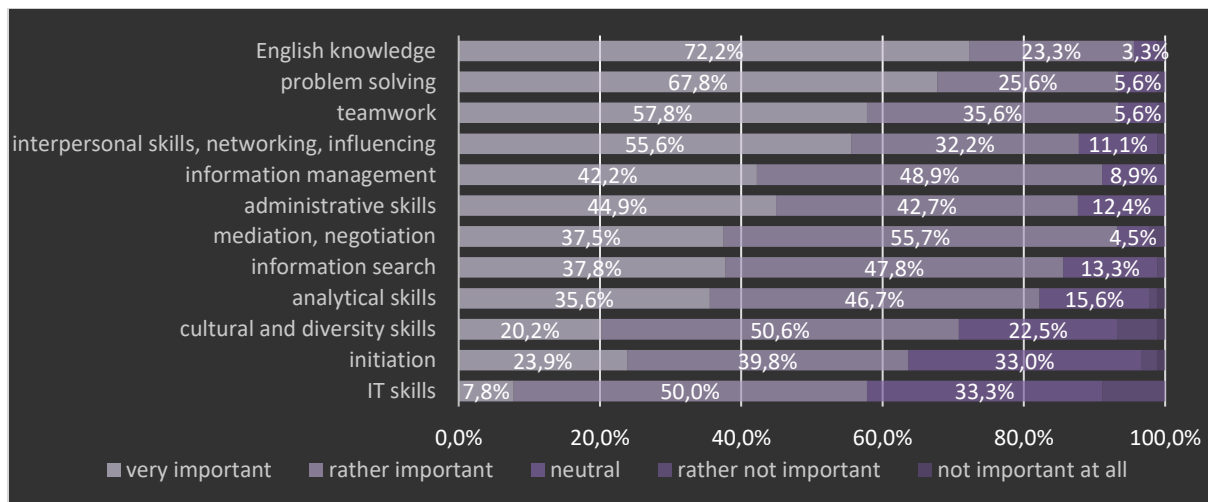


Figure 6: Most important skills to fulfil the RMA job, by the RMA respondents (n=90) (source: Virágh et al., 2020)

As regards competencies, results of the same survey highlight the importance of reliability, efficiency, flexibility, planning and strategic thinking, teambuilding and motivation building. The authors point out that the last two is especially interesting considering the relatively low rate of leaders among respondents (10%) suggesting that these competencies were marked as important also by RMs not in a leader role. On the other hand, high rates of “rather important” and “very important” answers show that this profession needs a wide variety of different skills and competencies (see Figure 7) which is again in line

RM Roadmap HETFA WP1 D1.1 Preliminary report on ERA-wide landscape with the statements of the literature.

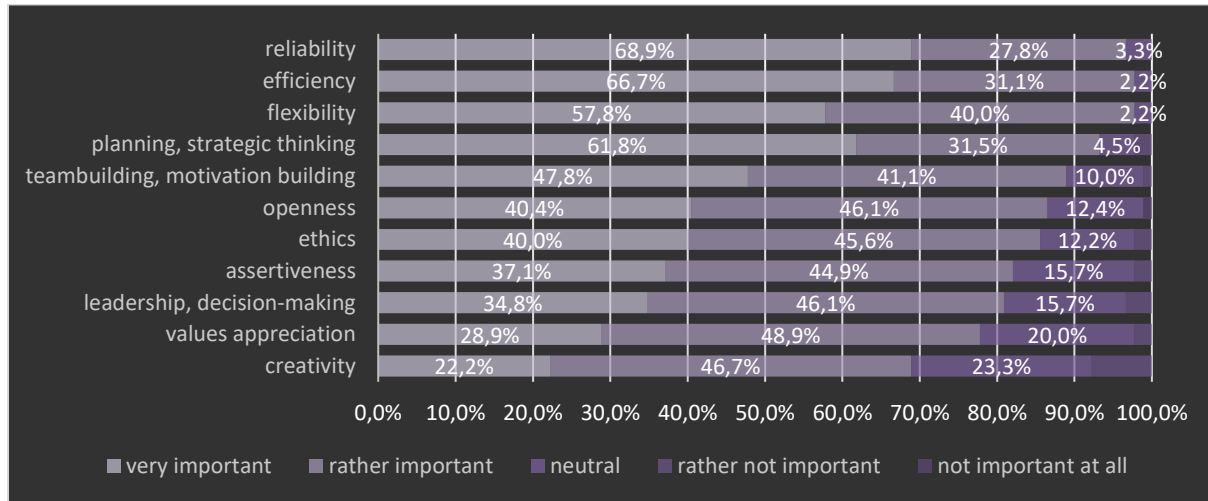


Figure 7: Most important competencies to fulfil the RMA job, by the RMA respondents (n=90) (source: Virágh et al., 2020)

Two interesting data shall be examined from RAAAP surveys: the first aimed to touch upon those skills which were considered important by professionals to get their first position in Research Management. As regards European respondents, Figure 8 shows that the three most important ones are organisational skills (73.97%), learning new things (65.95%), and communication skills (65.41%) (n=1483).

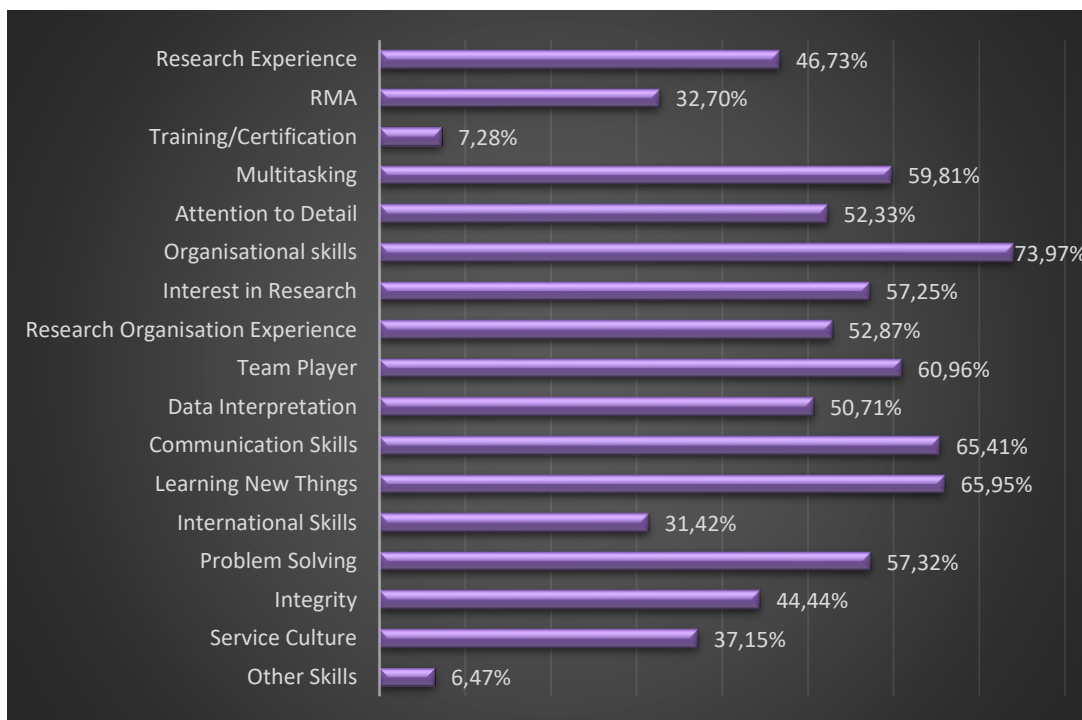


Figure 8 Skills considered important to get the first RM position of European respondents (n=1483) (data source: Kerridge et al., 2023b)

The second data presents those skills which are considered important from the view of professional development. Among European respondents, project management is outstanding (54.10%) followed by communication skills (47.93%) (Figure 9).



RM Roadmap HETFA WP1 D1.1 Preliminary report on ERA-wide landscape

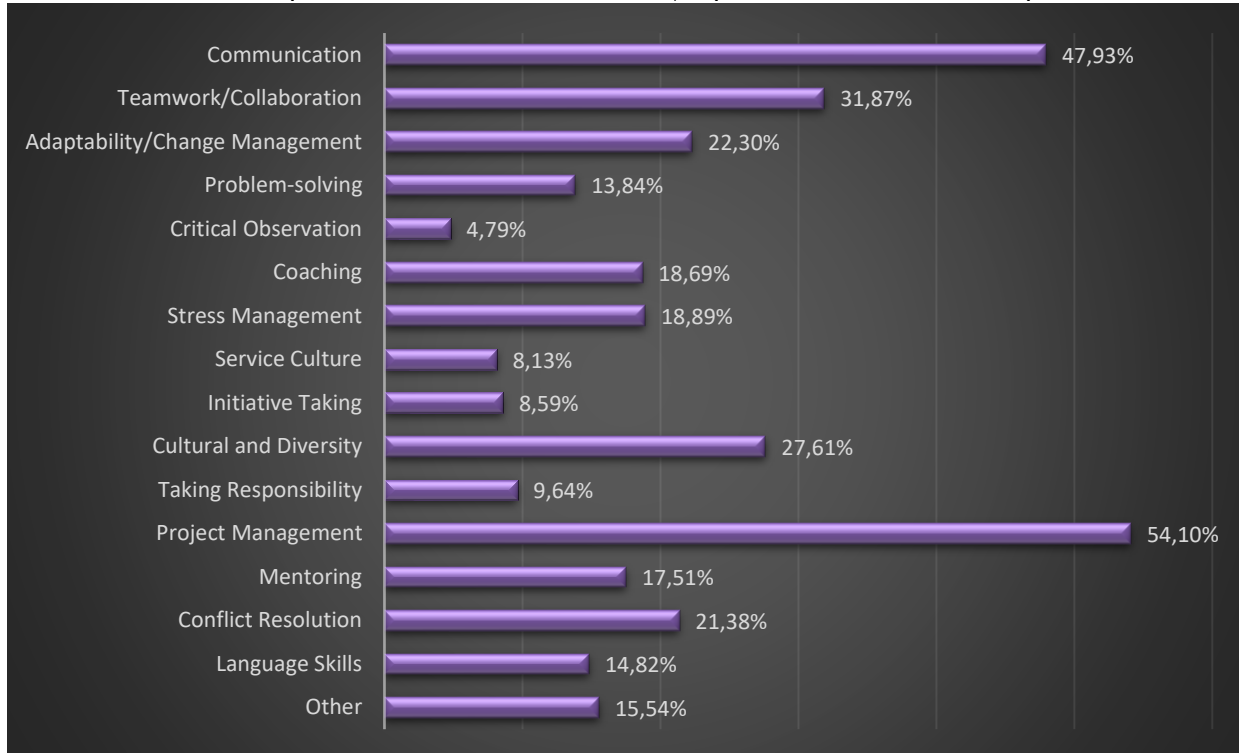


Figure 9: Skills considered important from the view of professional development (data source: Kerridge et al, 2023a)

The CARDEA survey asked respondents to indicate the level of importance of skills families. Here both soft and hard skills as well as competencies were listed. Respondents had to indicate their importance on a 1-5 Likert scale. In line with previous survey results, respondents highlighted the significance of transversal skills, relationship management and communication among the most important soft skills. Among more technical and knowledge related skills, project management, finances and outreach and community were ranked among the top ones (Figure 10).

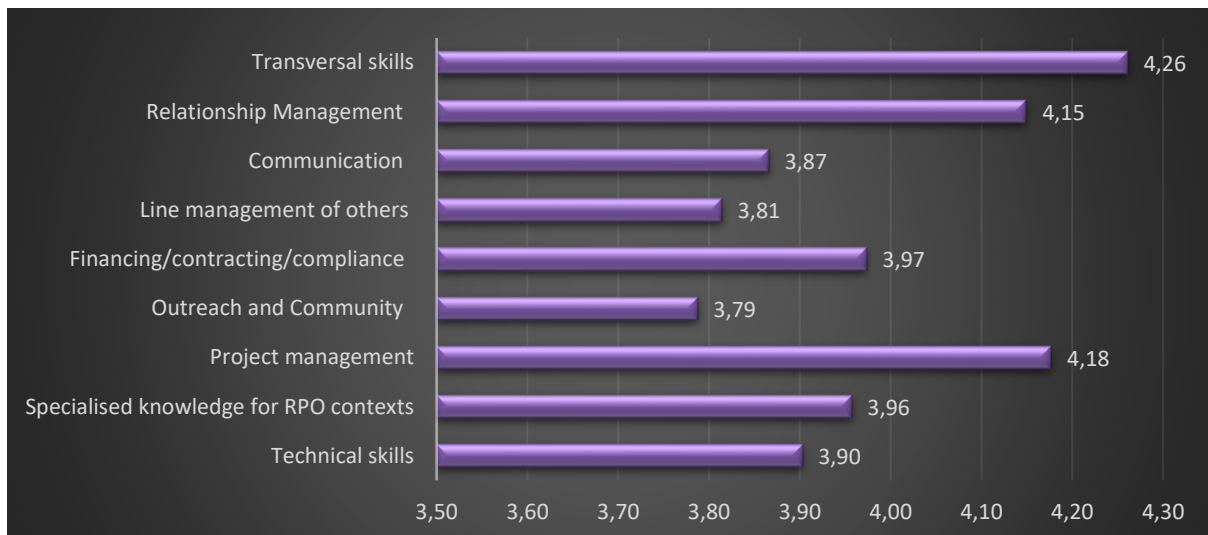


Figure 10: Importance of skills families according to European respondents of the CARDEA survey (mean average) (n=394) (datasource: Chruallaich & O'Reagen, 2023)

However, due to the constantly changing nature of the profession in reply to the transforming

RM Roadmap HETFA WP1 D1.1 Preliminary report on ERA-wide landscape environments in research, innovation and research funding, professionals in research management also need to solve more complicated tasks and evolving topics, thus have to improve and increase their skills and competencies and reflect their transformations (Romano & Albanesi, 2021; Tauginiene, 2009; Virágh et al., 2020b; Zink et al., 2022). The need for training in the relevant fields is well-depicted by the CARDEA survey: the need for training in the field of transversal skills is outstanding, but similarly high proportion can be tracked down in the field of relationship management, outreach, communication and project management (Figure 11).

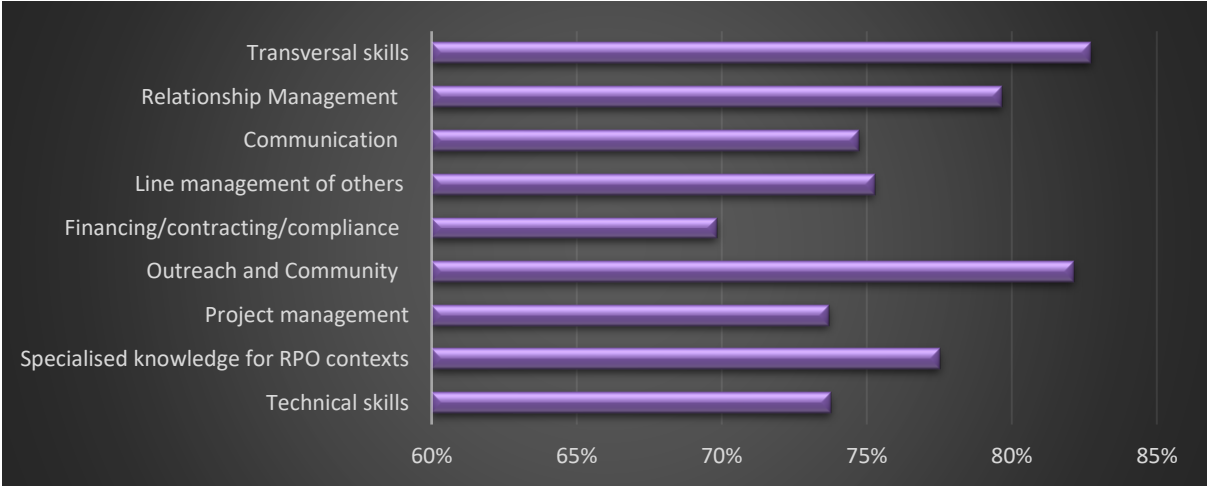


Figure 11: Training needs of European RMs related to the different skills and competences (mean average) (n=394) (datasource: Chrualaich & O'Reagen, 2023)

As it is presented above, most of the literature and the surveys aim to identify and assess the skills and competencies of research managers in general; however, distinction were rarely made along the different job profiles and roles. It is Dyason & Pillay (2023) who highlight that as SARIMA has an integrated approach by including both research managers and technology transfer managers and understand these roles in a complementary manner. The organization and the developed certificate programme therefore **acknowledges the different skill sets and competencies which are needed to treat both field in an appropriate manner** (Dyason & Pillay, 2023). Poli (2018b, p. 18) also argued that in line with the current needs and requirements of the research ecosystem and funding environment, some specific skills may be more needed than others, requiring specific job roles and categories.

