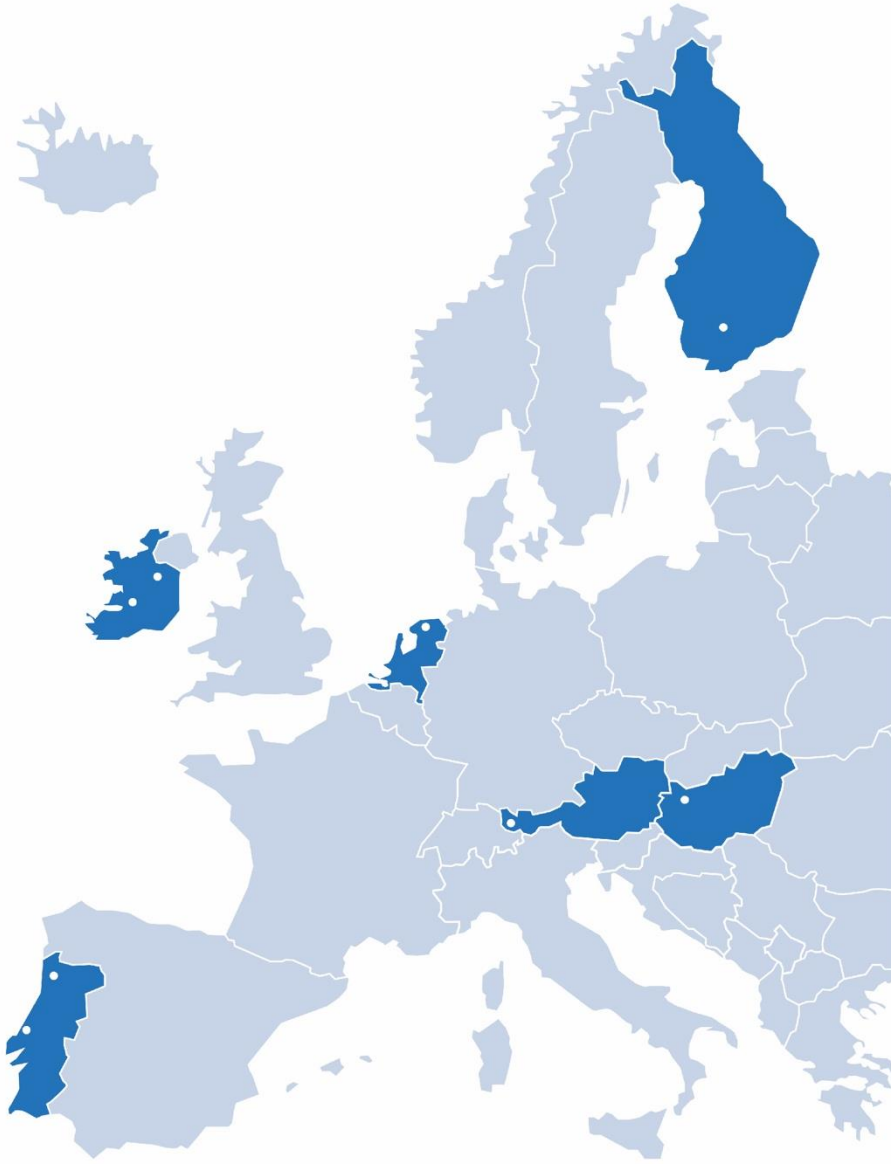
REGIONAL UNIVERSITY NETWORK PLUS

EUROPEAN UNIVERSITY



D4.6 RUN-EU PLUS RESEARCH AND CAREER EVALUATION SYSTEM

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Abbreviations

D	Deliverable
DMP	Data Management Planning
ECoC	European Code of Conduct for Research Integrity
EIH	European Innovation Hub
FHV	Vorarlberg University of Applied Sciences, Austria
HAMK	Häme University of Applied Sciences, Finland
IP	Intellectual property
IPCA	Polytechnic of Cávado and Ave, Portugal
IPL	Polytechnic of Leiria, Portugal
MS Forms	Microsoft Forms
MS Teams	Microsoft Teams
NHL Stenden	NHL Stenden University of Applied Sciences, The Netherlands
RUN-EU	Regional University Network – European University
RUN-EU PLUS	Regional University Network – European University: Professional Research Programmes for Business and Society
SZE	University of Györ – Széchenyi István University, Hungary
T	Task
TUS	Technological University of the Shannon: Midlands Midwest, Ireland
WP	Work Package

1. Introduction

An essential goal of the Regional University Network - European University (RUN-EU) is that RUN-EU researchers will develop strong competencies in research and transferable skills in addition to the ability to effectively plan their future career and learning paths. The Research and Career Evaluation System that is being developed by the RUN-EU PLUS project should explicitly support these general goals.

