BRIEFING NOTE IN PREPARATION OF THE ONLINE FOCUS GROUP

1. INTRODUCTION

The European Commission's communication on the new ERA for Research and Innovation[1] announced the delivery of a toolbox of support for researchers' careers by the end of 2024. This toolbox is to be developed by the Commission in partnership with Member States and research organisations, and includes, amongst others, a Researchers Competence Framework. The framework should support the recognition of researchers' skills, foster mobility between academia and industry and develop more targeted training opportunities.

Developing a reference framework with learning outcome descriptors is also one of the measures put forward in the European Skills Agenda for Sustainable Competitiveness, Social Fairness and Resilience published in 2020. In this agenda, the European Commission introduces the development of a European Competence Framework for researchers as a tool to support the development of a set of core skills for researchers and to foster mobility of scientists across Europe.

In May 2021, the Council of the European Union confirmed in its conclusions[2] the importance of developing a European Competence Framework for researchers to accomplish the recognition of the research profession at European level. Moreover, the Council stressed the need to develop a taxonomy of skills for researchers for monitoring purposes. In this respect, the European Skills, Competences, Qualifications and Occupations (ESCO) classification is currently being updated to include a set of skills and occupations for researchers. Since this is an ongoing process, the preliminary set of skills was used to develop the draft Competence Framework for Researchers. Hence, the development of the European Competence Framework for Researchers will serve multiple purposes and is directly related to other initiatives initiated by the European Commission and politically supported by the Council.

This note introduces the draft Competence Framework for Researchers, which consists of 7 competence areas covering 35 competences. The draft framework will be further developed and validated through stakeholder consultations. This first introductory chapter presents the aims of developing a European Competence Framework for Researchers followed by a discussion on the methodology used to develop the framework and the limitations it implies.

1.1. AIMS OF DEVELOPING A EUROPEAN COMPETENCE FRAMEWORK FOR RESEARCHERS

The development of the Competence Framework for Researchers is being led by the Directorate General for Research and Innovation (DG R&I), with the coaching of the European Commission's Joint Research Centre (JRC). Its ambition is to enable widespread recognition of the competences and career development of researchers in various stages of their careers. By clustering the competences in a manageable set of categories, the Framework will be a useful tool to support self-assessment, education and training (e.g. curricula development) as well as job search. By establishing a common basis, the ultimate goal is to contribute to the full recognition of the research profession, support comparable and interoperable research careers across countries, and facilitate the transitions between the academic and the private sector.

To achieve its aim, the study has been therefore designed to:

- Identify a set of key competences that researchers need for a successful research career, both inside and outside academia;
- Describe these competences to establish a shared conceptual model that all players in the field of research can refer to and to increase visibility and awareness of the transferable skills researchers have;

[1] COM/2020/628 final

[2] Council Conclusions on *Deepening the European Research Area: Providing researchers with attractive and sustainable careers and working conditions and making brain circulation a reality* (adopted on 28/05/2021)

- Identify cases that illustrate how a competence framework and other tools can be successfully used to promote and support researchers' training and assessment, to communicate competences related to researchers' occupations to employers outside the academic sector and to identify diverse job opportunities for researchers.

1.2. METHODOLOGY

Using a mixed-method research process including literature reviews, surveys, analysis of the 2020 Euraxess database of job vacancies and the participation of stakeholders in interviews and meetings, this draft framework is the result of progressive refinement, leading to the result presented in this note.

The development of the framework comprises the following steps, some of them already implemented:

1. A **literature review** of existing competence profiles and career structures for researchers
2. Two **online surveys**, one among researchers from the academic and private sector, and one among umbrella organisations, to reshape the 168 skills resulting from the literature review into a shorter set of 38 skills[3]
3. Analysis of the full 2020 **Euraxess database** in order to gain insight into the requested skills/competences by employers for researchers in different sectors and diverse career stages.
4. A **draft proposal** for a conceptual model based on the previous steps.
5. An in-depth **case study analysis**, where existing initiatives will be analysed to capture in detail the development and use of competence profiles to promote and support researchers' training and assessment, as well as to communicate competence profiles to employers outside the academic sector and to identify job opportunities for researchers outside academia.
6. A **focus group** with representatives from multiple umbrella organisations and Member States to refine the draft proposal based on participants' comments.
7. A subsequent **final proposal** for a conceptual model based on the feedback received from stakeholders.
8. A multi-stakeholder **validation meeting**
9. A draft **Competence Framework for Researchers** with 3 proficiency levels.

