RM ROADMAP

Report from the 2nd co-creation session of the RM Roadmap project

Who are Research Managers
Skills and Competences
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Table of contents

Executive summary	3
Introduction	6
Aim of the 2nd co-creation	9
Map: Country communities	10
Methods used by the RM communities	11
National and thematic Co-creation Documents	12
Who are research managers?	13
Areas of Research Management	
Specifications of thematic areas	15
National specifications	17
Field-related specifications	20
An umbrella/collective term at European level	21
Alternative terminology	22
Skills and competences	30
Conclusions	36
Annex 1 Country codes	38
Annex 2 Co-Creation Questions for National RM communities	39
Annex 3 Co-Creation Questions for Thematic RM communities	41
Annex 4 Areas of RM described in the RM ROADMAP survey	42
Annex 5 3rd Co-creation timeline	44
Annex 6 Co-creation timeline overview	45

1. Executive summary



28 national communities and 4 thematic communities elaborated the consensus reports.



As for the **definition**, communities emphasized the need for a broad definition that acknowledges emerging fields and the blend of administrative, management and support tasks.



When it comes to the **areas covered by Research Management**, it is important to separate areas such as financial management, legal advising, and open science.



As regards the **terminology**, **Research Manager** was ranked at first place by 14 national and 3 thematic communities. **Research Manager and Administrator** was ranked at the first place by 10 national communities.



There are essential **'horizontal' skills** crucial across all RM roles, such as critical thinking, communication, and problem-solving.



Communities underlined the importance of **digital skills, including IT and AI competencies**, highlighting the need for RMs to stay current with technological advancements and ethical considerations.

Executive summary

The RM ROADMAP project seeks to establish a common understanding of the Research Management (RM) profession by proposing a standardized definition and terminology for the field. Launched in November 2023, the RM Roadmap survey gathered input from the community of Research Managers (RMs) across the European Research Area (ERA), focusing on the current status, position, and needs of research managers. The subsequent co-creation sessions aimed to validate and expand these survey results by engaging national and thematic RM communities to reflect diverse national contexts. The feedback collected aimed to identify gaps and consider national circumstances, with 28 national and 4 thematic communities contributing through the consensus documents.

The co-creation exercise provides a nuanced overview of the varied and evolving nature of Research Management (RM) across Europe, highlighting key areas and national specificities that influence the profession. The results of the co-creation exercise confirm that RMs operate in a wide range of roles, from proposal development and project support. The RM ROADMAP survey and subsequent co-creation session aimed to capture these roles' diversity and complexity, noting the fluid and hybrid nature of the profession. It has been also revealed that it is important to specifically separate such areas as financial management, legal advising, and open science. National communities emphasized the need for a broad definition that acknowledges emerging fields and the blend of administrative, management and support tasks. Issues such as the lack of recognition, inadequate policies, and insufficient funding for RM were recurring themes influencing the national landscape. These challenges are compounded by varied HR policies and a lack of standardized career frameworks, which hinder career progression and professional recognition.

The quest for a collective term to describe the Research Management (RM) profession at the European level involved reviewing preliminary survey results and gathering feedback from various national and thematic communities. In the co-creation exercise, 14 national communities argued for the term "Research Manager" at first place and 6 at second place, whereas 10 national communities argued for "Research Manager and Administrator" at first, and 2 second at second place. “Research Management and Support Professional” or “Research Support Professional” have their merits by emphasising the support and the professionalism.

There were concerns that terms like "administrator" could imply a less professional or auxiliary role, while "support" might also downplay the significance of RM work. Some communities suggested alternative terms, such as "Research and Innovation Manager" or "Research Management Professional," to better capture the breadth and importance of the profession.

The debate also highlighted the importance of a term that accurately reflects the diverse roles and responsibilities of RMs, promotes professional recognition, and is adaptable to various national contexts.

Then a table summarizing preliminary survey results on the top five skills and competencies for different Research Management (RM) areas was presented to national communities. The aim was to gather initial impressions. Responses varied: some communities provided a general list of needed skills, while others detailed specific skills for each RM area.

Key messages emerged from the feedback:

1.) There are essential 'horizontal' skills crucial across all RM roles, such as critical thinking, communication, and problem-solving.
2.) The increasing importance of digital skills, including IT and AI competencies, highlights the need for RMs to stay current with technological advancements and ethical considerations.
3.) There was a debate over the necessity of a research background for RM professionals, with some arguing it enhances understanding and communication, while others cautioned against overemphasizing this requirement. The contributions helped identify core and specialized skills needed in RM, implying future training and professional development needs.

2. Introduction

This is an important moment for the research management (RM) community in Europe. The European Commission (EC) and countries across Europe want to better understand the current research management landscape to further strengthen the European Research Area (ERA). The aim of the RM ROADMAP project is to create a consensus on the understanding of the Research Management (RM) profession and propose a working definition and terminology for the profession, both at large and for specific categories.

RM ROADMAP consists of 8 partners: European Association of Research Managers and Administrators (Belgium); HETFA Research Institute (Hungary); Nova University Lisbon (Portugal); Association of European Science and Technology Transfer Professionals (Netherlands); Crowdhelix Limited (Ireland), The Cyprus Institute (Cyprus) and associated partners Janssen Pharmaceuticals (Belgium) and Una Europa (Belgium).

The RM Roadmap Knowledge and Community Platform (KCP) brings research managers together to shape the future of the profession and support the strengthening of an inclusive research management community in Europe. The KCP is a place where research managers share their views and introduce issues for discussion in a solution-focused endeavour. RM Roadmap Ambassadors lead the discussions for each country or thematic group on the Knowledge and Community Platform, supported by national, regional and thematic RM networks.

Research management includes a broad range of professionals supporting researchers to achieve excellence in research. For the purpose of the RM Roadmap co-creation exercise, research managers (RMs) are to be considered as broad as possible including: research policy advisers, research managers, financial support staff, data stewards, research infrastructure operators, knowledge transfer officers, business developers, knowledge brokers, innovation managers, etc. For simplicity, we use the term research management but this endeavour covers also other terms such as research support, research management and administration, professionals at the interface of science and other terms which are used regularly in the national landscapes across Europe.

This co-creation is the biggest collaboration between RM networks ever to take place in Europe. With a focus on learning insights from RMs, the co-creation seeks to establish a robust framework that can support professional growth and collaboration across the EU and associated countries.

The Knowledge and Community Platform brings Research Managers together to shape the future of the profession and support the strengthening of an inclusive research management community in Europe. The KCP is a place where research managers share their views and introduce issues for discussion in a solution-focused endeavour. RM Roadmap Ambassadors lead the discussions for each country or thematic group on the Knowledge and Community Platform, supported by national, regional and thematic RM networks.
The Knowledge and Community Platform is an open and accessible platform, inviting people with experience in research management to exchange information about different topics of interest, and the current situation of research management on the national level, as well as on the European level. This facilitates a bottom-up approach, paving the way for the future development and professionalisation of research management in Europe.
The RM Roadmap project will use the outcomes from this co-creation exercise to make a roadmap for the future of research management in Europe and to build and exchange solid knowledge on career framework opportunities, upskilling and networking for research managers. RM Roadmap will ultimately build a value proposition for policy makers and institutional leaders who want to strengthen and modernise their research support departments.

The RM Roadmap project has identified the following three topics to be addressed from 2023 to 2025:

1. Understanding the landscape: National networks and associations
2. Who are research managers: Skills and competences
3. Training and Career development framework

Since the RM Roadmap consortium took the first steps towards creating framework conditions for research management to strengthen the European Research Area (ERA) in 2022, the journey so far has been both inspiring and enlightening. Already, we have seen an impressive level of participation and dedication from research managers in Europe in seeking to assess the breadth and scope of the community of research management professionals across the European Union and beyond as part of the first RM Roadmap co-creation session. Their contribution has already led to ground-breaking discoveries in the pursuit for recognition of the research management profession in Europe.

For the first time, the RM Roadmap consortium has been able to identify national research management communities operating across the ERA and has been provided with insights into the issues faced by research managers on a daily basis. The issues highlighted include a need to build connections between national research management communities, to provide information that makes research managers aware that they are part of an existing large and vibrant community of professionals, and the current lack of professional development opportunities or established career pathways.

The experiences of our community of professionals are shaping the roadmap that will be used by stakeholders to tackle these issues head on.

The RM Roadmap project will use the outcomes from this co-creation exercise to make a roadmap for the future of research management in Europe and to build and exchange solid knowledge on career framework opportunities, upskilling and networking for research managers. RM Roadmap will ultimately build a value proposition for policy makers and institutional leaders who want to strengthen and modernise their research support departments.

Figure 1. Co-creation sessions



It should be emphasized that the RM ROADMAP consortium genuinely appreciates the efforts of the Ambassadors, Associate Ambassadors, and all community members who contributed to the discussions. We believe that these engagements reflect the commitment of Research Managers across Europe towards professionalization and recognition. The discussions are enriched by the valuable insights gathered during the co-creation exercises.

