

CARDEA Survey Summary of Results

May 2023

Mary Kate O'Regan

Dr Joanne Uí Chrualaoich

Dr Paolo Saporito



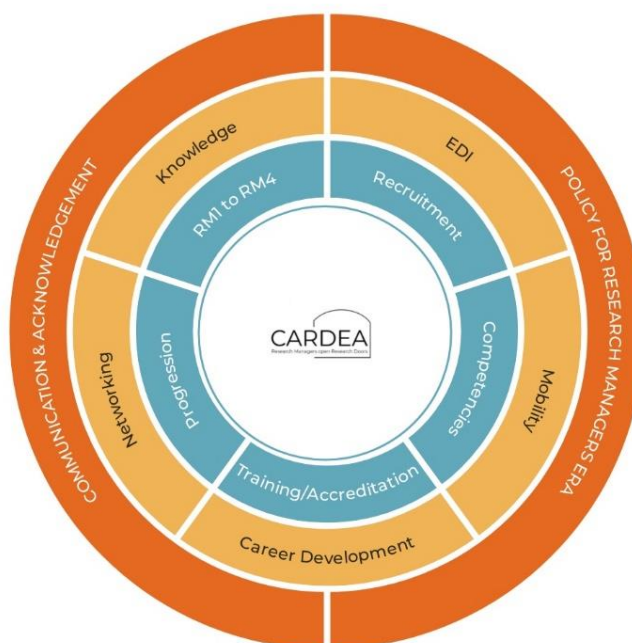
**Funded by
the European Union**

The CARDEA project is funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor REA can be held responsible for them.

Contents

Project Abstract.....	2
Executive Summary.....	3
Chapter 1: Survey distribution and responses.....	8
Chapter 2: Demographics.....	9
Chapter 3: Education, memberships and qualifications.....	11
Chapter 4: Employment.....	13
Chapter 5: Job profile.....	19
Chapter 6: Professional Development.....	27
Chapter 7: Quality of work indicators.....	28
Chapter 8: Networks, Mobility, Equality, Diversity, and Inclusion.....	34
Chapter 9: Professional Identities.....	39
Chapter 10: Skills.....	42
Section 11: Research Management Careers and Their Future.....	47

CARDEA MATRIX



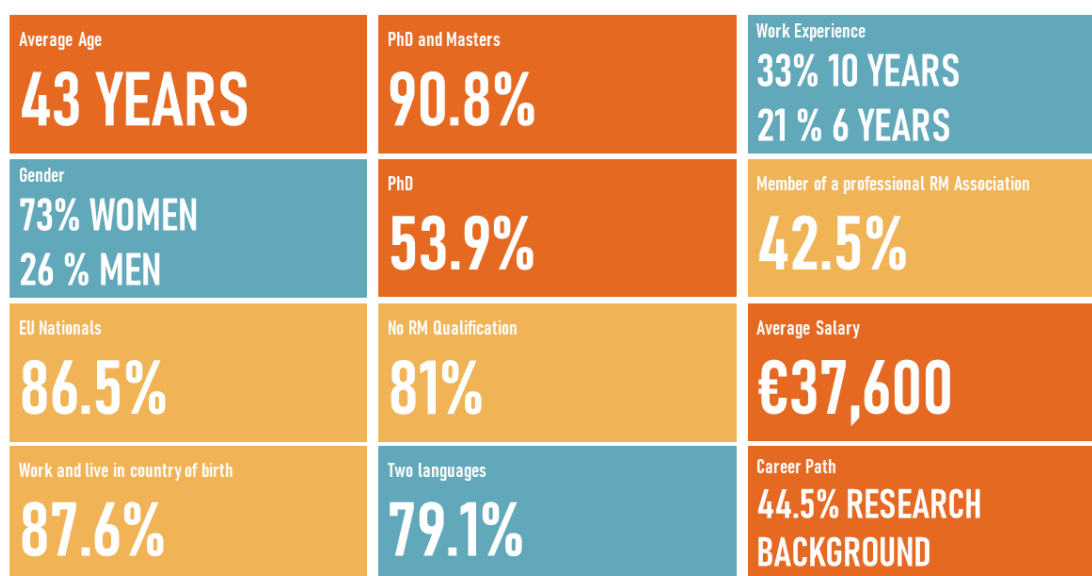
Project Abstract

CARDEA is the Roman Goddess of door pivots, ideal to describe our project to develop Research Managers (RM) who strengthen Europe's R&I excellence through a diverse set of support roles and responsibilities. Research management as a profession is almost invisible from policy, career progression and tenure opportunities across Europe. Also, there is little consistency between countries, funders, policymakers and individual institutions. Cardea will develop supports to address this inequality. Our consortium has enjoyed considerable success doing this for Researchers already. We will create a detailed data-driven (500+ participants, 24 countries) knowledge space defining and characterising the problem. Based on this, we will develop a range of solutions, including a Capacity Maturity Model to assess and improve RM activities and a novel RM Hub for networking and training to include a community of practice. Equality, Diversity and Inclusion, Widening Participation (EUJ3), and Public-Private partnership actions will be at the core of our research, training and enhancement activities. Additionally, the mobility and networking of RM and those with responsibility for developing RMs will be included to ensure the RM ecosystem grows transnationally. We will learn from each other and support one another in bringing RM careers to the next level. Significantly these actions will provide a significant evidence base to advocate the inclusion of RM exigences in policy, and we will target this proactively, targeting 38 key decision-making organisations. Amongst the impacts of CARDEA will be an enduring network and Hub that can facilitate RM development and collaboration, a validated methodology to assess RM careers and a well-established baseline against which improvements can be objectively measured. This allows us to develop a RM Charter and offer a Concordat to institutions and organisations that make significant commitments to developing RM activities in a structured, mature manner.

Executive Summary

This report details preliminary findings for the research phase of the CARDEA project. In order to deliver a once in a generation change for Research Managers, it was first necessary to develop a detailed understanding of the contexts, challenges and opportunities that face Research Managers within and beyond the EU. 855 Research Managers were asked 97 unique questions (and 416 individual items) about their demographics, employment, skills and education, motivation and satisfaction and professional networks and mobility using an online survey. Standardised lists and instruments were used where possible.

CARDEA RM PROFILE AT A GLANCE



The results show that Research Managers are a diverse group of professionals sharing several characteristics. With an average age of 43 years, Research Managers are mostly women, speak two languages and live and work in the country they were born in. Research Managers are a very experienced cohort of professionals, with half of them having at least six or ten years of work experience. These professionals are also highly educated, with over 90% of Research Managers having a postgraduate qualification. This may sound surprising, given that there is no EU level requirement for such high level of education for research management roles. Moreover, most of these professionals do not have a specific research management qualification, meaning that their educational background is not strictly related to

their job. These results should be contextualised in the increasingly shrinking options available for Researchers in the academic job market. As permanent jobs in academia have become the exception rather than the norm, or increasingly less secure, PhDs and post-doctoral Researchers have been looking for an alternative career path. They found it in research management.

The flow of highly educated professionals and Researchers into research management careers has to-date produced positive synergies. The flexibility characterising Research Managers' skillset enables them to work across disciplinary boundaries and institutional environments. This highlights the interoperability of the role. These professionals connect Researchers, funding agencies, policymakers and the private sector making research possible. Working simultaneously in multiple institutional sectors and disciplines, in and out of research ecosystems and funding landscapes, Research Managers facilitate processes and occupy an "in-between role" that is key to research success.

However, research ecosystems, labour policies and organisations do not seem to be fully ready to give these highly educated and experienced professionals the work environment they deserve. The issues raising the most significant concerns relate to a lack of promotional opportunities and career progression architecture; low and uncompetitive salaries; extremely busy work schedules; the lack of professional esteem; the absence of appropriate opportunities for training and professional development; all of which are exacerbated by the lack of a clear definition of the role.

Most Research Managers are employed full-time and are required to complete involuntary overtime hours with no extra compensation. The average salary amounts to €37,600, with more than half earning less than €40,000 per annum. The average salary for Research Managers is lower than the average salary in many European member states. Moreover, comparisons with researcher salary scales reveal that Research Managers do not earn what they should according to their educational level and work experience. The lack of bespoke salary scales for many Research Managers is a further issue. Where these scales do exist, they

are mostly linked to administrative scales that, do not reflect the highly skilled profiles of Research Managers within the ERA.

A lack of opportunities for career progression and uncompetitive salaries are clear examples of how the work of Research Managers, and their contribution to research within the ERA, is not acknowledged or valued. A worrying number of Research Managers feel they are outsiders within their organisations or, put another way, invisible. The majority are not involved in decision-making processes or strategic think tanks, especially those regarding plans for research and innovation. These professionals are asking to be involved. On average, they work on relatively large teams and team members informally report to them, but this leadership role is not formalised or officially acknowledged. These and other phenomena translate into an extremely low level of professional esteem. The lack of professional esteem has an impact on the wellbeing of Research Managers and Research itself within the ERA. Many note that they are not fully satisfied with their job and often do not look optimistically at a long-term career in this sector.

The lack of opportunities for training and professional development does not encourage Research Managers hoping for a brighter career future. The relationship of these professionals with professional development is complex. They either do not have a professional development plan or have an individual one. Almost half of Research Managers did not engage in professional development in the last year, while the other half did, often in their own personal time. What these results reveal is that organisations are not committed to providing their research management employees with professional development opportunities. Research Managers are asking for these opportunities and for the inclusion of time for training within their busy work schedules. These opportunities would need to be cognisant of the fact that the average amount of time spent by Research Managers on continuous professional development is between 9 and 40 hours per year. This means that longer duration educational certifications may not appeal to this busy cohort of professionals. They would welcome accessible and free accreditation for shorter programmes.

The lack of professional development opportunities and the absence of promotional schemes are closely tied. Not only improving their skillset to progress is extremely difficult, but career progression for Research Managers is even more impervious or impossible. For almost three quarters of Research Managers, there are no defined opportunities for progression in their role. These professionals, especially those on temporary contracts, feel stuck in their careers and want career pathways that would allow them to progress. They want career objectives and are ready to channel their desire for improvement towards the achievement of these objectives.

CARDEA revealed that one of the main challenges for Research Managers' within their work environments is the lack of a definition of this role. Research management as a profession does not correspond to a defined job title in many countries, especially EU member states, and is not recognised by most national legislation or funded by national funding agencies. Research management is an ill-defined term that describes a wide range of roles and levels of responsibility, with some overlapping with research activities. Most Research Managers surveyed would describe their job as the provision of specialised professional services to a range of projects. As we mentioned, this requires and entails working across disciplinary boundaries, being flexible and using a diverse array of skills. However, the lack of a definition for the diversity embedded in research management is hindering systematic approaches to its classification as a profession. This report includes a series of suggestions, for instance the identification of a range of specialised roles within the research management suite of expertise. In this context, the role of both CARDEA and her sister project RM Roadmap is particularly timely as a vital ambition of both projects is to inform the definition, policy and regularisation of research management roles in the new ERA.

Resonant with EU policies concerning gender equality, diversity and inclusion, the report pays particular attention to the gender aspects of the profession. Since the majority of Research Managers are women, the interpretation of the results should take this gender distribution into account. For instance, is the low

level of geographical mobility a result of a different distribution of mobility opportunities for men and women? Is the fact that low levels of professional esteem are more frequent among female Research Managers a signal of gender-related forms of discrimination and invisibility in the workplace or research ecosystems? It is not within the remit of this study to answer these questions. Rather, the report raises questions and points for further discussion and synergy with other actions in the ERA policy agenda. Research Performing Organisations in Europe are expected to have a Gender Equality Plan (GEP). The report reveals that, when confronted with how GEP themes and ERA-specific gender objectives are managed in their organisations, Research Managers are not satisfied. Gender gaps are still an issue, especially with respect to gender balance in leadership and decision making and gender equality in careers. Echoing the Commission's commitment to gender equality through the Horizon Europe programme, CARDEA makes gender a cross-cutting priority in the regularisation of research management roles.

Ultimately, this report demonstrates that the time to act and give Research Managers better work environments is now. Research Managers open research doors, are invaluable components of research ecosystems and contribute to making research and innovation possible. Improving the skills and career progression architecture of Research Managers will enhance Europe's research ecosystems. CARDEA welcomes the commitment and leadership shown by the European Commission through the new ERA policy agenda as research and innovation policies should foster and nurture the careers of research management professionals. They are the invisible driving force on which research networks and organisations rely. Now is the time for recognition and visibility!