1.3. LIMITATIONS

The robust research methodology described above uses available expertise through desk research and extensive stakeholder consultation to progressively develop a conceptual model of the competence framework, building on the received feedback from diverse stakeholders. While the key statements and assumptions have been validated throughout the process, the following limitations need to be taken into account:

- The conceptual model presented in this briefing note **focuses on transferable skills** and it is deliberately formulated in a generic way so that it applies to the academic sector and beyond.
- The presented framework should be considered as a **blueprint or prototype**: it has not been tested or applied in real life settings yet and could be further refined based on feedback from practitioners and end-users.
- The competences in the framework correspond with the skills/competences related to research occupations in the **European classification of Skills, Competences, Qualifications and Occupations (ESCO)**. Changing the framework is likely to imply adaptations in ESCO and vice versa.
- For each competence, several **learning outcomes** will be developed indicating what researchers in the academic sector and beyond should know, understand and be able to do to demonstrate a certain level of

[3] This set of skills was used to update the European Skills, Competences, Qualifications and Occupations (ESCO) classification. In this context, it is important to note that ESCO does not make a distinction between skills and competences. More information on ESCO if available online: https://ec.europa.eu/esco/portal
This set of skills was used to draft the conceptual model presented in paragraph 2.2 of this briefing note. However, two of these ESCO skills are not explicitly mentioned in the competence areas as they are embedded in at least one other competence, namely 'apply blended learning' (as part of teaching) and speak different languages (covered by all communication skills). Moreover, 'publish academic research' and 'evaluate research activities' have been combined into one competence, namely 'participate in the publication process', as they are closely related to one another.

competence in research. These learning outcomes are, however, not included in this note and will be developed later on.

2. THE EUROPEAN COMPETENCE FRAMEWORK FOR RESEARCHERS

This chapter starts with a presentation of the conceptual model of the framework and a definition of the key concepts. Then, it explains how the framework could be used to support researchers and research careers.

2.1. DEFINITIONS OF KEY CONCEPTS

The competence framework aims to establish a common understanding of the competences that are related to researchers´ careers. Its goal is to become a reference for a broad spectrum of initiatives which aim to foster trainings for researchers in Europe and beyond. Therefore, it is highly important to define the key concepts that are at the basis of the framework.

Term	Definition & Source
Attitudes	"Attitudes describe the disposition and mind-sets to act or react to ideas, persons or situations" (ST/9009/2018/INIT: Council Recommendation on key competences for lifelong learning)
Competence	"Competence is defined as a combination of knowledge, skills and attitudes." (ST 9009 2018 INIT)
Data	"Data refer to characteristics or information, usually numerical, that are collected through observation. Data are typically the results of measurements and can be visualised using graphs or images." (Eurostat – Statistics explained - Glossary)
Knowledge	"Knowledge is composed of the facts and figures, concepts, ideas and theories which are already established and support the understanding of a certain area or subject" (ST 9009 2018 INIT)
Learning outcomes	"Learning outcomes are statements of what a learner knows, understands and is able to do after completion of learning" (Cedefop, 2009). Such statements can be designed and used for educational planning and curriculum development or for different types of accountability such as legal accountability or professional accountability (Prøitz, 2010)
Open data	"Data in an open format that can be freely used, re-used and shared by anyone for any purpose" (PE/28/2019/REV/1)
Research	"Research and experimental development (R&D) comprise creative and systematic work undertaken to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge. […] The term R&D covers three types of activity: basic research, applied research and experimental development. "Basic research is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view. Applied research is original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific, practical aim or objective. Experimental development is systematic work, drawing on knowledge gained from research and practical experience and producing additional knowledge, which is directed to producing new products or processes or to improving existing products or processes" (Frascati Manual, OECD, 2015)
Researcher	"Professionals engaged in the conception or creation of new knowledge, conducting research and improving or developing concepts, theories, models, techniques instrumentation, software or operational methods" (Frascati Manual, OECD, 2015)
Resources	"In the context of this work, the concept 'resources' is a term that encompasses personal resources (namely, self-awareness and self-efficacy, motivation and perseverance), material resources (for instance, production means and financial resources) or non-material resources (for instance, specific knowledge, skills and attitudes)." (Bacigalupo et al., 2016)
Skills	"Skills are defined as the ability and capacity to carry out processes and use the existing knowledge to achieve results" (ST 9009 2018 INIT)
Stakeholders	"Actor that can affect, be affected by, or perceive itself to be affected by a decision or activity" (Glossary from European Open Science Cloud)
System	"Set of components that are interrelated in order to obtain an emergent behaviour" (Glossary from European Open Science Cloud)

