

Best practices on Research Competence Framework for Researchers and transversal skills/competences

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Table of contents

Introduction	1
Methodology	2
Best practices on the Competence Framework for Researchers	3
1. Vitae – The Researchers Development Framework (RDF)	3
2. KU Leuven Career Centre - The Researchers Development Framework (RDF)	4
3. German University Association of Advanced Graduate Training (UniWiND/GUAT)	6
4. University of Cyprus - YUFE Competence Framework for Researchers	7
Conclusions	8
Annex 1 Interview guide on the Competence Framework for Researchers and their transversal skills/competencies	8

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- Dr. Christian Dumpitak, HHU Düsseldorf, German University Association of Advanced Graduate Training (UniWiND/GUAT)
- Stefan Wellens, KU Leuven Career
- Nicole Wedell von Leupoldt, KU Leuven Career
- Dr. Tatiana-Ioanna Gialama, University of Cyprus

Introduction

This document is a brief compilation of European best practices on the Competence Framework for Researchers and their transversal skills/competencies of the researchers potential future improvements or revision of ResearchComp.

This document was developed as part of Work Package 4 (WP4), *"Implementation of the Research Career Framework,"* within the European project [Sustainable Careers for Researcher Empowerment](#) (SECURE). Running from 1 January 2023 to 31 March 2025, the project is funded by the Horizon Europe 2021–2027 programme, with UEFISCDI among its 18 partners.

The SECURE project aims to create, test, implement, and integrate a common framework for research careers. This framework provides a range of options to support organisations in recruiting, employing, training, developing, advancing, and facilitating the mobility of researchers, with the goal of enhancing research careers and reducing career instability.

As one of five pilot organizations implementing actions from the [Research Career Framework](#) developed in the project, UEFISCDI is carrying out several of these actions. Among these is the activity, *"Collect and share best practices on ResearchComp and transversal skills/competences"* (UEFISCDI [Action Plan](#), Pillar 4, Recommendation 17 - ResearchComp, SECURE Research Career Framework).

Some of the best practices collected at the European level are among those identified by the European Commission in the document [Knowledge ecosystems in the new ERA - Using a competence-based approach for career development in academia and beyond](#) (2022), along with an additional example identified through desk research.

Many inspiring initiatives have been implemented over the past few years. Efforts should be made to foster the sharing of best practices, knowledge and lessons learned among the research community.

This exercise contributes to the compilation of a comprehensive overview of effective practices that can guide research funding organizations and research performing organizations in similar endeavors to better understand the need for a research competence framework for researchers and to better promote the use and its future integration within their system.

Methodology

A combination of complementary research methods was used to gather the necessary information for drafting this document. In addition to desk research, diverse stakeholders who developed and are utilizing competence frameworks for researchers were consulted through interviews conducted in October 2024.

The desk research included a review of existing European competence frameworks for researchers, European Commission documents on the topic, and [ResearchComp: The European Competence Framework for Researchers](#).

The interview questions focused on the following topics: information about the competence framework for researchers developed by the organization (if applicable) or the one used by the organization; the use

of the competence framework that the organization has developed (if applicable) or the actual use of the [ResearchComp](#) or other competence framework existing at the European level; alignment with the [ResearchComp: The European Competence Framework for Researchers](#) (if applicable); challenges encountered & strategies for addressing them; lessons learned; recommendations for the future improvements/revisions of [ResearchComp: The European Competence Framework for Researchers](#); conclusions & plans (see Annex 1 Interview guide on the Competence Framework for Researchers and their transversal skills/competencies).

Interviews with representatives of organizations who have their own competence framework for researchers or are using other European competence frameworks were organized online. The interview guide was sent prior to the interview, so as the representatives would be familiar with the questions. One interviewee preferred to fill in and send the responses from the guide via email.

Interviews were conducted with representatives from the following organizations recognized for their best practices, offering valuable insights into their approaches and experiences:

- Vitae – The Researchers Development Framework (RDF);
- KULeuven – The Researchers Development Framework (RDF);
- German University Association of Advanced Graduate Training (UniWiND/GUAT) – UniWind Competency Model for researchers;
- University of Cyprus – Young Universities for the Future of Europe (YUFE) Competence Framework for Researchers.