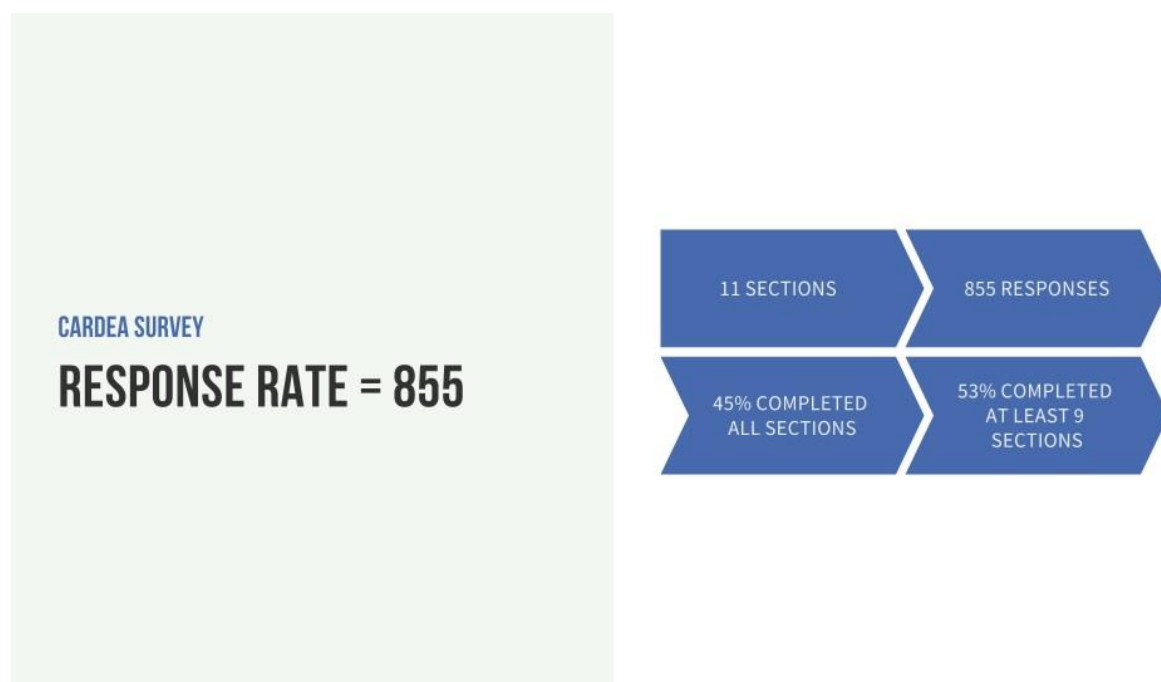
Authors

Mary Kate O'Regan and Dr Paolo Saporito



Chapter 1: Survey distribution and responses

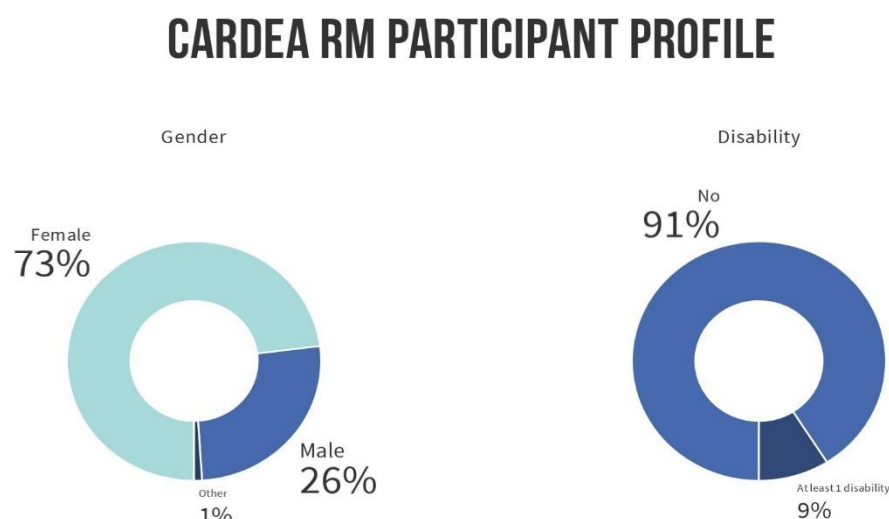
CARDEA received 855 responses to its ERA Research Manager survey. 389 (45%) respondents fully completed the survey through all 11 sections. 456 (53%) respondents completed at least nine of the sections. The number of responses gives us confidence in the results produced. The survey adopted a mixed methods approach with a series of quantitative choices responses required, supplemented by free text areas to elaborate on these choices.



Chapter 2: Demographics

We asked a range of demographic questions. This information is summarised in **Error! Reference source not found.** The core insights the survey provided are as follows:

Gender: Research management is a highly gendered profession, with 73.2% of respondents identifying themselves as female and 25.7% as male.



Age: The participants' average age (in years) was 43 with an age range between 20 and 69.

Disability: Most of participants (90.9%) do not have any disabilities, with 9.1% of respondents reporting having at least one disability.

Nationality and Residence: Most of the survey participants (87.6%) live and work in the country they were born in. This is a very interesting result within the context of mobility and CARDEA's findings on gender. Is this a result of cultural preferences, family ties, economic and employment stability or other gender-related factors? For sure, more discussion is warranted here with clear synergies to other actions in the ERA Policy Agenda. In total, 43 nationalities are represented in the CARDEA responses. Of these, 86.5% enjoy nationality from an EU country, 4.6% are from other European countries, and 3.3% are from the rest of the world. 87.6% of respondents' nationality matched their country of residence, whereas 12.4% reside in a country different from their nationality.

CARDEA RM PARTICIPANT PROFILE



Average Age

43 YEARS

EU Nationals

86.5%

Work and live in country of birth

87.6%

2 Languages

79.1%

Language: The majority of survey participants speaks more than one language, with 79.1% of respondents reporting knowledge of at least two languages, 64.4% of three and 36.2% of four languages. English was validated as the *lingua franca* of research management, with 82.9% of respondents speaking it as either their mother tongue (14,8%) or second language (60,5%). Spanish was the next most popular second language (8.2%) followed by French (4.6%).

TABLE1: DEMOGRAPHIC CHARACTERISTICS OF CARDEA SURVEY SAMPLE

Characteristic	N	%
Age		
29 and under	33	4.5
30-39	209	28.5
40-49	345	47.1
50-59	129	17.6
60 and over	17	2.3
First language		
English	108	14.8
Portuguese	98	13.4
Italian	90	12.3
Spanish	68	9.3
German	62	8.5
Spanish	62	8.5
Catalan	56	7.7
Polish	40	5.5
Croatian	36	4.9
Dutch	31	4.3
French	28	3.8

Chapter 3: Education, memberships and qualifications

Education: Data regarding respondents' highest educational level demonstrate that Research Managers are a highly educated cohort (see Table 2 for details of educational levels with respect to the European Framework of Qualifications).¹ It is striking that over half of respondents (53.9%) have a doctoral level qualification, and 90.8% have a Masters or PhD level qualification. The educational level in the survey population is significantly higher than the averages in the OECD area (e.g. 13.9% Masters and 1.3% Doctorate, source ISCED 2011).

CARDEA RM PARTICIPANT PROFILE



Since there is no legislative or functional EU level requirement for such high levels of education for research management roles, the reasoning for such a highly qualified profession should be determined and contextualised in the decreasing number of positions available to PhDs and post-doctoral Researchers in the academic job market. As we all now know, the professional outcome for Researchers within academia has altered dramatically, and studies² demonstrate that a faculty job has become the alternative career. The current system is producing too many Researchers and PhDs for the jobs available to meet their expectations of remaining in academia. The high-level educational qualifications among Research

¹ <https://europa.eu/europass/en/europass-tools/european-qualifications-framework>

² Nature Editorial <http://www.nature.com/news/there-is-life-after-academia-1.15808>

Managers indicate that many Researchers are moving to research management careers. Similarly, the value-add from such high-quality expertise in the profession should be determined to ensure the correct skills to task mix.

TABLE 2: HIGHEST QUALIFICATION LEVEL FOR CARDEA RESPONDENTS		
EQF level	<i>n</i>	%
1-3	7	1.1
4	1	0.2
5	3	0.5
6	40	6.0
7 (Master)	246	36.9
8 (Doctoral/PhD)	359	53.9

RMA membership and qualifications: 57.5% of respondents are not a member of any professional RMA associations. 26.5% are members of EARMA and 16.1% (*n* = 97) are members of another RMA association. 81% of respondents do not have any specific research management qualifications or certifications, while 19% report a range of credentials (see most popular in TABLE 3). Nevertheless, 90% believe they have the skills to be an effective Research Manager. Combined with the information regarding Research Managers' educational qualifications, these results demonstrate that Researchers from diverse backgrounds are moving to research management. Moreover, the results also indicate the synergies these professionals can potentially create within research ecosystems and especially between research activities and their management/administration at institutional level. The enhancement of Research Managers' ability to establish and foster these synergies will require the design of bespoke forms of training and professional development. Training opportunities will need to be devised taking into account Research Managers' busy work schedule. As the average amount of time spent by Research Managers on continuous professional development is between 9 and 40 hours per year, longer duration educational certifications may not appeal to this cohort. Perhaps European Digital Credentials through Euro Pass would provide accessible and free accreditation for shorter programmes. More on this in Chapter 6 and 10.

TABLE 3: MOST POPULAR RM CERTIFICATIONS IN CARDEA		
Certification	<i>n</i>	%
Masters in Research Administration	26	4.3
Certificate in Research Management (CRM)	22	3.6
Bachelors in Research Management	8	1.3
Certificate in Leadership of Research Management	8	1.3
Certificate in Research Administration (CRA)	6	1.0

Chapter 4: Employment

A key ambition of the CARDEA research is to develop a comprehensive understanding of the employment patterns, career pathways and opportunities for European Research Managers. TABLE 4 summarises the employment characteristics of the cohort. The data revealed the following core insights:

Working patterns/schedule: Most Research Managers (90.6%) are employed full-time. The average working week is approximately 39 hours, with 52.5% of respondents indicating that they work between 37 and 40 hours per week. A concern is that 18% report routinely working 41 or more hours per week, with 4.4% of Research Managers routinely working over 51 hours per week. This would appear to contravene the EU's Working Time Directive (2003/88/EC).

CARDEA RM PARTICIPANT PROFILE

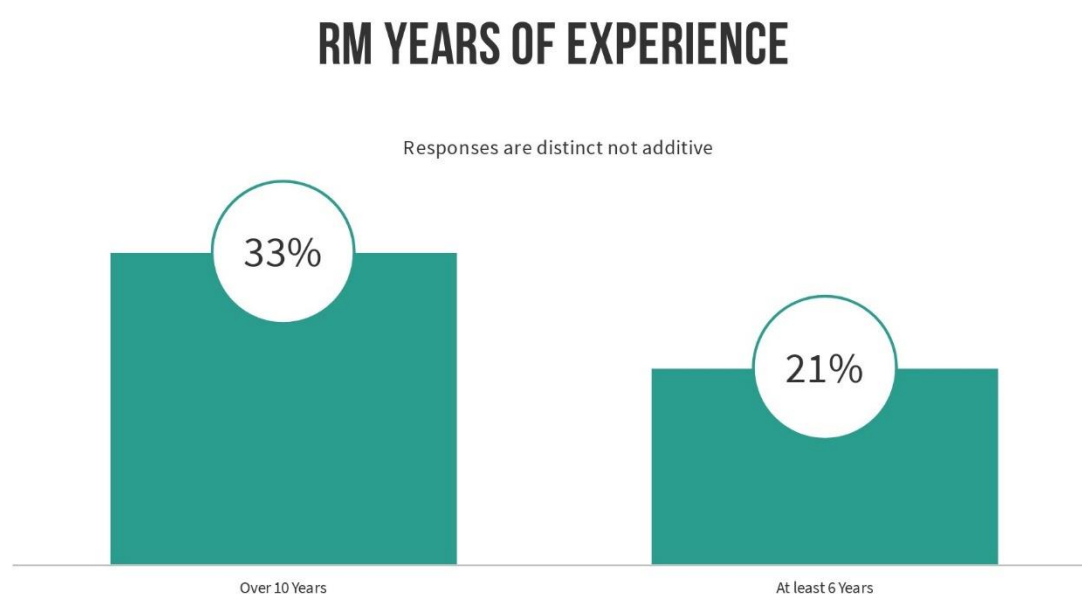


Hybrid and Flexible working: Most respondents indicated that they have access to hybrid (81.3%) and flexible (72.5%) working opportunities. The most frequent work-from-home pattern amounts to 40% of working hours or two days per week. As for flexible working, the responses reveal different approaches, from many respondents indicating that they can work flexibly as long as the work is completed satisfactorily, to some respondents describing flexible organisations of daily working hours.