2.2. CONCEPTUAL MODEL

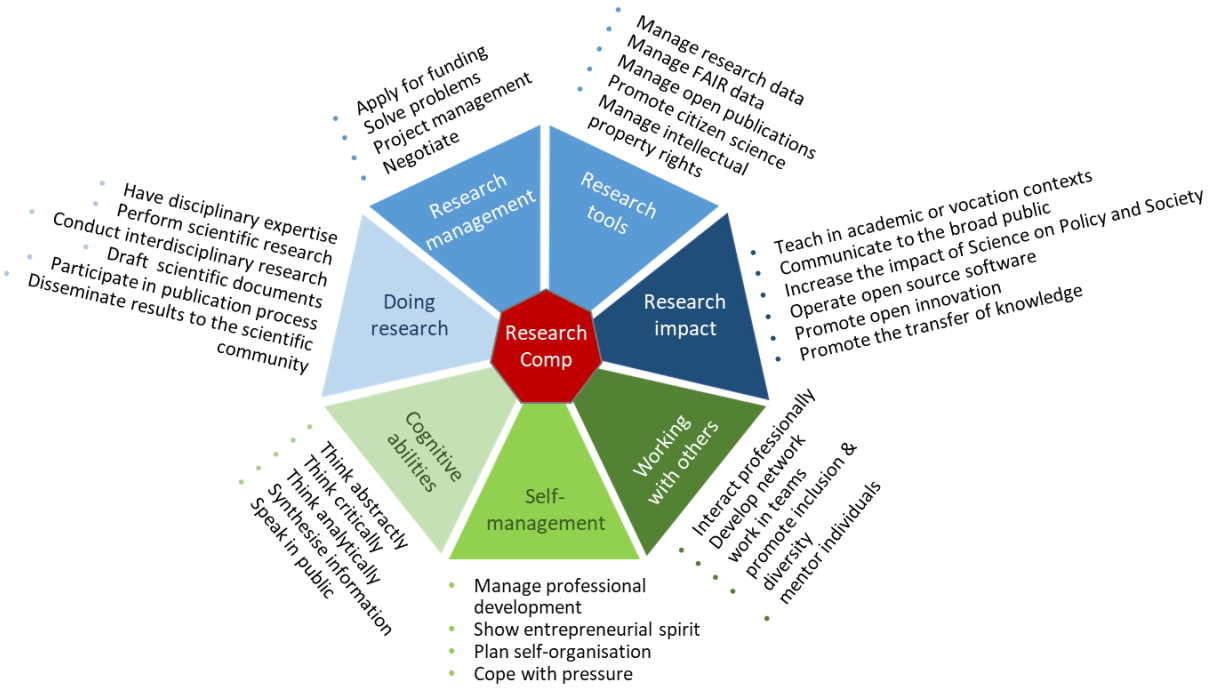
The draft conceptual model is inspired by the European Entrepreneurship Competence Framework (Entrecomp) and has the provisional title 'ResearchComp'. It is made up of two main dimensions: 7 competence areas and 35 competences that, together, make up the building blocks of the key competences for researchers' careers (see Figure 1). While the 35 competences are interrelated and interconnected, we are not suggesting that researchers should acquire the highest level of proficiency for all 35 competences or have the same proficiency across all the competences. The framework does, however, imply that researchers need to develop competences in all 7 areas.