Aim of the second co-creation session

The RM Roadmap survey having been launched on 2 November 2023 included specific questions designed to provide evidence from the RM community in all countries of the European Research Area on the current status, position and needs of research managers.
By relying on the outcome of the survey, the 2nd co-creation sessions aimed to validate and expand the survey results with the national and thematic RM communities, and to further elaborate on these results with specificities reflecting the various national contexts.
The following areas were concerned in the second co-creation session:

- **Who are research managers?**
- **What are their key skills & competences?**

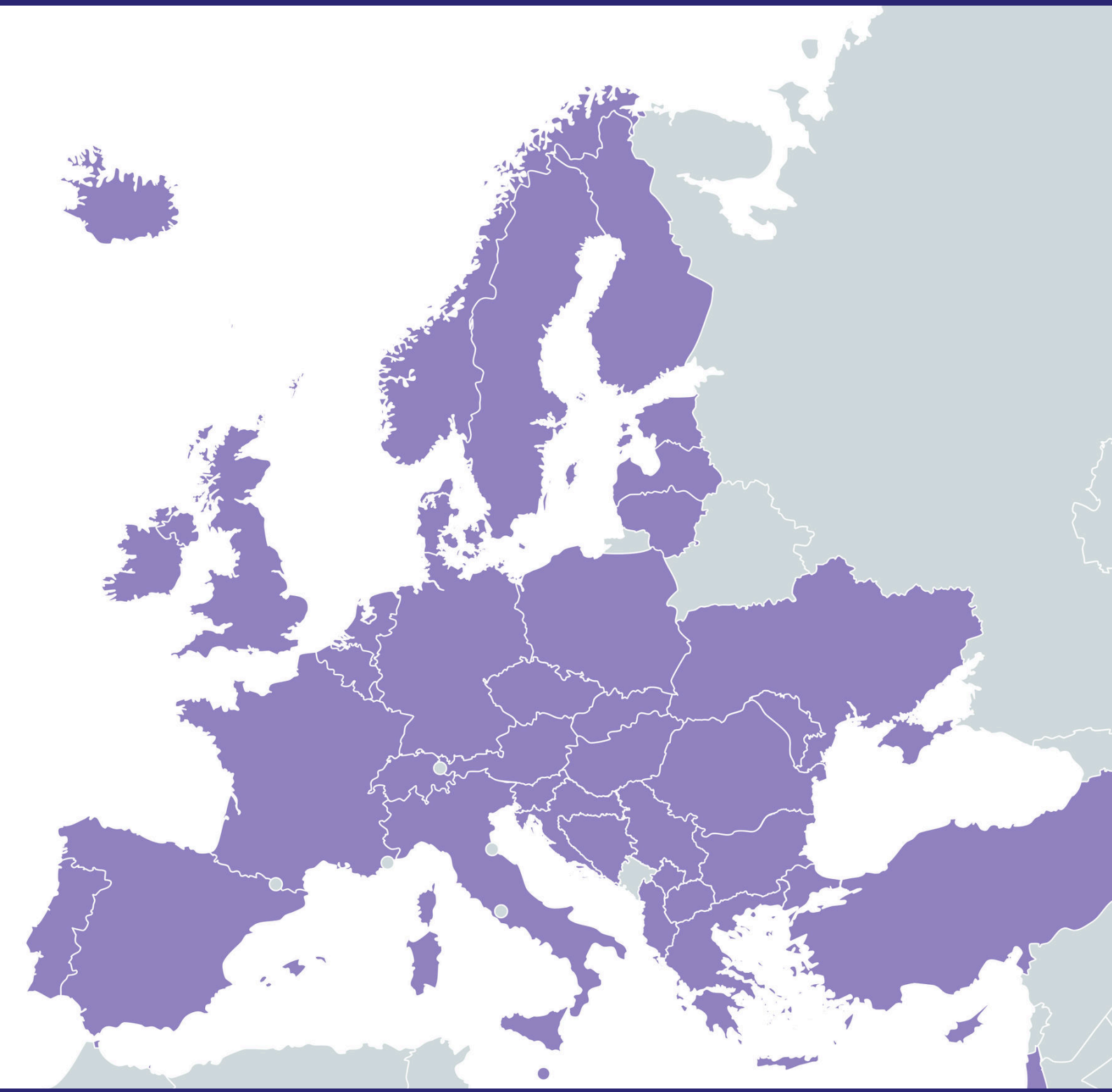
The focus of the second co-creation session was two-fold: first, the terminology and definition of professionals working in research management was discussed. Second, the skills and competences relevant for the different job categories/RM fields were addressed.

Data included in the questions for the co-creation session were retrieved from the first results of the RM ROADMAP survey from 28 January 2024 (and for the terminology and professional categories from ERA Action 17). The session aimed to gather feedback and validation from the national and thematic communities with two aims: first, to identify any potential gaps or missing aspects, second, to gather evidence about any national circumstances that may be relevant when applying the results at the national levels.

The second co-creation session ran between 14 March 2024 and 7 May 2024. In total 28 national communities and 4 thematic communities submitted their consensus documents to the project consortium. The brief assessment of these consensus documents is presented in this report. Furthermore, the results will be used for the validation of the findings of WP1 Intelligence of RM ROADMAP in the frame of Deliverable 1.2 ERA wide landscape due in 2025.

This report from the second co-creation session on the RM Roadmap Knowledge and Community Platform - Who are research managers/ skills and competences can be used as a resource to identify research management communities in your area for you to connect with. The report also serves as an introduction to the needs of research managers across Europe, which will be further explored as the RM Roadmap co-creation sessions progress. Please see the RM Roadmap co-creation sessions timeline in Annex 3.
All consensus documents depicting the results of this second co-creation will be available to view at the project website.

Figure 2. RM Roadmap 40 country communities on the Knowledge and Community Platform



Methods used by the communities

The national and thematic communities received the final set of questions for the 2nd co-creation session through the Knowledge and Community Platform on 14 March 2024. The RM ROADMAP Ambassadors and Associate Ambassadors made huge efforts to engage the national and the thematic communities to generate discussions and get valuable feedback. Based on the experiences on the use of the Knowledge Community Platform (KCP) and the 1st co-creation exercise, several groups came up with additional solutions: they either shared the questions through an online survey, organised online or face-to-face discussions, or arranged individual consultations with group members. In addition, several communities managed to have a vivid discussion at the KCP as well.
The table below summarises the methods used by the communities to gather inputs:

KCP	online survey (no of responses)	online meeting (no of attendants)	face-to-face meeting (no of attendants)	individual consultation
AT, BE, CZ, EE, EL, ES, DK, FI, FR, HR, IS, IT, LV, MT, NL, NO, RO, SE, SI, TR, Pre-award group	CY (13), PT (34), HR (40), IE (26), NL, UK Research Knowledge and Technology Transfer (14), Research Evaluation and Assessment (67), Research Impact (76) groups	BE, CZ (33) PT (62), TR (58)	CY (16), HU (70)	LU, SE, RO, SRB

1) This report aims to summarise the results of the co-creation exercise with regards to the two main questions introduced above. Given the timing, the co-creation exercise relied on the preliminary results of the survey derived from the data being available on the 28th of January of 2024, aiming to generate a discussion and gather the first impressions of RM communities. Therefore, the in-depth assessment of the survey results is not the scope of the current report.

2) The co-creation exercise, and consequently this report, have notable limitations. First, not all national and thematic communities submitted their consensus reports by the deadline, resulting in the fact that information was provided by 28 national and 4 thematic communities. Second, engagement of the RM communities in these discussions were diverse: in some countries more than 100 professionals were engaged, in some others, less than 10. Therefore, the results cannot be considered representative, eliminating any general conclusions.

National and Thematic Co-Creation Documents

The below list covers 28 country communities and 4 thematic groups, which submitted a Co-creation document:

Austria	AT	**Italy**	IT
Belgium	BE	**Latvia**	LV
Croatia	HR	**Luxembourg**	LU
Cyprus	CY	**Malta**	MT
Czechia	CZ	**Netherlands**	NL
Denmark	DK	**Norway**	NO
Estonia	EE	**Portugal**	PT
Finland	FI	**Romania**	RO
France	FR	**Serbia**	SRB
Germany	DE	**Slovenia**	SI
Greece	EL	**Spain**	ES
Hungary	HU	**Sweden**	SE
Iceland	IS	**Turkey**	TR
Ireland	IE	**United Kingdom**	UK

Thematic Groups
Research Evaluation and Assessment
Knowledge and Technology Transfer
Research Grant
Research Impact

The above list cannot be used for benchmarking. The information that was gathered is based on the discussions on the **Knowledge and Community Platform** and was collected by the RM Roadmap ambassadors of the respective country communities, leading to a difference in the level of details.

Full consensus documents for each country highlighted below will be available on the **project website**.

Who are research managers?
Areas of Research Management

The first question aimed to identify whether there are any particular or emerging areas at national levels that should be included in the definition of research management at European level. The first results of the RM ROADMAP survey were presented where respondents could indicate in which RM areas they work across the pre-defined 13 relatively broad areas, such as follows. Explanation of these areas were not included in the document as such but in the RM ROADMAP survey. (Annex 4 consists of the elaboration of these areas.)

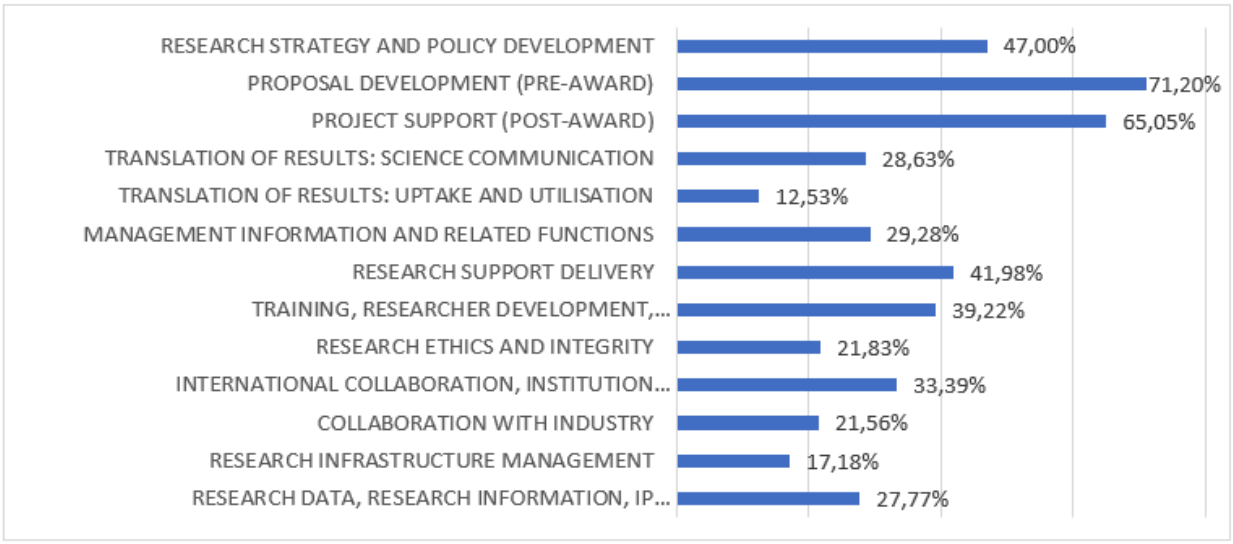


Figure 1: Areas of Research Management based on the preliminary responses of the RM ROADMAP survey (data from 28 January 2023, n=1851)

In general, several national communities highlighted that during the creation of the definition it is of utmost importance to raise awareness on several aspects influencing the profession. These aspects include **the fluid and/or flexible nature of the profession, the wide range of roles fulfilled by RMs, the constantly emerging roles (SE), the diverse and complex activities (FR), the shifting environments (EE), the blended roles of RMs (TR) or the hybrid nature of their roles (NL, IE)**, meaning that there are overlaps with the roles of researchers and other parts of the administration.