5.2.Preliminary findings

Based on the exercise carried out with the RM ROADMAP ambassadors and representatives of the ERA Action 17 workshop on 10 May, an initial table of skills and competencies were created. It is important to highlight that the discussions revealed in several cases, that beside transversal skills and general, RM related skills, the need for the different skills can strongly vary according to the job role and the position of research managers. Therefore, a detailed assessment should analyse these skills in specific matrixes.

Based on the outcomes, the identified skills and competencies were divided into four categories, namely 1) transversal skills, 2) RM related soft skills, 3) RM related hard skills, and 4) specialisation or role related skills. A more in-depth assessment will be possible based on the results of the survey. Table 5 illustrates the findings. The rows in purple are those skills, which were identified in the first round, needed generally in research management. Most of them were also identified as important skills for practitioners in different job roles or categories.



Curiosity								
Adaptability		X				X		
Resilience	X					X	X	
Reliability								
Coaching / guiding / mentoring								
Strategic planning	X				X			X
RM related hard skills								
Understanding research and R&I ecosystem	X				X			X
Understanding institutional governance								
Knowledge of rules and regulations of funders								
Expert knowledge						X	X	X
Language skills (EN)								
Management Skills	X	X						
Resource management								
IT skills			X		X	X		
Specialisation or Role related Skills								
Networking					X	X		
Decision-making					X			
Proof reading skills	X							
Financial skills		X	X					
Knowledge of financial requirements		X	X					
Understand politics & policy cycle	X							X
Understand interests	X							X



and different needs								
Change management								X
Quality management								X
Security						X		
Lobbying							X	
Stakeholder engagement and management	X				X			X
Training skills					X			
Legal skills				X	X			
Impact planning				X				
Fundraising				X				
Intellectual asset recognition, IP strategy				X		X		
Cross-cutting issues in HEU	X							

The above listed skills were then looked for in the focus groups discussions and interviews. Table 6 summarizes the outcomes and indicates in purple those skills which were mentioned in addition.

Table 6 Skills covered by the focus groups discussions and the online interviews

	Focus Groups	Interviews
Transversal skills		
Cultural awareness		
Communication	1	2
Interpersonal skills		
Intrapersonal skills		
Outward skillset		1
Emotional intelligence	3	
Openness	2	
Problem solving	3	7
Critical thinking	1	
Multitasking, organisational skills	2	1
Self-motivation, proactiveness	1	3
RM related soft skills		
Flexibility	1	1
Trustfulness, responsibility		2
Time management		1
Stress management		
Efficiency and effectiveness	1	1
Negotiation	1	
Diplomacy	3	
Facilitating, enabling skills		
Mediation	1	
Conflict Management		
Patience		
Leadership	1	3
Assertiveness	2	
Working in teams		1
Team management	2	2
Service attitude	1	
Strategic thinking	2	
Conveying messages	1	1
Information search & share, translation	2	3
Presentation skills		1
Target oriented	1	
Analytical skills		2
Attention to detail		1
Curiosity, continuous learning	1	3
Adaptability		1
Resilience	1	
Reliability		
Coaching / guiding / mentoring		1
Strategic planning		
RM related hard skills		
Understanding research and R&I ecosystem	5	2
Understanding institutional governance	1	
Knowledge of (FP) rules and regulations of funders	5	2
Expert knowledge	5	7
Language skills (EN)	1	2



Management Skills		2
Resource management		
IT skills		1
Specialisation or Role related Skills		
Networking	1	2
Decision-making		
(Grant) writing skills	5	2
Proof reading skills		
Financial skills	5	1
Knowledge of financial requirements		
Understand politics & policy cycle		
Understand interests and different needs		
Change management		
Quality management		
Security		
Lobbying		
Stakeholder engagement and management		
Training skills		
Legal skills	5	2
Impact planning		
Fundraising		
Intellectual asset recognition, IP strategy		
Cross-cutting issues in HEU		2

These results also underline the importance of transferable skills and RM related soft skills which are looked for in case of recruiting new staff for the RSOs and which have to be used on a professional level.

“But what I think it's really the most important are these transversal skills like how we are talking with them [the researchers].” (Participant, Central European countries)

“So, I spent most of the time being a person, that they can cry on my shoulders. And besides that, I have some technical skills as well. How to write the grant how to avoid the economic and legal pitfalls, and how to make it cohesive at all so that the hard skills I spent sometimes only the soft skills are really demanding. So as a research manager, so that's where I spend most of my energy.” (Participant, Northern European countries)

Motivation or passion for the job was also regularly underlined:

“So I think that when hiring someone here, they have to know to what they are going to enter, which cave they are going to enter. Because if they don't know this field, it will be difficult to work with. And you either have passion for that or not. If you don't have passion to go and help people or to be available for people and always waiting for, I don't know, what to reward, then maybe it's not your place there.” (Interviewee, Romania)

RM related hard skills were also considered significant, however, in most cases it was mentioned that professionals acquire them mainly on the job; generally it is not necessary to have experience if the applicant possesses the basic transversal and soft skills – or it is impossible to require experience due to the shortage of potential applicants. Most of them agreed on that if they hire someone, they train him or her.

“...it's important the way in which this person explains the things. I think the communication is a key competency for us. The motivation as well. Sometimes I prefer people, maybe, with less experience, but very motivated, and I don't know. Experience, it's very important, but it's not only...” (Interviewee, Spain)

“And so, we've had some people coming in that don't have experience in European funding. I don't see that as a barrier to coming into the team because that's something that can be



learned: terms and conditions, rules and regulations. How those types of projects work so that that can come over time. So it's a bit more of the soft skills or understanding the research culture, sort of those aspects that I would consider perhaps and also project management understanding as a bonus, contracts management. ... So, the European aspect can be, that's something if you have it as a plus, but the other expertise that you have and bring in, we can then teach you the European specifics.” (Interviewee, UK)

As regards specialisation or role related hard skills, interviewees unequivocally underlined that it highly depends on the tasks to be fulfilled.

“...the person that should or would be hired, it has to know English first of all. And it depends, now it depends, if I'm searching for an economist or if I'm searching for a legal advisor or for a scientific advisor. ... the person that will work for financial issues should know some financial issues, not to be an accountant because we already have that, but to know how to read and understand the accounting documents. And then to know English, in order to read all the European legislation,” (Interviewee from Romania)

5.3. Gaps and needs

The preliminary results shows that Research Managers need a vast range of skills, especially soft and transversal skills. These skills are also called as transversal, transferable or 21st century skills and are required in most jobs. Therefore, there is an enormous competition in the labour market for people having these skills, meaning that if RPOs and RFOs are not able to recognise those Research Managers who possess these skills, professionals can easily find other jobs with better recognition, including salaries. Thus, keeping the motivation of RMs and recognising their added value is a key for retainment.

To better identify the needed skills, as it was previously presented, there are already various categorisations of skills and competencies which are generally tailor made to the subject field, such as the one developed by IPMA in project management or the one developed by ARMA in research administration. If a Europe-wide definition, terminology and categorisation for Research Management will be formulated, it is also important to develop a specific competence matrix which includes a tailor-made categorisation of skills and competencies along the job roles and the positions. Based on the results, it is suggested to organise the skills and competencies along the following categories:

- transversal skills,
- RM related soft skills,
- RM related hard skills,
- Role or position related skills.

Beyond transversal skills, there are specific soft and hard skills which has to be possessed by RMs, although it seems that both hard skills and position related skills are generally acquired on the job – here is the gap which could be overcome by Europe-wide specific educational or training programmes. But more importantly, it is suggested to go beyond a general competence matrix and develop matrixes tailored to the different job categories.

Lastly, these findings of the preliminary investigation have to be scaled up and completed with the findings of the quantitative investigation, a Europe-wide survey, and then validated with the community of practitioners.



6. Institutional best practices

6.1. Literature

Poli (2018a) dedicates an entire chapter to the organisational structures of research support. Her research relies on diverse resources, starting with the research report of Green & Langley (2009), Shelley (2010), and Johnson (2013), collecting case studies from Belgium, Sweden and the Netherlands, as well as assessing practitioners' previous works focused on the University of Bologna, universities from Finland, the Netherlands, the UK and the US. Her main focus was, however, mainly on the location and the organisation of the research support services and aimed to understand pros and cons of centralised and decentralised research support structures.

Apart from that, a few lessons learnt and good practices are highlighted when she goes beyond the main focus of the investigation: some innovative and outstanding services of the RSOs subject to case studies are listed. These examples include the existence of experience science communication unit at central level connected to research support, dedicated ERC support track (Vrije Universiteit Brussels), involvement of RSOs in strategic networks, provision of project preparation and management services covering the whole project lifecycle, interdisciplinary feature of the RSS, stakeholder engagement and collaboration along the quadruple helix (Lulea University of Technology), opening up to new funding opportunities (Tilburg University).

In case of Finnish universities, the focus of the investigation is mainly on pre-award services and two main findings are highlighted: firstly, if the institution is coordinating the project, fee-based proposal support is frequently offered in combination with fee-based project management. Secondly, regular cross-discipline meetings are organised between different service units. Lastly, the study highlights two examples, how research support offices at the central level have been reorganised as a response to the changing requirements of Horizon 2020 at the Technical University of Denmark and Tallin University.

Beside the literature, an important number of presentations and round table discussions of professionals deals with sharing institutional best practices in the field of research support. To prepare the ground for the findings, some of them are summarised below.

The preparation of international R&I projects requires an important amount of time and resources, therefore last-minute submission, even if the institution has only a partner role, is a waste of resources.¹¹ Both the institutional leadership and the researchers have to understand the life cycle of FP programmes and act not only when the calls are published, but shall try to get informed and engaged during the planning phase of the policy, then at the elaboration of the draft Work Programmes. In this way, important topics for the research organisations can become part of the calls, thus before they are published, the preparations of the proposal can be already on the way.¹²

As researchers have different levels of interest in participating or coordinating EU funded projects, the support provided by the Research Support Office has to consider such differences. Potential winners need coaching and mentoring, newcomers need training and one-to-one support, whereas those who are not interested, first, need to learn success stories from participation in FPs highlighting the benefits of participation.¹³

To provide such tailor-made and proactive support for researchers, research organisations across Europe developed a number of practices which can be showcased as good practices. For instance, the allocation of roles and competences of RMs altogether is carried out by the Politecnico di Milano in order to

¹¹ Presentation delivered by Virág Zsár at the third BESTPRAC-EARMA virtual meeting on 25 January 2022. Presentation is available at https://bestprac.eu/fileadmin/mediapool-bestprac/documents/EARMA-virtual-202201/DOs_and_DON_Ts_of_successful_consortium_building_Zs%C3%A1r.pdf

¹² Presentation delivered by Sean McCarthy at the webinar hosted by the V4WB RMA Network project on 14 Feb 2022

¹³ Presentation delivered by Sean McCarthy at the Final Conference of the V4WB RMA Network project on 30 March 2022.



strengthen the consultancy quality within the RSO, to manage and use data as well as to give researchers the opportunity to trust in services offered.¹⁴ Charging a fee on the project for the services provided by the RSO is also getting common, such as the case of the University of Vienna shows.¹⁵ Developing proactive research support services, based on data and communication, can be also highly important by addressing silent needs of researchers.¹⁶ Taking evidence from audits to highlight and make recognised the value of research support services is getting more importance at several institutions as it was highlighted in the case of the University of Oxford.¹⁷

Personal meetings of pre-award funding advisors and post-award RMs are regularly organised by a number of institutions, including the RSO at the University of Paris. For current updates, news, and knowledge sharing, such meetings are held biweekly, but for more in-depth knowledge exchange and training, such meetings should be held at least quarterly.¹⁸

Skill development workshops (e.g. intervision sessions within the research support team¹⁹ and trust building workshops with researchers²⁰) are also organised at several research organisations to handle the stressful and hectic workload and to build good working relations within the teams. This can be complemented by MicroSoft Teams/ Slack channels to keep in touch and discuss challenges and rules but also to support community building.

The commitment and motivation for RMs can be increased through numerous incentives, such as self-development and training opportunities, networking, clear career path, and so on. Participation in European and international network of research managers, such as EARMA, SRAI, NCURA, etc. can be part of such motivational factors as conferences, trainings and the participation of other type of events or networks not only provide important up-to-date information to participants, but platform for practical knowledge exchange.²¹ Supporting the accomplishment of a certification programme can strongly reinforce the self-development of colleagues: beside the knowledge gathered, the application and the study programme makes the students more self-confident and conscious as it was reported by colleagues from SARIMA.²²

Equally importantly, it is of crucial importance that researchers and potential Principal Investigators (PIs) are aware of the RSO and RMs, to whom they can turn with their questions and use the services provided during the whole lifecycle of the funded project. Based on the example of the University of Paris it also proved to be highly useful that the RSO presented all the advantages to participate to research projects (e.g. bonuses, teaching release) to researchers.²³

6.2. Preliminary findings

Institutional best practices with regards to the organisation and operation of Research Support Offices were aimed to be discovered through the interviews. As the preliminary report contains only the results of the first round of the interviews, the aim is to give a glimpse on existing practices which can be potentially taken over by RMs working across Europe. A more in-depth analysis will be provided in the final report, following the running of the survey and the second round of interviews. The demand is high in this field: interviewees themselves confirmed that they are eager to learn other institutions' practices

¹⁴ Presentation delivered by Stephania Suevo and Stephania E, Grotti at the Digital Event of EARMA, 28 September 2021.

¹⁵ Presentation delivered by Stephanie Fogel at the Digital Event of EARMA, 24 March 2021.

¹⁶ Presentation delivered by Stephania Suevo and Stephania E, Grotti at the Digital Event of EARMA, 28 September 2021.

¹⁷ Presentation delivered by Gem Brown, at the INORMS Congress, 30 May 2023.

¹⁸ Presentation delivered by Sandra Mereu at the Digital Event of EARMA, 28 September 2021.

¹⁹ Intervision session held by Sascha Le Large and Edwin Kanters at the BESTPRAC WG meeting in Belgrad, 24 September 2018.

²⁰ Presentation delivered by Zygmunt Krasinski at the Digital Event of EARMA, 28 September 2021.

²¹ Presentation delivered by Sandra Mereu at the Digital Event of EARMA, 28 September 2021.

²² Presentation delivered by Dr Pamisha Pillay at the INORMS Congress, 30 May 2023.

²³ Presentation delivered by Sandra Mereu at the Digital Event of EARMA, 28 September 2021.



to improve their operation, their efficiency and their impact.