Organisational profiles: A range of organisational sizes are represented in the sample, from individuals who are self-employed to others working in large institutions with more than 15,000 staff. On average,

considering the number of employed Research Managers and Researchers, the ratio between Research Managers and the number of employed Researchers oscillates from one Research Manager to every two Researchers to one Research Manager to every four Researchers. However, despite the variability and the uncertainty in the data, there appears to be a definite trend to fewer Research Managers per Researcher as organisational size increases.

Work experience: According to the CARDEA data, Research Managers are a very experienced group of professionals. One-third have over ten years of experience in research management (33.2%), with a further fifth (20.9%) having at least six years of research management experience. Combining this with the previous results on educational attainment indicates that Research Managers are a highly qualified and experienced group of professionals.



Work responsibilities: The data suggest that 'research management' is an ill-defined, varied term that describes a wide range of roles and levels of responsibility with some overlapping with research activities. The most common responsibility among respondents consists in providing specialised professional services to a range of projects, with 35% doing this individually and 12.6% as the leader of a team. Less than ten percent are dedicated to managing an individual project. Approximately 14% of respondents are involved in both research and research management. Of these, 7.2% lead on several research projects (e.g.

department head), while 8.5% work as both Researcher and Research Manager. 14.7% of respondents indicated that they lead research management across an entire institution, with 1.1% doing it across multiple institutions.



Contracts: Two-thirds of respondents indicated that they are on permanent (or equivalent stable) contracts, with approximately one-third on temporary or fixed-term employment contracts and a small number on other types of contracts or employment arrangements.

Salary: The average Research Manager salary amounts to €37,600 (full-time employment), with 52.5% of respondents earning less than €40,000 per annum. Given the education and experience of Research Managers, it is surprising that salaries are less than the average salary for many European member states. Comparisons with Researcher salary scales reveal that Research Managers do not earn what they should according to their educational level and work experience. For example, the Irish University Association salary scales³ suggest that a post-doctoral Researcher with six years of experience can expect a gross annual salary of €49,117. We estimate that only 34.4% of the survey sample earn this salary. This is very

³ <https://www.iua.ie/for-researchers/researcher-salary-scales-career-framework/>

surprising, especially considering that 54.1% of this sample have at least six years of experience and that 90.6% have a postgraduate (EFQ level 7 or 8) qualification.



CARDEA RM PARTICIPANT PROFILE



Route to a research management career: According to the survey data, the choice to pursue a career in research management was mostly influenced by a perceived match between the profession and their skill profiles. This suggests that the participants actively seek roles in line with their qualifications and experience. Other reasons (e.g. closeness to family and interested in supporting research but not

conducting research) were also very influential. There is a subtle affiliation with research management as an alternative to a research career. Further evidence of this type of career mobility is provided by the RAAAP-3 Survey⁴ results which suggest that 44.5% of respondents⁵ in the EU indicated that they moved from a research career to a Research Manager career. There is little intersectoral transfer from other management administration functions to research management.

ROUTES INTO RESEARCH MANAGEMENT CAREER



TABLE 4: EMPLOYMENT CHARACTERISTICS OF CARDEA SAMPLE

Characteristic	n	%
Employment status		
Full time	492	90.6
Part-time	43	8.3
Career break	1	-
Student	5	0.9
Other	9	1.7
Weekly working hours		
<20	12	2.3
21-30	18	3.4
31-40	398	75.7
41-50	74	14.1
51+	24	4.6
Hybrid working possible		
Yes	444	81.3
No	81	14.8
Other	21	3.8

⁴ <https://inorms.net/activities/raaap-taskforce/raaap-survey-2022/>

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

TABLE 4: EMPLOYMENT CHARACTERISTICS OF CARDEA SAMPLE

Characteristic	n	%
Flexible working possible		
Yes	392	72.5
No	128	23.7
Other	21	3.9
How long have you been a RM?		
more than 10 years	173	33.2
6 to 10 years	109	20.9
4 to 6 years	63	12.1
3 to 4 years	51	9.8
2 to 3 years	48	9.2
1 - 2 years	44	8.4
less than one year	33	6.3
Type of contract		
permanent	365	67.7
temporary	162	30.1
other	12	2.3
Gross income 2022		
Up to €20,000	57	10.9
€20,000 – €29,999	113	21.6
€30,000 – €39,999	105	20.0
€40,000 – €49,999	78	14.9
€50,000 – €59,999	54	10.3
€60,000 – €69,999	55	10.5
€70,000 – €79,999	34	6.5
More than €80,000	28	5.3

Chapter 5: Job profile

This section examines the profile of research management roles at an individual, organisational and national level. Research Managers described their role at each of these levels.

Job title: We asked Research Managers to report their job titles according to their contract of employment.

A wide range of titles were reported. The word cloud below shows the 100 most frequent words used to report job titles. Key elements in the responses include references to project-based roles, the interaction between management, administrative and strategic tasks, and some specialist aspects, including innovation, development, internationalisation, and technical and scientific specialities.

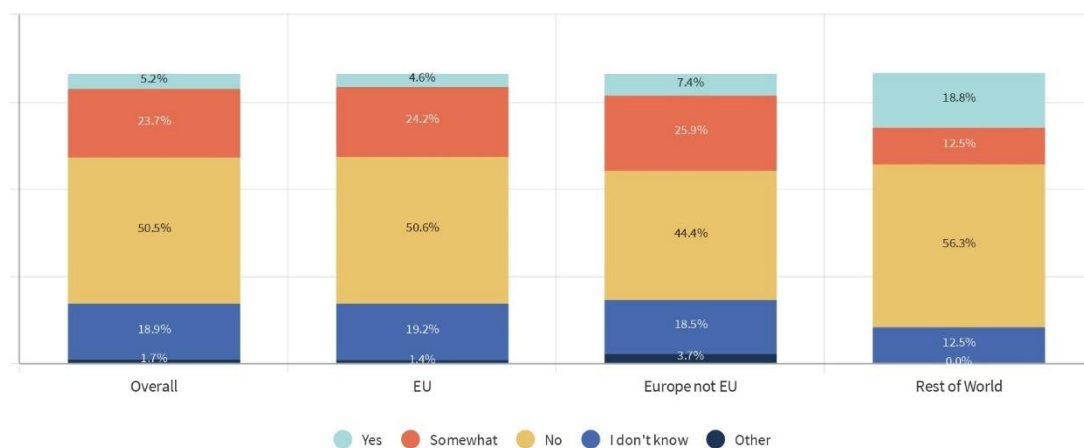
Job title and role: For three-quarters of respondents (75.8%), their job title agrees with their role as they deliver it. However, for the remaining 29.2% there is a discrepancy between job title and job role. About 66% of respondents agree that their role is well defined with clear objectives, while about 23% disagree.



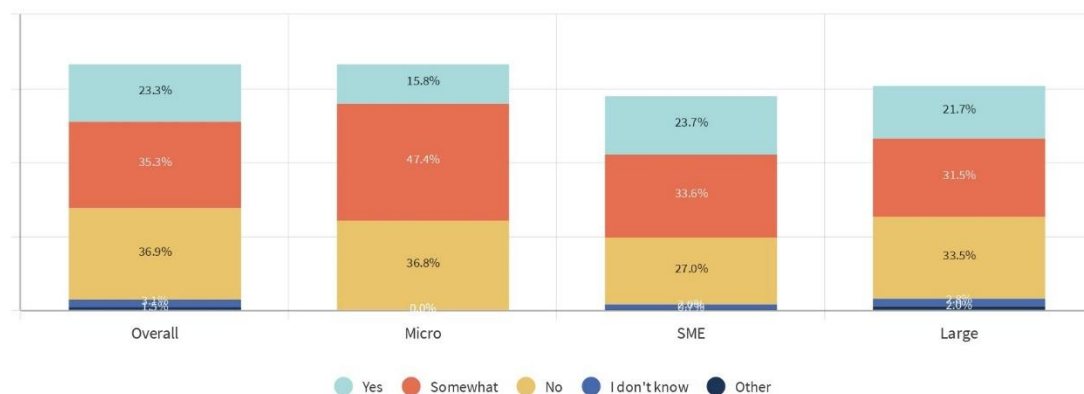
Legislative recognition: Over half of respondents (50.3%) indicated that research management as a profession is not a defined job title in their countries (e.g., is not recognised by the national legislation or funded explicitly by research funders). Only 5.3% of participants indicated that research management is a defined job title recognised by legislation or explicitly funded. Worryingly, the lack of a definition is higher within EU members states than in other countries. In this context, the role of both CARDEA and her sister

project Roadmap RM⁶ are particularly timely as a vital ambition of both projects is to inform the definition, policy and regularisation of research management roles in the new ERA. At organisational level, research management is more frequently defined and recognised as a role (23.3% compared to 5.3% at national level). However, over a third of organisations (36.9%) do not formally recognise research management careers.

RESEARCH MANAGEMENT RECOGNISED AS A PROFESSION



RESEARCH MANAGEMENT RECOGNISED AT ORGANISATIONAL LEVEL



⁶ <https://www.rmroadmap.eu/>

Role identification: Participants were asked to indicate how closely they identified with a range of potential research management roles.⁷ The results confirm the diversity of roles that Research Managers undertake, this reflecting the complexity, variety (and perhaps ambiguity) of research management characteristics seen elsewhere in this study. The images below reports the roles with the highest and lowest rate of identification. The roles with the highest rates can be considered as traditional research management roles or roles that locate Research Managers in key positions of the organisational hierarchy. The data reveal a clear difference between Research Managers and Principal Investigators. The lowest rates show a concerning disalignment between the profile of Research Managers and research policies in the ERA, especially those focusing on the development of common industrial technology roadmaps and research careers. Some of the roles identified in the 'other' free-text answer included the following: Technology Transfer Specialist; Innovation Management; Proposal Construction and Submission Expert; Financial Management; Mentor/Coach. Suggestions not captured by the list included the following: Internal Communication; Research Finance; Secretariat Issue; Pre-Award Officer; Science Communicator.

ROLE IDENTIFICATION/RELATE TO ROLE

Gauge values 1 - 5



Values are mean scores on a scale from 1 to 5

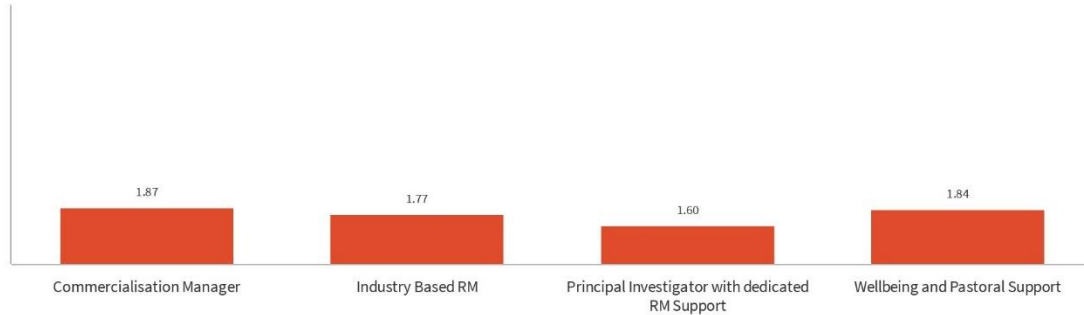
©2023 Proprietary and Confidential. All Rights Reserved.

1

⁷ The list was derived from the literature on research management and Third Space professionals. See Whitchurch, C. (2012). *Reconstructing identities in higher education: The rise of 'third space' professionals*. Routledge.