The Swedish community underlined the importance of building the definition on the fact that RMs do everything beyond research. In line with that, the Danish and other Scandinavian communities also argued to include the 'support' role in the definition. In some countries it was also underlined that many areas are not yet mature, therefore it is not possible to find professionals being solely responsible for that field, but in general, RMs have to deal with them.

When scoping down the specific areas of Research Management, during the elaboration of the survey, the aim was to cover a high variety of potential subareas of RM. Interestingly, the preliminary results showed that RMs across Europe cover all these fields. The most populated areas are, nevertheless, proposal development (pre-award) and project support (post-award), followed by research strategy and policy development. The results also underline that RMs generally work in 2 to 4 different areas during their everyday work.
The contributions of the consensus documents showed two tendencies: first, some national communities argued for the separation of certain subareas. Second, most of the national communities gathered additional areas which are also covered by Research Managers.

First, the **following sub-areas were mentioned having the relevance to be considered as separate areas** of Research Management:

- **financial management and advising** mentioned by LU, NO, MT, BG, CY, EL, LV, NL and SI;
- **legal advising, support and contract management** mentioned by PT, LU, MT, CY and NL, as well as ensuring compliance mentioned by FI, MT, FR, IE, NL;
- **management of and advising on open science** (related or not to the library services) mentioned by FI, LU, NO, BE, CY, FR, IT, NL and ES;
- **AI and emerging, technologies** mentioned by SE, LU, NL, ES, FI, MT, FR, IE;
- **collaboration with other stakeholders** mentioned by BE, HR, FR, IE, IT, ES, whereas CY pointed out the collaboration specifically with policymakers and EL the R&I ecosystem building.
- **impact management** mentioned by IE, IS, NL and ES as well as impact assessment mentioned by PT and MT.

Secondly, the outcomes of the consensus documents suggest that

- **management of human resources** should be the overarching category including the training, career development of researchers and RMs as well as taking care of mental health, as proposed by IE, LV, LU, MT, PT, CZ, FR, HR, SI and NL;
- **innovation management and business development** should be merged and should replace the existing categories of “Translation of Results: Uptake and Utilisation” and “Collaboration with the Industry” proposed by NO, DK, CY, EL, ES and NL.

In addition to these, several other **sub or specialised areas** were mentioned which should not necessarily be reflected in the definition, but should still be considered in case of future activities related to the professional development, career path and recognition of RMs.

These are the following:
- dual use (FI and LU),
- research evaluation (IS and IE),
- research security (FI and IT),
- research sustainability (IE and ES),

- research assessment reform (IE),
- laboratory support (MT),
- project evaluation (FR),
- science diplomacy (EL),
- technology and research method related issues (IT),
- supporting procurement (LV),
- supporting interdisciplinary research (RO and SRB),
- administrative management and direction (ES),
- research assessment (UK) as the Research Excellent Framework (REF) evaluating the quality and impact of research is getting more importance.

Specification of thematic areas

Thematic communities were explicitly asked to **elaborate the main areas and jobs undertaken by RMs in their fields**. Thanks to that, the four communities provided brief but distinct specification as it is presented below.



Research Grant, Pre-award

1) **Consultations of strategic nature** (ERA, EU Framework Programme, Work Programmes, (European) policy context of funding scheme) and on set up of funding strategies & portfolios for departments/research groups/individual researchers.
2) **Information**: Providing tailored information on funding opportunities and specific requirements, targeted communication measures (e.g. newsletters, blogs, etc).
3) **Training**: Various training & coaching formats incl. workshops focusing on the funding landscape, grant application (specific funding schemes, cross-cutting issues, mock interviews, case studies, assuming the role of an evaluator), implementation (kick-off, initial training of project team), project management.
4) **Support**: comprised of several aspects covering a) administrative and management duties, b) financial tasks, c) legal and ethics advise, d) development, implementation, monitoring and evaluation of specific measures supporting grant acquisition as well as e) mentoring and assistance in strategic career development planning.



Research Impact

1) **Training** for researchers/funding applicants on impact pathways in funding applications;
2) **Supporting** the use of an impact planning tool such as the logical framework approach or an impact planning canvas; planning and delivery of engaged/participatory research approaches;
3) **Analysis**: carrying out stakeholder analysis; policy or PESTLE analysis;
4) Planning/implementation of dissemination, exploitation and communication plans, as well as technology transfer, valorisation, commercialisation or intellectual property;
5) **Capturing, assessment and analysis** of impact-related data; development of reports on research impact such as research impact case studies

Research Knowledge and Technology Transfer



1) **Technology Commercialisation:** Identifying commercialisation opportunities. Strategizing for the protection and transfer of technologies to businesses and industries. Expanding and strengthening relations with the business and industrial environment.
2) **Dissemination and Promotion of technologies**: Organising R&D&I events and participating in transfer events. Disseminating research results through various channels and managing intellectual property assets. Identifying promising research results for protection and commercialisation through scouting activities.
3) **Stakeholder Engagement**: Engaging with stakeholders, customers, and entrepreneurs to assess technology adoption potential. Networking and partner search to identify potential collaborators or buyers for research results. Training and capacity building for researchers in technology transfer and IP management areas.
4) **Support for Entrepreneurial Ideas**: Providing support for assessing entrepreneurial ideas proposed by researchers. Promoting and managing European Union programs related to technology transfer and innovation.
5) **Intellectual Property (IP) Management**: Understanding and implementing strategies for knowledge protection and IP management. Negotiating and drafting agreements. Conducting market analysis and marketing technologies to potential buyers or partners.
6) **Innovation Management**: Managing innovation processes and facilitating collaborations between academia and industry. Reviewing legal contracts, licensing agreements, and fostering academy-industry collaborations. Promoting entrepreneurship and supporting start-ups in scaling up and adopting technologies.
7) **Project Management**: Managing EU projects and national calls, including financial and administrative aspects. Coordinating projects, monitoring progress, and managing partners. Preparing and submitting proposals for funding, including administrative and budgetary aspects.

Research Evaluation and Assessment



1) Planning and management of research projects;
2) Coordination of research teams;
3) Management of resources;
4) Monitoring and evaluation of progress;
5) Ensuring compliance with regulations and ethics;
6) Communicating results and impact;
7) Developing and implementing policies and procedures;
8) Understanding and integrating knowledge from various fields can be a significant advantage in an increasingly complex world.

The results of the co-creation exercise also underline the manifolded nature of the profession. This also means that while some fields shall be treated as separated sub-areas of Research Management, they can be also regarded as essential part of another subfields.

National specificities

During the co-creation session, we also aimed to identify whether there are any national specificities, e.g. certain areas being underdeveloped / non-existent, that influence the areas covered by research management so they might also affect the definition of research management at the national level.
It is important to note that most of the responses collected regarding the areas of RM already reflect the maturity level of the profession in different countries. This part of the question provided a more in-depth view on this issue. However, it must be also underlined that this part of the question was not answered by all groups, therefore it is not possible to make general statements. It might be also possible that once communities read other's feedback, would agree on the relevance of the mentioned points for their own national context.

The most frequent issues mentioned:

1) Trends in research funding and research management

Several national communities referred to the trends in research funding influencing research management as well. The increase of funding opportunities, backed by increasing funding requirements necessitate the professionalisation and specialisation of research management. However, the resources dedicated to Research Management at the institutional level or within the funded projects are scarce, as reported by the communities based in LU, IE, NL, SRB, CY. This might also result in the phenomenon when 'one-person-does-it-all' (PT) or the huge diversity of RM roles among the different institutions at the national landscape. Even the UK community mentioned the issues of less resources for RM when "colleagues are expected to pick up a much broader range of responsibilities … they have to prioritise certain "core" aspects of RMA which may prevent engagement with wider RMA agendas". It was only the Danish Community which was rather positive about this issue stating that RM is well-funded and organised within the country's Research Performing Organisations.

Regarding the increasing funding requirements, the importance of addressing **emerging fields** should be pointed out, such as Artificial Intelligence, Open Science, data management, or knowledge security. Other countries mentioned a different phenomenon by stating that certain areas of RM are considered as areas **under development** (PT, AT, FI HR, MT, CZ, ES), requiring the definition of the area, the related knowledge and skillset and the relevant trainings, for instance:

- impact in PT, IT and CZ, NL,
- science communication, researcher training, collaboration with industry, research infrastructure management in IS,

- data stewardship and management in IT, NL, IS,
- AI management in NL,
- knowledge security in NL,
- interdisciplinarity research coordination & project management in RO and SRB.

Interestingly, both the Italian and the French community mentioned the **underdeveloped maturity** of pre-award support: RMs mainly provide administrative or eligibility checks instead of a more pronounced support regarding the scientific part of the proposals. According to their statement, this might even undermine the quality of the proposals.