Best practices on the Competence Framework for Researchers

1. Vitae – The Researchers Development Framework (RDF)

Vitae is a UK-based organization dedicated to enhancing researchers' skills and career development by providing resources, frameworks, and support for professional growth and employability across various career paths. They work directly with either institutions or researchers with the goal of skills development, career planning and any other aspects that relate to improving researchers' lives and professional careers.

Vitae has developed the Researchers Development Framework, as a specific tool to guide researchers in identifying and developing skills and competences for professional growth, more tailored to the UK context and focused on a self-reflective approach, thus encouraging researchers to assess their own skills, goals and interests, in order to design customized development plans. Vitae has deliberately designed the framework to be comprehensive and are actively working to teach researchers how to use it, ensuring that they do not feel overwhelmed.

The Framework serves multiple purposes and audiences:

- Researchers: To assess and plan their professional growth and development.

- Managers and Supervisors: To support researchers in advancing their careers and skills.
- Trainers, Developers, HR Specialists, and Career Advisors: To guide the design and delivery of programs that foster researchers' development.

Additionally, the Framework is valuable for employers interested in understanding the unique skill sets researchers bring and their potential as high-value employees. It also appeals to aspiring researchers and those seeking to transition into higher education from other sectors, offering insights into the competencies required in the field.

During the interview, the Vitae representative stated that their framework is very comprehensive: it includes 64 different identified competences, structured on levels from 1 to 5 (e.g. a PhD student could be a 1 and an established professor might attain level 5). However, no researchers, of any status or degree, would score level 5 in the whole range of competences and there is also no need for such an ideal accomplishment.

The Vitae framework can be approached with different lenses (e.g. early career researcher, established researchers etc.), thus, helping researchers focus on the domains and specific skills that are best suited for their needs and professional goals.

It is very useful for a series of supporting activities for researchers, such as designing relevant training. By using visual tools (e.g. cards with examples of activities relevant to research career), stakeholders select their interests, so that they can further create a training tool that is relevant and beneficial for the researchers. Thus, based on specific interests that stem from the RDF, Vitae selects the most coveted skills and competences and then, they design the most appropriate solution.

Vitae does not currently integrate ResearchComp into their practices and primarily rely on the RDF framework. However, Vitae plans to work more with ResearchComp in the future to better align the two frameworks and incorporate its principles into their practices. Vitae was consulted during the development of ResearchComp. The RDF (Researcher Development Framework), which Vitae developed, served as a source of information and inspiration for shaping the ResearchComp framework. This collaboration ensured that ResearchComp built on established best practices while addressing emerging needs in researcher development.

Vitae regards ResearchComp as a comprehensive and well-structured competence framework, emphasizing its robustness and utility in addressing researchers' professional development and skill-building needs.

There are certain overlaps between RDF and [ResearchComp: The European Competence Framework for Researchers](#). Both use the same 1-5 level structure and share the belief that achieving level 5 in all skills is not necessary. There are language similarities on certain domains, however, since RDF is "older", it requires refreshing, hence it could be better aligned with ResearchComp, terminology wise, and also it would include aspects related to open science. ResearchComp has also a focus on soft skills and those skills that are transferable outside the academia, while the Vitae-RDF is more focused on addressing researcher

based competencies. In contrast, ResearchComp takes a broader approach, focusing more on generic skills. Mapping the language between the RDF and ResearchComp reveals significant similarities, particularly in domains B (Personal Effectiveness) and D (Engagement, Influence, and Impact) from the RDF, which align closely with ResearchComp. In contrast, domains A (Knowledge and Intellectual Abilities) and C (Research Governance and Organisation) from the RDF show fewer parallels with ResearchComp.

Among the challenges encountered by Vitae during the implementation of the framework are issues with slightly outdated language/terminology, as well as the need to update the structure due to innovations in technology, communication methods, and media. Additionally, Vitae has highlighted the necessity of including more soft skills, drawing inspiration from the ResearchComp model.