ROLE IDENTIFICATION/RELATE TO ROLE

Gauge values 1 - 5



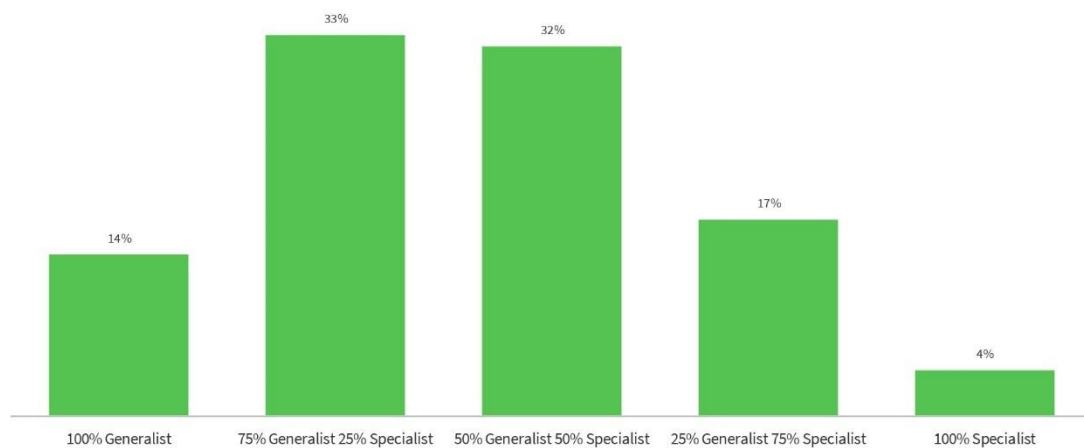
Values are mean scores on a scale from 1 to 5

©2023 Proprietary and Confidential. All Rights Reserved.

1

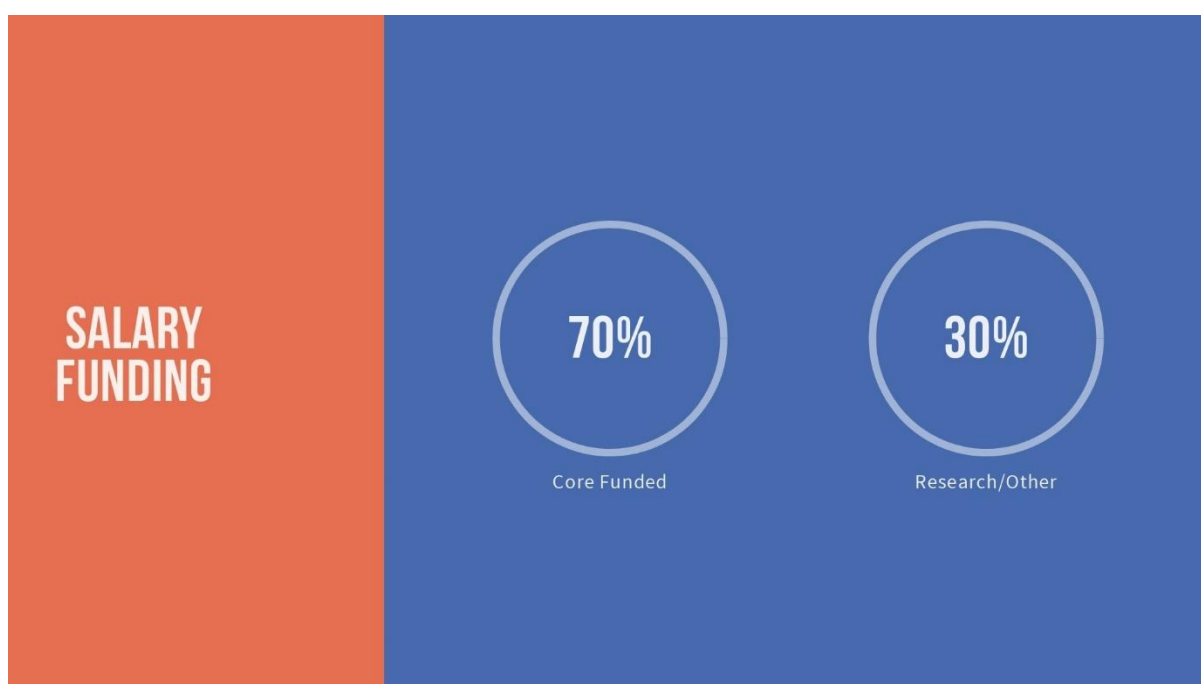
Degree of specialisation or generality: Participants were asked if they identified themselves as generalists (i.e. degree of variety of interest, skills and knowledge with respect to their role) or specialists (i.e. specialisation in a specific professional practice). The responses demonstrate a slight preference for generalism, with 47% of respondents reporting more generalisation than specialisation. 32% reported an equal balance between generalisation and specialisation, and 21% consider themselves more specialists than generalists.

SPECIALIST/GENERALIST

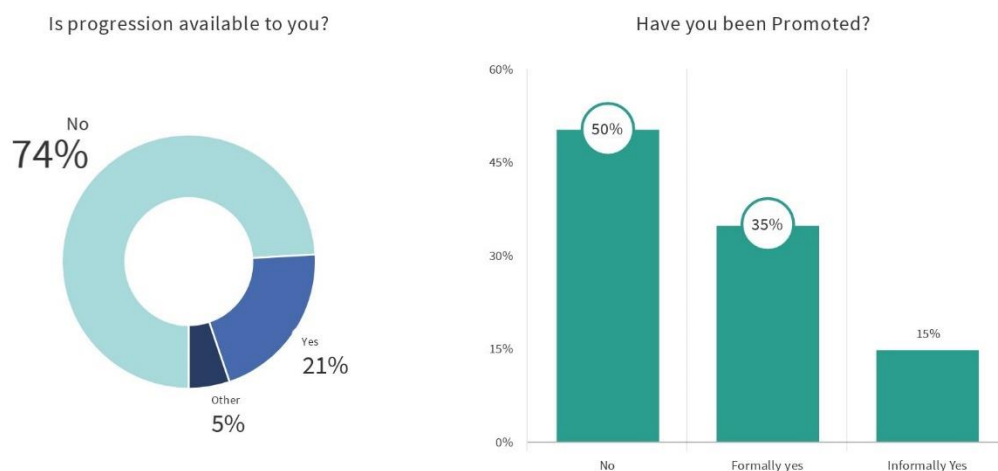


Role financing: The majority of Research Managers (69,6%) are funded from core institutional staff budgets (at either university, faculty, department or other local level). Just over a third (30.4%) of Research Manager salaries are linked to particular projects or other sources of funding.

Salary scales: 63.2% of respondents confirmed the existence of a salary scale for their role, while 32.9% claimed they do not have one. In free-text comments, several respondents reported that, as the position of research management is not defined, there is no entitlement to a salary scale, but that there are mechanisms to link their role to related administrative scales. These scales, however, are not designed to take into account the educational level and work experience of Research Managers.



PROGRESSION/PROMOTION



Progression opportunities: Almost three quarters of respondents (74.1%) indicated that there are no defined opportunities for progression in their role. Only 20.7% indicated that 'yes' progression is possible. In a related question, participants were asked whether they had been promoted since they first became a Research Manager. Over half (50.3%) have never been promoted, while the other half have been promoted formally (34.9%) or informally (14.8%). As experts suggest that professionals should target promotion every three years⁸ and most of Research Managers have at least six years of experience, this information is concerning.

Research Managers as team leaders: Participants were asked about the formal and informal size of the teams they work in, including how many colleagues report to them. TABLE reports the results. Although a significant number of respondents work in relatively large teams, the members of these teams seem to report to Research Managers informally rather than formally. This fits with the previous narrative that Research Managers take on a range of informal roles that are not specifically part of their job role and do not correspond to the role of principal investigators or budget holders.

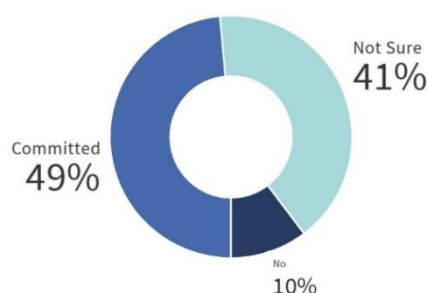
⁸ <https://blog.shrm.org/blog/should-you-be-promoted-every-three-years>

TABLE 5: WHAT SIZE IS YOUR PROFESSIONAL TEAM?							
Team size	0	1	2	3	4	5	6+
Formal size							
Number of people on team*	19.2	6.6	8.1	8.8	7.5	7.7	42.1
Number of people that report to you*	51.4	8.8	7.0	7.2	5.7	1.8	18.1
Informal size							
Number of people on team*	15.2	7.5	5.8	7.2	7.0	6.0	51.3
Number of people that report to you*	25.7	6.8	6.8	3.8	4.5	2.5	49.9

*All numbers are percentages of total responses

LONG TERM CAREER RESEARCH MANAGERS

Are you committed to a long-term Research Manager Career?



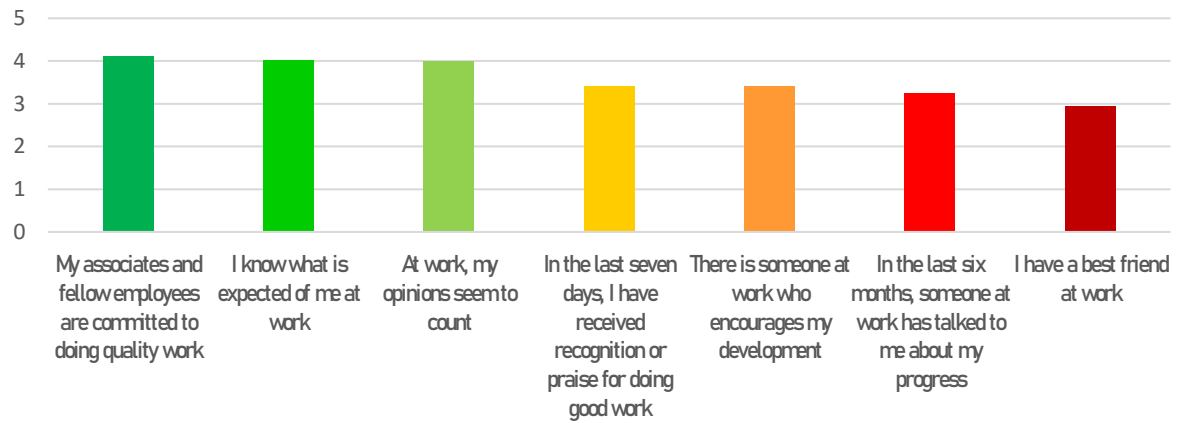
Long-term Research Manager Careers: 48.5% of respondents are committed to a long-term research management career, while 41.1% are not sure about it and only 10.3% do not see a long-term career in research management.

Role satisfaction: CARDEA drew on a published workplace survey⁹ to assess Research Managers' workplace satisfaction. According to the results, Research Managers' rate of satisfaction in the workplace is relatively low. In a 1 to 5 scale, with 1 indicating the lowest level of satisfaction and 5 the highest, the overall average (3.69) is close to the cut-off value (3.5) under which the literature identifies a problematic level of satisfaction. The figure reports the three factors determining the highest levels of satisfaction and the four areas where the results did not reach the cut-off value.

⁹ [Gallup's Q12 Employee Engagement Survey - Gallup](#)

RM ROLE SATISFACTION

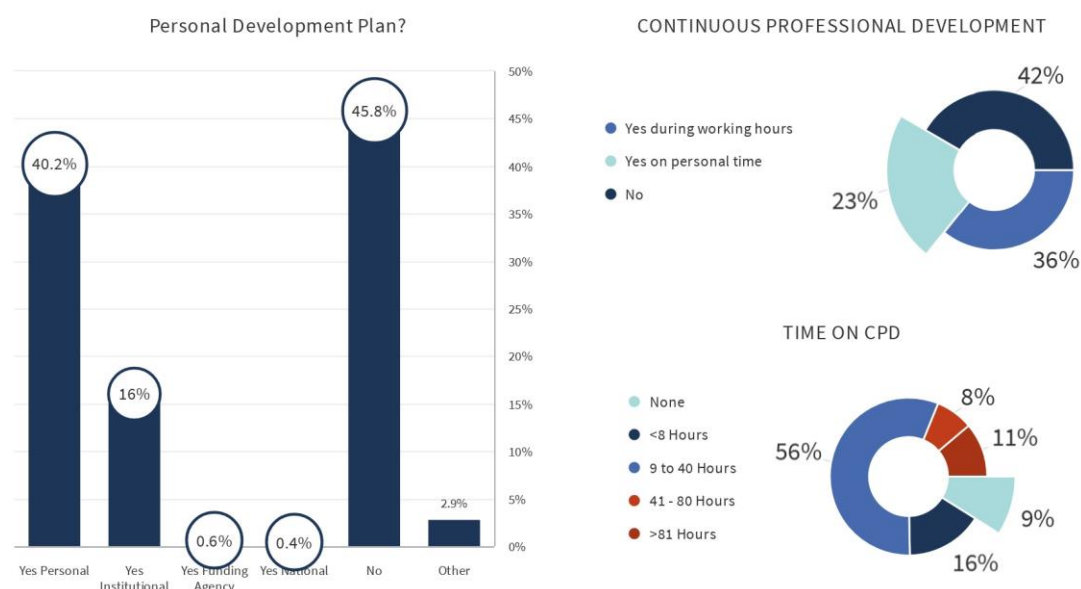
The factors indicating the highest (in green) and lowest (in red) levels of role satisfaction



Chapter 6: Professional Development

CARDEA examined whether Research Managers have professional development plans, whether they engage in continuing professional development and what supports would be useful in a research management context. Over half of respondents (51.2%) do have at least one type of professional development plan, the most popular PDP being a personal one (40.2%). The data suggest that Research Managers are twice as likely to have an individual personal development plan rather than one provided or supported by their employer. While this reflects the proactivity and engagement of the cohort, it challenges a systematic approach to research management development. 45.8% of respondents have no professional development plan at all.