Before presenting the identified cases, some observations are listed with regards to the interviewees and the Research Support Offices they are leading:

- Interviewees reported that they are acknowledged at the institutional level, both the institutional management and researchers are satisfied with their services.
- They invested significant time and energies in self-learning and improving their professional expertise, grabbed all opportunities for self-development.
- They are proactive, constantly looking for opportunities to improve and expand their services, develop their colleagues and the institution,
- Only few of them are specialised on EU FPs, the majority deals with various international funding programmes and in some cases national funding as well
- A few went through a clear career path, some just a part of it – now they don't see what could be the next step, unless they create a new position by merging or expanding the current ones.

6.2.1. Providing tailor-made and professional support

Both the interviews and some of the focus group discussions touched upon the situation that “...*whatever is inside your institution, you don't hear it. You just take it for granted and you need someone that comes outside, an expert...*” (Interviewee, Portugal, company). This means that even if there are professionals in research support in a given institution, both researchers and the management tend to downsize their expertise, whereas they respect the knowledge and expertise of external consultants.

“It is because of the nice suit, or event without a suit and they look nicer. Maybe because you've paid for them for, you know, a lot of money, then, of course, whatever they say it will be good. You might say exactly the same thing, but you're there every single day and... they don't listen” (Participant, Southern Europe countries).

Some of the interviewees, however, elaborated various approaches which can overcome this situation: first, to reinforce the interdisciplinary character of the research support, second, to tailor-make and third, to professionalise the support provided.

Deriving from the fact that most research support offices are located at the central level, they have an excellent overview on the different research fields covered by the organisations. The growing interdisciplinary nature of the calls necessitates interdisciplinary projects by involving scientist from these fields. This involvement gives an important role for research managers who can initiate projects, or contribute to the participation of more than one department in the projects. Based on the case of the UK university, this approach can determine how they “*distribute workloads and responsibilities away from sort of a faculty split and consider it from a thematic space in response to global challenges and how those are being funded.*” (Interviewee, UK)

The recognition of research support services can be increased if research managers are able to provide tailor-made support. However, in all Research Performing Organisations, all the expectations, the knowledge levels, wants and needs are highly different.

“We have the youngsters and the oldest, we have the ones that are invited to join the projects and we have the ones that are struggling to come up with an idea for the project.” (Interviewee, Romania).

“So, you may encounter people and research teams that are quite knowledgeable and they need your support in areas where you can indeed support them or they [research managers might] be facing research teams that know nothing about external funding and you have to take them from step one to step 10. So ... the main challenges that they [research managers]

have to deal with different levels of expertise, levels of support.” (Interviewee, Cyprus).

Although it is highly demanding, it is possible to personalise and tailor-make the research support to make it more efficient and recognised. This means that research managers provide information sessions on current calls, trainings on how to address different topics, capacity building for interviews, but they also develop personal plans for the upcoming 2 years for researchers along which they can plan their personal research career and the related sources.

“[It necessitates] reading, it needs having access to proposals or other material that you can study and go back and say, look, this is how you do it... and this requires time, patience and having also to deal with people that most of the times are difficult to deal with.” (Interviewee, Cyprus).

Besides making research support tailor-made, it also needs to be professional. The related good practice was elaborated by the Portuguese interviewee working now in a private organisation who highlighted the necessity of having “an organised” and “structured process” in grant writing which is shared within the consortium. *“We have a very organised process, we have a very structured process. And we share it with our consortiums and I think this brings a lot of benefits. ... When you get to the third time, we work together, then our partners are already, you know, waiting for a certain way of doing things...”* (Interviewee, Portugal, private). They make researchers and innovators understand that the preparation of the proposal takes time, they clarify the responsibilities of the involved parties, set a timeline, agree on the necessary inputs from each party. *“We bring structure and a professional approach to this, and also some responsibility.”* (Interviewee, Portugal, private). It was admitted that the most challenging task is to make researchers work and dedicate their time to the proposal. To overcome this issue, the relevance of the invested time from the side of the researcher has to be explained as even the consultants cannot write the scientific and content related parts of the proposal. What they can provide, is the methods, the structure and some good practices to elaborate those parts. Based on the focus group discussions and the interviews it can be confirmed that it is not a stand-alone example and doable within public research performing organisations as well.

Moving to the management of granted projects, another good practice was revealed by the UK interviewee. In all the projects, regardless whether that university coordinates the project or is beneficiary, a management trio is set up with the respective budget.

“So, it’s sort of three, it’s the lead PI, we always encourage and have the budget for a scientific project manager because we’re not going to be looking at ... deliverables, reviewing the scientific reports that has to be with the PI and his team, so that would be a scientific project manager, perhaps part-time Research Associates and doing some of the research and coordinating the rest of their time. And then us, as a project manager... We’re really fitting into that element and then we’ve been able to develop a really partnership aspect.” (Interviewee, UK).

This kind of strong and professionalised support in the post-award phase is going beyond the general support in terms of financial management and reporting, which is done in most institution. However, it encouraged new-comer researchers to get engaged in preparing and managing projects.

6.2.2. Developing in-house consultancy

A crucial part of the interviews was the aim to understand the business models, if they exist, laying behind the operation of the RSOs. As the RSOs under investigation were coming from different countries with different levels of maturity of the profession, the assessment could also depict the main steps of the development and professionalisation of these RSOs. It was revealed that both the power, the recognition and the manoeuvring capacities of RSOs are dependent on the level of income generated.

In the Romanian research institute, the research support is charged solely on the indirect cost of the project which means that the institute *“cannot pay him [the research manager] from the budget of the project, because it’s not a researcher, it’s administrative staff, it’s support staff. So it is from the indirect*

cost” (Interviewee, Romania). Other institutions under investigation, however, reached that point when the post-award management, primarily the financial support is secured from the projects. The financial arrangements differ based on the level of the intensity of the support. In case of the Spanish university, the central level post-award, which is going beyond the sole financial management, was built along the following business model: in case of ERC grants, “one each person in the post-award ... can manage 3 [projects] well. So we are asking for a 25% of Co-funding to each project and thereby Rectorate still funding the other 25% [of the salary of that person]. While the coordinated projects, not ERC, but the Pillar 2 project, we are asking for 50% of the funding. And they usually, yes, they are in charge of two projects” (Interviewee, Spain).

It is important to notice that most of the interviewees underlined that once they provide professional support either in pre-award or post-award and the research community realises its importance, they are eager to ask for it. This might make headache for the RSO leaders because it means that they have to build such a team and a service which is manageable and able to perform at the same level of excellency.

It is worth to examine in details the good practice elaborated by the UK based university bearing in mind that the organisation is among the champions of the EU funded framework programmes with a huge research capacity. Professional support in research management was developed, tested and then scaled up in the frame of “in-house” consultancy which enabled that the RSO is sustained on success fees.

“...its unique sort of business model within the universities, but it did work. ... The financial, contractual, administrative management was a specialisation of our team. They’re budgeted into those projects and by developing the proposal development, we increased the number of coordinated projects where we had that service. ... When we launched that, we had trialled the service at the end of FP7 and we collected a small, well, small fee. It was still a large fee but against the scale of the total budget, that the collaborative projects were winning, was small, so I think was around maybe sort of £30,000 if it was successful and shared amongst the consortium and we used that to build a business case.” (Interviewee, UK)

Although the participation of the university is slightly hampered by Brexit and the delayed agreement on the association, they reached that point that the *“office has been a partner in a project and there’s been no technical expert from [the university]. So not a scientific partner. We provided proposal development. We charged the fee. It was successful, so that helped fund our service and then we had built in project management and that was a great success story. That worked out quite well.”* (Interviewee, UK). It means that they act as a quasi-consultancy company which leads the proposal preparation and then takes part in the implementation of the project as well, based on the expertise of the team in pre- and post-award.

Both the interviewee from the UK and the Portugal from private organisation confirmed that there is a market for such services both within research performing organisations and beyond.

“...companies, so small and medium sized enterprises; a very interesting area for us to tap into, because often they don’t have the capacity for such large scale projects and sort of all of the financial, contractual requirements of the Commission to understand that so we can still support partnerships with the scientific perspective, but we can help deliver those projects and I look at, sort of, that realm of service of proposal development, sort of in the research management...” (Interviewee, UK).

Similarly, the Portuguese interviewee highlighted the *“a huge wall of regulations and templates and complexities and policies and everything”* which eliminates the companies, researchers and students with the most innovative ideas to get funding. Therefore, their support is focused on *“giving access to companies that have great ideas... [who are] not experts in accessing a very complex and highly competitive proposals. So, we are driven by the purpose of giving a chance to highly impactful projects”* (Interviewee, Portugal, company).

6.2.3. Constantly improving the profile of the RSO



In line with the constantly changing arena of research and the constantly increasing competition for research funding, expertise in new fields is needed. All interviewees confirmed that need and elaborated different strategies along which they try to cope with these necessities. In all cases these strategies contribute to extending and improving the profile of the Research Support Offices. Three different fields were highlighted during the interviews: 1) cross-cutting issues, such as data management, intellectual property (IP), Equality, Diversity and Inclusion (EDI), 2) designing impact, and 3) strategic foresight and policy improvement.

Addressing the requirements related to cross-cutting issues, such as data management, open science, IP and EDI issues within FP funded projects, is understood both as a challenge and an opportunity so each RSO under investigation added this field to their competency fields, or at least are working on them. Data management and IP issues are regarded as a field which is important in pre-award services, even if there is a dedicated unit taking care of knowledge and innovation management.

"...because the funder requirements are increasing, they are rapidly changing at a pace that it's hard to keep up from a professional development perspective. To now, one understands the programme, but then, and to have the skills to be able to review and advise and then add in just on sort of science and impact and then add open science and open data and gender and EDI requirements and the fact that gender equality and gender dimension are two different things and how do you explain gender dimension for a CO2 capture and conversion project versus it's much easier to explain for a project with clinical trials and drug testing."
(Interviewee, UK)

"I'm trying to mobilise the competencies of the people to cover the new demands of the Commission... With the resources that we have. So, if you are good doing something, maybe, if we provide you with more training, you can be a good data manager, for instance."
(Interviewee, Spain).

The second field for improvement is also in line with the changing requirements on the side of the European Commission, as with Horizon 2020 and then with Horizon Europe a greater emphasis is put on revealing the potential social, economic and environmental impact of research and innovation projects. Thinking about impact is not evident for researchers and research managers can have an important role in facilitating the designing of that part:

"I really-really like is that I like to have everyone thinking about impact. So, it's really fun for me to write about impact. They hate it, I love it. I really like impact and I really like to work with them and you know, have consortium meetings and take them out of their comfort zone and put them thinking about impact, and I really like this. And sometimes it's when they get out of an impact session. And they are like, oh, this is really cool, and I said yes, it was. So, they don't have time to do these things in their work..." (Interviewee, Portugal, company)

"And then one of the issues that the Commission had been trying to tackle was not just having papers published and patents filed, but actually real social, economic and environmental impact. And I saw it as an opportunity for our service that is not, you know, the proposal they're interested in winning the money and management is in, as said, and it's running smoothly and getting reimbursed. But there's that piece of, and this is where the innovation management comes in, that will how can we as research managers... We have an important role in global challenges and how we can help facilitate that who do you bring in? What kind of support do you bring in? And it's an area of development I've been really interested in. So, it's understanding business term, how investment works, when you do spin it out, there's a lot of sorts of skills, and understanding patents and licencing that you start to really need even from that earlier research side that is us, research managers if we can understand that by asking questions." (Interviewee, UK)

The third area that was reported by some of the interviewees is providing intelligence for strategic foresight and institutional policy improvement. These areas are not officially included in the activities of the given RSOs, however, it is considered important to support their institution at large.

"...since we are always connected with many activities related to policy, and science policy,

we follow up on the news about Commission, and we transmit this information when we feel it's necessary to the leadership, the directors and sometimes also to the researchers to be well positioned in the application or what is expected in the near future.... And since we work with so many agencies, we need to know the trends. Where to go? What will be the best for our institution?" (Interviewee, Portugal, research institute)

"And we also have, let's say a fourth sector that is about supporting the decision-making bodies of the University for research and innovation, designing research policies, implementing the programmes that the decision-making bodies are deciding, for example, the internal research funding programme. ... we bring research projects, for example, to improve our policies. The people that are working on these projects are also helping us in the practical implementation of the policies, not just improving them in theoretical term. This can be done through the project, but also on the implementation part to actually serve the community. And this is something that also provides them with the knowledge and depth of understanding in order to be able to, to reflect and help us in improving the policies in the best way possible." (Interviewee Cyprus)

6.2.4. Defining a clear portfolio of the RSO

As it was discussed in the literature review, setting boundaries of the profession and the support provided by professionals is a crucial issue due to its emerging feature. Lacking a clear description of the services can generate conflicts and misunderstanding from the side of the researchers, leadership and other administrative services. Almost all the interviewees reported, however, that in the last 3-5 years, they initiated important improvements in this field, which means that the job descriptions for all colleagues are distinct.

"So that was a review of the job description. So again, that's pretty, pretty clear. So I would say we do have, it's a long answer to say, but for all of those roles and teams, we do have fairly clear job descriptions, but that also involved in a recent review to make sure that we have all of those in place and it's clear." (Interviewee, UK)

"...this is another improvement that finally we have specific description of the two profiles: pre-award and post-award. Because in the past when a project was granted the unit in charge of managing the grant is the department. And in this department or at the faculty level, maybe they don't have training or knowledge about the programmes. And we have to do or to, yes, to send answer emails. That was our duty in term of formally, so yes, at the beginning there wasn't clear the pre-award and post-award. And people of the pre-award unit are very happy now with this official distinction of the two different activities. Because we are advisors, so we are not in charge of the post-award, so we can give some advices, but it's not our responsibility, now we don't do the economic part or during the audit." (Interviewee, Spain)

If there were any projects or initiatives at the institutional level aiming to improve the organisational structure and the services, interviewees put special emphasis on clarifying the services of their offices. Based on their experiences, these initiatives provided satisfaction at the level of the team as well.

"Yes, and now we are doing a Charter of services that is also a list of tasks here in our university, something very formal. We are doing training for that and there is a specific unit who is guiding us. And I would like that this was a self-reflection for us... And this document has to be approved by [the] governing body as well. So, I think that here we have the opportunity to write what we do, how, which are our commitments with our users that are the researchers. ... You know, sometimes someone asks something that is not part of our duties, but you don't know how to explain so, well. This is our document and what we offer, so this is not part and it's approved by our governing body so. It can help our team as well." (Interviewee, Spain)

6.2.5. Building partnership with researchers and leadership

Setting the boundaries of the profession and the services does not mean that research managers should



be settled in an ivory tower. On the contrary, as it was pointed out by all the interviewees and most focus group participants, they have to build partnership with researchers, and also with the institutional leadership, as in most cases research managers are the mediators or the link between the two groups.

Building partnership starts with trust-building. As reported by the interviewees, this takes time and a number of skills.

"...we think about how we will present it [the research support office]. We try to have the kind of standards of relations with the researchers to have good connections with them. We take care of the way we write emails." (Interviewee, Portugal, research institute)

"Also, it's about trusting, trusting the people that work with me now, trusting the people that is helping you, trusting the people. It's all an issue of trust. ... And it's a step-by-step process that requires a lot of time and it differs from person to person. Based on the age, on the I don't know. A lot of things. Capacity to interact first of all." (Interviewee, Romania)

"...and this [trust-building and recognition] requires time, patience and having also to deal with people that most of the times are difficult to deal with. Academics are not too, too easy to deal with. This is this is the truth. I mean, after 18 years, I can say that most of the times you are facing with people that are quite rigorous in the way they think, the way they act. So, you must prove yourself over and over and over again. So that they can trust you..." (Interviewee, Cyprus)

So this process can be burdensome. It was pointed out explicitly only by one interviewee, but most of the interviewees and the focus group participants made references to the fact that *"the researchers are always in a higher position than the research manager."* (Interviewee, Portugal, research institute). This approach necessitates the above-mentioned skills, and efforts, to make them understood the actual role of research managers: instead of taking over the responsibilities and the "victory", they are there to support, facilitate, translate, or even to take over the unnecessary burdens.