We have listed the competences in Table 1. Each one is defined by a descriptor, which breaks it down into its core aspects. The 7 competence areas represent multiple perspective on research competences, indicated by the colours in the visualization:

- The three green competence areas are linked to the personal dimension, while the four blue competence areas relate to the research activities.
- The shading represents three thematic threads: 'doing' (light shade), 'managing' (medium shade) & 'interacting' (dark shade).

The skills used in the Framework come from the list of skills linked to researchers' occupations which are proposed to be included in the update of the ESCO classification, which is currently ongoing[4,5]. While there is no distinction between skills and competences in ESCO, the Framework describes each competence in one single description containing knowledge, skills and attitudes, which are the three interrelated components of a competence as defined in section 2.2. Hence, the Framework creates a shared understanding of the knowledge, skills and attitudes that researchers need for a successful research career, both inside and outside academia.

Figure 1: ResearchComp



[4] ESCO does not make a distinction between skills and competences.

[5] The labels of the competences are more 'compact' and user-friendly than the proposed skills for the ESCO update for communication purposes. However, two of these ESCO skills are not explicitly mentioned in the competence areas as they are embedded in at least one other competence, namely 'apply blended learning' (as part of teaching) and speak different languages (covered by all communication skills). Moreover, 'publish academic research' and 'evaluate research activities' have been combined into one competence, namely 'participate in the publication process', as they are closely related to one another.

The table below provides an overview of the ResearchComp conceptual model and describes the competences included in each area. The competences are shown in random order: they are equally important, as indicated by the circular visualisation. Depending on the use of the framework, some of the competences may be more emphasized than others. Each stakeholder can use it as a starting point to address its own needs.

Table 1 Draft ResearchComp conceptual model

Areas	Competences	Descriptions
1. Cognitive abilities	Think abstractly	Demonstrate the ability to use concepts in order to make and understand generalisations, and relate or connect them to other items, events, or experiences.
	Think critically	Be able to understand argument (oral and textual) and articulate own assumptions. Develop independent and critical thinking
	Think analytically	Produce thoughts using logic and reasoning in order to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
	Synthesise information	Critically read, interpret, and summarize complex information from diverse sources
	Speak in public	Address a group of listeners in a structured, deliberate manner to inform, influence or convince them. Understand and appreciate the value of engaging with the public.
2. Self-management	Manage professional development	Take responsibility for lifelong learning and continuous professional development. Engage in learning to support and update professional competence and develop personal skills. Identify priority areas for professional development based on reflection about own practice and through contact with peers and stakeholders. Pursue a cycle of self-improvement and develop credible career plans.
	Show entrepreneurial spirit	Demonstrate a proactive attitude and determination to achieve success in business or successfully create it
	Plan self-organisation	Identify the necessary tasks and prioritise them in order to develop an individual schedule and perform the work in an autonomous way, ensuring that the requirements are met.
	Cope with pressure	Handle challenges, disruption, and change and recover from set-backs and adversity.
3. Working with others	Interact professionally	Show consideration to others as well as collegiality. Listen, give and receive feedback and respond perceptively to others, also involving staff supervision and leadership in a professional setting.
	Develop network	Develop alliances, contacts or partnerships, and exchange information with others. Foster integrated and open collaborations where different stakeholders co-create shared value research and innovations. Develop your personal profile or brand and make yourself visible and accessible in face-to-face and online networking environments.
	Work in teams	Work confidently within a group with each doing their part in the service of the whole.
	Promote inclusion & diversity	Act as role model for personal conduct when dealing with diversity and difference; educate, advise and guide less experienced researchers. Make positive use of diversity and difference to enrich research projects and outputs, integrating gender dimension in research and applying equality and diversity management
	Mentor individuals	Mentor individuals by providing emotional support, sharing experiences and giving advice to the individual to help them in their personal development, as well as adapting the support to the specific needs of the individual and heeding their requests and expectations.