Continuing Professional Development: 58.4% of respondents have engaged in CPD in the last year. This value is very close to the EU 2030 target that 60% of the adult population should be involved in lifelong learning and is substantially above the average engagement in lifelong learning by professionals.¹⁰ This is an encouraging result that shows that Research Managers are invested in and proactive about learning.



¹⁰ <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20190517-1>

Chapter 7: Quality of work indicators

One of the key goal of CARDEA is to establish how the broader research ecosystem values research management and Research Managers and how the vital role Research Managers play is supported. Chapter 7 looks at a range of quality of work indicators to assess these important dimensions of research management roles. **Error! Reference source not found.**⁹ summarises the results from the quality of work questions.

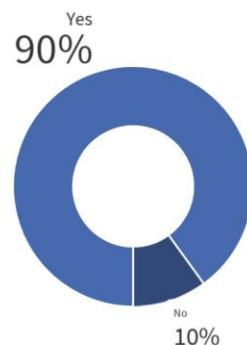
Value add from Research Managers: 49.6% of respondents indicated that their organisation recognises their contribution to research management appropriately, while 50.4% do not feel that their contribution is valued. Female respondents and participants with a disability are less likely to feel valued. Reasons for not feeling valued include lack of recognition in organisational structures, low salary levels, lack of promotion opportunities and the feeling of being invisible.

RM QUALITY OF WORK

Do you feel your organisation values and recognises your contribution to research management appropriately?



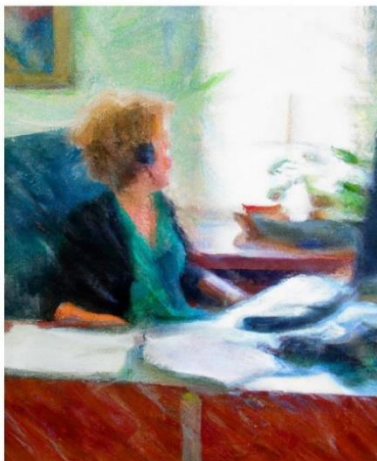
Do you understand how your role fits in your organisation?



Satisfaction within the workplace: The literature measures the level of satisfaction within the workplace by assessing hygiene factors and motivating factors. Hygiene factors decrease an employee's dissatisfaction by removing fundamental sources of frustration with work. Typical hygiene factors include elements such as salary and appropriate supervision. However, hygiene factors alone are insufficient to drive employee motivation, and motivating factors such as recognition and achievement can serve to boost

productivity, creativity and commitment to the organisation. Benefits are considered key hygiene factors. Hybrid working patterns (85.1%), flexible working patterns (72.5%) and educational opportunities (66.7%) are the benefits available to most of the Research Managers surveyed, with bonus payments and other benefits available to a minority. Almost three-quarters (71.5%) of respondents work flexible schedules of their choice, with working in the evening being the most frequent pattern. The majority of respondents (66.2%) are required to complete involuntary overtime hours, with a significant number of respondents (56.4%) reporting that they receive no compensation for overtime and a minority (22.5%) reporting that they are offered time off in lieu. Worryingly quite a few reported working while on vacation/holidays.

CARDEA RM PARTICIPANT DRAWBACK OF ROLE



Involuntary Overtime

66.2%

No compensation for overtime

56.4%

Time in lieu offered

22.5%

CARDEA RM PARTICIPANT BENEFITS OF ROLE



Hybrid Working

81.5%

Flexible Working

72.5%

Educational Opportunities

66.7%

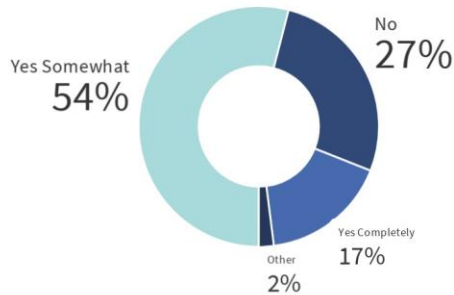
Flexible Schedules of Choice

71.5%

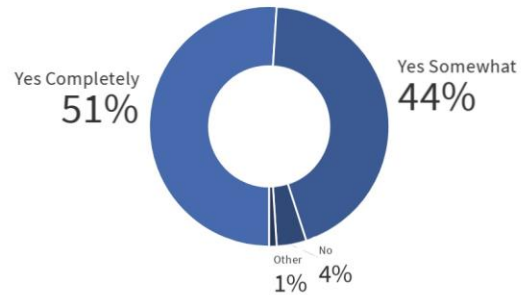
Motivating factors: Understanding whether and how one's role fits in the organisation, autonomy at work, effective feedback, involvement in organisational decision making, the feeling of making a useful contribution—these are motivating factors that boost efficiency, productivity and wellbeing. 90.3% of respondents do understand how their role fits within the organisation, this demonstrating a high level of confidence in the role of research management within the organisation. However, this positive result is somewhat at odds with the previous results about whether a person's role as they deliver it agrees with their job title and whether the function is well defined with clear objectives. It is unclear what the source of this discrepancy is. Reassuringly, almost all (96.8%) of participants report that they enjoy workspace autonomy, and a slight majority (52.2%) indicated that they have complete autonomy to choose their methods and pace of work. For those that indicated they do not enjoy enough autonomy, the reasons were influenced by funding call deadlines and requirements from Principal Investigators. While the former is unlikely to change, the latter can be negotiated.

RM QUALITY OF WORK

Do you have suitable opportunities to contribute to organisational decision making at the appropriate level?



Do you enjoy an appropriate amount of work autonomy to choose your methods of working and pace of work?



Most participants do receive regular feedback from their supervisors (70.2%), but most of those who receive regular feedback are not completely happy with it. Moreover, worryingly enough, 28.9% of Research Managers do not receive regular feedback. The dissatisfaction with feedback and its lack are a concern given the missing clarity around the role of the Research Manager in the first place. The lack of individual feedback on performance is likely to exacerbate the obscurity. Most Research Managers (71%) feel that they are only partially considered part of the strategic team and have a valid voice in the decisions that are made, while 27.3% do not feel they can make appropriate contributions to decision-making. Comments suggest that Research Managers would like their input to be considered more and that they are unsure about how much their contribution is considered. Most of Research Managers (93.1%) feel that they have the opportunity to do useful work and make a significant contributions, but they are not completely convinced that this is happening. Overall, Research Managers appear to be largely satisfied with motivating factors in the workplace. However, hygiene factors are less strongly satisfied and should be considered further.

TABLE 9: SUMMARY OF QUALITY OF WORK INDICATORS FROM CARDEA SURVEY

Question	<i>n</i>	%
Do you feel your organisation values and recognised your contribution to research management appropriately?		
Yes	233	49.8
No	235	50.2

TABLE 9: SUMMARY OF QUALITY OF WORK INDICATORS FROM CARDEA SURVEY

Question	<i>n</i>	%
Does your organisation provide any of the following benefits?*		
Bonus payments	84	19.0
Flexible time	321	72.5
Hybrid office (WFH)	377	85.1
Educational Opportunities	282	63.7
Other	36	8.1
Do you ever complete involuntary overtime hours		
Yes	304	66.2
Nb	155	33.8
If so, approximately how many overtime hours do you work per month?		
Less than 5	68	23.0
6 to 10	104	35.1
11 to 15	51	17.2
16 to 20	39	13.2
21 to 25	11	3.7
26 to 30	4	1.4
More than 30	19	6.4
Are you paid an additional salary or offered time off in lieu when you work overtime?		
Yes, both	21	4.5
Yes, time off in lieu	156	33.5
Yes, additional payment	7	1.5
Nb	263	56.4
Other	19	19
In your current role, do you regularly (i.e. more than once per month) work according to the following patterns?*		
Nighttime	60	13.9
Evening (after regular working hours)	224	52.0
Flexible schedules (of your choice)	308	71.5
Flexible schedules (of your employer's choice)	66	15.3
Other irregular working patterns	56	13.0
Do you understand how your role fits in your organisation?		
Yes	420	90.3
Nb	45	9.7
Do you enjoy an appropriate amount of work autonomy to choose your methods of working and pace of work?		
Yes, completely	245	51.4
Yes, somewhat	211	44.2
Nb	18	3.8
Other	3	0.6
Do you receive regular feedback from your supervisor or line manager?		
Yes, completely	86	18.3
Yes, somewhat	244	51.9
Nb	136	28.9
Other	8	1.7
Do you have suitable opportunities to contribute to organisational decision-making at an appropriate level?		
Yes, completely	81	17.0
Yes, somewhat	257	54.0

TABLE 9: SUMMARY OF QUALITY OF WORK INDICATORS FROM CARDEA SURVEY		
Question	<i>n</i>	%
Nb	130	27.3
Other	8	1.7
Do you feel that you have the opportunity to do what you consider to be 'useful work'?		
Yes, completely	173	37.0
Yes, somewhat	264	56.3
Nb	30	6.4

**Multiple selections possible*

Security of Employment: The International Labour Organisation (ILO) and the United Nations Economic Commission for Europe provide additional indicators for measuring employment quality and job security.¹¹ The relationship with one's line manager, the availability of social protection and the duration of the contract are factors contributing to Research Managers' job quality and security, but the scarce availability of training opportunities generates insecurity. The lack of opportunities for professional growth and promotion are further factors generating insecurity. Combined with the low rate of promotion and the scarce level of confidence in a long-term career in Research Management (Chapter 4 and 5), these results demonstrate that there is considerable frustration with the career pathways available (or, more correctly, not available) to Research Managers.