"So what we did in time was that we tried to gain their [the researchers'] confidence. And we said, you know, OK, you will be the project manager. I'm not taking that away from you, but whenever you want to do something, look, you can tell me and we can discuss on it and I can help you without interfering to, I don't know what kind of problems during the implementation and at the end you will be found in a situation that you have to reimburse some money. So, we started working step by step and now they are coming to ask for support. They are willing to work with you and to tell you what they are going to do and tell me how. I'm usually the one that is asking questions only and they find their own answers or, ohh, that is a good thing, I didn't think of that." (Interviewee, Romania)

To make this more wide-spread, change of mindset is needed, which, again, takes time.

"... and I think, at least in our [edited] office, we are seeing that we are treated as a partner. ... It's also one of the things, that's our selling point is, that we're involved at the proposal and it's the same person throughout the project. You have a main point of contact, so you develop that relationship so that becomes your partner. Now, departmental administrators working with our central administrators, they will tend to have the same person... So, there are those existing relationships... But it's still a cultural shift in transition. Oh, yeah, still in transition, I think and I'd love to see more of that. Where we're really seen as partners. ... I'm not a huge fan of, maybe, the business language of "the university and the academics are our clients", something like that. I much prefer, that's my passion is, really around collaboration. And that sort of that partnership with the academics, with the departments, not that where anyone is anyone's clients as such." (Interviewee, UK)

This type of partnership also includes that research managers have to work together with the researchers on the whole proposal and the project.

"They [the researchers] should be motivated, they should be involved and thrilled and excited about doing the proposal and submitting the project, but they don't and they don't because they are completely overwhelmed with other things. ..., we cannot do it for them, we



need to do it with them. So, if they want to have a meeting with me and explain it to me in plain or plainer words. If they want to send me one or two articles for me to read and understand and discuss, that's fine. That's perfectly fine. And then if I prepare the text, then they revise it in the sense that this text is too simple or this text is too complex or whatever. It's fine either way, but it's, but it's collaborative work in the sense you know it needs to be.”
(Interviewee, Portugal, company)

6.2.6. Developing projects for the networking and capacity building of research managers

It is not yet a wide-spread practice, but five interviewees mentioned different projects or initiatives that they exploited to develop their or their colleagues’ opportunities in the field of networking and capacity building. Three out of the five projects or initiatives were developed by the interviewees, whereas in the remaining cases, the interviewees joined existing ones.

As it is highlighted, even if these kinds of activities are funded externally, they require investment from the side of the organisation involved as well, at least the time dedicated to the preparations and the mobilities. It was pointed out several times, that it is a challenge both for the professionals to dedicate time for their own self-development, but also for the leadership, to accept that kind of investment.

“And then basically grabbing all opportunities ahead that I consider were useful for me. ... he [the older colleague] told me about, like, for instance, Germany was doing a pilot and they needed volunteers to do a pilot between US and Europe. And then I said, OK, I’m going to volunteer. And then I was in the US for three weeks. And then I also convinced myself to receive an American person to come, because I also learn with it. But that, you know, it’s effort and your own effort and to have, like, the openness of your leadership to accept that because that is time. In my case, I used a lot of extra working time for all these activities.”
(Interviewee, Portugal, research institute)

“I was part of an exchange. So, my link to South Africa was an Erasmus Plus funded project with a fellowship, it’s called STORM. Yeah. So, I was a [...edited] fellow. I spent two weeks in South Africa at this university and I visited some other institutions as well while I was there, and I did a regional presentation for SARIMA. And I just found the passion, the ambition, and the creativity, it was really, really inspiring. And the founders of SARIMA were some of my hosts. And so there was this that I learned a little bit more about that [professional development framework] I just think I just love the energy of SARIMA. That was really, really inspiring. Because it’s a bit entrepreneurial, so I just connected with that and that was an institution based in South Africa that we were looking at the framework. So, they came to me with it and then I was keen to explore it.” (Interviewee, UK)

The Spanish interviewee also reported to use national funds for capacity building and professional development:

“I have applied for a funding from our Spanish Minister of Science and Universities. And I have included, one of the costs is some money or pay this certification, the EARMA certificate. I think that two per year. And I have included myself like the leader there.”
(Interviewee, Spain)

Going beyond, two interviewees elaborated that they themselves initiated projects for the development of their research services. In the case of the university based in Cyprus, they used EU funds to develop specific expertise within the RSO to provide additional support to the institutional leadership and also to secure additional funding for the operation of the office.

“In the years that followed, we had... an orientation towards actually grant writing not only for the community but also for projects that could help the university to improve processes, policies, bring trainings, or even elevate the level of research at some institutional level. And therefore, through this process we managed as a research and innovation support service in the past five years to attract funding of over [EUR] 9,000,000.” “...we bring research



projects, for example, to improve our policies. The people that are working on these projects are also helping us in the practical implementation of the policies, not just improving them in theoretical terms... And this is something that also provides them with the knowledge and depth of understanding in order to be able to, to reflect and help us in improving the policies in the best way possible.” (Interviewee, Cyprus)

At the Romanian research institute, they used a programme initiated by the Romanian government to raise the number of Romanian participants in FP funded projects. The programme was financed by the structural funds and consisted of several activities, such as organising conferences, trainings, participation of international events, hiring professionals to boost research support services.

“...this project was good both for the institution, ... that this programme was meant for, at the level of the countries, to increase Romania’s capacity to participate in this H2020, ... However, we had, in that project, we had money, we had a budget for activities that helped us improve. So that means that we went and attended some training courses at the Commission, but also in the institutes that are accredited for that. And some were quite interesting because they were auditors that used to work at the Commission and now, they are having OR maybe they are still working as collaborators or I don’t know exactly. And they gave us some tips and some tricks, let’s say that you cannot find in the annotated model grant agreement or whatever. So, it was a good thing that we also improved our knowledge and then there were some funds for the researchers to go and attend the meetings with other researchers to stay together and to write proposals.

There were also other activities ... It was organising events for the scientific community in which we showed them participant portal, and it was the pre-proposal phase, how to search, where to search if you have the idea, how to take something out of it. And then we had events for the project managers as, we are, for the administrative offices and this is how we connected to each other, people from institutions, from research institutes, from universities, from all over the country. So we started to know each other better and to discuss, we had not only a presentation of Horizon Europe, because when that project started, it started also Horizon Europe, with all the novelties and everything, but also really helpful trainings where we discussed how thing is done in their organisation, just like the BestPrac meetings, whereas it was something at a smaller level, at the level of the country, and with specific problems that were identified and discussed and solutions were found.” (Interviewee, Romania)

In short, both cases show good practices how the EU or national funding can give a boost to networking, knowledge exchange and capacity building of research managers.

6.2.7. Partnering among RSOs

Another unique approach was introduced by the interviewee based in the UK highlighting another strategic role of professional research support services. Overcoming the competition among excellent institutions competing for EU funding, they can fulfil two niche type of functions: 1) completing each other’s expertise and 2) launching highly excellent, strategic collaborations in a top-down manner.

In the first case, the institution took a shift from striving for coordinating all the granted projects to sharing this role with other organisation and using the different expertise of the RSOs themselves. This approach also helps to overcome the institutional limitations, especially in the field of hiring new staff or having specific training for the staff.

“...we were more successful when we took collaborative approach. So, we shifted away from focusing on coordination... We’re partnering... I looked at it as a partnership between research management offices that we can pool expertise. There’s two ways to do it... So that’s sort of looking elsewhere, where there’s that expertise in an institution and then they’ll go into sort of research and innovation management that kind of collaboration. Because we might not be able to bring that in, it’s hard to get new staff, like new positions funded. So, and then I looked at it from a European perspective of, let’s partner with the research management offices, because we can do some reviews and they can do some reviews. We can



actually support more activity to, you know, lesser extent and generate more success and we've proven that. So, if we were focused on coordination, we would win about 3 (name of the university-edited) coordinated bids with our support a year that would feed into the project management. That was a very nice sort of system. We were then, if we switched to collaboration and when we're being a partner but still supporting it, so didn't need our full support, we were able to support more high-quality bids and improve and help improve the chances. And we ended up with eight funded that first year as opposed to three. No, not all 8 go into our project management unit, that was still probably about 3, but we were able to have a greater impact by partnering with research managers and it's that fine line of competition and cooperation. So, collaborating with your competitors as well." (Interviewee, UK)

The other possibility is to initiate strategic collaborative project by using the network of research managers across Europe, the profile and strength of different key institutions.

"... But you have sort of two typical ways to develop strategic partnerships in a university or partnerships. You've got the bottom up, the typical academic to academic, very organic and that's something you don't want to disrupt. And then you have the top down strategic, we want these new institutions to be working together. Research managers have an overview of what's happening across the institution. So if we connect, we have the possibility to make connections that otherwise wouldn't happen, and we can then, if we look at it from strategic partnerships. ... Now those are strategic partnerships in Europe for our organisation, make connections and support collaborations, get money from Horizon Europe. That will enhance that strategic initiative. So, there's a possibility as research management, we know where the money is and how to get the money. So, if we know in academics they're working together, if they know to reach out to us, we can call our counterparts. Now that's across Europe and that could be across the world." (Interviewee, UK)

6.2.8. Monitoring and evaluating the performance of the RSO

Most of the interviewees elaborated approaches through which they measure the performance of the Research Support Office in order to present the added value and corroborate the resources used. This can be done either through setting the goals for a defined period backed by KPIs or even asking for users' feedback from the side of the researchers, consortium partners.

"This is actually a KPI that we have at our service. How many researchers have submitted a grant for the first time or how many have coordinated the project of consortium for the first time." (Interviewee, Cyprus)

"We collect feedback as well. So, we send out feedback requests after proposal submission which we've used to bolster our business cases for why this is important. So, when you get the financial element of X amount investment has achieved X amount of income or at least supported it. Success rates comparison to average Horizon Europe success rates as well as an institutional champion that support us and see us as an area of expertise." (Interviewee, UK)

"...every year, our leadership launch a kind of inquiry to the users about all the services because it's not only the part that we have services, but also the facilities. We have a lot of common research facilities like microscopes, and these are specific facilities. And then every year they launch a kind of satisfaction inquiry to all the users and are anonymous, voluntarily. And on the last three years in the service, we are the most well-scored or one of the best scored in the parts of the service. ... we can see the comments, it's closed questions and then open questions. But very few open. We see the people recognise our knowledge and our like commitment to their work. And I think that is something good. ..." (Interviewee, Portugal, research institute)

Beyond depicting the added value of the Research Support Office, the set KPIs can also help in improving the research support services as such. As it was elaborated by an interviewee, it is important to see all the relevant KPIs and use it for decision-making and the organisation of the work, i.e. to



prioritise among proposals to be submitted and support only those which can potentially be granted:

“I don't make decisions. I share my opinion. I tell you what I think it's a good time investment and what I think it's not good time investment. But please take in mind that it's much more difficult to say no than to say yes, so don't be alert to saying yes just because you want to submit a lot of proposals because the next KPI you are going to have to demonstrate is how many of them were funded and you are lowering that KPI as hell because ohh we submitted 100. OK, fantastic. How many have you got? Two. This is not good. This is not good, and its researcher's time, right? The researchers are involved and dedicated to producing texts and to thinking for that need to be careful with people's time, especially great minds, as theirs needs to be focused and guided to work towards added value tasks.” (Interviewee, Portugal, company)

6.2.9. Providing incentives

Even though most interviewees confirmed that their services and their added value are recognised and understood by the researchers and the management, all of them highlighted the problem of the recognition in financial terms. In public institutions, the salary of research managers is generally in line with the national registry for public servants or public employees. It is lower than that of the researchers and not in line with the responsibilities they are charge with and the high expertise needed for fulfilling their job. *“...my staff members have been approached by consultancies to start immediately with a double salary that they get know here.”* (Interviewee, Cyprus.) Most of the interviewees also highlighted the difficulties when it comes to hiring staff as the salaries are lower than in the private sectors and even if they find a relevant person to the position, it will not accept the offer due to the low salary. *“Yes, for me it's a more negative thing, a part of the things that I have talked about the lack of recognition... in terms of salary”* (Interviewee, Spain).

“... I think that for each person, it's different. The way of motivation. There are other people that the only way of motivation is salary. So maybe this person is not the appropriate person for this work, because we, as a public university, we can't decide how much our someone to earn because we have a specific timetable and after the few years to change it very slowly.” (Interviewee, Spain)

All the interviewees introduced different measures through which, within their office, they try to compensate and motivate their staff. We list here four of the most common ones: 1) financial incentives, 2) opportunities for professional development, 3) flexibility in work, 4) creating a strong team and supportive environment.

It is more common for those countries which joined the EU since 2004 that they can pay a certain extra money for the employees if they work on EU funded projects. This comes from the fact that the general salary at public institutions is significantly lower than at their foreign counterparts. This scheme was reported by both the interviewee from Cyprus and Romania.

“The thing is that at the university we have quite a couple of additional incentives that we have tried to institutionalise. For example, our employees can get paid over and above for working on projects, so this is something that works. Now our benefit to keep them incentivized and motivated.” (Interviewee, Cyprus)

“So, we have the basic salary and when you are also involved in a project, at financial or administrative, you are taking care of that project, then you are also going to be paid according to the work that you... we have the time sheets and everything. As I said, up to a certain percent from the indirect cost of the project. So, the more projects that you have, the more work that you are carrying out, but also the incentives are the same, so this is one thing.” (Interviewee, Romania)

The interviewee from Spain, however, elaborated their example which can be regarded as a flagship one in this field: in recent years they carried out an investigation at the regional level to see the salary rates at the different institutions and then created a new, tailor-made scale for the research managers working

in pre-award. Their plan is to continue this process with the post-award unit.

"...they [research managers] are people with a lot of knowledge on their research field and in terms of assessment of course, and we realised that there were plenty of opportunities outside our university and if we want to retain this person, we have to improve the conditions, I mean salary. So, my boss asked to the other university ... university about the salaries and he realised that we are under the average. So yes, well, now we are on the average or top with the ..., I think that now it's OK. In terms of Spanish salaries..." (Interviewee, Spain.)

Interviewees most frequently talked about providing opportunities in the field of professional development meaning that they send their staff to training programmes, study trips, European or international conferences. The necessary financial resources are mainly covered from the indirect costs of the granted projects. Building the profile of the colleague is an incentive for the colleague, but beneficial for the institution as well.

"...we encourage and we pay for the training for people to get qualified at the EARMA level, at PMP, PM squared, whatever they want to do. RTTP for the technology transfer officers whatever they want to do. We cover the training mostly through the overheads that we get from the projects, because we get some funds here as a service and we utilise the service, we recycle it to support the training and other activities that are for the development of the personnel." (Interviewee, Cyprus)

"Well, for instance, to go to EARMA conference. And no, I think that it is very motivating for them, yes. Maybe in the future they can send a proposal for a panel or for a poster or whatever. Well, we are designing this year, we start a new measure that is short stages in Brussels. We have shared offices with other three Spanish universities. And we made a short stage with an agenda of interviews with EC officers and other key persons, and I think that it was also very motivating for them." (Interviewee, Spain)

"I gave the opportunity [to accomplish the masterclass provided by EARMA for young research managers] to this young person that is working with us because I feel it gives her more confidence. And that is quite important for the job to have confidence and I think this even she told me, I realised that actually what you will do everybody's doing and this is the way maybe to do, and then I think it's to be more professionalised faster because of course I took longer because I needed to discover the ways." (Interviewee, Portugal, research institute)

"We also try to create opportunities even if we can't sort of, even if it's a flat structure, but can we do, some colleagues to do some mentoring, so they get a bit of line management mentoring experience and they can add that to the CV and get that expertise so that when there is a rule that might include some management there, they have something that they can reference back to." (Interviewee, UK)

As a starting point, a stronger involvement in the project and the opportunity to travel and take part at project meetings can be also regarded as an incentive.