Vitae recommends that institutions consider adopting an existing research competence framework and tailoring it to their specific needs, rather than creating one from scratch. This approach avoids duplicating effort and leverages established resources, ensuring efficiency and consistency while addressing unique institutional requirements.

The recommendation from Vitae to other organisations that would like to either develop or use the existing competence frameworks for researchers is to test them for a diverse audience, since "one size does not fit all". Vitae advises maintaining flexibility in its use and regularly reviewing and revising it (e.g. every two years) for the necessary updates (e.g. such as the alignment with ResearchComp). The feedback Vitae has received on the RDF was positive, with researchers noting, for example, that they found it useful for job interviews, especially since they were involved in developing the tool.

One final point addressed during the interview was the potential future improvements or revision of the ResearchComp. Since it is very new, there are not many specific recommendations at this stage. However, it would be beneficial to develop more supporting materials to help researchers understand how to practically apply it.

2. KU Leuven Career Centre - The Researchers Development Framework (RDF)

KU Leuven University is organized in doctoral schools, each focusing on transferable skills development of researchers. The university's career center collaborates closely with doctoral schools to create skills courses tailored to their specific interests. This partnership ensures that PhD researchers are equipped with the skills necessary for a smooth transition towards stable career paths in or outside academia. Support is also extended to young researchers in finding sustainable employment opportunities within the non-academic labour market.

KU Leuven develops training courses, coaching and mentoring programs to help researchers identify the skills they already possess and the areas in which they need further development. Many of these courses are designed to support researchers in discovering their research career profile. While the courses follow an established template, they can be adapted to meet the specific needs of different stakeholders. For example, the leadership module is constantly updated to align with evolving demands and expectations of the topic, ensuring that the program remains relevant and responsive to the changing landscape of academic and non-academic careers.

Among the courses KU Leuven develops and implements are the following:

KU Leuven offers an obligatory „one and a half day” session about the milestones of the doctoral schools and addresses the recruitment of the PhD students. This session plays a crucial role in helping PhD candidates understand the expectations and key stages of their doctoral path.

Additionally, the individual career coaching and development plans are meant to address career topics and help students explore their future career options. It also focuses on what the relationship between supervisors and candidates should look like, ensuring effective mentorship throughout the research journey.

The information sessions for postdoctoral candidates include information about the potential career progression such as the fact that they cannot stay longer than six years in a postdoctoral position. Additionally, they also develop modules focused on mental health for researchers. One of their flagship courses helps researchers improve their time management and communication skills, aiming to enhance the effectiveness of their research activities.

KU Leuven works with the VITAE competence framework but even more so KU Leuven tries to work as hands-on as possible for the non-academic labour market. Therefore, they do ask labour market representatives about needed skills and are trying to align their efforts with that.

KU Leuven Career Centre uses the Vitae Competence Framework (RDF) as a key tool for developing courses, training modules, individual career coaching, and information sessions for postdocs, etc. However, in its efforts to prepare researchers for the non-academic labour market, the Career Centre adopts a flexible approach that is not limited or exclusive to any specific EU framework but is designed to align with a broader range of skills required in the labour market. This flexibility allows the Career Centre to address evolving demands and offer personalized development opportunities for researchers transitioning to various career paths.

For example, within the individual development plan for postdoctoral candidates, KU Leuven Career Centre uses the Vitae template, so that students can set their goals for their research career, and transferable skills development. However, supervisors do not actively monitor. Instead, they provide the template to create an autonomous environment for the postdoctoral researchers, empowering them to take charge of their own professional development.

Also, the courses at KU Leuven Career Centre addressing transferable skills are designed with reference to the Vitae RDF, ensuring that researchers develop a comprehensive set of skills for career progression. Moreover, the different lenses that Vitae focuses on (e.g. early career researcher lens, established researcher lens) are particularly useful to guide researcher in prioritizing their career development for example, PhD candidates are encouraged to initially focus on research methodologies, while later in their career, they may focus on developing skills in project management or leadership.

In terms of alignment between the RDF and ResearchComp, KU Leuven also considers that the main difference between these two is the fact that RDF is more inclined towards academic skills, in relation to

research activities, whereas, ResearchComp also addresses soft skills, which are applicable across various contexts, not limited to academia. Should they be more aligned, the vocabulary should be revised. However, the main goal is not to question any European competence framework, but to ensure that courses and training programs are as relevant as possible to stakeholders and to adapt them in real time depending on the needs.