This report is the first description of the Research and Career Evaluation System developed for the RUN European University. We follow the recommendations described in the EU report Towards a Reform of the Research Assessment (2021) with the aim to develop research skills and researcher career evaluation systems that are based on intrinsic merits and performance. Also following the EU report suggestions, the RUN-EU research and career evaluation system aims to be flexible to "accommodate the diversity of countries, disciplines, research cultures, research maturity levels, the specific missions of institutions, and career paths". As the RUN European University alliance is a multidisciplinary and international network, it is natural that the partner universities have some different practices regarding research and researcher evaluation, such as in researcher recruitment. One university of the alliance, TUS, currently has a Researcher Career Framework Policy in place. It provides the focus for topics and content included in the researcher career evaluation system. The university also implements a personal development plan template for researchers to use to identify skills training requirements. IPCA is in the process of developing a researcher career evaluation system, as is FHV and HAMK.

Due to different development and implementation practices in addition to varying focuses of existing researcher evaluation systems, the first version of the RUN-EU PLUS Research and Career Evaluation System as presented in this deliverable report will be tested across the RUN university alliance in 2023. This is to ensure that the developed system will be appropriate for use by all RUN-EU researchers for the assessment of their skills training requirements pertaining to their personal career development goals.

Based on the RUN-EU PLUS goals as identified in the Grant Agreement (101035816), the initial concrete goals for the Research and Career Evaluation System have been defined.

The Research and Career Evaluation System will:

- support researcher career development at all researcher career stages
- support researcher competences, focusing particularly on practice-based research
- focus particularly on recognising team performances
- emphasise the quality of research work
- include the assessment of teamwork, Open Science practices, and research quality markers
- support the development of RUN-EU researcher recruitment and collaboration practices
- support the trainers of RUN-EU researchers to plan and implement their training based on the general objectives of RUN-EU and
- support the assessment and development of the RUN-EU researcher training programme content, practices, and quality.

In this document, we first provide the background (**Section 2**) for the evaluation system and how it is currently discussed in Europe, by presenting some research results regarding researcher career paths. We refer to the EU level documents that have orientated us in our work with the evaluation system. We are aware of the agreement for reforming research assessment (launched in January 2022, EUA) and of the final version of the agreement (in July 2022) (CoARA 2022). Based on the RUN-EU research evaluation development stage, we identify the main objectives in detail for the evaluation system and some practices for the implementation of the system (**Section 3**). The Researcher Career Development Evaluation Tool is presented in **Appendix 1** of this document. In **Section 4**, the process of implementing and testing the evaluation tool is described, followed by an explanation as to how it will progress the development of the evaluation system.

The main resources informing the design and build of the evaluation system include the following reports and documents:

- Towards a Reform of the Research Assessment (EU document) (2021)
- Research Assessment EU Adoption (Coalition for Advancing Research Assessment, CoARA) (2022)

- RUN-EU PLUS D4.1 Report on Audit and GAP Analysis of Current Human Capital Resource Strategies and Practice across the RUN-EU Consortium
- RUN-EU PLUS D4.2 Researcher Career Development Framework Training Workshop Programme
- RUN-EU PLUS D4.3 Annual Report on the Implementation of the Research Career Development Framework Training Workshops – 1st Report
- RUN-EU PLUS D5.1 Report on Audit and GAP Analysis in Training and Education on Open Science Skills
- RUN-EU FASA Skills bulletins (RUN-EU Deliverables 3.9, 3.10 and 3.11)
- TUS Researcher Career Framework Policy
- LIT Personal Development Plan
- RUN-EU PLUS Grant Agreement (Number 101035816) and
- Recent research on researcher career paths, in particular the Researcher Education and Careers Special Interest Group (SIG 24 Group), European Association for Research on Learning and Instruction (EARLI).