"Maybe just being a part of the project, he's [the research managers colleague] also attending from time to time the general assemblies where the project management work package is discussed and he has the possibility to connect with the people from the partners that are working in the same field. ...other is that we always, we used to have before the pandemic this ... were the events that were for the countries, mostly for the Eastern countries, where the Commission was coming and presenting all the news about the programme and with the auditors and the legal departments." (Interviewee, Romania)

Another incentive, which was mentioned is providing flexibility in terms of working conditions. This can include the flexibility in terms of working hours; in case of deadlines RMs are requested to overwork but then it is compensated. As it was reported by the interviewees, the opportunity to work from home is working well and motivates the colleagues. *"We offer a lot of flexibility in term of timetable and also the possibility to home working twice a week". (Interviewee, Spain) "The other thing is that we have institutionalised now a specific number of work from home days per year, which has also, I mean, I'm a*



big fan of work from home." (Interviewee, Cyprus)

Last but not least, creating a supportive environment within the unit is also considered as a way to incentivize colleagues. A good climate within the unit can also compensate the demanding job of research managers.

"Yes, so it's not easy to motivate the team in this context [lack of career path, lack of clear salary growth], so I think that it's important to have a positive... I don't know... environment and collaborative environment... I think that the first step is this stabilisation of the team..." (Interviewee, Spain)

"We are a team. We laugh, and we work, and we struggle, and we fight, but in the end, yeah." (Interviewee, Romania)

To establish a good working climate within the unit can be supported by different means, such as coaching.

"...we asked to our human resources unit for a... Well, it's not a team building... a kind of, I don't know, the coaching. Yes, like a team coaching, yes, because, the size of our unit almost doubled during the COVID. We were at home. A lot of new people that we don't meet face to face with some of them it. It was very, very complicated for us. And after the lock down and the COVID we asked for a coaching because we are a team, but we don't feel like a team because the size of the office, 2 units, very different so. Yes, I think that these kinds of things are also or show them that we are committed with the teams." (Interviewee, Spain)

Referring back to the introduction part of this section, it can be stated that most of the presented cases already exist in a number of RSOs across Europe. This means that they have the potential to be adopted by even more organisations or used in a more conscious manner to increase the excellence of Research Support Services. Learning from such practices, discussing the pros and cons should be an important part of networking and capacity building opportunities.



7. Conclusion and recommendations

7.1. Conclusion

Defining Research Management is a complex task due to the diverse and constantly evolving nature of the profession. The literature depicts different approaches and terminologies without generating a consensus on any of them. Professionals bearing vast experience in the field having been involved in the focus group discussions and the online interviews reported different approaches to explain and define their role. Both focus group respondents and interviewees revealed a number of metaphors and misconceptions, converging around the supporting and often invisible nature of their work.

Professionals in research management have to be creative also when positing themselves: in the last decades the constant changes and emerging needs in the R&I ecosystem forced RMs to create and come up with the own understanding of their roles, diversify and expand their support, and specialise in the fields and topics necessary for delivering excellent research support.

As a result, nowadays, RMs provide support in a vast range of fields along the project lifecycle, including pre-award, contracting, post-award, finances, communication, legal issues, knowledge and innovation management, and beyond, in research policy, research funding, data management and the management of research support services. Based on our findings, there is a significant diversity of job roles and categories across Europe: even the same job categories have different naming in the different institutions and countries. Moreover, the level of specialisation of the support was also revealed as some job categories are broader whereas others are more specific, i.e. data steward vs open science specialist or technology transfer officer vs licencing manager. Both the size of the institution and the Research Support Office matters when it comes to the specialisation of RMs across different job categories.

Therefore, our preliminary findings underline that the recognition of the profession necessitates the creation of an umbrella term and definition of RM which is understood and recognised by relevant stakeholders, including policy-makers, university leadership, management as well as researchers. To do so, it is inevitable to understand first the complexity of these roles and then make this umbrella term embraceable by all these professional groups and categories, instead of replacing them. Due to the mixed nature of profiles, generalisation can be done only to that extent that support recognition.

Our findings also underline the lack of clear career path and the professional development framework. The literature points out that each professional has a “unique journey”. Both our interviewees and focus group participants highlighted that there are Research Managers who are proactive and take advantage of the constantly changing ecosystem to improve their position and develop their expertise, however, this is not the case for all. Despite the fact that there are several opportunities for professional development, in most cases professionals do not have time or resources to exploit them and build their professional career. The lack of recognition of certifications or knowledge development seriously hinder this process: if there is no promotion or increased salary, many RMs do not invest efforts in self-development.

Therefore, to make RM as a recognized profession, beyond creating a common professional identity, it is important to establish and reinforce professional associations, make available and incentivise opportunities for professional development, including certification programmes, trainings. Last but not least, providing clear career path which includes financial remuneration and job security is also important to overcome the today's reality when professional research support depends on the self-motivation of professionals and their commitment to make impact in the R&I ecosystem.

The facilitating role of Research Managers includes the possession of a vast range of skills, competences and knowledge, which can be divided into four categories, 1) transversal skills, 2) RM related soft skills, 3) RM related hard skills, and 4) specialisation or role related skills. Our preliminary findings also underlined the importance of transversal skills and RM related soft skills. However, there is an enormous competition in the labour market for people possessing these skills, meaning that if RPOs and RFOs are



not able to recognise those RMs who bear these skills, professionals can easily find other jobs with better recognition, including salaries. So keeping the motivation of these professionals and recognising their added value is a key for retention.

Based on the workshop results and the interviews, beside the transversal skills and RM related skills in general, the different job roles or categories require different skills and knowledge. Therefore, the development of career path, professional development frameworks and clarification of roles and responsibilities of the different job categories necessitates the definition of professional categories or segments to which the necessary knowledge and skills can be related.

An overarching but detailed categorisation of Research Management jobs can provide the example and a path for development for RSOs regardless their level of maturity: those which are having still limited staff and services can understand the opportunity for development, whereas those which are working already with greater staff can understand the possible niche fields where they can specialise their support.

Thanks to the first round of the interviews, it was already possible to grab several good practices which can be potentially adopted by other RSOs across Europe to improve their profile, their services and their recognition. Almost each of them can contribute to clarify and develop the relation with other colleagues at research performing organisations, including researchers, university leadership and management. However, internally, they can also enable to make supportive and motivating environment for the colleagues working in RM. Some examples also showcase how RSOs can increase their strategic role and demonstrate their value added.

As regards the next steps, further investigations in the frame of RM ROADMAP are planned by circulating a survey and conducting a second round of interviews. The aim is to gather more evidence to make our results more specific and enable the development of an overarching terminology and definition, then the differentiation of specific job categories. A general and job category-based skill and competence tables will be developed paired with a possible frame for professional development. All these results will be then validated through the co-creation exercise with the involvement of national RM communities through the RM Ambassadors.

7.2. Recommendations

Based on the literature review and the preliminary results, the following recommendations are formulated to the different stakeholders. More detailed ones are expected to be delivered following the quantitative analysis and the co-creation exercise.

7.2.1. The European Commission

- Strengthen the recognition of the RM profession through adopting recommendations prepared by the projects, i.e. RM ROADMAP & CARDEA, for the definition and terminology of Research Management backed by a frame for career and professional development in RM including skill and competence matrixes
- Facilitate the recognition and understanding of roles and functions of Research Managers through the formulation of a Charter and/or a Code of Conducts for RMs as a set of general principles and requirements which specifies the roles, responsibilities and entitlements of RMs as well as of employers and/or research funders
- Allocate a dedicated budget line and sufficient resources within funded projects to ensure the effective execution of Research Management related tasks by professionals having experience or certification in the field.
- Develop, test and make available for beneficiaries a common EU software designed specifically for the management of funded R&I projects.

7.2.2. National R&I Funding Organisations and Policymakers

- Support the creation/reinforcement of RM associations/networks and enable national community building of professionals across various categories of RMs. Recognise these associations as key stakeholders, engage them in relevant policy debates.
- Secure the necessary funding for RM associations/networks to offer training, networking and capacity building opportunities for RMs.
- Allocate a dedicated budget line and sufficient resources within funded projects to ensure the effective execution of Research Management related tasks by professionals having experience or certification in the field.

7.2.3. Research Performing Organisations

- Understand and recognise the added value of the work carried out by professionals in Research Management, value and compensate their expertise, skills and competencies.
- Acknowledge the need for investment in RMs, enable their upskilling and capacity-building, recognise and reward the accomplished accreditations and/or certifications.
- Avoid precarious working conditions, reinforce job security of RMs through permanent employment contracts and reward the professional development of RMs.
- Find solutions for the sustainability or, even, for the profitability of Research Support Services in collaboration with RMs. Build or adapt a business model which can successfully operate within the specific institutional circumstances.
- Regularly review and update the relevant job descriptions to align them with actual tasks and roles of RMs.
- Follow the discussions related to the categorisation, career development and professional

development framework of RMs carried out by the ERA action 17 and the projects in order to feed in the institutional specificities and set-ups, and then enable the adoption of developed results and recommendations.

7.2.4. Research Managers

- Build and deepen their own professional identity: internalize the professional identity of RMs in general, and if relevant the job role related specific identity, and build the reputation of the profession by delivering excellent support externally.
- Find the ways to benchmark and showcase the added value of Research Support to reinforce the recognition within and beyond the own institution.
- Strive to professionalise the Research Support provided by adopting existing good practices and improving constantly the own knowledge and skillset. Seek proactively professional development opportunities at the national and international levels.
- Leverage strategic capacities by building knowledge and experience in R&I policy planning and cross-cutting issues requested by funded projects.
- Try to build partnership among RSOs of different RPOs at the national and international level, to exchange knowledge, good practices and initiate multidisciplinary and jointly beneficial projects.
- Acknowledge the importance of networking and information sharing among colleagues at the national and the international levels. Try to seek funding opportunities enabling staff exchange, peer-to-peer learning, mentoring, networking or organising conferences and trainings.
- Engage with your national RM ROADMAP Ambassadors and take part in the co-creation process by sharing experiences, getting inspiration from the network, validating the project results, feeding policy-making and creating the joint future of Research Management across Europe.



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9. Annex 1: Research Data Management

HETFA collects data upon the expression of consent of the participants. One can choose to voluntarily provide personal data in the context of the following project activities:

- a) responding to the RM ROADMAP survey;
- b) participating as interviewee;
- c) participating in focus group interview.

This data enables HETFA to deliver the project activities for which it is responsible. The data provided is only used for the purposes of the RM ROADMAP project. Voluntarily provided personal data may also be used by HETFA for the purpose of contacting the respondent for possible future consultation related to the theme of the respective project activity.

HETFA will treat personal information with the strictest confidentiality and in accordance with the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), effective as of 25 May 2018.

After anonymization, results of the research activities carried out by HETFA will be published open access in research reports (D1.1, D1.2) and possibly in peer reviewed scientific publications.

As project coordinator, the European Association of Research Managers and Administrators (EARMA) will ensure all project partner guarantees the treatment of personal data generated during the RM ROADMAP project.

Access and storage

Data will be either collected in an anonym way (survey) or will be anonymized (interview and focus group). Collected data will be shared through online open access repositories.²⁴ Any information that could lead to an individual being identified will be completely and irreversibly removed. Access to personal data one directly provides is limited to the appropriate staff within HETFA who are involved in the respective project activity. This data is kept for maximum of 5 years after the end date of the RM ROADMAP project.

Re-use of existing data

For the sake of comparison or reference, results of previous or parallel research projects will be utilised e.g. RAAAP, RAAAP-2, RAAAP-3, the preliminary study of foRMAtion, CARDEA, etc. All results from these projects and initiatives were via volunteers and are open access.

More information

You can find more information on HETFA's GDPR policy [here](#).

Contact

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²⁴ FigShare/Zenodo

a) Survey

In the frame of WP1 – Intelligence and WP2 – Training and Development a joint online survey will be carried out. The main aim of the survey is to get a comprehensive picture of the current situation of European Research Manager and Support Professionals (RMs). The survey will be conducted through the Knowledge and Community Platform (KCP) developed in the frame of the project. The survey will open with an introduction – providing information about the RM ROADMAP project, the objective of the research, the details of participation and data management – and a consent statement. The data collected will be concerning RMs, their career paths, training, funding and networking opportunities available to them, etc.

Answering to the survey will be voluntary and all data collected will be anonym. Email addresses will be only gathered from those who wish to provide additional information, e.g. about training courses, or who are interested in learning about the results and/or voluntarily apply for interviews. These data will be handled in line with GDPR.

It is expected that 2,600-2,800 responses will be received. Results of the survey will be retrieved in CSV format and retained on an external hard drive of HETFA for maximum of 5 years after the end date of the RM ROADMAP project.

b) Interview

At least 18 online interviews will be carried out in the frame of WP1 – Intelligence. The aim of conducting interviews is to identify at least 16 case studies of institutional RMS best practice and capacity adoption. Interviewees will be selected based on social and professional characteristics (occupation, expertise and competencies).

Participation in the interview is completely voluntary. Participants also have the right to stop the interview, refuse to answer any question or withdraw from the research at any time without any consequences. Content of the interviews will support the analysis, quotes and excerpts will be extracted to support the findings.

Prior to the interview, participants receive detailed information about the purpose and procedure of the research, and they must sign a consent form. The consent form is necessary to ensure that participants understand the purpose of their involvement and that they agree to the conditions of their participation.

Participants' will remain anonymous throughout data reported. It will be ensured that information in the interview that could identify the interviewee will not be revealed. None of the personal data will ever be passed to third parties.

The interviews will be recorded through Zoom in mp4 format and then summarised in MSWord document. To ensure complete confidentiality, interviewees will have the right to request a copy of the transcript given the opportunity to correct any factual errors. Access to the interview transcript will be limited to the researchers who officially take part in the research process.

Signed consent forms, original audio recordings and transcripts of the interviews will be retained on an external hard drive of HETFA for maximum of 5 years after the end date of the RM ROADMAP project.

c) Focus group interview

Six focus group interviews (each with 6-8 interviewees) will be carried out in the frame of WP1 – Intelligence. Prior to the interview, participants receive detailed information about: 1) the purpose and method of the research, 2) the topics to be discussed in the focus group, 3) the potential benefits and risks of participation and 4) confidentiality. They must also sign a consent form.

The interviews will be audio-recorded and then transcripts will be elaborated in MSWord document.



Signed consent forms, original audio recordings and transcripts of the interviews will be retained on an external hard drive of HETFA for maximum of 5 years after the end date of the RM ROADMAP project.

Participants' responses will remain confidential, and no names will be included in any project reports. Participants will also have the right to refuse to answer any question or to leave the focus group at any point without any consequences. Participants will be asked to respect the privacy of other focus group members and keep all information disclosed during the group confidential.

10. Annex 2: Literature review

The aim of the literature review was to get a holistic understanding of the current state-of-the-art of the research in the field of Research Management.

10.1. Subtasks

- a) Defining the research questions
- b) Determining inclusion/exclusion criteria
- c) Co-constructing guidelines for sharing the task and organising the results
- d) Conducting the search
- e) Meta-analysis to summarise the state of the art

10.2. Selection criteria

Date

- 2010 or later (focus should be on most recent publications)

Geographical scope

- Focus on Europe or European countries, more specifically the EU or EU Member States

Source-types

- Academic publications (peer-reviewed journals or books)
- Reports of international organisations / networks: EU institutions, OECD
- Reports, materials, frameworks of national or transnational RM associations, platforms
- Reports of related projects
- Presentations, training materials, reports of practitioners

Thematic scope

- 1) history of the profession,
- 2) existing and/or possible definitions of RM,
- 3) job roles and categories of RMs,
- 4) existing career frames and professional development frameworks in RM,
- 5) skills and competences needed by RMs, and
- 6) research support structures.