There is a constant updating activity of the courses KU Leuven offers, according to the evaluation provided by the participants. However, these updates do not occur on an annual basis, nor involve fundamental changes to the course content.

The challenges encountered by KU Leuven Career Centre, as aforementioned, point to the VITAE language/vocabulary that should be "translated" into a more updated and friendly language. Also, when they develop new courses they prioritize addressing the needs of the labour market, industry, entrepreneurship sectors, and universities.

KU Leuven recommendation for institutions intending to use a competence framework is to adapt it according to their labour market needs, national context and their own institutional needs. Feedback from researchers, when implementing such a competence framework is of utmost importance, so is the used language in the framework, since language plays a crucial role—it fosters awareness of researchers' position, priorities, and relevance in the broader context, not a particular strength within the skill set of researchers.

3. German University Association of Advanced Graduate Training (UniWiND/GUAT) - UniWind Competency Model for researchers

The German University Association of Advanced Graduate Training is the sole national organization in Germany dedicated exclusively to enhancing doctoral and postdoctoral education. It fosters cross-university exchanges on best practices, addresses common challenges, and advocates for reforms to ensure high-quality training for early-stage researchers, thereby equipping them with the necessary qualifications for diverse career paths.

They have internally developed a competence framework - UniWind Competency Model for researchers and organize activities, such as courses, coaching sessions or trainings, based on their model. The rationale behind it was the lack of a unitary understanding about competences. Hence, they aimed at implementing a model that would push forward a standardized vocabulary and that would provide both a range of generic and specific skills. The UniWiND model was developed alongside the Vitae framework.

This model helps researchers be aware about their competences, developed through the doctoral program, enabling them to effectively articulate these skills when engaging with potential employers.

In Germany, it is common for individuals pursuing a research doctorate to experience a significant increase in interest regarding their future career options as they approach the end of their program. Unfortunately, by that stage, they often lack the time needed to invest in substantial skills development. To address this

challenge, the UniWiND framework provides ongoing support throughout the doctoral journey, helping researchers identify which skills they should further develop and which new skills they should aim for, enabling them to make more informed and deliberate career choices well before completing their programs.

The German University Association of Advanced Graduate Training developed a framework to identify competencies relevant to doctoral researchers across all disciplines. Focusing on generic rather than discipline-specific skills, the framework explores competencies that can be developed and addresses critical incidents typical in doctoral programs. This led to the creation of 10 competency clusters (e.g., teamwork, systematic working, self-management, project management, communication, teaching, creativity, leadership, and expert competencies), further divided into sub-competencies. The framework, published in two phases (2016 and 2019) supports evaluation, self-evaluation, counselling, and course design while aligning with the typical phases and challenges of doctoral studies.

The competence framework is applied to assess and develop researchers' skills through self-evaluation or external evaluation, identifying areas for improvement and offering targeted courses. Supplementing the framework, the UniWiND Competency Toolbox was published in 2019 in German and translated to English in 2022. It helps other universities implement the model by using several tools like competence registers, sets of competency cards, overview sheets, critical incidents or self-assessment sheets, applicable in curriculum design, course development, workshops and counselling. One example is a course on personal development planning, where researchers analyse career preferences, perform a self-assessment of competencies using the UniWiND model, and align their skills with labour market demands. They develop a personal strategy, review job profiles, and identify opportunities for skill development through training or daily research activities, often in collaboration with supervisors. This approach has received positive feedback from doctoral researchers.

There is an established community of practice who regularly use the UniWiND competency model or doing competency development for doctoral candidates and postdoctoral researchers. Through comparisons with Research Comp, they have concluded that ResearchComp is better suited for broader contexts, such as employment in research, international research and career, whereas the UniWiND model is focused on the doctoral career phase.

There is no alignment between the German UniWiND model and ResearchComp, primarily due to the differing timelines of their development. For instance, UniWiND focuses more on teaching skills. For counselling and career development, researchers use the German model, since it is more detailed and there are more options, particularly through its ToolBox. The UniWiND model addresses research integrity based on the German codex of research integrity. However, one similarity does exist: none of the two frameworks require an expert level in all competencies.