2. Setting the Scene for the RUN-EU Research and Career Evaluation System

2.1. Background for the need for a Research and Career Evaluation System

Research quality and impact, along with researcher performance, are fundamental criteria assessed by universities during the recruitment, promotion, or reward of research personnel. Research quality and interests in different fields motivate researchers and research organisations to build collaboration with other research units and institutions. RUN-EU PLUS has reported on the gaps in researcher career path development across the RUN-EU alliance (RUN-EU PLUS Deliverable D4.1), that shows the need to develop the researcher and researcher evaluation practices both in individual RUN-EU universities and collaboratively. In addition, there is evidence that the general research process is undergoing 1) digital transformation and is becoming 2) less linear, 3) more collaborative and open, and 4) more multidisciplinary with a

larger diversity of outputs (EU report Towards a Reform of the Research Assessment, 2021). From this point of view, the research assessment systems and practices that European Universities use might focus too much on the quantity of publications in journals with high journal impact factor and citations.

The discussion in higher education, both on a national and European level, has raised the needs to broaden criteria and to bring broader elements to the research evaluation discussions. The international references, such as the Declaration on Research Assessment (DORA) and Coalition for Advancing Research Assessment (CoARA), recognise the need to improve the ways in which researchers and the outputs of scholarly research are evaluated (Dora www pages, https://sfdora.org/, CoARA https://coara.eu/).

The EU report Towards a Reform of the Research Assessment (2021) identifies the main principles upon which the RUN-EU PLUS Researcher and Career Evaluation System presented in this report is based. These principles are listed in **Table 1**.

Table 1. Assessment Development Principles (see Towards a Reform of the Research Assessment, EU document, 2021)

Development area	Description
Multi-, inter- and trans-disciplinarity research	capacity building is essential with this goal
Non-traditional career paths	continuity in research career possibilities
Ethics and integrity	"Ensure that ethics and integrity are the highest priority, never compromised by any counterincentives. Verify before or during assessment that the highest standards of general and research-specific ethics and integrity are met."

Freedom of scientific research	"By putting in place assessment frameworks that do not limit researchers in the questions they ask, in their research implementation, methods or theories."
Autonomy of research organisations	"By putting in place assessment frameworks that do not limit researchers in the questions they ask, in their research implementation, methods or theories. By limiting the assessment frameworks to only those necessary, as assessment must be useful for researchers, institutions, and funders"
Independence and transparency of the data, infrastructure and criteria necessary for research assessment and for determining research impacts	Ensure these aspects; "in particular by clear and transparent data collection, algorithms and indicators, by ensuring control and ownership by the research community over critical infrastructures and tools, and by allowing those assessed to have access to the data, analyses and criteria used."
Research assessment focus on quality.	Reward the originality of ideas, the professional research conduct, and results beyond the state-of-the-art, a variety of research missions, ranging from basic and frontier research to applied research, openness of research. Recognise the contributions that advance knowledge and the (potential) impact of research results
Diversity, inclusiveness, and collaboration	Consider tasks like peer review, training, mentoring and supervision of PhD candidates, leadership roles, and, as appropriate, science communication and interaction with society, entrepreneurship, knowledge valorisation, and industry-academia cooperation.
Variety of scientific disciplines, research types, as well as research career stages.	Use assessment criteria and processes that respect different kind of research (e.g. basic and frontier research versus applied research), as well as research career stages (e.g. early career researchers versus senior researchers).

Diversity in research roles and careers, including roles outside academia.	Acknowledge and valourise these aspects; "value the skills (including open science skills), competences and merits of individual researchers, but also recognise team science and collaboration."
Gender equality, equal opportunities, and inclusiveness.	Ensure these aspects; consider gender balance, the gender dimension, and consider diversity in the broader sense (e.g., racial, or ethnic origin, sexual orientation, socio-economic, disability) in research teams at all levels, and in the content of research and innovation.

The assessment principles referred to in **Table 1** are supported also in the recommendations that are expressed regarding doctoral education development both at an EU and a national level as well as at an institutional and an individual (doctoral candidate) level (Hnatkova, Degtyarova, Kersschot & Boman 2022). In **Table 2**, which is quoted from the Labour market perspectives for PhD graduates in Europe report (Hnatkova, Degtyarova, Kersschot & Boman 2022), the emphasis is on career and research collaboration possibilities in addition to training for these. In practice, researchers should possess the tools and channels available to them which they can use for improving their skills to undertake their own research skills self-assessment and learn to develop their career paths and training according to their identified needs.