Older publications, other source-types or geographical scope can be included if it is relevant for the purposes of the literature review.

11. Annex 3: Guide for the focus group discussions

- Round of introduction: Please introduce yourself in a few words. Please tell us your name, country, and organization.



Definition: who are we? **definitions, terminologies, categories (15')**

- How would you call yourself / your job? What do you say when your mother asks you what you do in your job? / How can you describe it briefly for an “outsider”?
- Is your job title a defined role in your organization? How is it defined (is it broader or more narrow definition?)
- What about your country? Is your job title a defined role in your country? How is it defined (is it a formal/legal definition, is it broader or more narrow definition?)
- *Does your job title match your tasks? If not, what is not covered?*
- *How did you become a research manager /etc.? (One sentence about your background)*

What kind of categories of research management roles are you aware of in your institution and country? (Who belongs to the group of RM?) (15')

- What are the typical roles/tasks of a research managers in your organization?
- *How many RMs does your organization have? Are you a part of a bigger team?*
- *Is there some kind of division of work among you? What/Why?*
- Who, what kind of work roles support your job? Are they also considered RM?
- We are working on a wider definition and categorisation of the research managers. What other type of roles/jobs would you put in this category?

How would you define the value proposition of Research Managers? (15')

- What kind of specific tasks or problems are covered by RM in your organisation?
- To whom your work is the most useful in your opinion? And why?
- Please tell us some examples when you have felt that your expertise as an RM have helped a research project? Have you ever encountered a situation when you could not help?
- Please tell us some examples when you felt your work was crucial for your organization?
- *What do you think is your added value as an RM to the wider research community?*
- *Can you tell us a personal experience when your colleagues gave positive feedback of your role? What benefits were they acknowledged? Do they see the same benefits of your job as you?*
- *How can you show your added value to outsiders? What are the easy-to-understand indicators of your job?*
- *Where do you see yourself in a few years? What career options you see for yourself?*



12. Annex 4: Interview Guide

- 1. Introduction (information on the RM ROADMAP project and specifically on the interview) and consent**
- 2. Please introduce yourself briefly with a special regard to**
 - a. Your current job
 - b. Your institution (status, type)
 - c. Years of experience in research management and support
 - d. How long are you employed in the current institution? At which level?
- 3. Job profile**
 - a. In which [Research Management and Support (RMS)-related] areas do you work currently?
 - b. What is your level of responsibility?
 - c. How would you call yourself / your job? How can you describe it briefly for an “outsider”?
 - d. Are these areas that you currently work in reflected in your official job description (on file with your employer)? Do you see any trends with that regard in your institution?
 - e. How do you see, to what extent needs your work specialization and specific knowledge? Do you and your colleagues need to be generalists or specialists?
- 4. Organization**
 - a. Could you briefly summarize how research management and support is operating in your institution? At which units do Research Managers (RMs) work? At which levels?
 - b. Could you give an approximate no. of RMs?
 - c. Which job roles are covered by these colleagues? Do you miss any specific roles?
 - d. Is there any business model for the operation of Research Support Offices?
 - e. How do you evaluate the operation of Research Support Services? In terms of e.g. the excellence of proposals and projects, institutional performance in the absorption of funds, marketization of results, etc.
 - f. Are there any good practices that you consider worth to share regarding the delivery of professional Research Support Services in your institution?
 - g. What are the main challenges that professionals working in research management and support face in your institution? What are the drivers and what hinders your work at your Research Support Office/as an RM?
 - h. How do you see the recruitment of colleagues? How can you find the relevant people with relevant expertise?
 - i. What kind of skills do you look for when recruiting your colleagues?
 - j. What can your office/organisation offer to colleagues to retain them?



- k. What are the factors that influence your daily work/your recognition as a RM at your institution?

5. Career path

- a. Is there any career frame for RMs at your institution? If yes,
 - i. What are the main positions/proficiency levels? What are the requirements of advancement?
 - ii. How do you evaluate the existing frame?
 1. What are the advantages?
 2. Do you see any barriers/limitations of career development?
 3. Is there anything that you miss from the existing frame?
- b. If not, what can be the reason behind? What is needed for the creation of a career frame?

6. Professional development

- a. Are there any opportunities for professional development within your institution, unit? If yes, could you summarize them? (e.g. training, mentoring, certificate programme, post-graduate studies, mobility, etc.)
 - i. If not, what do you miss particularly?
- b. What kind of support/resources are needed for these opportunities? How can you secure that support and the resources? e.g. financial resources, dedicating time, approval of supervisor/lean manager, etc.
- c. Are there any challenges that should be addressed in the field of professional development?

7. Recognition of the profession

- a. Is your job and role, as part of research support at large, a defined job title and role in your organization?
- b. Is your job and role, as part of research support at large understood / recognized by other colleagues, e.g. by researchers, administration, leadership, management?
- c. Is your job and role, as part of research support at large, a defined job title and role in your country?
- d. What about other professions in research management and support?
- e. Do you see any changes during your career? Do you still see any remaining challenges?
- f. How do you see the future? What is needed?

14. Annex 5: Intelligence from AI

14.1. Terminology and definition

What is a research manager?

ChatGPT

“A research manager is a professional who holds a critical position within academic institutions, research organizations, or similar contexts. Their role revolves around orchestrating and supervising the multifaceted components of research projects. Research managers are entrusted with diverse responsibilities, including but not limited to identifying suitable funding avenues, crafting persuasive grant proposals, meticulously managing project finances, fostering efficient collaboration among members of research teams, upholding ethical and regulatory standards, and effectively communicating research outcomes. By assuming these duties, research managers contribute significantly to optimizing research procedures, cultivating innovation, and facilitating the successful realization of research initiatives.” (OpenAI’s GPT-3.5 model, 2023)

Perplexity.ai

A research manager is responsible for overseeing and managing research projects, both internal and external, in various fields such as business, market, natural science, and clinical research[3]. Their role involves coordinating and executing research projects, as well as managing budgets, timelines, and teams[1][2]. Here are some key responsibilities and duties of a research manager:

1. Executing research projects: Research managers lead the execution of research projects by planning, coordinating, and executing assigned research projects[1][6].
2. Designing and implementing research policies: They are involved in designing and implementing research policies to ensure the smooth operation of research projects[1].
3. Monitoring research projects: Research managers monitor the progress of research projects, ensuring that they are on track and meeting deadlines[1].
4. Scheduling and budgeting projects: They are responsible for scheduling and budgeting research projects, ensuring that resources are allocated effectively[1].
5. Drafting proposals: Research managers draft proposals for research projects, outlining the objectives, methods, and expected outcomes[2].
6. Selecting methods and techniques: They select appropriate methodologies and techniques for research projects, ensuring that they align with the objectives and requirements[2].
7. Supervising teams: Research managers supervise teams of researchers, providing guidance and support throughout the project lifecycle[2].
8. Presenting findings: After a project is completed, research managers present the research findings to stakeholders, clients, or other relevant parties[2].
9. Collaborating with clients: They work closely with clients to understand project objectives, discuss budgets, and provide guidance throughout the research process[3].
10. Writing reports: Research managers are responsible for writing reports on research findings, summarizing the results and implications of the research[2].

To become a research manager, a bachelor's degree in a relevant field such as marketing, statistics, economics, psychology, or a related field is typically required. Employers often prefer candidates with advanced degrees or graduate degrees in the social sciences[3]. Additionally, several years of experience working with clients and consulting on business problems using research and data analysis are usually



necessary[3].

Overall, a research manager plays a crucial role in overseeing and managing research projects, ensuring their successful execution and delivering valuable insights and findings.

Citations:

[1] <https://ca.indeed.com/career-advice/finding-a-job/research-manager>

[2] https://www.glassdoor.com/Career/research-manager-career_KO0,16.htm

[3] <https://www.ziprecruiter.com/career/Research-Manager/What-Is-How-to-Become>

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

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

[6] <https://www.greatsampleresume.com/job-responsibilities/sciences/research-manager>

What is the most frequent terminology used for professionals working in research management and support in Europe?

ChatGPT

In Europe, professionals working in research management and support go by various titles depending on the specific roles and responsibilities they hold within the research ecosystem. Some of the most frequent terminologies used for these professionals include:

1. **Research Manager:** This is a broad term that can encompass professionals responsible for overseeing and coordinating various aspects of research projects, including budgeting, project planning, compliance, and reporting.
2. **Research Administrator:** These professionals typically handle administrative tasks related to research projects, such as grant proposal submissions, contract management, and compliance with funding agency regulations.
3. **Research Coordinator:** Research coordinators often work closely with principal investigators and research teams to ensure the smooth execution of research projects. They may assist in project planning, budget management, and coordination of research activities.
4. **Grants Manager:** Professionals in this role focus on securing external funding for research projects by identifying grant opportunities, preparing grant proposals, and managing grant-related administrative tasks.
5. **Funding Officer:** These individuals work within institutions or organizations to identify funding opportunities, assist researchers in preparing funding applications, and ensure compliance with funding guidelines.
6. **Project Officer:** Project officers are responsible for managing the day-to-day activities of research projects, including budget tracking, progress reporting, and stakeholder communication.
7. **Innovation Manager:** In the context of research management, innovation managers may focus on supporting the translation of research outcomes into practical applications, products, or services.
8. **Research Support Specialist:** This term can encompass a range of roles that provide specialized support to researchers, such as data management, ethics compliance, technology transfer, and communication.
9. **Research Liaison Officer:** Professionals in this role often serve as a bridge between researchers and various stakeholders, including funding agencies, industry partners, and government entities.



10. **Research Development Officer:** These individuals assist researchers in developing their ideas into fundable projects by providing guidance on proposal writing, strategic planning, and identifying funding opportunities.

11. **Research Compliance Officer:** Compliance officers ensure that research activities adhere to ethical, legal, and regulatory requirements, including issues related to human subjects, animal welfare, and data protection.

12. **Knowledge Exchange Manager:** This role focuses on facilitating the exchange of knowledge and expertise between academia, industry, and other sectors, often through collaborative research projects or technology transfer.

It's important to note that the specific titles and roles can vary between institutions and countries in Europe. The field of research management and support is diverse, and professionals may have hybrid roles that combine elements from several of the above titles.

What is the most frequent terminology used for professionals working in research management and support in Europe?

Perplexity.ai

There is no specific terminology used for professionals working in research management and support in Europe. The most frequent terminology used for professionals working in research management is "research manager," while for professionals working in research management and support, it is "research administrator"[1][2][3][4][5][6]. These terms are used across various industries, including government, medical institutions, non-governmental organizations, universities, and market research firms. The responsibilities and duties of research managers and administrators may vary based on the specific job, company, or industry, but the terms "research manager" and "research administrator" are consistently used to describe these positions.

Citations:

[1] <https://www.research.psu.edu/osp/prepare-proposals/proposal-guides/research-administration-glossary>

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

[3] <https://med.virginia.edu/office-for-research/resources/glossary-of-research-terms/>

[4] <https://www.greatsampleresume.com/job-responsibilities/sciences/research-manager>

[5] https://www.glassdoor.com/Career/research-manager-career_KO0,16.htm

[6] <https://www.ziprecruiter.com/career/Research-Manager/What-Is-How-to-Become>

14.2. Job categories

What kind of job categories do exist in research management and support in Europe?

ChatGPT:

In Europe, research management and support encompass various job categories that contribute to the planning, coordination, administration, and facilitation of research projects. Here are some common job categories within this field:

- a. **Research Manager/Administrator:** Research managers or administrators oversee the overall management of research projects. They handle project planning, budgeting, resource allocation, coordination of research activities, and compliance with regulations and policies.



- b. **Project Coordinator/Officer:** Project coordinators or officers provide support in the planning, implementation, and monitoring of research projects. They assist with project logistics, scheduling, documentation, and coordination among team members and stakeholders.
- c. **Grants and Funding Officer/Manager:** Grants and funding officers or managers specialize in securing funding for research projects. They identify funding opportunities, develop grant proposals, manage grant applications, and ensure compliance with funding agency requirements.
- d. **Research Compliance Officer:** Research compliance officers ensure that research activities adhere to ethical guidelines, regulatory requirements, and institutional policies. They oversee the ethical conduct of research, manage research protocols, and ensure compliance with data protection and privacy regulations.
- e. **Research Data Manager/Analyst:** Research data managers or analysts handle data management, organization, and analysis processes in research projects. They ensure data integrity, develop data management plans, perform statistical analyses, and contribute to data interpretation.
- f. **Research Communications Specialist:** Research communications specialists facilitate the dissemination of research findings to diverse audiences. They develop communication strategies, write research reports, create content for publications and websites, and engage in science outreach activities.
- g. **Research Ethics Officer:** Research ethics officers ensure that research activities adhere to ethical standards and guidelines. They review research protocols, provide guidance on ethical considerations, conduct ethics training, and address ethical concerns or violations.
- h. **Technology Transfer Officer/Manager:** Technology transfer officers or managers focus on transferring research outcomes and innovations from academic institutions to the commercial sector. They evaluate intellectual property, negotiate licensing agreements, and support the commercialization of research discoveries.
- i. **Research Support Specialist:** Research support specialists provide technical and operational support to researchers. They assist with laboratory management, equipment maintenance, research instrument calibration, and experimental procedures.
- j. **Research Librarian:** Research librarians offer information and research support services to researchers. They help researchers access relevant literature, navigate databases, conduct literature reviews, and provide guidance on citation management.

These job categories represent a broad range of roles and responsibilities in research management and support in Europe. The specific titles and responsibilities may vary across institutions, countries, and organizations. It's important to note that these categories can overlap, and professionals in this field may have diverse skills and responsibilities depending on the specific context and requirements of their roles.

What kind of job categories do exist in research management and support?

Perplexity.ai:

Research management and support jobs can be found in various categories, including but not limited to:

- **Researcher Careers:** Research assistant, research technician, forensic science technician, market researcher, and more[1].
- **International Standard Classification of Occupations (ISCO):** Managers, professionals, technicians and associate professionals, clerical support workers, service and sales workers, and more[2].
- **Jobs Involving Research and Analysis:** Market research analyst, forensic scientist,



archaeologist, business analyst, biologist, and more[3].

- **Project Management Career Paths:** Project management jobs exist in multiple industries, from software and construction to healthcare and engineering[4].
- **Science and Research:** Acoustics consultant, agronomist, animal technician, conservation officer, data analyst, research analyst, market researcher, and more[5].
- **European Research Manager Jobs:** European research manager jobs can be found in various fields, including engineering, science, and technology[6].

These are just a few examples of the job categories that exist in research management and support. Depending on the industry and field, there may be many more job categories available.

Citations:

[1] <https://www.indeed.com/career-advice/finding-a-job/researcher-careers>

[2] <https://ilostat.ilo.org/resources/concepts-and-definitions/classification-occupation/>

[3] <https://www.indeed.com/career-advice/finding-a-job/jobs-involving-research-and-analysis>

[4] <https://www.flexjobs.com/blog/post/project-management-career-paths/>

[5] <https://nationalcareers.service.gov.uk/job-categories/science-and-research>

[6] <https://uk.indeed.com/q-european-research-manager-jobs.html>

What are the specific job titles in research management and support in Europe?