¹¹ https://unece.org/DAM/stats/publications/2015/ECE_CES_40.pdf

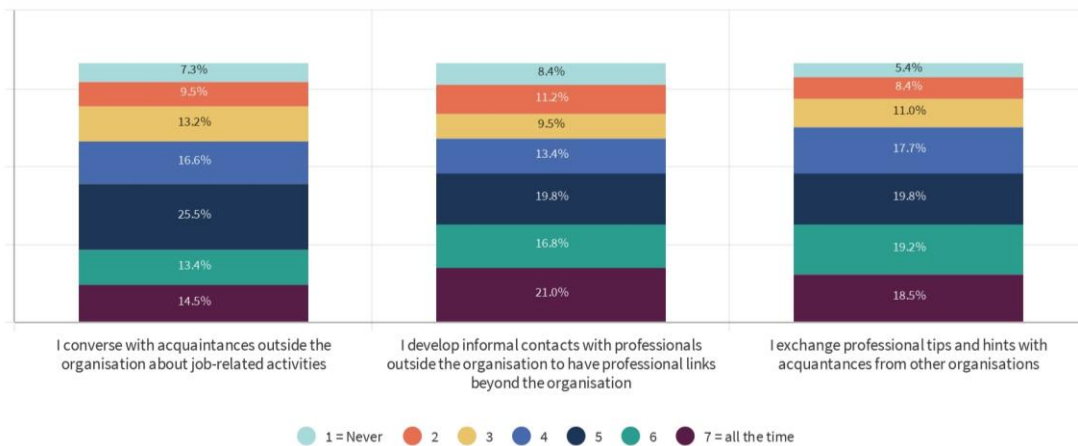
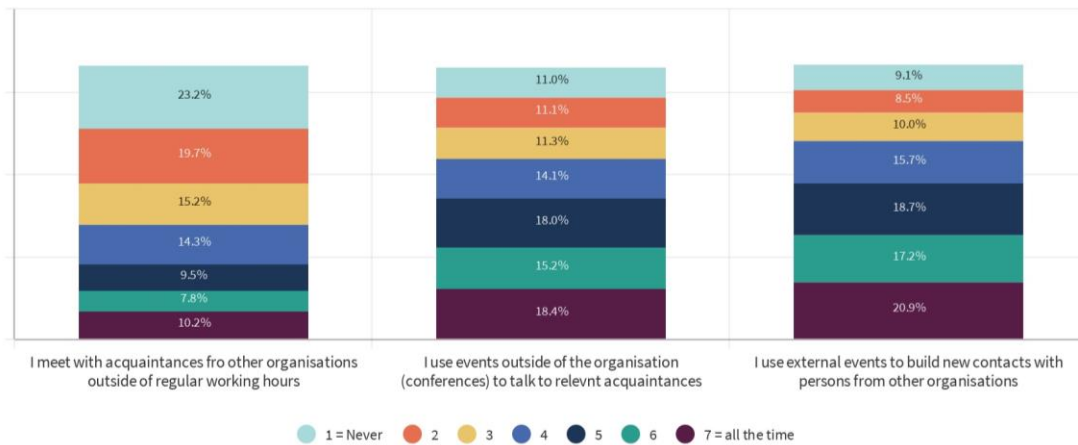
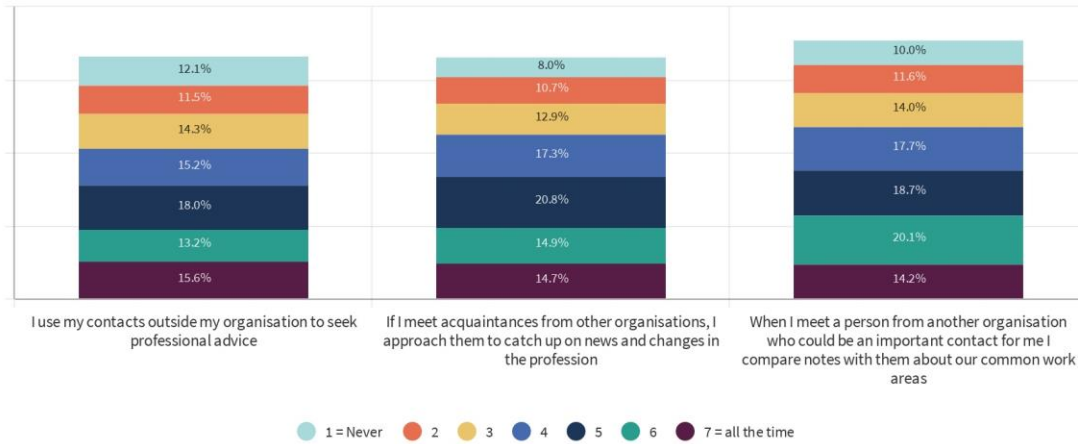
Chapter 8: Networks, Mobility, Equality, Diversity, and Inclusion

This chapter examines several vital dimensions of research management, including human resources, and human capital development for Research Managers.

Networking: Horizon Europe supports the development of networks to gain exposure to different research cultures (international and interdisciplinary) and to expand research excellence beyond Europe. The requirement for collaboration in research projects has ensured meaningful Researcher networking, but this has not traditionally been extended to support staff systematically. Research Managers engage in intentional networking behaviour and in more than one type of networking activity. These activities are located both within and outside their organisation, with a slight preference for internal ones. About two-thirds of Research Managers network with other Research Managers, and over half with Researchers. It is reassuring to see such a vibrant networking community among Research Managers who do not necessarily have the traditional researcher channels (e.g. conferences, the peer-review publication process) open to them to meet this need. Research Managers are good at building and using networks, but they do not do well in maintaining them. This gives an indication of areas that should be targeted for priority supports and interventions. The results also demonstrate that men and older Research Managers are more likely to engage in networking than women and younger professionals, therefore further insights are needed to make sure that gender and age discrimination does not hinder networking opportunities.

Mobility: Human capital mobility has long been a core element of the European Research landscape through the activities of EURAXESS and schemes such as MCSA. However, there is currently little data on the mobility patterns of non-research active staff, including Research Managers. CARDEA adopted a broad conceptualisation of mobility to include intersectoral and inter-role mobility as well as more traditional geographic mobility. As most Research Managers have worked in a single country or two countries only, geographical mobility is limited. The availability of funding and the enhancement of professional and personal networks are the two most influential factors fostering mobility, while linguistic barriers and social integration at the new location are the two factors hindering mobility.

NETWORKING RESEARCH MANAGERS



Personal reasons (e.g. family) also have a deep influence on geographical mobility and since most of Research Managers are women this aspect will need further reflection. Immigration barriers, social security systems and the cost of living have less impact on mobility than one would expect.

Job mobility is more common among Research Managers. Their choice is influenced by job satisfaction, career progression, salary increases and the pursuit of a fair work-life balance. Echoing observations made in other chapters, promotion opportunities are not a factor influencing job mobility. Comments regarding a lack of knowledge about possible alternative employment opportunities and of planning in the job change point to the need for career development advice for Research Managers. The Erasmus+ scheme was the most popular among Research Managers who moved, but this reveals engagement in mobility schemes (i.e. StudyAbroad Erasmus+) at a career level that is not necessarily linked to their professional development as Research Managers (also considering the low rate of professionals having a RM certification – see Chapter 3).

TABLE 10: MOBILITY DATA FROM THE CARDEA SURVEY

	<i>n</i>	%
How many countries have you worked in?		
1	202	44.7
2	124	27.4
3	70	15.5
4 or more	56	12.4
Which of the following factors influenced your decision to be geographically mobile (or not)*		
Social security system	37	14.6
Barriers to immigration	13	5.1
Language challenge	78	30.7
Quality and cost of accommodation	56	22.0
Social integration at the new location	62	24.4
Funding availability	105	41.3
Maintenance or enhancement of professional and personal networks	94	37.0
Culturally related factors	90	35.4
Other – details	72	28.3
Is your citizenship different to your country of employment		
Yes	61	13.2
No	402	86.8
How many jobs have you had as a professional?		
1	29	6.4
2	68	15.1

TABLE 10: MOBILITY DATA FROM THE CARDEA SURVEY

	<i>n</i>	%
3	123	27.3
4 or more	231	51.2
If you ever changed job type (e.g. research to RM or public to private?), which of the following influenced your decision*		
I have not changed job type	54	11.8
Contract ended	154	33.7
Job satisfaction	218	47.7
Good work-life balance	193	42.2
Life satisfaction	144	31.5
Career progression goals	208	45.5
Prospect to work with a learning organisation	73	16.0
Salary and other financial reasons	178	38.9
Promotion or opportunities	97	21.2
Job security	157	34.4
To gain professional experience	158	34.6
Higher recognition as a professional	113	24.7
Interdisciplinary opportunities	114	24.9
other	26	5.7
Have you availed of any of the following EU mobility schemes or instruments*		
No, I have not availed of any EU mobility schemes	275	48.8
Refugee Researchers (science4refugees)	1	0.2
Cost Action Networks	51	9.1
Study abroad Erasmus+ (individual actions)	70	12.4
Staff visits/exchanges Erasmus+	84	14.9
Erasmus Mundus Actions	13	2.3
ERC Individual Fellowships	10	1.8
MCSA - Post-Doctoral Fellows	13	2.3
MCSA - Doctoral Networks	11	2.0
MCSA - Cofund	6	1.1
ERC - Visiting Research Fellowships	1	0.2
ERC International Arrangement Funding	0	
ERC International Mentoring Initiative	1	0.2
Other, please specify	27	4.8

*Multiple responses possible

Gender Equality, Diversity and Inclusion: In the Horizon Europe programme, the commission has reaffirmed its commitment to gender equality by integrating gender as a cross-cutting priority. Research Performing Organisations in Europe are expected to have a Gender Equality Plan (GEP). Moreover, the European Research Area (ERA) has prioritised gender equality in considering changes required in the Research and Innovation ecosystem. The majority of organisations hosting Research Managers (80.8%) have a Gender Equality Plan, but the CARDEA survey also revealed the need to increment funding for their

implementation. More worryingly, most of Research Managers' organisations (86.6%) do not have any EDI recognition schemes or affiliations such as charters or awards in place. This raises the question of whether EDI is only considered by organisations when they need to access funding or for other 'box-ticking' reasons. Among the organisations that do have a recognition scheme, Athena Swan was the most popular, followed by the HR Excellence in Research awards. When confronted with how GEP themes, ERA-specific gender objectives and gender-relevant flexible working patterns are managed in their organisations,¹² Research Managers are not completely satisfied. Gender gaps are still an issue, especially with respect to gender balance in leadership and decision making, gender equality in careers and the integration of the gender dimension into teaching, research and innovation content. Moreover, the level of satisfaction among men is statistically higher than among women.¹³ The management of gender equality, diversity and inclusion in Research Managers' work environments will need further investigation and support in the future.

¹² The GEP themes are work life balance and organisational culture; gender balance in leadership and decision making; gender equality in recruitment and career progression; integration of the gender dimension into research and teaching content; measures against gender-based violence, including sexual harassment; gender equality in research careers; gender balance in decision making; integration of the gender dimension into the content of research and innovation; offering flexible employment practices for RMs e.g. career breaks, and family leave. The three ERA objectives are gender equality in research careers; gender balance in decision making; integration of the gender dimension into the content of research and innovation.

¹³ Male/man and female/woman are used interchangeably in this text.

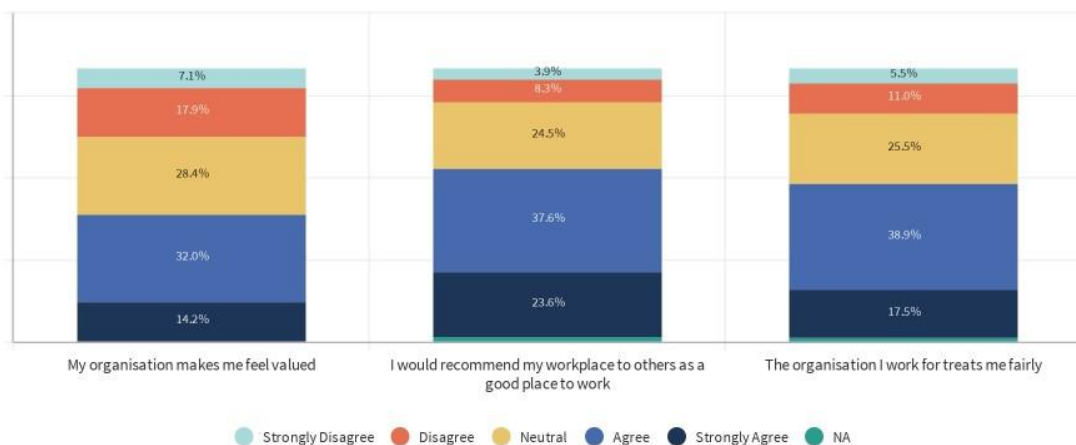
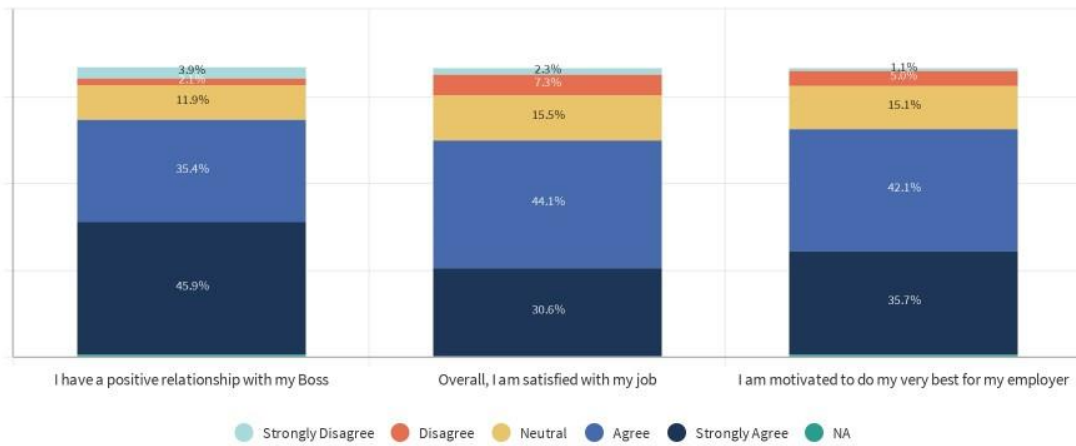
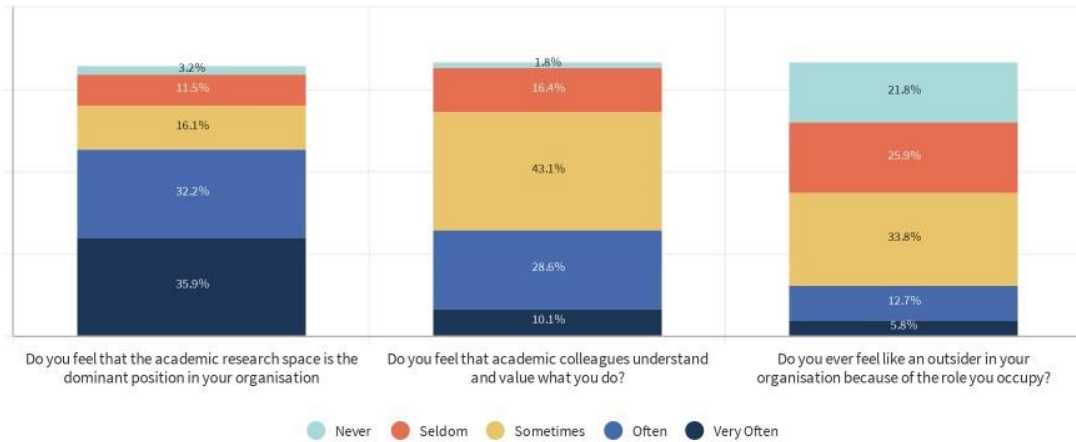
Chapter 9: Professional Identities