Another national circumstance mentioned was the burdens posed by the **highly bureaucratic national funding systems**, requiring enormous administrative efforts and specific expertise during both the preparation and the implementation and reporting of the projects (CZ, IT, RO).

2) Career path, professional development and training

Several national obstacles were mentioned in the field of career path, professional development, and training opportunities for research managers (RMs), primarily stemming from **institutional and national employment frameworks**. These frameworks lack standardized RM career structures, resulting in inconsistencies in job roles and career progression. Employment contracts and salary rates frequently fail to recognize the importance and specialized skills of RM professionals, which contributes to **job instability and high turnover rates**. This issue is notably pronounced by the French community, where current employment contracts contribute to a high fluctuation of research managers, indicating a systemic undervaluation of these roles within the national context.

Additionally, **cultural and organizational barriers**, particularly within the hierarchical structures of universities, pose significant challenges to the professional development of RMs (reported by SRB). These barriers often manifest in the lack of accessible and relevant training programs, which are crucial for the advancement of research managers' skills and competencies. **The insufficiency of funding** further exacerbates this issue, as reported by the Irish, Romanian, Serbian, and Slovenian communities. This lack of investment in training and development leads to limited opportunities for research managers to enhance their capabilities and advance in their careers, thus stalling the professional growth within the sector, as reported by the Romania and Serbian communities.

Moreover, **the absence of standardized national guidelines** for the profession contributes to the inconsistency and unpredictability in the career trajectories of research managers. The lack of a cohesive career framework complicates the understanding of career progression pathways, as reported by the Irish community. The situation is further complicated by differing HR policies and the varying importance placed on RM roles across institutions, making it challenging to establish a unified professional identity. Without standardized frameworks and sufficient training, research managers face difficulties in navigating their career paths and achieving professional recognition and advancement.

3) Lack of recognition, lack of policies and strategies related to RM

The challenges faced by research managers are further compounded by a lack of recognition and the absence of coherent policies and strategies at the national level. This issue is prevalent in several countries, where the role of research managers is often underappreciated and overlooked, as reported by PT, HR, SI, SRB, and RO. Without formal acknowledgment of the importance of research management, these professionals struggle to find a defined place within the academic and research landscape. This lack of recognition is closely tied to the absence of comprehensive policies and strategic frameworks that could support and guide their work.

4) Additional national specificities

The responsibilities of researchers might also affect the RM roles. The French community pointed out the differentiation between researchers doing research solely and researchers involved in teaching activities: to attract the latter, more efforts and support are needed. The **lack of proactiveness** of researchers was also reported by the French community, whereas this phenomenon appears in other countries as well.

The federal system of Germany and the important freedom of Länders in the field of education and research resulting in a diversity of regulations in the field of writing of gender forms, data management, financing, acceptance of foreign exams, micro-credentials, etc. was highlighted by the German community. The specific regulations varying from one region to the other might also complicate issues. This is backed by lagging digitisation: while processes in research management should be digitised, Research Managers lack the tools and capacities to be used.

Limited collaboration with the industry and the inefficient translation of research results was also mentioned by some communities. In Iceland, Cyprus and Malta, the size of the country and the limited size of the industry is decisive with that regards. However, other countries also mentioned the limited size of professionals working with knowledge and technology transfer and their under representation.

The issue of **outsourcing research support** to external consultants or consultancy companies was mentioned by the Serbian group which hinders the organic development of institutional research support structures.

The Romanian community elaborated the issue of **general underinvestment** and lack of recognition of the research and research infrastructures influencing the roles of RMs. Broader expertise and more adaptive skillset are needed in such circumstances.
Lastly, the limited integration of national communities to European and international networks of research managers can strongly limit the adaptation of good practices and guidelines, thus, on the long run, the professionalisation and standardisation of research management (RO and IT).

Field-related specificities

Thematic communities were asked to list the emerging trends and gaps in their field that influence their area. Regarding **the trends, AI** was mentioned by both the Research Knowledge and Technology Transfer (RKTT) and Pre-award community. In addition, **open science, research security, dual use, and the measurement of societal impact** were also mentioned which are in line with the topics listed by the national communities.

The gaps listed by 3 thematic communities also correlate with the **gaps** listed by national communities, however, provide a deeper understanding of the specific thematic areas. These communities referred to lack of career path, professional development opportunities, **lack of recognition, institutional and policy strategies**, which result in **difficulties in recruiting and retaining colleagues** with appropriate knowledge and expertise.

Additionally, the following area-specific gaps were identified:

- **Lack of guidelines and processes**: There is an absence of clear frameworks to ensure the responsible use of AI and to mitigate risks related to research security and dual use.
- **Insufficient resource allocation**: Resources are inadequate for developing essential strategies and actions in the areas of Research Knowledge and Technology Transfer and Impact.
- **Awareness and understanding issues**: Research Managers (RMs) working in RKTT have noted a general lack of awareness and understanding regarding the importance of patenting and commercializing research outcomes.
- **Deficiencies in impact literacy, impact and/or entrepreneurial culture**: A lack of impact literacy and an entrepreneurial mindset can hinder the engagement of RMs specializing in RKTT and Impact.

Seeking for an umbrella/collective term at European level

For this section too, the preliminary results of the RM survey were presented to the national and thematic communities about the preferred terminology. The five most popular answers and the proportion of answers were included in the question, as they follow.
The 5 most popular choices are as follows (data from 28 January 2023, n=1846):

The 5 most popular choices are as follows (data from 28 January 2023, n=1846):

- **Research Manager and Administrator: 32.88%**
- **Research Manager: 31.96%**
- **Research Management and Support Professional: 28.60%**
- **Research Support Professional: 22.70%**
- **Research Advisor: 19.50%**

When examining the feedbacks of the RM communities it has to be underlined that different methodologies were used by the RM ROADMAP ambassadors, therefore no scientific and generalised results can be derived on their basis. Some of the communities gave a 1-5 ranking to the 5 terminologies, whereas others just indicted the top 1 or 2 most popular ones. Few countries underlined that reaching a consensus was impossible within the national community. Some interesting features can be nevertheless highlighted, with special regards to certain national circumstances that influence the choice.
During the co-creation session, **Research Manager** was ranked at first place by 14 countries (DE, IS, NL, LU, PT, ES, IT, CY, EL, FR, HU, SI, HR, TR) and at the second by 2 countries (BE, MT). Among the 4 thematic communities, 3 ranked Research Manager at the first place (Pre-award, Research Evaluation, Research Knowledge and Technology Transfer). **Research Managers and Administrator** was ranked at the first place by 10 countries (NO, SE, DK, FI, NL, AT, PT, EE, LV, SRB) and at the second place by 6 countries (IS, LU, ES, IT, CY, EL, CZ) and one thematic community (Research Impact). To a certain extent, some geographical patterns can be observed: communities from Southern Europe prioritised almost unanimously the term Research Manager and put RMA on second place, which was prioritised by Northern European communities. The terms **Research Management and Support Professional** was favoured at first place by the IE, UK, CZ and RO communities, while **Research Support Professional** generally appeared at third or fourth place, except for BE, who put it on first place. **Research Advisor** was also favoured by the German community representing the equality of the colleagues working in the field.

The selection of national communities is mainly in line with the survey results; however, the co-creation exercise gives a more nuanced understanding on the choices of the national communities. The arguments for and against of the picked terms are presented in more details below.

Research Manager

Arguments in favour of the term Research Manager:

- globally recognised and straightforward as argued by the Dutch and the French communities,
- a more general term covering a broad field of tasks argued by Belgian, Turkish, Cypriot and the Dutch communities,
- the most comprehensive term including all the administrative and support aspects according to the Italian community,
- describes the profile, short and conveys a proper message according to community based in Luxemburg,
- -onveys professionalism and expertise, enhances credibility within the research community and among stakeholders argued by the Maltese community,
- reflects the multi-dimensional nature of the role as argued by Greek community,
- covers most areas of support activities as well as enhances the importance of the complex work contributing better to recognition and understanding according to the Hungarian community.

Arguments against the term Research Manager:

- less inclusive according to the Dutch community,
- is linked to a more strategic and managerial role instead of describing the role of research services according to the Finnish community,
- inadvertently imply that only researchers or professors are qualified to fulfil these duties, potentially excluding executives with equivalent qualifications, education, and experience as underlined by the Greek community,
- more linked to leadership roles within RPOs, thus it would be difficult to position RMs in the hierarchy,
- does not encompass the entire project management cycle according to the Italian community,
- using the term "manager" exclusively might not convey the value of the role to those outside of management as proposed by some representatives of the Dutch community.

Research Manager and Administrator

Arguments in favour of the term Research Manager and Administrator:

- globally recognised and accepted as mentioned by the Czech, Dutch, Maltese, Danish, Serbian and Swedish communities,
- mostly neutral as proposed by Danish community,
- least controversial term according to the Czech community,
- covers effectively the scope argued by the communities from Luxemburg and Malta,
- reflects the dual nature of the role, by being responsible for managerial tasks, such as coordination and decision-making, whereas doing several administrative tasks argued by Estonia, Serbia and Portugal,
- consists of the possibility of vertical advancement within the RPOs' hierarchy (starting as junior administrator and then being promoted towards more managerial positions) according to the community based in Luxemburg,
- embraces all the professionals working in the research management, even though research manager and research administrator are two separate roles according to the Italian community,
- reflects the day-to-day tasks performed by professionals from Serbia, where individuals often handle a broad range of responsibilities from project planning to execution and compliance,
- reflects clarity towards the job, inclusivity, and encompasses the diverse skillset needed as argued by Greek community.