Discussions are currently to update the UniWiND framework: to implement the cluster of digital skills which are missing at the moment. This update aims to address the evolving needs of doctoral and postdoctoral researchers in the digital age, ensuring that they are equipped with the necessary competencies.

When discussing the challenges encountered in using the UniWiND competency framework, complexity was highlighted. As a result, a handbook (part of the toolbox) has been created to guide users in applying the framework. Since it was created for experts in competency development, the model cannot be given directly to doctoral candidates or their supervisors, without also providing additional supporting information.

4. University of Cyprus - Young Universities for the Future of Europe (YUFE) Competence Framework for Researchers

The University of Cyprus (UCY) is committed to enhancing the skills of researchers, including transversal skills, through structured programs that emphasise career development and academic growth. Its comprehensive support structures are designed to provide researchers with the tools necessary to succeed in diverse academic and professional contexts. Their offer includes structured training courses on specific research skills (e.g. data analysis, scientific writing, etc.), transversal skills trainings (e.g. critical thinking, communication, etc.), on-the-job training, mentoring and coaching and access to international networks.

The YUFE Competence Framework is designed to support various aspects of academic staff development, including staff selection, promotion processes, and individual career planning. Its design was inspired by existing frameworks in place at certain YUFE universities and the [ResearchComp: The European Competence Framework for Researchers](#) (ResearchComp), which was under development at the time the YUFE Competence Framework was created.

UCY currently endorses the [ResearchComp: The European Competence Framework for Researchers](#) and tries to implement the components that are applicable to its regulatory framework.

The Young Universities for the Future of Europe (YUFE) Competence Framework for Researchers is aligned to a significant extent with ResearchComp. It ensures that all training activities address components of the competences outlined in the framework and there is a tendency to revise the doctoral programmes and recruitment policies to reflect competence-based evaluations.

Resources are perceived as a challenge, since the implementation requires additional resources, particularly in training delivery and mentoring systems. UCY partially addressed this by securing external funding and collaborating with partner institutions and aims to mainstream the implementation of ResearchComp in the near future.

Also, awareness among staff and researchers is of utmost importance and UCY has planned multiple workshops and information sessions to bridge this gap. Stakeholder engagement (early and continuous engagement with researchers and faculty members is necessary for successful adoption of the competence framework in the future) and customisation to local context are crucial for the successful adaptation of any competence framework. While the European framework provides a robust base, adaptations to local needs and institutional culture are critical. UCY recommends other institutions invest in stakeholder engagement from the outset and avoid implementing frameworks without considering the

local context and resource constraints. Feedback from researchers has generally been positive, particularly regarding the clarity the framework provides for career development.

UCY has also identified the importance of an enhanced focus on digital skills, especially AI, for future revisions of the ResearchComp. The University plans to continue aligning its internal frameworks with European standards like ResearchComp and will further integrate the framework into doctoral programmes, ensuring all training activities are competence-based and internationally recognised.

Conclusions

The development, application and overlapping of all these skills and competence frameworks highlight a growing trend towards adopting structured, cohesive and competency-based approaches to researcher development. It also proves that there is a shift from a traditional academic-only focused training in order to progress in the career, reflecting a broader emphasis on equipping researchers with skills that align with the demands of the labour market. These frameworks collectively connect educational outcomes and professional requirements, fostering transferable skills that support sustainable career development both within and outside academia.

Annex 1 Interview guide on the Competence Framework for Researchers and their transversal skills/competencies

Respondent's name:

Respondent's job title/position:

Organization:

1. Introduction to the organization

Please provide a brief description of your institution/organization, including information about its role in enhancing researchers' skills (including transversal skills) training and career development.

2. Support for skills development for researchers

What does the institution offer researchers that will support the progress/advancement in their careers (e.g. support researchers' skills (including transversal skills) training, dedicated training courses, on-the-job training, peer-to-peer learning, coaching, and mentoring)? Please provide more details.