4. Doing research	Disciplinary expertise	Demonstrate deep knowledge and complex understanding of a specific research area, including responsible research, research ethics and scientific integrity principles, privacy and GDPR requirements, related to research activities within a specific discipline.
	Perform scientific research	Gain, correct or improve knowledge about phenomena by using scientific methods and techniques, based on empirical or measurable observations.
	Conduct interdisciplinary research	Work and use research findings and data across disciplinary/functional boundaries.
	Draft scientific documents	Draft and edit scientific, academic or technical texts on different subjects.
	Participate in publication process	Conduct academic research, in universities and research institutions, or on a personal account, and publish it in books or academic journals with the aim of contributing to a field of expertise and achieving personal academic accreditation. Review proposals, progress, impact and outcomes of peer researchers, including through open peer review.
	Disseminate results to the scientific community	Publicly disclose scientific results by any appropriate means, including conferences, workshops, colloquia and scientific publications.
5. Research Management	Apply for funding	Identify key relevant funding sources and prepare research grant application in order to obtain funds and grants. Write research proposals.
	Solve problems	Develop and implement solutions to practical, operational or conceptual problems which arise in the execution of work in a wide range of contexts.
	Project management	Manage and plan various resources, such as human resources, budget, deadline, results, and quality necessary for a specific project, and monitor the project's progress in order to achieve a specific goal within a set time and budget.
	Negotiate	Exchange ideas while analysing issues and interests at stake, enabling opposing sides to resolve disputes and reach agreement, or making decisions to resolve disputes or impose justice.
6. Research tools	Manage research data	Produce and analyse scientific data originating from qualitative and quantitative research methods. Store and maintain the data in research databases. Support the re-use of scientific data and be familiar with open data management principles.
	Manage FAIR data	Produce, store and (re) use scientific data based on FAIR (Findable, Accessible, Interoperable, and Reusable) principles, making data as open as possible, and as closed as necessary.
	Manage open publications	Be familiar with Open Publication strategies, with the use of information technology to support research, and with the development and management of CRIS (current research information systems) and institutional repositories. Provide licensing and copyright advice, use bibliometric indicators, and measure and report research impact.
	Promote citizen science	Engage citizens in scientific and research activities and promote their contribution in terms of knowledge, time or resources invested.
	Manage intellectual property rights	Deal with the private legal rights that protect the products of the intellect from unlawful infringement.

7. Research impact	Teach in academic or vocation contexts	Instruct students in the theory and practice of academic or vocational subjects, transferring the content of own and others' research activities.
	Communicate to the broad public	Communicate about scientific findings to a non-scientific audience, including the general public. Tailor the communication of scientific concepts, debates, findings to the audience, using a variety of methods to different target groups, including visual presentations.
	Increase the impact of Science on Policy and Society	Influence evidence-informed policy and decision making by providing scientific input to and maintaining professional relationships with policymakers and other stakeholders.
	Operate open source software	Operate Open Source software, knowing the main Open Source models, licensing schemes, and the coding practices commonly adopted in the production of Open Source software.
	Promote open innovation	Apply techniques, models, methods, and strategies that contribute to the promotion of steps towards innovation through collaboration with people and organizations outside the organisation.
	Promote the transfer of knowledge	Deploy broad awareness and knowledge of processes of knowledge valorisation aimed to maximise the two–way flow of technology, intellectual property, expertise and capability between the research base and industry or the public sector.

2.3. HOW TO USE THE FRAMEWORK

This conceptual model is in line with other competence frameworks developed by the Joint Research Centre (JRC), such as the European Entrepreneurship Competence Framework (EntreComp), the Digital Competence Framework for Citizens (DigComp) and the Competence Framework for 'Evidence for policy', directed at researchers, which is currently under development[6]. It will follow a similar structure, including three levels of progression for each of the 35 competences:

- Foundational: developing expertise under the supervision of others
- Intermediate: building independence and taking responsibility
- Advanced: driving transformation, innovation and growth

The progression model will be defined as soon as the conceptual model with its 7 competence areas and 35 competences is validated. The example below illustrates the progression levels for the competence 'Mentoring':

Competence: Mentoring		
Foundational	**Intermediate**	**Advanced**
• Effectively supports the learning of others when involved in teaching, mentoring, demonstrating or other research activities • Recognises the importance of mentorship and receiving mentoring. • Develops skills as a mentor and uses own mentorship effectively. • Encourages peers and less experienced researchers to present at conferences, write and publish joint or individual papers. • Acts as a mentor to students.	• Acts as mentor to less experienced colleagues. • Helps mentees and other people to see opportunities and take up new challenges. • Identifies potential in others; empowers people. • Sets challenges but builds and develops confidence; manages the over-confident.	• Is a role model. Shares networks; creates opportunities for others. • Shapes the mentoring strategy of own institution. • Involves people in decision making and leadership roles, promoting their autonomy. • Nurtures talent; develops skilled researchers.