Arguments against the term Research Manager and Administrator:

- administrator might be perceived a negative term referring to the division between the academic and administrative staff, as highlighted by the British, French, Irish and Swedish communities,
- the term administrator does not necessarily reflect the common service-oriented approach of RM within Finland and Spain,
- it might be confusing either with CEOs and high-level positions at institutions or, on the opposite side of the spectrum, have connotations with exclusively administrative tasks (e.g. secretariat services) mentioned by the Portuguese community
- the term administration not only places research managers in a subordinate position relative to researchers but also inadequately describes the scope and significance of their duties and responsibilities according to the members of the Norwegian, Croatian and the French communities
- an 'administrator' is considered as a secretary or an administrative assistant who handles only procedural paperwork according to the Cypriot community.
- term 'administrator' is often understood as the equivalent of a clerk doing a completely dull and boring job as argued by some representatives of the Czech community.

Research Management and Support Professional

Arguments favouring Research Management and Support Professional:

- more comprehensive as argued by the British, French, the Croatian, the Czech and the Portuguese communities,
- effective in covering a variety of roles, including the scope of different units and different levels of seniority according to the Irish community;
- importantly includes the term ‘Support’ in the title as mentioned by the Irish and the French communities;
- incorporates two indicative verbs of a RM role: the word ‘Professional’ helps to build trust and demonstrates the sound knowledge and skills that a RM is expected to possess. The word ‘Manager’ captures the managerial role of research professionals according to the Cypriot community;
- helps in getting across the professionalism needed and provided in the field according to the members of the Czech and the Irish communities;
- encompasses all the cross-cutting aspects that the term "Research Manager" alone does not capture, and which require additional professional support according to the Italian community.

Arguments against Research Management and Support Professional:

- cumbersome according to the Dutch community,
- the word support might rather mean “kind of helping/service role/secondary role” and limited to that which could be unfortunate in the long run according to the British and Norwegian community,
- the word ‘support’ might affect the perception (by e.g. upper management and/or academics) of the RMs as an auxiliary and secondary service, instead of a high-quality and indeed professionalised service of the front line according to the Cypriot and the Italian community,the term ‘support’ might lead to misunderstanding in translation to French community.

Research Support Professional

Arguments favouring Research Support Professional:

- more inclusive and can cover the full range of roles and responsibilities fulfilled by professionals as argued by the Dutch and the Norwegian communities,
- indicates the professional approach given in supporting research as argued by Sweden, Ireland and Belgium,
- more precise, emphasizing the specialised support role without ambiguity associated with management function according to the Croatian community,
- more commonly used in Denmark in national language.

Arguments against Research Support Professional:

- the word 'support' might affect the perception of the RMs as an auxiliary and secondary service, instead of a high-quality and indeed professionalised service of the front line according to the Cypriot & the Italian communities,
- the term 'support' might lead to misunderstanding in translation to French community,
- does not include the concept of research management which should be an essential element of the definition according to the Italian community.

Research Advisor

Arguments favouring Research Advisor:

- clear and could be understood as an alternative to manager as argued by the French community, broader then a sole Manager as argued by the UK community,
- could relate to a more senior or strategic responsibility as mentioned by the Norwegian community.

Against

- A less inclusive as argued by the Dutch community,
- 'Advisor' sounds more like a consultant for hire than a Research Manager according to the Serbian, Cypriot and Italian communities.

Some communities suggested new terms or such terms which were included in the survey but was not favoured by the respondents.
The term suggested and surveyed by RM ROADMAP survey is **Research and Innovation Manager** promoted by the Croatian, the Turkish and the Dutch communities as being broad and inclusive. It can expressively cover the fields of knowledge and innovation management as well as knowledge and technology transfer. The concrete reference to innovation was also missed by the Portuguese community.

The **suggested new terms** are the following:

- **Research Manager, Administrator and Support Professional** promoted by the Austrian community to indicate the broad range of fields to be covered;
- **Research Management Professional** promoted by the Maltese and French communities as a more encompassing and straightforward term;
- **European Contracts Manager**, Professional Research/Consultant/Community Manager or Research Development Professional mentioned by the French community;
- **Project Manager and Administrator** listed by the Latvian community;
- **Project Manager in Research** OR Research and Development Manager as listed by the Slovenian community,
- **Research enabler** as promoted by the Italian community,
- **Research Manager and Advisor** as promoted by the Pre-award thematic community.

Issues related to the translation of the different terminologies were also articulated in some cases. For instance, Research Manager work better in translating to Greek than RMA. Or in case of the Latvian translation, Research Management and Support Professional can result in misunderstanding.

To sum up, communities agreed that the definition and the terminology should meet the following criteria:

- cover a broad range of fields, roles and responsibilities,
- reflect the type of work fulfilled by RMs, instead of research, doing everything to support it
- include a huge diversity of identities,
- be flexible and adaptable to reflect the future of the profession and the professionals that take on new responsibilities or specialise in specific areas, i.e. can be specified by adding the RM area: Research Manager specialised in Impact,
- foster recognition and regard RMs as partners in research.

Each of the proposed terms for describing research management roles has its own merits and drawbacks. In some countries, the terms "administrator" or "support" may carry negative connotations, potentially undermining the perceived value of the profession. However, in other contexts, these terms can help clarify the nature of the work involved. The importance of including the term "professional" was emphasized by several communities, highlighting the specialized skills and added value that research managers bring to their roles. As the Research Impact group described: “We are more than pure "managers"; and more than "support" professionals. We are "advisers" guiding our research community with advice on how to promote impactful research.” The suitability and inclusiveness of these terms also vary depending on national contexts and community perceptions, which can lead to differences in the preferred terminology or even the absence of a standard term altogether.

Skills and competences

A table was presented to the national communities which was based on the preliminary results of the RM ROADMAP survey intending to highlight the top 5 different skills and competences for the different RM areas. To launch a first discussion about the topic, no explanation of the methodology or detailed figures of the different skills and competences were provided. National communities were asked to add any skills or competences that they miss from the 5 most important.
The approach of the different national communities was different again: some provided a general list of skills and competences needed in Research Management, whereas others provided a detailed list completing the different tables. So again, no robust results can be presented, as it was not the aim. The aim was to collect the first impressions of the RM communities. Before going into the details, three main messages can be formulated based on the inputs of the co-creation.

When analysing the necessary skills and competences for research managers, it is important to take into consideration that there are **several ‘horizontal’ skills and competences that are needed by most RMs**. These skills and competences are related to their core role, namely supporting – and not conducting – research. Several national communities argued that it is important to specify these denominators which have an important role: they can support the recognition of the profession and the understanding of its complex and multifaceted nature, but also the development of training needs and professional development opportunities to contribute to the creation of a standard career path. **Once these denominators are defined, it is important to identify the specific skills and competences for the specialised fields in RM.**

These horizontal skills and competences listed by several national communities are mainly in line with the findings of previous surveys, including RAAAP and CARDEA. However, it must be also noted that several skills belonging to transversal and/or soft skills are not only specific to research management, but they are also important in most of the 21st century jobs. Without making an exclusive list, the most frequently mentioned ones are the following:

Transversal skills	Country communities, which considered it important
critical thinking	AT, LU, BE, IE, RO, SRB,
communication	SE, HU, EE, SRB, SI, HR, PT,
interpersonal skills	CZ, FR, ES, IE, TR, LV, NL, ES, TR,
proactivity	SI, ES, TR, HU, PT,
cultural and diversity skills	TR, SRB, HU, ES, IS, NL, RO, PT,
problem solving	BE, IE, LV, NL, RO, TR, PT,
RM related soft skills	
soft skills (in general)	SE, BE, FR, EL, SI, TR,
leadership skills	TR, AT, MT, BE, SRB, ES,
creative thinking, creativity	IE, DK, RO, ES, TR, PT,
analytical thinking	LV, IE, TR, NL, CY,
facilitation	IE, BE, FR, TR,
the desire and the openness towards continuous learning	SRB, SI, LU, NL, TR,
resilience	SRB, IE, TR, NL, PT, IT,
conflict management and resolution	NL, IE, LV, SRB, ES, TR, PT
strategic thinking	NL, LU, BE, DK, EE
RM related hard skills	
IT skills, digital literacy, AI skills	HR, EE, SRB, DK, MT, RO, DK,

The second message emphasizes the **multifaceted role of Research Managers (RMs) in staying abreast of evolving dynamics in their field**. RMs must also stay informed about technology trends, as the digital landscape is rapidly transforming the way how research and research management are conducted. As a result, **digital skills are increasingly crucial**; this includes proficiency in data management, digital communication tools, and software relevant to research administration. Furthermore, with the growing integration of artificial intelligence (AI) in various aspects of research and administration, RMs need to develop competences in **using AI responsibly**. This means not only understanding how to leverage AI for efficiency and insight but also being aware of ethical considerations, such as data privacy and bias, ensuring that these technologies are used in a fair and transparent manner.

Thirdly, the debate over whether **a background in research** is crucial for research management professionals also appeared in some of the consensus documents. Proponents of having a researcher background explicitly indicated the importance of having knowledge about research methodology, having doctoral skills or having research background highlighting that it might provide a deeper understanding of the research process, can enhance communication with researchers, and might lend credibility when navigating the complexities of academic and scientific environments. However, an overemphasis on research experience might perpetuate a hierarchical view within academia, potentially marginalizing the other diverse competencies needed.

Based on the detailed contribution of several national communities, the table presenting the top 5 skills and competences necessary for the 13 RM areas are completed and presented below.

The following patterns can be observed:

- certain communities added the same skills or competences to more RM fields arguing for their importance in each field,
- most of the inserted skills and competences were included in the columns ‘RM related hard skills’ and ‘RM specialisation and role related skills’ which made the distinction a bit blurrier between these categories, nevertheless, they will definitely provide important indications when these lists are translated to the identification of training needs.