Perplexity.ai:

There are several specific job titles in research management and support in Europe, including:

- **European Research Manager:** This job involves managing research projects and teams, developing research strategies, and ensuring compliance with regulations and funding requirements[2].
- **Research Fellow:** This is a temporary position at the European Commission's science and knowledge service, the Joint Research Centre. Research Fellows conduct research in various fields, including energy, environment, health, and security[6].
- **Administrators (AD):** Administrators work in various sectors such as justice, law, finance, environment and climate change, foreign affairs, agriculture, economics, IT, communication, human resources, science, translation, and interpretation in the EU institutions[4].
- **Assistants (AST):** Assistants work in various fields such as communication, economics/statistics, European public administration, external relations, finance, information technology, languages (translation or interpreting), law, and others in the EU institutions[4].
- **Learning Support Assistant:** This job involves supporting students with special educational needs and disabilities in their learning and development[5].
- **Data Analyst:** This job involves analyzing and interpreting data to provide insights and recommendations to organizations[5].
- **Sales Supervisor:** This job involves managing a sales team, setting sales targets, and developing sales strategies[5].



- **Business Account Executive:** This job involves managing and developing relationships with business clients, identifying new business opportunities, and achieving sales targets[5].

These are just a few examples of the job titles in research management and support in Europe. The specific job titles and requirements may vary depending on the organization and sector.

Citations:

[1] http://archives.esf.org/fileadmin/Public_documents/Publications/moforum_research_careers.pdf

[2] <https://uk.indeed.com/q-european-research-manager-jobs.html>

[3] https://europa.eu/youreurope/citizens/education/research/jobs/index_en.htm

[4] https://european-union.europa.eu/live-work-study/jobs-traineeships-eu-institutions_en

[5] <https://www.leru.org/files/Strengthening-Research-Careers-in-Europe-Full-paper.pdf>

[6] https://joint-research-centre.ec.europa.eu/working-us/jrc-jobs-redirected/temporary-positions-redirected/contract-staff-members-redirected/function-group-iv-redirected/job-opportunities-research-fellows-european-commission_en

14.3. Career path

What kind of career path is available for professionals in research management and support in Europe?

ChatGPT:

Professionals in research management and support in Europe have diverse and dynamic career paths that can lead to various opportunities within academia, research institutions, government agencies, and industry. Here are some potential career paths available in this field:

- a. **Entry-Level Positions:** Professionals often start their careers in entry-level roles such as research assistant, project coordinator, or research administrator. These positions provide valuable experience and a foundation in research management and support.
- b. **Specialization:** As professionals gain experience and expertise, they can specialize in specific areas of research management and support. This could include focusing on grants management, research compliance, data analysis, technology transfer, or research communications. Specialization allows individuals to develop in-depth knowledge and skills in their chosen field.
- c. **Advancement within Research Administration:** With experience and demonstrated leadership skills, professionals can progress to supervisory or management positions within research administration. These roles involve overseeing research teams, managing projects, and leading strategic initiatives in research management and support. Titles may include research manager, program director, or research operations manager.
- d. **Research Strategy and Policy Development:** Professionals can advance into roles focused on strategic planning and policy development in research. They may work closely with senior leadership to develop research strategies, identify funding opportunities, shape institutional policies, and contribute to the broader research ecosystem.
- e. **Research Funding and Grant Management:** Opportunities exist in the field of research funding and grant management. Professionals can work in research funding agencies, foundations, or other organizations involved in grant administration. Roles may involve



evaluating research proposals, managing funding programs, and providing support to researchers in securing grants.

- f. **Industry Engagement and Technology Transfer:** Professionals with expertise in research management and support can transition to roles that involve industry engagement, technology transfer, or commercialization of research outcomes. These positions require knowledge of intellectual property, licensing, industry collaborations, and business development.
- g. **Consulting and Advisory Services:** Experienced professionals can pursue careers as consultants or advisors in research management and support. They can provide specialized expertise and support to research organizations, institutions, or government agencies in areas such as grant writing, research strategy, compliance, or program evaluation.
- h. **International Collaborations and European Programs:** Europe offers various international research collaborations and programs. Professionals can explore opportunities to work on large-scale research projects, multinational initiatives, or European Union-funded programs. These positions often involve managing international partnerships, coordinating activities across different countries, and navigating complex funding frameworks.
- i. **Research Leadership and Senior Management:** With extensive experience and a strong track record in research management and support, professionals can aspire to leadership positions in research organizations or institutions. They may hold titles such as director of research, associate vice president of research, or research officer. In these roles, individuals provide strategic direction, oversee research initiatives, and shape the overall research agenda.
- j. **Entrepreneurship and Innovation:** Professionals with an entrepreneurial spirit may choose to start their own research support businesses, consultancy firms, or technology transfer companies. These ventures can offer specialized services in research management, grant writing, or technology commercialization.

It's important to note that career paths in research management and support can be highly individualized and influenced by factors such as educational background, professional development, networking, and personal interests. Continuous learning, staying updated with the latest trends and regulations, and actively seeking new opportunities are key to advancing in this field in Europe.

What kind of career path is available for professionals in research management and support in Europe?

Professionals in research management and support in Europe have various career paths available to them. Here are some examples:

1. **Research Management:** Professionals can pursue a career in research management, which involves managing research projects and teams, developing research strategies, and ensuring compliance with regulations and funding requirements[1].
2. **Academic Research:** Professionals can pursue a career in academic research, which involves conducting original research and publishing findings in academic journals[2].
3. **Training and Education:** Professionals can pursue a career in training and education, which involves designing and delivering training programs and courses to support the development of research skills and knowledge[3].
4. **Research Support:** Professionals can pursue a career in research support, which involves providing administrative and technical support to research projects[4].
5. **Innovation Management:** Professionals can pursue a career in innovation management,



which involves identifying and evaluating new ideas and technologies, managing intellectual property assets, and developing partnerships[5].

These are just a few examples of the career paths available for professionals in research management and support in Europe. The specific career path may depend on the individual's skills, interests, and experience.

Citations:

- [1] https://www.researchgate.net/profile/Toni-Gabaldon/publication/264874233_Career_Paths_and_Mobility_of_Researchers_in_Europe/links/543ba5ed0cf204cab1db0eb4/Career-Paths-and-Mobility-of-Researchers-in-Europe.pdf
- [2] http://archives.esf.org/fileadmin/Public_documents/Publications/moforum_research_careers.pdf
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- [5] <https://digital-skills-jobs.europa.eu/en/inspiration/research>
- [6] https://research-and-innovation.ec.europa.eu/jobs-research_en

14.4. Professional development

How can these professionals in research management and support improve their professional expertise in Europe? What kind of opportunities are available in the field of professional development?

ChatGPT:

Professionals in research management and support in Europe have various opportunities to enhance their professional expertise and stay updated with the latest developments in their field. Here are some avenues for professional development:

- a. **Training Programs and Workshops:** Many organizations, including universities, research institutions, and professional associations, offer training programs and workshops focused on research management and support. These programs cover topics such as project management, grant writing, research compliance, data management, and research communication. Professionals can attend these events to acquire new skills, expand their knowledge, and network with peers.
- b. **Professional Associations and Networks:** Joining professional associations and networks dedicated to research management and support can provide access to valuable resources, conferences, seminars, and networking opportunities. Associations like the European Association of Research Managers and Administrators (EARMA), Association of Research Managers and Administrators (ARMA), or European Research Services (ERS) offer platforms for professional development and collaboration.
- c. **Webinars and Online Courses:** Online platforms and institutions provide a wide range of webinars and online courses related to research management and support. These platforms, such as Coursera, edX, or LinkedIn Learning, offer courses on topics like research ethics, project management, data analysis, and research administration. Professionals can participate in these self-paced or instructor-led programs to enhance their skills conveniently.



- d. **Professional Certifications:** Some organizations and associations offer professional certifications in research management and related fields. These certifications, such as the Certified Research Administrator (CRA) or European Research Administrator (ERA) certification, validate expertise and enhance professional credentials.
- e. **Conferences and Symposia:** Attending conferences and symposia in the field of research management and support provides opportunities to learn about the latest trends, best practices, and research advancements. Professionals can present their work, participate in workshops, engage in discussions, and build networks with colleagues from academia, industry, and government.
- f. **Mentoring and Coaching:** Seeking mentorship or coaching from experienced professionals in the field can be beneficial for professional development. Mentors can provide guidance, share insights, and offer career advice to help professionals navigate their career paths in research management and support.
- g. **Research Projects and Collaborations:** Actively participating in research projects and collaborations allows professionals to gain hands-on experience and expand their expertise. Engaging in interdisciplinary collaborations, taking on leadership roles, and contributing to high-impact research can enhance professional skills and open doors to new opportunities.
- h. **Research Management and Support Positions in European Projects:** European Union-funded research projects often seek professionals in research management and support. Working in such projects allows professionals to gain exposure to international collaborations, navigate complex funding frameworks, and acquire expertise in managing large-scale research initiatives.
- i. **Continuous Learning and Self-Study:** Keeping abreast of the latest research policies, regulations, and advancements in research management is crucial for professional growth. Professionals can engage in continuous learning through reading research literature, following industry blogs, participating in webinars, and exploring open-access resources.

It's important for professionals to actively seek out professional development opportunities that align with their interests and career goals. By investing in continuous learning, networking, and staying updated with emerging practices, professionals in research management and support can enhance their expertise and contribute effectively to the research landscape in Europe.

How can these professionals in research management and support improve their professional expertise in Europe? What kind of opportunities are available in the field of professional development?

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Professionals in research management and support in Europe have various opportunities to improve their professional expertise and engage in professional development. Here are some avenues for professional development in this field:

1. **Training and Workshops:** Professionals can attend training programs and workshops that focus on research management, project management, data analysis, and other relevant skills. These programs are often offered by universities, research institutions, and professional organizations[3].
2. **Conferences and Seminars:** Attending conferences and seminars allows professionals to stay updated on the latest trends and advancements in research management and support. These events provide opportunities for networking, knowledge sharing, and learning from experts in the field[4].



3. Peer Learning and Collaboration: Professionals can engage in peer learning activities, such as participating in peer mentoring programs, coaching schemes, or action learning sets. These activities provide a platform for sharing experiences, best practices, and insights with colleagues in similar roles[3].

4. Professional Associations and Networks: Joining professional associations and networks related to research management and support can provide access to resources, training opportunities, and a community of professionals in the field. These associations often organize events, webinars, and workshops specifically tailored to the needs of their members[4].

5. Internal Training and Development: Many organizations offer internal training and development programs for their employees. These programs may include workshops, courses, and mentoring opportunities to enhance skills and knowledge in research management and support[6].

6. Academic and Professional Development Programs: Some universities and research institutions offer academic and professional development programs specifically designed for researchers and professionals in the field. These programs provide a structured approach to enhancing skills, knowledge, and career advancement[6].

It is important for professionals in research management and support to actively seek out these opportunities for professional development to stay current, enhance their expertise, and advance their careers.

Citations:

[1] https://www.researchgate.net/profile/Toni-Gabaldon/publication/264874233_Career_Paths_and_Mobility_of_Researchers_in_Europe/links/543ba5ed0cf204cab1db0eb4/Career-Paths-and-Mobility-of-Researchers-in-Europe.pdf

[2] https://research-and-innovation.ec.europa.eu/jobs-research_en

[3] <https://www.vitae.ac.uk/doing-research/leadership-development-for-principal-investigators-pis/developing-individual-researchers/supporting-researcher-professional-development>

[4] <http://staffmobility.eu/staffweek/peer-learning-professionals-research>

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[6] <https://www.eui.eu/en/services/academic-service/academic-professional-development>

14.5. Skills and competencies

What kind of skills do professionals need in research management and support?

ChatGPT:

Professionals in research management and support require a diverse set of skills to effectively contribute to the research process and facilitate its successful execution. Here are some key skills that are valuable in this field:

- a. **Project Management:** Research projects often involve multiple stakeholders, strict timelines, and complex coordination. Strong project management skills are essential for planning, organizing, and executing research initiatives effectively.
- b. **Communication:** Excellent communication skills are crucial for professionals in research management and support. They need to interact with researchers, funding agencies,



collaborators, and other stakeholders to convey information, coordinate activities, and facilitate collaboration.

- c. **Research Methodology:** A solid understanding of research methodologies, experimental design, and data analysis is important for professionals in research management and support. This knowledge helps them support researchers in designing experiments, interpreting data, and ensuring research integrity.
- d. **Data Management and Analysis:** Research generates vast amounts of data, and professionals in this field should be skilled in data management, organization, and analysis. Proficiency in statistical software and data visualization tools is valuable for handling and interpreting research data.
- e. **Grant Writing and Fundraising:** Research management often involves securing funding for projects. Professionals in this role should possess skills in grant writing, proposal development, and fundraising to attract financial support from various sources.
- f. **Ethical and Regulatory Compliance:** Knowledge of research ethics, regulations, and compliance requirements is essential for professionals in research management and support. They should be familiar with ethical guidelines, data protection laws, institutional policies, and protocols governing research activities.
- g. **Problem Solving and Critical Thinking:** Research projects may encounter unexpected challenges or setbacks. Professionals in this field should be adept at problem-solving and critical thinking, enabling them to identify issues, propose solutions, and make informed decisions to keep research on track.
- h. **Collaboration and Teamwork:** Research management often involves working with interdisciplinary teams, including researchers, administrators, technicians, and other professionals. Strong collaboration and teamwork skills are necessary to foster positive working relationships and facilitate effective cooperation.
- i. **Organizational and Time Management:** Research management professionals need to juggle multiple tasks, deadlines, and priorities. Effective organizational and time management skills help them stay organized, meet deadlines, and allocate resources efficiently.
- j. **Continuous Learning:** Research is a dynamic field with new discoveries, methodologies, and technologies emerging regularly. Professionals in research management and support should have a thirst for knowledge, a commitment to ongoing learning, and an ability to stay updated with the latest advancements in their field.

These skills, combined with experience in research administration, policy development, budgeting, and compliance management, contribute to the success of professionals in research management and support roles.

What kind of competencies do professionals need in research management and support?

ChatGPT:

Professionals in research management and support require a diverse set of competencies to effectively carry out their roles and contribute to the success of research projects. Here are some key competencies needed in this field:

- a. **Project Management:** Professionals need strong project management skills to plan, organize, and execute research projects effectively. This includes skills in defining project objectives, creating project plans, managing timelines and resources, and coordinating project activities.
- b. **Communication and Interpersonal Skills:** Excellent communication skills are essential for professionals in research management and support. They must be able to effectively communicate with researchers, stakeholders, funding agencies, and team members. Strong



interpersonal skills, including active listening, negotiation, and relationship-building, are also important for successful collaboration.

- c. **Research Methodology and Knowledge:** Professionals should have a solid understanding of research methodologies, experimental design, and data analysis. This knowledge allows them to provide support to researchers, assist in study design, and ensure research integrity.
- d. **Grants and Funding:** Competence in grant writing, proposal development, and funding strategies is crucial for professionals involved in research management and support. They should be familiar with funding opportunities, understand the grant application process, and possess skills in budgeting and financial management.
- e. **Ethical and Regulatory Compliance:** Professionals need to be well-versed in research ethics, regulations, and compliance requirements. This includes knowledge of ethical guidelines, data protection laws, intellectual property rights, and research governance principles.
- f. **Data Management and Analysis:** Competency in data management, organization, and analysis is essential for professionals in research management and support. They should be skilled in data collection, storage, quality control, statistical analysis, and data visualization techniques.
- g. **Problem-Solving and Critical Thinking:** Research projects often encounter challenges and require problem-solving skills. Professionals should be able to identify issues, analyze complex problems, and develop effective solutions. Strong critical thinking abilities help in evaluating research findings and making informed decisions.
- h. **Strategic Thinking and Planning:** Professionals should have the ability to think strategically and contribute to the development of research strategies and plans. This involves aligning research goals with organizational objectives, identifying potential collaborations, and assessing the impact of research activities.
- i. **Collaboration and Teamwork:** Research management and support often involve working in multidisciplinary teams. Professionals should possess strong collaboration and teamwork skills to foster positive working relationships, facilitate effective communication, and coordinate efforts among team members.
- j. **Adaptability and Continuous Learning:** The research landscape is dynamic and continually evolving. Professionals in this field should be adaptable, open to new ideas, and committed to continuous learning. They should stay updated with emerging research trends, technologies, and best practices.