A novel aspect of the CARDEA research is that we aim to move the discourse beyond an analysis of demographics and working conditions and develop an understanding of the characteristics of professional identity and lived experience of becoming and being a Research Manager.

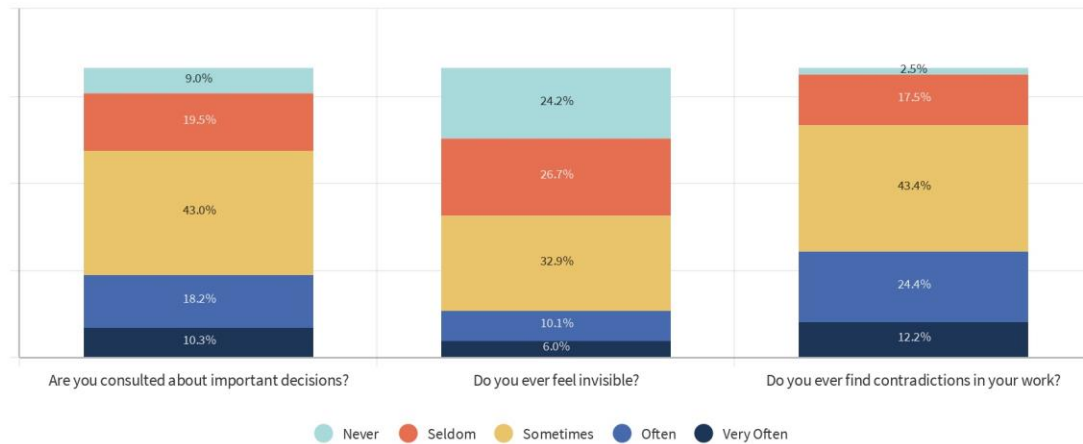
Working across boundaries: This professional identity is often (49.9%) associated with a fixed portfolio of activities, but this portfolio extends across disciplinary boundaries. As they do not seem to experience any tensions in relation to this interdisciplinarity work, Research Managers seem to be extremely flexible in doing their job. Research Managers have a sound knowledge base and rich expertise that enable them to deliver their work effectively and enjoy an appropriate amount of autonomy to choose their methods and pace of work. Only a minority of the Research Managers surveyed, however, feel a well-defined sense of belonging to a professional group, either formally or informally. Interdisciplinary work, low levels of organisational recognition or other factors may influence this lack of sense of belonging. The sense of belonging is higher among those who belong to EARMA or other professional group. Membership of these organisations should be encouraged to foster the sense of belonging among the diverse community of Research Managers.

Professional Esteem for Research Managers: A strong theme in the literature on research management is around the lack of job-esteem afforded to professional support, administration and research management roles. Overall, Research Managers feel that academic colleagues understand and value what they do, but there is a relatively worrying number of individuals that feel outsiders in their organisation or, put another way, invisible. This means that Research Managers work in environments where they do not always feel valued for what they do. Moreover, levels of professional esteem are higher among men than among women and professionals with disabilities.

PROFESSIONAL IDENTITY - RESEARCH MANAGERS



PROFESSIONAL IDENTITY - RESEARCH MANAGERS



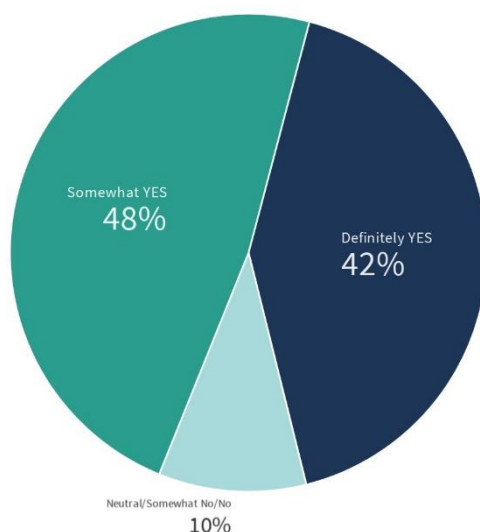
Well-being: The lack of professional esteem has an impact on the wellbeing of Research Managers. Although most of them have a positive relationship with their boss, mental (i.e. depression, anxiety or other mental health issues kept me from achieving my goals at work) and physical (i.e. chronic illness, allergies, headaches, back pain or other physical conditions) health issues keep them from achieving their goals and, ultimately, reduce organizational performance. Worryingly enough, as we have seen with professional esteem, men and those without a disability enjoy a higher level of wellbeing than women and those with a disability. However, despite the challenges associated with individual items on the wellbeing measure, it is reassuring to note that Research Managers report that they are satisfied overall with their job.

Stress: Stress has been associated with a range of negative outcomes in the workplace. Research Managers seem to experience some levels of stress, with the most frequent symptoms being lack of interest, motivation or energy (43.1%), difficulty in focusing (35.3%), lower productivity (30.5%), negative thoughts (27.6%), irritability or anger with co-workers or other stakeholders (26.9%), or desire to quit (25%).

Chapter 10: Skills

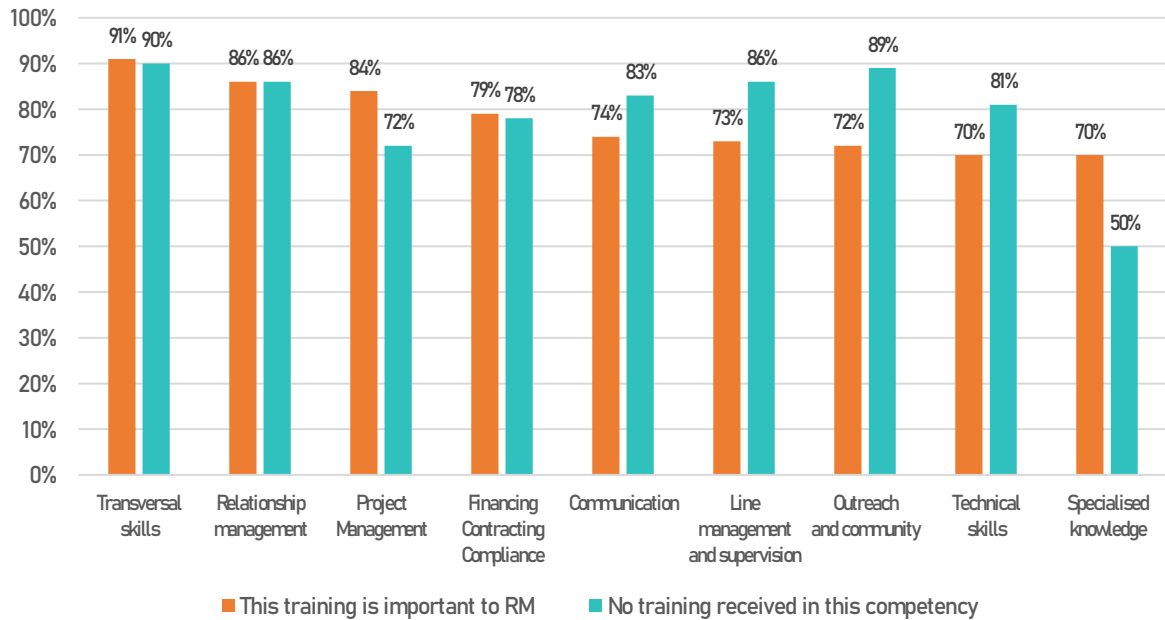
CARDEA aims to capture the skills profiles of Research Managers. These professionals (89.9%) strongly believe that they have the skills they need to be an effective Research Manager. Their work also encourages them (78.6%) to use their skills in their tasks. Table 11 gives an overview of the level of importance Research Managers attribute to specific skills (from 1 to 5) and identifies where further training is most needed. Individual skills have been grouped into skill families.

CARDEA demonstrates that Research Managers need and want training in the skill areas that they think are the most important to carry out their job. As the results discussed previously show, this does not mean that Research Managers do not think they have the skills required to do their job. Rather, this means that they are eager to engage in professional development initiatives that will enhance their capacities and their effectiveness as research management professionals. This is especially true for transversal skills such as attention to detail, critical thinking, decision making and relationship management skills such as collaborating for success. Developing and managing partnerships with internal and external stakeholders is also an area where there is a lack of training for Research Managers. CARDEA will devise training opportunities that will answer the professional needs of Research Managers and that will be compatible with their busy schedules and flexible plans for professional development (see Chapter 6 for further details).