Skills and Competence tables

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
RESEARCH STRATEGY AND POLICY DEVELOPMENT	• Written communication • Oral communication • Problem solving • Self-motivation, proactiveness, initiation • Critical thinking • **Proactivity (PT)** • **Influencing skills (HR)** • **Cultural and diversity skills (HR, PT)** • **Flexibility (IT)** • **Interpersonal skills (IT)**	• Prioritisation • Time management • Efficiency and effectiveness • Reliability, trustfulness • Planning, strategic thinking • **Flexible (PT)** • **Open minded (PT)** • **Teamwork (HR, CY)** • **Negotiation skills (HR, IT)** • **Leadership skills (HR, CY)** • **Team building and management (CY, IT, HR)** • **Empathy (IT, PT)** • **Mediation (IT)** • **Patience (IT)** • **Resilience (IT)** • **Organisational skills (PT)** • **Active listening (PT)** • **Information management (PT)** • **Analytical skills (CY)**	• Understand research and the R&I ecosystem • Knowledge of rules and regulations of funders • Understanding institutional governance • Ethics, integrity • Language skills • **Agile management (CY)**	• Appreciating values and understanding interests • Understanding politics and policy cycles • Building and maintaining networks • Stakeholder engagement and management • Administrative skills • **Data analysis and interpretation (MT, CY)** • **Financial skills (CY)** • **Strategy development (CY)** • **Management of strategic projects (CY)** • **Setting and monitoring KPIs (CY)** • **Financial skills (CY)** • **Open science (CY)** • **Lobbying (IT)** • **Strategic foresight (IT)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
PROPOSAL DEVELOPMENT (PRE-AWARD)	• Written communication • Problem solving • Flexibility • Openness • Oral communication • **Self-motivation (MT)** • **Interpersonal skills (IT)** • **Assertiveness (PT)** • **Cultural and diversity skills (PT, pre-award)** • **Multitasking (Pre-Award)** • **Critical thinking (pre-award)** **Interpersonal skills (pre-award)**	• Prioritisation • Adaptability • Time management • Reliability • Trustfulness • **Active listening (PT)** • **Empathy (PT, IT)** • **Creativity (PT, MT)** • **Strategic thinking (HR)** • **Analytical skills (HR)** • **Resilience (HR, IT, PT, pre-award)** • **Leadership skills (HR, CY, pre-award)** • **Meticulousness (HR)** • **Negotiation (CY, pre-award)** • **Attention to detail (CY, pre-award)** • **Team building and management (IT, PT)** • **Teamwork (PT, pre-award)** • **Multitasking (IT)** • **Conflict management (IT, pre-award)** • **Mediation (IT)** • **Patience (IT)** • **Organisational skills (PT, pre-award)** • **Curiosity (pre-award)** • **Decision-making (pre-award)**	• Knowledge of rules and regulations of funders • Language skills • IT skills • Ethics, integrity • Understand research and the R&I ecosystem • **Project management skills (CY)**	• Administrative skills • Appreciating values and understanding interests • Building and maintaining networks • Financial skills • Understanding politics and policy cycles • **Basic business and commercial knowledge (HR, pre-award)** • **Understanding broader strategic value of proposals for the EU community (HR)** • **Understanding relevant field of science (HR, IT)** • **Understand the research process and guarantees quality assurance (MT)** • **Overview of the main elements of a good proposal (IT)** • **Understand the impact evaluation of projects (PT, CY)** • **Communication, dissemination, and exploitation of data visualization (HR)** • **Legal skills (PT, pre-award)** **Stakeholder management (PT)** •