These competencies, combined with experience in research administration, policy development, budgeting, and compliance management, contribute to the success of professionals in research management and support roles. It's important for professionals to continually develop and refine these competencies to stay effective and relevant in their field.

For the professionals working in different fields of Research Management and Support, what kind of specific skills and competencies are needed to their specific field in Europe?

ChatGPT:

Specific skills and competencies needed for professionals in different fields of research management and support in Europe may vary based on the nature of their work and the specific requirements of their roles. Here are some examples of field-specific skills and competencies in Europe:

a. Grants and Funding Management:

Knowledge of European funding programs, such as Horizon Europe, Erasmus+, or European Structural and Investment Funds.

Familiarity with the application process for European Union funding and experience in developing successful grant proposals.

Competence in budgeting, financial management, and reporting for European-funded projects.

b. Research Compliance and Ethics:

Proficiency in European research ethics regulations, such as the General Data Protection Regulation (GDPR) and the ethical guidelines of the European Research Council (ERC).

Understanding of European regulations for clinical trials, human subjects research, or animal research.

Experience in conducting ethical reviews, managing research protocols, and ensuring compliance with EU regulations.

c. Technology Transfer and Innovation:

Knowledge of European intellectual property laws and regulations, including patenting and licensing processes.

Understanding of innovation management, technology transfer models, and strategies for commercializing research outcomes.

Experience in negotiating licensing agreements and establishing collaborations between academia and industry.

d. EU Research Programs and Collaboration:

Familiarity with European research programs and initiatives, such as Marie Skłodowska-Curie Actions (MSCA) or European Research Council (ERC) grants.

Expertise in managing international research collaborations, coordinating partner institutions across Europe, and navigating collaborative frameworks like European Research Area (ERA).

Knowledge of EU policies and frameworks for research and innovation, such as the European Open Science Cloud (EOSC) or the European Innovation Council (EIC).

e. Research Communication and Public Engagement:

Proficiency in communicating research findings effectively to diverse audiences, including policymakers, the general public, and media.

Skills in science communication, including writing research reports, press releases, and engaging in public speaking.

Knowledge of European initiatives promoting public engagement with research, such as Science Communication Hubs or European Researchers' Night.

f. Research Data Management and Open Science:

Competence in implementing data management plans aligned with European Open Science principles, including data sharing, metadata standards, and long-term preservation.

Understanding of European Open Access policies and repositories, such as the European Open Science Cloud (EOSC) or institutional repositories.

Skills in data curation, data sharing platforms, and compliance with GDPR and data protection regulations.

These are just a few examples of field-specific skills and competencies that professionals in research management and support may require in Europe. It's important for professionals to stay updated with the evolving trends, regulations, and best practices in their specific fields of expertise to effectively contribute to research management and support activities in Europe.

Is it possible to expand these examples with additional specific job categories?

ChatGPT:

Certainly! Here are additional specific job categories in research management and support in Europe, along with their corresponding field-specific skills and competencies:

a. Clinical Research Coordinator:

Competence in Good Clinical Practice (GCP) guidelines and regulations specific to clinical trials.

Knowledge of European Medicines Agency (EMA) regulations and guidelines for clinical research.

Experience in managing clinical trial protocols, participant recruitment, and ensuring regulatory compliance.

Research Impact and Evaluation Officer:

b. Proficiency in research impact assessment frameworks, such as the Research Excellence Framework (REF) in the UK or the Excellence in Research for Australia (ERA).

Skills in evaluating the societal, economic, and policy impact of research projects and programs.

Knowledge of research evaluation methods, including bibliometrics, altmetrics, and case studies.

c. Research Data Protection Officer:

Expertise in European data protection laws, including the General Data Protection Regulation (GDPR).

Knowledge of data protection impact assessments, data anonymization techniques, and data breach response protocols.

Experience in ensuring compliance with data protection regulations throughout the research data lifecycle.

d. EU Project Manager:

Proficiency in managing European Union-funded projects, including financial management, reporting, and consortium coordination.

Knowledge of European Commission project management guidelines and reporting frameworks.

Skills in navigating EU project portals, such as the Participant Portal and the Funding & Tenders Portal.

e. Research Policy Analyst:

Competence in analyzing and assessing European research policies, funding frameworks, and strategic research agendas.

Understanding of European Union policy initiatives, such as the European Research Area (ERA) or the European Research Council (ERC).

Experience in conducting policy research, policy impact assessments, and providing policy recommendations.

f. Research Contracts and Intellectual Property Manager:

Knowledge of European contract law, intellectual property rights, and licensing agreements.

Skills in negotiating research contracts, consortium agreements, and collaborative research agreements.

Experience in managing intellectual property portfolios, technology transfer contracts, and spin-off ventures.

g. Research Quality Assurance Officer:

Proficiency in quality assurance frameworks for research, such as ISO 9001 or EFQM Excellence Model.

Knowledge of European quality standards for research, including quality assurance in research ethics and data management.

Experience in conducting internal audits, developing quality management systems, and ensuring research integrity.

h. Research Training and Development Coordinator:

Competence in designing and delivering training programs for researchers, including research skills development and career advancement.

Knowledge of European initiatives promoting researcher training and development, such as Vitae's Researcher Development Framework (RDF) or the European Charter for Researchers.

Skills in organizing workshops, mentoring programs, and professional development initiatives for researchers.

These additional examples highlight specific job categories within research management and support in Europe, along with the specialized skills and competencies required for each role. Professionals can pursue these roles by acquiring the necessary field-specific knowledge and experience to excel in their chosen areas.

What are the required skills for a research support position in Europe?

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The required skills for a research support position in Europe may vary depending on the specific job and organization, but some common skills that may be required include:

- **Research skills:** A research support position may require knowledge of research methodologies, data collection and analysis, and the ability to conduct literature reviews and synthesize information[1].
- **Digital skills:** In today's digital age, research support positions may require proficiency in digital tools and platforms, such as data analysis software, project management tools, and social media[2].
- **Communication skills:** Effective communication skills are essential for a research support position, including the ability to communicate research findings to different audiences, write reports and proposals, and collaborate with team members[6].
- **Organizational skills:** Research support positions may require strong organizational skills, including the ability to manage multiple tasks and projects, prioritize work, and meet deadlines[6].
- **Interpersonal skills:** Research support positions may require the ability to work collaboratively with others, build relationships with stakeholders, and provide excellent customer service[6].
- **Technical skills:** Depending on the specific job, research support positions may require technical skills such as proficiency in specific software or equipment, or knowledge of specific research methods or techniques[6].



These are just a few examples of the required skills for a research support position in Europe. The specific skills required may vary depending on the job and organization.

Citations:

- [1] https://europa.eu/youreurope/citizens/education/research/jobs/index_en.htm
- [2] <https://digital-skills-jobs.europa.eu/en/inspiration/research>
- [3] <https://www.leru.org/files/Strengthening-Research-Careers-in-Europe-Full-paper.pdf>
- [4] <https://www.timeshighereducation.com/unijobs/listings/europe/research-support/>
- [5] http://archives.esf.org/fileadmin/Public_documents/Publications/moforum_research_careers.pdf
- [6] <https://www.prospects.ac.uk/job-profiles/academic-researcher>

Could you elaborate further what kind of soft and hard skills are needed for professionals in research management and support?

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In research management and support, professionals require a combination of soft skills and hard skills. Soft skills are personal characteristics and communication talents that enhance teamwork, improve customer service, boost productivity, and increase leadership skills[1]. Some important soft skills for professionals in research management and support include:

- **Interpersonal skills:** The ability to interact effectively with others, build relationships, and collaborate with team members[1].
- **Communication skills:** Effective verbal and written communication skills to convey research findings, write reports and proposals, and interact with stakeholders[1].
- **Critical thinking:** The ability to analyze information, evaluate evidence, and make informed decisions[1].
- **Time management:** Efficiently managing time, prioritizing tasks, and meeting deadlines[1].
- **Problem-solving:** Identifying and resolving problems, finding innovative solutions, and adapting to changing circumstances[2].
- **Leadership:** Demonstrating leadership qualities, such as motivating and inspiring others, and taking initiative[1].

In addition to soft skills, professionals in research management and support also require specific hard skills, which are technical proficiencies acquired through training and hands-on experience[2]. Some important hard skills for professionals in this field may include:

- **Research methodologies:** Knowledge of research methods, data collection, and analysis techniques[1].
- **Data analysis:** Proficiency in data analysis software and statistical knowledge[6].
- **IT skills:** Strong computer skills, including proficiency in software and emerging technologies[6].
- **Organizational skills:** The ability to plan and manage projects, prioritize work, and support team members[6].
- **Statistical knowledge:** Understanding and applying statistical methods in research analysis[6].



- **Technical aptitude:** The ability to learn and use new equipment and technologies[6].

These are just some of the soft and hard skills that professionals in research management and support may need. The specific skills required may vary depending on the job role and organization.

Citations:

[1] <https://wawiwa-tech.com/blog/6-soft-skills-to-land-a-tech-job/>

[2] <https://www.betterup.com/blog/hard-skills-vs-soft-skills>

[3] <https://www.indeed.com/career-advice/resumes-cover-letters/soft-skills>

[4] <https://hbr.org/2023/02/5-essential-soft-skills-to-develop-in-any-job>

[5] <https://www.coursera.org/articles/hard-skills-vs-soft-skills>

[6] <https://www.prospects.ac.uk/job-profiles/academic-researcher>

So what kind of specific job roles can we distinguish in research management and support and what are the specific skills which are needed for them?

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There are various job roles in research management and support, and the specific skills required for each role may vary. Here are some examples of job roles in research management and support, along with the specific skills that may be required:

1. Clinical Research Professional: This job involves conducting clinical trials and research studies to evaluate medical interventions. The specific skills required may include:

- Data analysis skills, including the ability to gather and analyze data accurately[1].
- Knowledge of data models and data analytic tools[1].
- People management skills to lead and manage clinical trial teams[1].

2. Academic Researcher: This job involves conducting original research and publishing findings in academic journals. The specific skills required may include:

- Strong IT skills and excellent data analysis and statistical knowledge[3].
- Excellent verbal and written communication skills to present ideas and conclusions in lectures and publications[3].
- Technical aptitude to learn how to use new equipment and emerging technology[3].
- Organizational skills to plan workload and support team members[3].

3. Research Assistant: This job involves supporting research projects by conducting literature searches, data management, and maintaining files for project researchers. The specific skills required may include:

- Knowledge of research methods and ability to analyze data using various statistical methods[4].
- Excellent administrative skills to manage multiple tasks and prioritize work[4].



- Strong organizational skills to maintain quality standards and preserve the integrity of data and findings[4].

4. Data Analyst: This job involves analyzing and interpreting data to provide insights and recommendations to organizations. The specific skills required may include:

- Proficiency in data analysis software and statistical knowledge[2].
- Strong computer skills, including knowledge of emerging technologies[2].
- Excellent communication skills to convey findings and recommendations to stakeholders[2].

5. Research Support Officer: This job involves providing administrative and technical support to research projects. The specific skills required may include:

- Strong organizational skills to manage multiple tasks and prioritize work[6].
- Interpersonal skills to develop strong working relationships with team members and stakeholders[6].
- Technical aptitude to learn and use new equipment and technologies[6].

These are just a few examples of job roles in research management and support, along with the specific skills that may be required. The specific skills required may vary depending on the job role and organization.

Citations:

[1] <https://careers.iconplc.com/blogs/2023-5/top-skills-you-need-to-work-in-clinical-research>

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[4] <https://resources.workable.com/research-assistant-job-description>

[5] <https://www.indeed.com/career-advice/finding-a-job/researcher-careers>

[6] <https://www.timeshighereducation.com/unijobs/listings/europe/research-support/>

Is it possible to expand these examples with additional specific job categories?

Here are some additional specific job categories in research management and support:

1. Project Manager: This job involves managing research projects from start to finish, including planning, budgeting, and coordinating team members. The specific skills required may include:

- Strong organizational skills to manage multiple tasks and prioritize work[1].
- Excellent communication skills to convey project goals and timelines to team members and stakeholders[1].
- Leadership skills to motivate and inspire team members and ensure project success[1].

2. Archivist: This job involves managing and preserving research data and documents. The specific



skills required may include:

- Knowledge of archival principles and practices[3].
- Strong organizational skills to manage and preserve large volumes of data and documents[3].
- Technical aptitude to use digital tools and platforms for data management[3].

3. Grant Writer: This job involves writing grant proposals to secure funding for research projects. The specific skills required may include:

- Excellent writing skills to craft persuasive and compelling grant proposals[4].
- Knowledge of funding sources and grant application processes[4].
- Strong research skills to gather data and information to support grant proposals[4].

4. Laboratory Technician: This job involves conducting laboratory experiments and tests to support research projects. The specific skills required may include:

- Knowledge of laboratory procedures and techniques[5].
- Technical aptitude to use laboratory equipment and software[5].
- Strong attention to detail to ensure accurate and reliable results[5].

5. Market Research Analyst: This job involves conducting research to gather data on market trends and consumer behavior. The specific skills required may include:

- Proficiency in data analysis software and statistical knowledge[6].
- Strong research skills to gather and analyze data from various sources[6].
- Excellent communication skills to convey research findings to stakeholders[6].

These are just a few examples of specific job categories in research management and support, along with the specific skills that may be required. The specific skills required may vary depending on the job role and organization.

Citations:

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[2] https://european-union.europa.eu/live-work-study/jobs-traineeships-eu-institutions_en

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[4] <https://www.indeed.com/career-advice/finding-a-job/researcher-careers>

[5] <https://www.timeshighereducation.com/unijobs/listings/europe/research-support/>

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What about professionals working in knowledge and innovation management and valorisation?

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Professionals working in knowledge and innovation management and valorisation require a combination of soft and hard skills. Here are some examples of specific skills that may be required:

Soft skills:

- **Communication skills:** Effective communication skills to convey complex ideas and findings to stakeholders[1][3].
- **Collaboration skills:** The ability to work collaboratively with others, build relationships, and develop partnerships[1][3].
- **Leadership skills:** The ability to motivate and inspire others, and take initiative[1][3].
- **Critical thinking:** The ability to analyze information, evaluate evidence, and make informed decisions[1][3].

Hard skills:

- **Knowledge of innovation management:** Knowledge of innovation management principles and practices, including the ability to identify and evaluate new ideas and technologies[4][6].
- **Data analysis:** Proficiency in data analysis software and statistical knowledge to analyze and interpret data[4].
- **Intellectual property management:** Knowledge of intellectual property laws and regulations, and the ability to manage intellectual property assets[3][5].
- **Project management:** The ability to manage projects from start to finish, including planning, budgeting, and coordinating team members[1][6].

These are just a few examples of the specific skills that may be required for professionals working in knowledge and innovation management and valorisation. The specific skills required may vary depending on the job role and organization.

Citations:

[1] <https://hmmagazine.com/vita-spa/knowledge-valorisation-eu>

[2] https://youtube.com/watch?v=IrNxx_CDUVa

[3] <https://www.cesaer.org/content/4-events/2020/20201103-openness-and-commercialisation/veronica.beneitez-pinero.pdf>

[4] <https://onlinelibrary.wiley.com/doi/full/10.1002/bse.3233>

[5] <https://www.astp4kt.eu/about-us/kt-news/council-recommendation-on-the-guiding-principles-for-knowledge-valorisation.html>

[6] https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/eu-valorisation-policy/knowledge-valorisation-platform_en



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RM-ROADMAP project has received funding from the European Union's Horizon Europe programme under grant agreement number 101058475.