3. Information about the competence framework for researchers developed by your organization (if applicable) or the one used by your organization

Please provide a brief description of the competence framework for researchers developed by your organization or the one used by your organization.

4. The use of the competence framework that your organization has developed (if applicable) or the actual use of the [ResearchComp: The European Competence Framework for Researchers](#) or other competence framework existing at the European level

Please provide a brief description of how the competence framework for researchers that your organization has developed (if applicable)/EU [ResearchComp](#) or other competence framework existing at the European level is used or is a useful tool, for example:

- to organize training for researchers
- to develop researchers' training including doctoral training according to the competences described in the framework
- to help higher education institutions and training providers adapt/ tailor their offer to researchers
- to develop researchers' skills and foster career development, recruitment, and selection procedures of researchers
- to support education and training (e.g. education and training curricula development) as well as job-seeking
- as a self-evaluation/assessment tool for researchers
- to show future employers the level that researchers have reached for specific competencies in the framework
- to communicate competences related to researchers' occupations to employers outside the academic sector and to identify diverse job opportunities for researchers
- to increase the private sector's awareness of the skills researchers have and facilitate intersectoral mobility by offering employers in diverse sectors a common reference base to recruit, develop, and assess researchers
- by policy makers to monitor researchers' competences better in order to develop targeted policies in support of inter-sectorally mobile researchers

Please describe if there are other situations in which you are using the competence framework.

5. Alignment with the [ResearchComp: The European Competence Framework for Researchers](#) (if applicable)

<https://secureproject.eu/>

<https://uefiscdi.gov.ro/>

Is the competence framework that your organization has developed aligned with the [ResearchComp: The European Competence Framework for Researchers](#)? If yes please describe.

Is your institution/organization planning to adapt/ align the competence framework that you developed with the [ResearchComp: The European Competence Framework for Researchers](#)?

If yes please specify which elements from the [ResearchComp: The European Competence Framework for Researchers](#) your organization will take into consideration.

What are the key changes (e.g. internal policies, procedures, etc.) to be implemented?

Did your organization develop or adapt the training offer and/or the doctoral program considering [ResearchComp](#)?

Did your organization adopt and integrate [ResearchComp](#) into relevant policies and practices for researchers? If yes please specify and provide details. If not, does your organization plan to adopt and integrate [ResearchComp](#)?

6. Challenges encountered & strategies for addressing them

What challenges (e.g. resource constraints or any other types of difficulties) has your organization encountered during implementation of Competence Framework for Researchers? (e.g. [ResearchComp: The European Competence Framework for Researchers](#) or other competence framework), specifying to what competence framework the challenges are related to.

Explain how the institution addressed these challenges. Include information regarding specific strategies or actions taken for addressing them and ensuring successful implementation.

7. Lessons learned

Regarding the competence framework that your organization has developed or [ResearchComp: The European Competence Framework for Researchers](#) (or other competence framework existing at European level that your organization is using)

What are the key elements and the most important lessons your organization has learned from developing and implementing the competence framework that your organization has developed or the [ResearchComp: The European Competence Framework for Researchers](#) (or other competence framework existing at European level that your organization is using)?

What recommendations would you give to other organizations considering similar endeavors? What can they learn from your case? Which elements are essential? Which pitfalls should they avoid?

Did you receive any feedback from researchers or other stakeholders regarding the research competence framework? Please include both positive reactions, as well as any areas that need further consideration.

8. Recommendations for the future improvements/revisions of [ResearchComp: The European Competence Framework for Researchers](#)

Do you have any recommendations for future revisions of skills/competences in [ResearchComp: The European Competence Framework for Researchers](#)?

9. Conclusions & plans

<https://secureproject.eu/>

<https://uefiscdi.gov.ro/>

Please describe the successes in using a competence framework for researchers (please specify which one) in your organization, reinforcing how the implementation has positively impacted researchers.

Depending on your own context, what are the plans within your organization when it comes to developing and implementing a competence framework for researchers and developing their skills (e.g. adapting your competence framework to ResearcComp, developing your own competence framework based on the European ones, etc)?

10. References and supporting materials

Please provide relevant references to key documents, guidelines or publications that informed this interview.