Source: adopted from VITAE Researcher Development Framework

[6] The competence framework is published for commenting (deadline Sep 8) on the Knowledge4Policy platform

These proficiency levels could relate to the diverse stages in a research career (e.g. for R1-R4 researchers[7]), but that is not necessarily the case. It is up to the users to apply the progression model to their own organisation and to decide on the level of proficiency required for junior and more senior researchers.

- As responsibilities related to management and supervision tend to grow through research careers, R1 researchers can be expected to be at the foundational level and R4 researchers should be more advanced, while expectations tend to be the other way around when it comes to managing research data.
- Non-academic research environments could have other requirements for researchers, since, for instance, teaching is less important than in higher education institutions. As a result, they may not expect senior researchers to be advanced at teaching in academic or vocation contexts.

Researchers can progress to the next level through dedicated (online) training courses, on-the-job training, peer-to-peer learning, coaching and mentoring. The framework is an inspirational tool that can be used at both organisational and individual level, for example, serving the following purposes:

- Recognise the skills, knowledge and attitudes required in jobs for researchers in and outside academia
- Draw up job descriptions and assess job applications
- Map an individual researcher's set and level of research skills, knowledge and attitudes to develop a personal training plan including the correct starting point, and to monitor the progress made (or lack thereof)
- Map a team's collective set and level of skills, knowledge and attitudes to determine if there are any missing or redundant skills, knowledge, attitudes to achieve the mission/project objectives
- Identify skills needs/shortages at regional, national and European level through monitoring
- Support the design of training courses and learning outcomes.

3. REFERENCES

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[7] R1: First Stage Researcher (up to the point of PhD)
R2: Recognised Researcher (PhD holders or equivalent who are not yet fully independent)
R3: Established Researcher (researchers who have developed a level of independence.)
R4: Leading Researcher (researchers leading their research area or field)

ANNEX: PROPOSED SKILLS TO BE INCLUDED IN THE UPDATED ESCO CLASSIFICATION

The update of the ESCO classification is work in progress: the updated version is expected to be available by the end of 2021. The list below will be finalised in interaction with the Directorate-General for Employment, Social Affairs & Inclusion of the European Commission (DG EMPL).

	Name	Description
1	**Think abstractly**	Demonstrate the ability to use concepts in order to make and understand generalisations, and relate or connect them to other items, events, or experiences.
2	**Think critically**	Be able to understand argument (oral and textual) and articulate own assumptions. Develop independent and critical thinking
3	**Synthesise information**	Critically read, interpret, and summarize complex information from diverse sources
4	**Operate open source software**	Operate Open Source software, knowing the main Open Source models, licensing schemes, and the coding practices commonly adopted in the production of Open Source software.
5	**Apply blended learning**	Be familiar with blended learning tools by combining traditional face-to-face and online learning by using digital tools, online technologies, and e-learning methods.
6	**Manage research data**	Produce and analyse scientific data originating from qualitative and quantitative research methods. Store and maintain the data in research databases. Support the re-use of scientific data and be familiar with open data management principles.
7	**Manage findable, accessible, interoperable and reusable data**	Produce, store and (re) use scientific data based on FAIR (Findable, Accessible, Interoperable, and Reusable) principles, making data as open as possible, and as closed as necessary.
8	**Manage open publications**	Be familiar with Open Publication strategies, with the use of information technology to support research, and with the development and management of CRIS (current research information systems) and institutional repositories. Provide licensing and copyright advice, use bibliometric indicators, and measure and report research impact.
9	**Promote the transfer of knowledge**	Deploy broad awareness and knowledge of processes of knowledge valorisation aimed to maximise the two–way flow of technology, intellectual property, expertise and capability between the research base and industry or the public sector.
10	**Promote open innovation in research**	Apply techniques, models, methods and strategies which contribute to the promotion of steps towards innovation through collaboration with people and organizations outside the organisation.
11	**Manage personal professional development**	Take responsibility for lifelong learning and continuous professional development. Engage in learning to support and update professional competence and develop personal skills. Identify priority areas for professional development based on reflection about own practice and through contact with peers and stakeholders. Pursue a cycle of self-improvement and develop credible career plans.