**DO YOU HAVE THE
SKILLS TO BE AN
EFFECTIVE RM?**

COMPETENCIES CARDEA MATRIX



COMPETENCIES CARDEA MATRIX

Level of importance of skill families

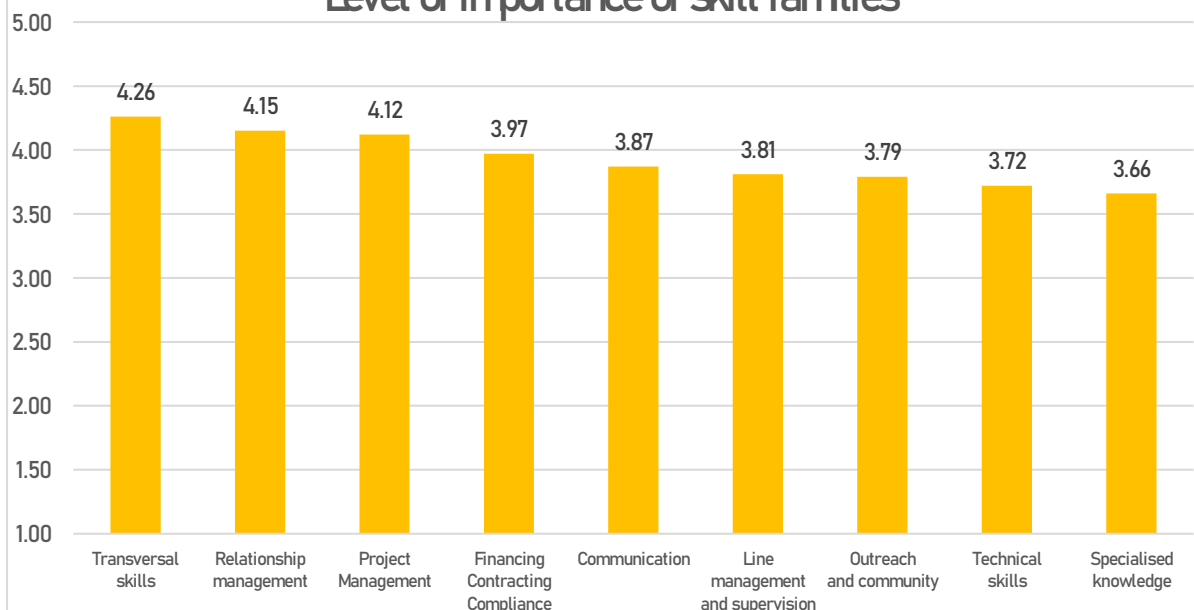


TABLE 11: SKILLS ASSESSED IN CARDEA SURVEY

Skills families and individual skills	Level of importance (from 1 to 5)	Nb training received
Transversal skills	4.26	90%
Attention to detail	4.59	95%
Autonomy	4.53	96%
Creativity	4.22	92%
Critical thinking	4.62	88%
Cultural sensitivity	4.30	87%
Decision making	4.52	90%
Diversified knowledge set	4.39	95%
Efficiency	4.59	91%
Flexibility	4.61	94%
Leadership	4.33	76%
Motivation	4.47	91%
Openness	4.46	94%
Proactivity	4.58	95%
Problem-solving	4.77	89%
Reliability	4.68	96%
Research Integrity/ ethical behaviour	4.50	77%
Strategic thinking	4.53	87%
Stress management	4.45	82%
Values Appreciation	4.24	93%
Relationship management	4.15	86%
Teamwork	4.66	77%
Collaborating for success	4.52	93%
Building trust within partnerships	4.49	94%
Networking	4.45	87%
Conflict management	4.45	73%
Handling difficult conversations	4.38	78%
Managing competing demands	4.36	92%
Diplomacy and negotiation, and mediation	4.30	89%
Facilitation skills	4.30	84%
Promoting or supporting mutual learning	4.11	93%
Contributing to fair working environments, e.g. anti-bullying initiatives	4.08	89%
Project Management	4.12	72%
General Project Management	4.66	52%
Time management	4.58	65%
Achieving project deliverables	4.57	72%
Relationship management	4.47	79%
Establishing project plans or policies	4.44	75%
Designing monitoring and evaluation frameworks and indicators	4.39	77%
Meeting management	4.33	77%
Knowledge of databases	3.81	81%
Knowledge of Microsoft projects (or other PM software)	3.59	75%

Financing/Contracting/Compliance	3.97	78%
Ensuring adherence to funders' terms and conditions	4.50	72%
Developing budgets	4.48	66%
Adhering to funding responsibilities	4.42	80%
Financial Management	4.38	69%
Monitoring budget, tracking expenditure or cashflow forecasting	4.34	80%
Audit trails, reporting on finance to funders or management	4.29	70%
Conducting due diligence on partners/collaborators	3.99	90%
Contract negotiation	3.94	83%
Processing financial claims and payments	3.87	84%
Procurement	3.64	84%
Communication	3.87	83%
Building and maintaining relationships with funders, partners or other stakeholders	4.57	89%
Presentation skills	4.41	61%
Coordination of communication	4.38	88%
Preparing and writing reports (including evaluation reports and funder reports)	4.38	85%
Public speaking/ presentation	4.36	68%
Designing and implementing communication plans	4.02	87%
Preparing briefings	4.02	91%
Social Media	3.61	86%
Website planning and design	3.52	82%
Media Liaison	3.45	92%
Line management and supervision of others	3.81	86%
People management and managing team performance	4.31	78%
Reporting or evaluation taking account of differing needs of target audiences	4.07	91%
Informal mentoring	4.03	86%
Coaching skills for managers	4.00	80%
Recruitment and selection	3.92	83%
Staff review, performance and development	3.89	84%
Delivering formal coaching/mentoring	3.81	85%
Outreach and community	3.79	89%
Academic and community relationship support	4.20	94%
Responsibility for engaging with key stakeholders	4.20	93%
Community and/or public outreach	3.98	81%
Provision of training	3.93	85%
Business and commercial liaison	3.61	94%
Technical skills	3.72	81%
Knowledge of the research systems	4.57	56%

Language skills	4.16	58%
IT skills	3.89	51%
Data collection and collation, and analysis	3.86	71%
Legal skills	3.64	77%
Discipline-specific skills	3.61	67%
Specialised knowledge	3.66	50%
Understanding the funding ecosystem	4.59	61%
Preparing funding applications	4.56	44%
Finding funding	4.54	49%
Open access scholarship	4.04	64%
Organisational behaviour	4.04	77%
EU policy drivers	4.02	71%
Preparation of bids (interinstitutional)	3.81	80%
Understanding unconscious bias	3.76	72%
Lobbying	3.71	93%
Managing equality, diversity and inclusion (including gender, disability and racism)	3.67	66%
Technology transfer/patents	3.65	69%
Gender competency	3.51	72%

Section 11: Research Management Careers and Their Future

One of the aims of CARDEA is to give voice to Research Managers and listen to their insights regarding their career journey and the future of the profession.

Career Journey: Research Managers reflecting upon their career development share the feeling of having 'topped out' and cannot see how they can pursue future aspirations as a Research Manager. To those with more years of experience, their long career looks like a mixed bag, with general satisfaction mixed with the identification of some challenges. The start of their career was a particularly challenging time, split between the desire to establish oneself as a professional and the complexity associated with managing research. For many, this start was accidental or due to a lack of alternatives, without a structured career plan. Those who ventured into this accidental transition either look at it with optimism for the future or pessimism and frustration related to precarity issues, the lack of professional esteem or the absence of promotional opportunities. Several Research Managers are former Researchers that transitioned in research management roles. The transition allowed many to stay in a research environment, but with a different focus and skills, and have a more secure career. Many, however, also did this transition involuntarily and especially because of shrinking trends in the academic job market.

The multifaceted career paths that characterise Research Managers result in versatile and diverse skill sets that make these professionals extremely flexible. As reported in Chapter 10, there is a strong desire for further training and career development opportunities. Structured and more tailored forms of research management training must be put in place to give the members of this skilled cohort the professional development opportunities they deserve. This effort should be combined with actions increasing Research Managers' recognition and promotional opportunities within their organisations. Future interventions will have to tackle the feelings of isolation, invisibility and dissatisfaction that are common among research management professionals.

Defining research management: What does 'research management' mean exactly? That is a question CARDEA aims to answer with the help of Research Managers. Referring to the addition of "Management" to "Research," Research Managers find management to be at the fore of their role and suggest that it is

necessary to define the first term in this context. Comparisons with other forms of management are frequent and lead to the conclusion that research management roles are more complex and diverse than other forms of management. The close relations of this profession with research activities is a factor contributing to this complexity and diversity. The emphasis Research Managers put on supporting research and Researchers reveal it to be a core activity in research ecosystems, necessary (though not sufficient) for research excellence.

Research Managers also define their role by locating their activity at the core of research teams and the management of their relations with internal and external stakeholders (i.e. funding agencies, private and public institutions, civic society). Research Managers are connectors that make research networks possible. As a Research Manager put it, “research management is distinctive because it connects the dots of the ecosystem. It's the connective tissue that may sometimes be overlooked.” Working simultaneously in multiple institutional sectors and disciplines, in and out of research ecosystems and funding landscapes, Research Managers facilitate processes and occupy an in-between role that are key to research success. The symbiotic relationship between research and research management, however, does not come without tensions. Research Managers see the added value their work provides to research ecosystems. However, tensions also arise because research management is often not viewed as having significant value. We have previously referred to this issue when we discussed low levels of professional esteem. Several Research Managers feel that their role could be even more valuable (and valued) if properly integrated in decision making processes concerning research strategies and plans. This point raises the question of whether and how Research Managers should understand research in order to be successful. The Research Managers surveyed do not agree on a final answer, but most of them acknowledge the need for bespoke training and professional development. That is what CARDEA is about. Improving the skills and career progression architecture of Research Managers will enhance Europe's research ecosystems. CARDEA welcomes the commitment and leadership shown by the European Commission through the new ERA policy agenda as research and innovation policies should foster and nurture the careers of research management

professionals . They are the connectors, pivots and relays on which research networks and organisations rely.

Research management in the next 10 year - proposed changes: Research Managers know what changes they want for their future and they ask for them in a consistent manner and a unified voice.

RECOGNITION

Research Managers want to be respected, valued and acknowledged, not only in research environments, but by society as well. The high rate of women working in this role, and the worryingly low level of professional esteem discussed earlier, should convey the urgency to recognise the work of Research Managers. This should happen nationally and internationally, via formal recognition from employers and changes at organisational and policy level.

“A BETTER RECOGNITION IN THE SCIENTIFIC BUT ALSO IN THE SOCIETY IN GENERAL. SOMETIMES EVEN INSIDE OUR INSTITUTION PEOPLE DON'T TOTALLY UNDERSTAND OUR JOB”

VISIBILITY

Research Managers do not want to feel invisible. They want their peers, colleagues and institutions to be aware of the value of their work. Visibility can be enhanced by, for instance, including Research Managers in decision-making processes, strategic think tanks and policy deliberations, especially if regarding research. Forms of professional recognition or certification would also be another way to make this role more visible.

“BEING A RECOGNISED PROFESSIONAL, NO NEED TO EXPLAIN TO MY HOMES WHAT A RESEARCH MANAGER IS FROM SCRATCH”

APPRECIATION

The work of Research Managers is scarcely appreciated. Appreciation of Research Managers' contribution and skills should not only come from peers, colleagues and Researchers, but from structural changes happening at institutional and policy level. For instance, the Commission may lead a unified effort across national funding institutions to implement appropriate funding solutions for research management. Considering the funding of Research Managers as an eligible expense item in research projects may be a first step in this direction.

"THAT THE FUNDING INSTITUTIONS SHOULD FINANCE THE MANAGEMENT OF THE PROJECTS PROPERLY AND THAT ALSO THE DIRECTORATE SHOULD BE TRAINED TO RECOGNISE THE COMPLEXITY OF THE PROFESSION"

FRAMEWORK – CERTIFICATION

One of Research Managers' priorities for the next 10 years is the design of bespoke and innovative training solutions that would foster opportunities for formation and professional development. National and/or international educational programmes (i.e. Masters or Bachelors); specific qualitifactions; certified courses; a concordat for the profession; a professional register — these are just some suggestions for solutions that would strengthen the acknowledgement of research management as a profession.

"DEVELOPMENT OF RESEARCH MANAGERS AS A PROFESSION WITH INTERNATIONAL STANDARDISED QUALIFICATIONS, JOB SKILLS AND COMPETENCIES AND A CAREER PATHWAY"

CAREER PATHWAYS

Calls for the provision of a defined career pathway naturally follow from the request for training opportunities. Research Managers feel stuck in their careers and want opportunities for progression. They ask for salary levels commensurate with their educational qualifications and work experience. They ask for career pathways that would increase job security and tackle the challenge of multiple short-term contracts that do not allow for promotion. Research Managers suggest that a potential solution to short-term contract issues may be to have institutional cohorts of permanently hired Research Managers who can be assigned to individual projects. This would guarantee security of employment and progression opportunities.

"I WANT TO SEE THAT RESEARCH MANAGEMENT IS ACKNOWLEDGED AS A PROFESSION, THERE IS A CAREER-DEFINED PATH AND IT'S PART OF THE CAREERS WITHIN RESEARCH INSTITUTIONS"

DEFINITION OF ROLES

Research Managers want their role to be defined, to be a job category with proper job descriptions. What it means to be a Research Manager is unclear and the tasks associated with this role are extremely diverse and unpredictable. This lack of clarity is hindering recognition of the profession and the implementation of solution concerning training and career pathways. As research management includes multifaceted tasks, a potential solution would be to identify a range of specialised roles within the research management suite of expertise. This profession, however, should be distinct from general administration duties. Research Managers are highly qualified, experienced professionals working at a high level, but this is not recognised as they are often classed as administrative staff. Formal definitions

of Research Managers' role would therefore contribute to better locate these professionals in private and public hierarchical structures.

"I WOULD LIKE TO SEE IT RECOGNISED AND NOT SEEN THE SAME AS OTHER ADMINISTRATIVE ROLES. I THINK MORE SPECIALISATION IS NEEDED (GRANT WRITERS, FINANCIAL MANAGERS, INNOVATION MANAGERS AND VERY DIFFERENT ROLES) BUT ONE PERSON LIKE ME MANAGES ALL THESE ROLES TOGETHER"