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
PROJECT SUPPORT (POST-AWARD)	• Written communication • Oral communication • Interpersonal skills • Intrapersonal skills • Flexibility • **Cultural and diversity skills (IT, PT)** • **Problem solving (CY, IT, PT)** • **Multitasking (IT)**	• Prioritisation • Time management • Information management • Efficiency, effectiveness • Reliability, trustfulness • **Anticipate situations/problems (PT)** • **Self-organisation (MT)** • **Adaptability, resilience (MT)** • **Working in teams (HR)** • **Team building and management (CY, IT)** • **Teamwork (PT, HR)** • **Active listening (HR)** • **Empathy (HR, IT)** • **Organisational skills (PT)** • **Mediation (HR, IT)** • **Decision-making (CY, IT)** • **Emotional intelligence (CY)** • **Attention to detail (CY, IT)** • **Negotiation (IT)** • **Leadership (IT)** • **Critical thinking (IT)** • **Conflict management (IT, PT), Patience (IT)**	• IT skills • Ethics, integrity • Knowledge of rules and regulations of funders • Understand research and the R&I ecosystem • Managing resources • **Language skills (HR, PT)** • **Event organisation and management (HR)** • **Project management skills (CY)**	• Administrative skills • Financial skills • Appreciating values and understanding interests • Building and maintaining networks • Legal and regulatory skills • **Understand the research process and guarantees quality assurance (MT)** • **Understand project management frameworks and practices (MT, CY)** • **Communication of project results to relevant stakeholders (HR)** • **Understanding of dissemination and exploitation of project results (HR)** • **Knowledge of impact mechanisms (PT)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
TRANSLATION OF RESULTS: SCIENCE COMMUNICATION	• Flexibility • Oral communication • Interpersonal skills • Self-motivation, proactiveness, initiation • Problem solving • **Written communication (PT, CY)** • **Cultural and diversity skills (CY, PT, impact)** • **Assertiveness (PT)**	• Adaptability • Prioritisation • Time management • Reliability, trustfulness • Efficiency and effectiveness • **Creativity (PT, CY, impact)** • **Leadership skills (HR)** • **Effective engagement (HR)** • **Precision (HR)** • **Analytical skills (CY, impact)** • **Agility (CY)** • **Attention to detail (CY)** • **Resilience (IT)** • **Empathy (IT, PT)** • **Patience (IT)** • **Information management (PT)**	• Language skills • IT skills • Understand research and the R&I ecosystem • Knowledge of rules and regulations of funders • Ethics, integrity • **Visual communication (MT)** • **Presentation skills (HR, CY)** • **Event organisation and management (HR, CZ)**	• Building and maintaining networks • Appreciating values and understanding interests • Understanding politics and policy cycles • Stakeholder engagement and management • Administrative skills • **Knowledge on research governance (IT)** • **Understanding citizens & science (PT)** • **Strategic and business insight (HR, impact)** • **Publishing and open access skills (HR)** • **Communication of the project results to relevant stakeholders and the public (HR)** • **Specific knowledge related to the project (HR)** • **Legal and technical know-how (HR)** • **Interdisciplinary approach (CY)** • **Creating synergies (among projects) (IT)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
TRANSLATION OF RESULTS: UPTAKE AND UTILISATION	• Oral communication • Problem solving • Interpersonal skills • Critical thinking • Assertiveness • **Cultural and diversity skills (PT, impact)**	• Prioritisation • Planning, strategic thinking • Time management • Information management • Adaptability • **Leadership skills (HR)** • **Creativity (HR, impact)** • **Confidentiality (CY)** • **Resilience (IT)** • **Empathy (IT)** • **Patience (IT)** • **Organisational skills (PT)** • **Proactivity (PT)** • **Negotiation (PT)** • **Analytical skills (HR, CY)**	• Understand research and the R&I ecosystem • Knowledge of rules and regulations of funders • Language skills • Management skills • Understanding institutional governance • **Intersectoral knowledge (PT)** • **Managing resources (PT)** • **Change management (MT)** • **Being a good promoter (MT)** • **Business acumen (CY, CZ)**	• Building and maintaining networks • Administrative skills • Stakeholder engagement and management • Financial skills • Legal and regulatory skills • **Entrepreneurship (PT)** • **Patents (PT)** • **Translate science to business and business to academics, knowledge valorisation (PT, CY, impact)** • **Understand TT models and channels (PT, impact) – market knowledge (HR)** • **Evaluating the economic value of research results and impact assessment (PT, CY, impact)** • **Marketing (PT)** • **Specific knowledge related to the project (HR)** • **Understanding open science principles (HR)** • **Innovation management (CY)** • **Commercialisation (CY)** • **Data management (CY)** • **IPR management (CY, impact)** • **Public policy analysis and advocacy (CY)** • **Fundraising (CZ)** • **Liaising (IT)** • **Knowledge about industry (IT)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
MANAGEMENT INFORMATION AND RELATED FUNCTIONS	• Problem solving • Openness • Flexibility • Cultural and diversity skills • Interpersonal skills • **Attention to detail (PT)** • **Critical thinking (CY)** • **Written communication (CY, PT)** • **Oral communication (PT)**	• Adaptability • Stress management • Resilience • Time management • Prioritisation • **Leadership skills (HR)** • **Conciseness (HR)** • **Confidentiality (CY)** • **Creativity (CZ)** • **Empathy (IT)** • **Patience (IT)** • **Organisational skills (PT)** • **Information management (PT)** • **Analytical skills (CY)**	• IT skills • Understanding institutional governance • Knowledge of rules and regulations of funders • Understand research and the R&I ecosystem • Ethics and integrity • **Public speaking (CY)**	• Administrative skills • Appreciating values and understanding interests • Financial skills • Appreciating values and understanding interests • Cross-cutting issues in HEU • **Data science, big data management, data privacy (PT, HR, CY)** • **Reports management (PT)** • **Performance management and evaluation (MT)** • **Responsible research and innovation (CY)** • **Evaluation and impact assessment (CY)** • **Liaising (IT)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
RESEARCH SUPPORT DELIVERY	• Assertiveness • Written communication skills • Interpersonal skills • Intrapersonal skills • Oral communication skills • **Flexibility (HR, IT)** • **Multitasking (IT, PT)** • **Problem solving (IT, PT)**	• Time management • Prioritisation • Adaptability • Reliability, trustfulness • Efficiency and effectiveness • **Conflict management (PT)** • **Leadership (CY, IT)** • **Managerial agility (CY)** • **Strategic thinking (IT)** • **Resilience (IT)** • **Empathy (IT)** • **Patience (IT)** • **Decision-making (IT)** • **Negotiation (IT, PT)** • **Mediation (IT)** • **Organisational skills (PT)** • **Team management (PT)** • **Working in teams (PT)** • **Information management (PT)** • **Analytical skills (CY)**	• Knowledge of rules and regulations of funders • Language skills • IT skills • Understanding institutional governance • Managing resources • **Project management (CY)** • **Understanding the R&I ecosystem (IT)**	• Administrative skills • Appreciating values and understanding interests • Financial skills • Understanding politics and policy cycles • Building and maintaining networks • **Exploitation of AI tools as part of managing resources (HR)** • **Specific knowledge related to the project (HR)** • **Scientific and technical know-how (HR)** • **Quality assurance (CY)** • **Knowledge of research methodologies (CY)** • **Technical proficiency (CY)** • **Creating synergies (IT)** • **Cross-cutting issues (IT)** • **Stakeholder engagement (PT)** • **Focus on value creation and impact (HR)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
TRAINING, RESEARCHER DEVELOPMENT, POSTGRADUATE RESEARCHERS (PGR)	• Assertiveness • Oral communication • Written communication • Openness • Flexibility • **Interpersonal skills (PT)** • **Intrapersonal skills (PT)** • **Cultural and diversity skills (CY, PT)** • **Multitasking (IT)**	• Adaptability • Time management • Reliability, trustfulness • Working in teams • Efficiency and effectiveness • **Conflict management (IT)** • **Negotiation (IT)** • **Resilience (IT)** • **Empathy (IT)** • **Patience (IT)** • **Strategic thinking (IT)** • **Organisational skills (PT)** • **Analytical skills (CY)**	• Language skills • Knowledge of rules and regulations of funders • Ethics, integrity • Understand research and the R&I ecosystem • IT skills • **HR skills (CY)** • **Public speaking (CY)**	• Administrative skills • Building and maintaining networks • Appreciating values and understanding interests • Understanding politics and policy cycles • Cross-cutting issues in HEU • **Teaching skills and learning techniques (PT, IT),** • **Mentoring and coaching skills (MT, CY, CZ, IT)** • **Understanding the academic environment (CY)** • **Evaluation and assessment (CY)** • **Knowledge of institutional governance (CZ)** • **Survey methods (IT)** • **Liaising (IT)** • **Engagement and empowerment of researchers (IT)** • **Stakeholder engagement (PT)** • **Strategic foresight (IT)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
RESEARCH ETHICS AND INTEGRITY	• Written communication • Multitasking • Interpersonal skills • Cultural and diversity skills • Openness **Critical thinking (HR)**	• Reliability, trustfulness • Adaptability • Time management • Efficiency and effectiveness • Planning, strategic thinking • **Conflict management (CY, HR)** • **Diplomacy (HR, PT)** • **Confidentiality (CY)** • **Resilience (IT)** • **Empathy (IT)** • **Patience (IT)** • **Organisational skills (PT)** • **Analytical skills (CY)**	• Ethics, integrity • Language skills • Knowledge of rules and regulations of funders • Management skills • Understand research and the R&I ecosystem • **Equity (PT)** **Research governance (IT)**	• Administrative skills • Appreciating values and understanding interests • Building and maintaining networks • Stakeholder engagement and management • Legal and regulatory skills • **Understanding GDPR and data management (HR, CY)** • **Knowledge of advisors' network (HR)** • **Understanding open science principles (HR)** • **IPR management (CY)** • **Ethics and RRI (CY)** • **Awareness of Anti-bribery/corruption & conflict of interest, data protection policies (PT)** • **Training skills (PT)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
INTERNATIONAL COLLABORATION, INSTITUTION BRANDING	• Intrapersonal skills • Flexibility • Assertiveness • Openness • Critical thinking • **Cultural and diversity skills (MT, HR, CY, CZ, PT)** • **Written communication (CY, CZ, PT)** • **Oral Communication (CY, CZ, PT)** • **Multitasking (IT)**	• Reliability, trustfulness • Stress management • Time management • Resilience • Adaptability • **Creativity (HR)** • **Confidentiality (CY)** • **Negotiation (CY)** • **Strategic thinking (IT)** • **Resilience (IT)** • **Empathy (IT)** • **Patience (IT)** • **Conflict management (IT)** • **Organisational skills (PT)** • **Teamwork (PT)** • **Analytical skills (CY)**	• IT skills • Knowledge of rules and regulations of funders • Understand research and the R&I ecosystem • Understanding institutional governance • Ethics, integrity • **Language skills (HR, PT)** • **Public speaking (CY)** • **Research governance (IT)**	• Appreciating values and understanding interests • Lobbying • Building and maintaining networks • Administrative skills • Understanding politics and policy cycles • **Legal and regulatory skills (MT)** • **Compliance (MT)** • **Marketing skills (HR, CY, CZ)** • **Understanding GDPR and data management (HR)** • **Strategy and business insight (HR)** • **Understanding relations with relevant audience (HR)** • **IPR management (CY)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
COLLABORATION WITH INDUSTRY	• Cultural and diversity skills • Problem solving • Oral communication • Assertiveness • Openness • **Written communication skills (PT)** • **Interpersonal skills (PT)** • **Multitasking (IT)**	• Time management • Prioritisation • Planning, strategic thinking • Stress management • Working in teams • **Resilience (IT)** • **Empathy (IT)** • **Patience (IT)** • **Conflict management (IT)** • **Negotiation (PT)** • **Result-oriented thinking (PT)** • **Analytical skills (CY)**	• Understanding institutional governance • Knowledge of rules and regulations of funders • Management skills • Language skills • Managing resources • **Business acumen (CY, CZ)**	• Building and maintaining networks • Administrative skills • Appreciating values and understanding interests • Nurturing innovation • Stakeholder engagement and management • **Understand TT models and channels (PT, HR)** • **Evaluating the economic value of research results (PT)** • **Empowerment / enabling skills (MT)** • **Legal and regulatory skills (MT, HR, CZ)** • **IPR knowledge (MT, HR, CY)** • **Specific knowledge related to the project (HR)** • **Data management (CY)** • **Knowledge valorisation (CY)** • **Outreach (CY)** • **Technical proficiency (CY)** • **Commercialisation (CY)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
RESEARCH INFRASTRUCTURE MANAGEMENT	• Flexibility • Openness • Written communication skills • Multitasking • Cultural and diversity skills	• Teamwork • Stress management • Diplomatic skills • Conflict management • Time management • **Prioritisation (HR)** • **Leadership skills (HR, CY)** • **Confidentiality (CY)** • **Negotiation (CY)** • **Resilience (IT)** • **Empathy (IT)** • **Patience (IT)** • **Team management (PT)** • **Analytical skills (CY)**	• Understand research and the R&I ecosystem • Understanding institutional governance • IT skills • Language skills • Ethics, integrity • **Performance monitoring (CY)** • **Information management (PT)** • **Project management (CY)** • **Resource management (CZ)** • **Knowledge of rules and regulations of funders (IT)**	• Stakeholder engagement and management • Building and maintaining networks • Administrative skills • Understanding politics and policy cycles • Legal and regulatory skills • **Financial skills (PT, HR, CY)** • **Facility management (MT)** • **Communication and dissemination (CY)** • **Research infrastructure management (CY)** • **Development of policies and procedures (CY)** • **Stakeholder engagement (CY)** • **Logistics and procurement management (CY)** • **Health and safety, quality assurance (CY)** • **Data and resources management (PT, CY)**

	Transversal skills relevant for RMs	RM related soft skills	RM related hard skills	Specialisation or role related skills
RESEARCH DATA, RESEARCH INFORMATION, INTELLECTUAL PROPERTY MANAGEMENT	• Assertiveness • Openness • Flexibility • Interpersonal skills • Oral communication • **Problem Solving (PT)** • **Critical thinking (PT)** **Proactivity (PT)**	• Adaptability • Negotiation • Time management • Conflict management • Reliability, trustfulness • **Confidentiality (CY)** • **Resilience (IT)** • **Empathy (IT)** • **Patience (IT)** • **Strategic thinking (IT)** • **Creativity (PT)** • **Analytical skills (PT)**	• Understand research and the R&I ecosystem • Knowledge of rules and regulations of funders • Understanding institutional governance • Management skills • Ethics, integrity • **IT skills (CZ, IT)** •	• Administrative skills • Legal and regulatory skills • Building and maintaining networks • Understanding politics and policy cycles • Appreciating values and understanding interests • **IPR knowledge and management (PT, CY)** • **Reports management (PT)** • **Awareness of Anti-bribery /corruption, conflict of interest, data protection policies & ethics (PT, CY)** • **Data management (CY)** • **Open science framework (CY)** • **Outreach and communication (CY)** • **Liaising (IT)**

Conclusions

The consensus documents of the 2nd co-creation session provided by the 28 national and 4 thematic communities of the RM ROADMAP project underlined that the profession of Research Managers has still a fluid and adaptable nature, encompassing a wide range of roles and responsibilities. The roles and responsibilities are shaped by the constantly evolving landscape of research and innovation, with emerging roles and new fields such as Artificial Intelligence, Open Science, data management, and knowledge security becoming increasingly significant. Therefore, this flexibility has to be taken into consideration when working on the definition, terminology, career path and professional development framework for RMs.

Based on the results of the survey, the co-creation exercise underlined that the most prominent areas of RM activity are proposal development (Pre-award) and project support (post-award), with additional responsibilities in research strategy and policy development. There is a noticeable divergence in the recognition and definition of the profession across different national contexts and thematic communities. While some advocate for a clear separation of subareas within RM, others integrate additional responsibilities, highlighting the diversity in roles covered by RMs. The lack of standardized terminology and the varying emphasis on terms like "manager," "administrator," and "professional" reflect these differences.

The profession's complexity is further underscored by the challenges in career development, professional training, and recognition. The scarcity of resources at both institutional and project levels exacerbates these issues, often leading to a lack of accessible and relevant training programs. This lack of support hinders the development of crucial skills and competences necessary for RMs, impacting their ability to effectively support and guide research endeavours.