12	Interact professionally in research and professional environments	Shows consideration to others as well as collegiality. Listens, gives and receives feedback and responds perceptively to others, also involving staff supervision and leadership in a professional setting.
13	Apply for research funding	Identify key relevant funding sources and prepare research grant application in order to obtain funds and grants. Write research proposals.
14	Communicate with a non-scientific audience	Communicate about scientific findings to a non-scientific audience, including the general public. Tailor the communication of scientific concepts, debates, findings to the audience, using a variety of methods to different target groups, including visual presentations.
15	Develop professional network with researchers and scientists	Developing alliances, contacts or partnerships, and exchanging information with others. Foster integrated and open collaborations where different stakeholders co-create shared value research and innovations. Develop your personal profile or brand and make yourself visible and accessible in face-to-face and online networking environments.
16	Conduct research across disciplines	Work and use research findings and data across disciplinary/functional boundaries.
17	Work in teams	Work confidently within a group with each doing their part in the service of the whole.
18	Teach in academic or vocation contexts	Instruct students in the theory and practice of academic or vocational subjects, transferring the content of own and others' research activities.
19	Evaluate research activities	Review proposals, progress, impact and outcomes of peer researchers, including through open peer review
20	Increase the impact of Science on Policy and Society	Influence evidence-informed policy and decision making by providing scientific input to and maintaining professional relationships with policymakers and other stakeholders.
21	Promote inclusion in research	Act as role model for personal conduct when dealing with diversity and difference; educate, advise and guide less experienced researchers. Make positive use of diversity and difference to enrich research projects and outputs, integrating gender dimension in research and applying equality and diversity management
22	Promote the participation of citizens in scientific and research activities	Engage citizens in scientific and research activities and promote their contribution in terms of knowledge, time or resources invested.
23	Demonstrate disciplinary expertise	Demonstrate deep knowledge and complex understanding of a specific research area, including responsible research, research ethics and scientific integrity principles, privacy and GDPR requirements, related to research activities within a specific discipline.
24	Manage intellectual property rights	Deal with the private legal rights that protect the products of the intellect from unlawful infringement.
25	Speak in public	Address a group of listeners in a structured, deliberate manner to inform, influence or convince them. Understand and appreciate the value of engaging with the public.

26	**Publish academic research**	Conduct academic research, in universities and research institutions, or on a personal account, publish it in books or academic journals with the aim of contributing to a field of expertise and achieving personal academic accreditation.
27	**Show entrepreneurial spirit**	Demonstrate a proactive attitude and determination to achieve success in business or successfully create it
28	**Solve problems**	Developing and implementing solutions to practical, operational or conceptual problems which arise in the execution of work in a wide range of contexts.
29	**Think analytically**	Produce thoughts using logic and reasoning in order to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
30	**Mentor individuals**	Mentor individuals by providing emotional support, sharing experiences and giving advice to the individual to help them in their personal development, as well as adapting the support to the specific needs of the individual and heeding their requests and expectations.
31	**Perform scientific research**	Gain, correct or improve knowledge about phenomena by using scientific methods and techniques, based on empirical or measurable observations.
32	**Speak different languages**	Master foreign languages to be able to communicate in one or more foreign languages.
33	**Plan self-organisation**	Identify the necessary tasks and prioritise them in order to develop an individual schedule and perform the work in an autonomous way, ensuring that the requirements are met.
34	**Cope with pressure**	Handle challenges, disruption and change and recover from set-backs and adversity.
35	**Perform project management**	Manage and plan various resources, such as human resources, budget, deadline, results, and quality necessary for a specific project, and monitor the project's progress in order to achieve a specific goal within a set time and budget.
36	**Negotiate**	Exchanging ideas while analysing issues and interests at stake, enabling opposing sides to resolve disputes and reach agreement, or making decisions to resolve disputes or impose justice.
37	**Draft scientific or academic papers and technical documentation**	Draft and edit scientific, academic or technical texts on different subjects.
38	**Disseminate results to the scientific community**	Publicly disclose scientific results by any appropriate means, including conferences, workshops, colloquia and scientific publications.