Both the national and the thematic communities underlined the importance of a broad range of skills, with a special regards to a set of transversal and soft skills which are needed by Research Managers, as well as digital literacy and competence in emerging technologies like AI. These skills are increasingly critical as the digital landscape transforms research processes. Moreover, the ethical use of technology, including data privacy and the mitigation of bias in AI, is becoming a necessary area of expertise for RMs. Moreover, the engaged communities listed a number of crucial hard skills and specialisation related skills which are important for RMs working in the different areas.

In conclusion, both the preliminary results of the survey and the 2nd co-creation exercise confirmed that Research Managers play a crucial and multifaceted role in the research ecosystem. Their responsibilities are expanding and becoming more specialized, necessitating ongoing professional development and recognition. Addressing the gaps in career paths, training opportunities, and institutional support is essential for the future advancement of this profession. The evolving nature of RM roles requires a continuous reassessment of necessary skills and competences to align with the dynamic research landscape. The richness of the results of the current exercise will definitely help in shaping the future projects results aiming to advance the professionalisation and the recognition of Research Management.

The creation of the roadmap is an open invitation and tool for actors from across Europe to unlock the potential of the RM community for their own benefit and the benefit of their (national) R&I systems. A preliminary version of the Overarching Roadmap Plan was published in 2023 and is available here. The final roadmap will be released in 2025.

The RM Roadmap consortium looks forward to continuing this process in consultation with the relevant stakeholders, related projects and ERA Action 17 representatives and the Member States.

We would like to thank all ambassadors, associate ambassadors and their employers/institutions/national networks for the support in such a collective and crucial endeavour.

The third RM Roadmap Co-Creation Session will take place from the 14th of November until the 19th of December on the topic of Training and Career Development Framework.

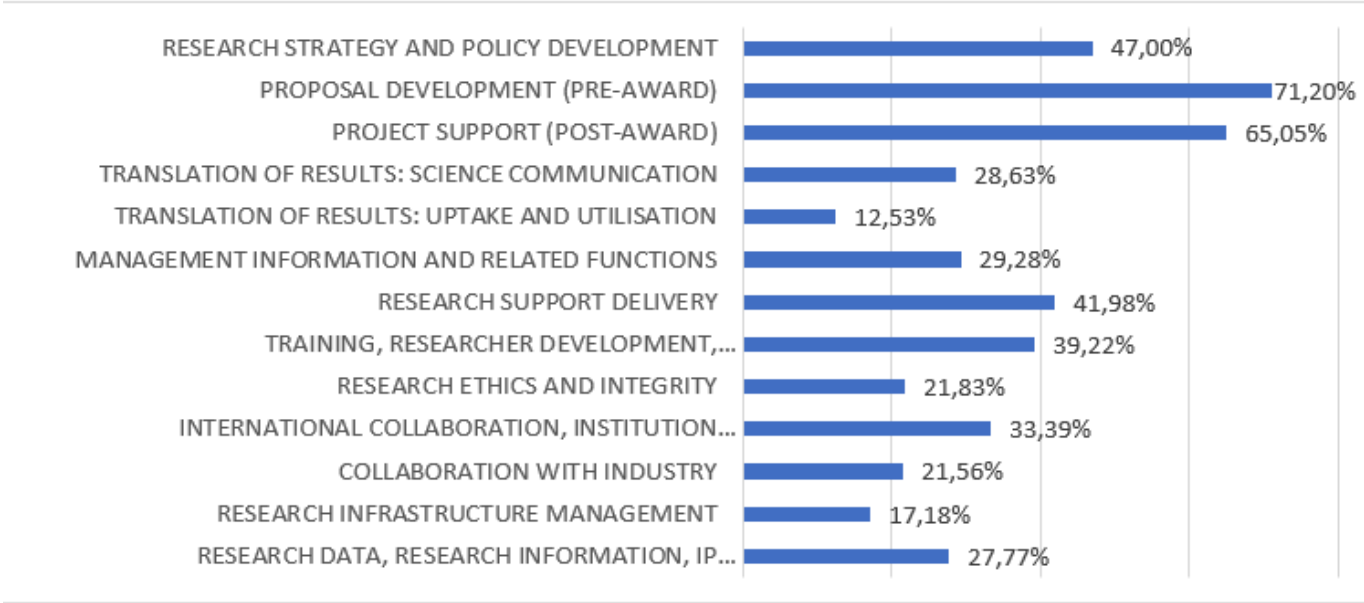
RM Roadmap project website: www.rmroadmap.eu

Annex 1 Country codes

Code	Country	Code	Country
EU countries			
AT	Austria	HU	Hungary
BE	Belgium	IE	Ireland
BG	Bulgaria	LT	Lithuania
CY	Cyprus	LV	Latvia
CZ	Czechia	LU	Luxemburg
DK	Denmark	MT	Malta
DE	Germany	NL	the Netherlands
EE	Estonia	PL	Poland
EL	Greece	PT	Portugal
ES	Spain	RO	Romania
FR	France	SK	Slovakia
HR	Croatia	SI	Slovenia
IT	Italy	SE	Sweden
LU	Luxemburg	UK	United Kingdom
EFTA Countries			
IS	Iceland	NO	Norway
EU candidate countries			
SRB	Serbia		

Annex 2 Co-Creation Questions for National RM communities

Q1: Respondents of the RM ROADMAP survey indicated the following areas in which they work (multiple selection was possible). (data from 28 January 2023, n=1851)



Q1.1: Do you miss any particular and/or emerging areas which should be also included in the definition of research management at the European level? If yes, please share!
Q1.2: Are there any national specificities, e.g. certain areas being underdeveloped / non-existent, that influence the areas covered by research management? If yes, please elaborate on these factors and how they might affect the definition of research management at the national level.
Q2: Respondents of the RM ROADMAP survey were asked to select the 3 most suitable professional titles with which they identify and could be used as umbrella/collective term at European level for RMs. The 5 most popular choices are as follows (data from 28 January 2023, n=1846):

-Research Manager and Administrator: 32.88%
-Research Manager: 31.96%
-Research Management and Support Professional: 28.60%
-Research Support Professional: 22.70%
-Research Advisor: 19.50%

Q2.1: Given the broad range of fields covered by research managers, what would be the most proper umbrella/collective term to be used at European level? Please pick one! The term should be embraced by professionals working in RM and understood by stakeholders of the R&I ecosystem including institution leaders, decision-makers and policymakers.

Q2.2: Please elaborate any specific circumstances that might be important from the view of the professionals working in your field.

Q3: The table includes the most important skills and competences revealed by the RM ROADMAP survey for each of the identified areas of research management. Identification of these skills and competences for the different areas can help employers in recruitment, provide career paths and professional development opportunities for RMs, and articulate better the training needs. Are there additional skills or competences that are essential for your field and should be included among the top 5? Please share your suggestions!

Annex 3 Co-Creation Questions for Thematic RM communities

Q1: Please provide a detailed description of your RM area/field!
Q1.1: What are the main areas/job roles undertaken by RM professionals in your field?
Q1.2: Are there any emerging trends or noticeable gaps within your field that are overlooked at the moment?
Q2: Respondents of the RM ROADMAP survey were asked to select the 3 most suitable professional titles with which they identify and could be used as umbrella/collective term at European level for RMs. The 5 most popular choices are as follows (data from 28 January 2023, n=1846):

-Research Manager and Administrator: 32.88%
-Research Manager: 31.96%
-Research Management and Support Professional: 28.60%
-Research Support Professional: 22.70%
-Research Advisor: 19.50%

Q2.1: Given the broad range of fields covered by research managers, what would be the most proper umbrella/collective term to be used at European level? Please pick one! The term should be embraced by professionals working in RM and understood by stakeholders of the R&I ecosystem including institution leaders, decision-makers and policymakers.
Q2.2: Please elaborate any specific circumstances that might be important from the view of the professionals working in your field.

Q3: The table includes the most important skills and competences revealed by the RM ROADMAP survey for each of the identified areas of research management. Identification of these skills and competences for the different areas can help employers in recruitment, provide career paths and professional development opportunities for RMs, and articulate better the training needs. Are there additional skills or competences that are essential for your field and should be included among the top 5? Please share your suggestions!

Annex 4 Areas of RM as described in the RM ROADMAP survey

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

- **Collaboration with industry** including but not limited to consultancy, securing access to infrastructure, coordinating R&I collaboration, coordinating internship programmes.
- **Research infrastructure management** including but not limited to security and risk management, planning research infrastructure & developing sustainable funding model, infrastructure and resource management, as well as business development and innovation in research infrastructure.
- **Research data, research information, intellectual property management** including but not limited to open access and open data, intellectual property and asset management, portfolio mapping, exploitation planning.
- **Research Funding** including but not limited to the preparation, management, and assessment of Research and Innovation grants.

Annex 5. 3rd co-creation timeline

RM Roadmap co-creation timeline

Session 3 on the Knowledge and Community Platform - Training and Career Development Framework

November 14- December 19, 2024

Ambassadors work on a consensus document

December 20 - February 4, 2025

Voting on the consensus document via the poll

NO Voting on the consensus document

Annex 6. Co-Creation timeline overview

Online sessions

1. UNDERSTAND THE LANDSCAPE: NATIONAL NETWORKS AND ASSOCIATIONS
2-13 October 2023

2. WHO ARE RESEARCH MANAGERS/ SKILLS AND COMPETENCES
14 March-18 April 2024

3. TRAINING AND CAREER DEVELOPMENT FRAMEWORK
14 November - 19 December 2024

Physical/Online meetings

1st Ambassador meeting
BUDAPEST
9-10 May 2023
Back-to-back with 2nd European Commission workshop of Action 17, European Research Area

2nd Ambassador Meeting
LISBON
13 March 2024

3rd Ambassador Meeting
ONLINE
12 November 2024
THE FUTURE OF THE AMBASSADORS

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