TABLE 2. Expert recommendations (Hnatkova, Degtyarova, Kersschot & Boman 2022)

European and national level	Institutional level	Individual level
The European Commission and individual EU governments can:	**Universities and doctoral schools can:**	**Early-career researchers can:**
• implement and raise awareness of the Salzburg principles, and Charter and Code for researchers • make professional development part of all research projects • introduce governmental incentives to support companies to hire PhD graduates • value and support diversity of future professional roles for PhDs in all sectors • create more flexible legal frameworks for more individualised and diversified doctoral education • strengthen intersectoral mobility and communication between universities and industry sectors • create new financial schemes for more individualised research and skills training • create better working conditions for supporting mental health	• support the professional development of doctoral candidates (e.g., create supportive structures, ensuring proper funding) • provide more transferable skills training (e.g., open science, patenting, marketing, entrepreneurship) • track PhD careers, develop contacts with alumni • raise awareness of career perspectives for doctoral candidates • demonstrate and communicate the value of PhD degrees to society and industry more clearly • take care of the quality of trainers and supervisors	• do self-reflection and self-assessment of their professional interests and needs • take personal responsibility for their own professional development • focus on research but also invest time and resources in skills training • be flexible and open to different contexts, career options and adapt to dynamic and changing conditions • develop their networks in and outside academia

Also informing the need to reform the researcher evaluation system is recent research on researcher career paths. These research results are significant for RUN-EU partners and for our shared goals as our focus is to support researcher career paths that are not only in academia, but also outside academia, and which may be in hybrid form.

The training and practices of doctoral education needs to be reviewed from a cultural competence point of views. Research (Skakni, Inouye & McAlpine, 2021) focused on doctorates in the UK and Switzerland shows that doctorates entering non-academic workplaces may struggle (in terms of time and energy) to understand a new organisational culture, the daily practices of workplaces and values shared within organisations. This experience is named the 'organisational culture shock' and can be more present especially with the researchers having had little or no experience of non-academic working life prior to undertaking their PhD programme (Skakni, Inouye & McAlpine, 2021). In our RUN European University, our goal is to prepare researchers for all types of careers, including educating researchers to undertake practice-based research where researchers learn to recognise different kinds of organisational cultural codes during their education (master's and PhD) and work constructively in these different contexts. Besides the increasing cultural understanding, doctoral candidates need career guidance to support their interest to work in a non-academic sector (St. Clair, Hutto, MacBeth, Newstetter, McCarty & Melkers J 2017). Networks built during doctoral education, both in an academic- and non-academic sector, play an important role in matching doctoral candidate specific technical expertise with labour market demands (Germain-Alamartine, Ahoba-Sam, Moghadam-Saman, & Evers, 2021). Doctoral candidates need to be prepared also for engagement with the broader (non-academic) job market to ensure effective job searches and career development. In the Supervisor Training Programme developed and delivered by RUN-EU PLUS (D4.2 Researcher Career Development Training Workshop Programme), additional support will be provided to research managers and academic supervisors to ensure that they themselves gain competencies to provide better support to trainee researchers in their career plans and development.

It is important that the researcher evaluation system presented in this report also supports the research stakeholders outside academia. Perhaps the knowledge and the competencies of doctorates is not so well understood in non-academic environments, and this situation could be investigated more. There are additional macro level factors that might be more difficult to change but may be address through discussion. Doctorates and doctoral degrees have been associated with university career paths and not with a career as an entrepreneur (for example). On global level (see Khelifi 2022; McAlpine, Skakni, & Inouye, 2021), the potential for doctorates to be employed in a non-academic sector may not be fully appreciated and doctoral graduates can encounter challenges when they embark on a career path involving a traditional occupation outside of academia (such as in industry or societal organization). These aspects are challenging also in Europe. The added value of PhD-associated skills in the non-academic sector will be the focus of RUN-EU PLUS activities in collaboration with industry, societal organisations and the public sector.

RUN-EU has created Future and Advanced Skills Academies (FASA) which are responsible for the identification of regional skills needs requirements through consultation with RUN-EU European Innovation Hubs, RUN Discovery Research Programme and other key internal and external stakeholders including regional industry, enterprise, and social partners. The skills set required for 2030 and beyond will be at the core of the work of the FASA (www.run-eu.eu).

The FASA Skills Analysis team is providing 4 informative skills bulletins (RUN-EU D3.3) based on the analysis carried out on the future and advanced skills as identified by policymakers, students, educators/researchers, and employers/industry. Skills bulletin #1 presents a working methodology which may be adapted to meet the needs of the key stakeholders. The RUN-EU FASA skills bulletin #2 presents future skills, as identified by policymakers, as being as much about our future world as they are about our future selves. This is one of the most striking consistencies across the policymaker materials reviewed. This means that ‘soft skills’ are deemed just as critical as industry and technology specific skills. This provides challenges and opportunities for the development of future skills programming to ensure the needs of industry, society and the individual are met.

RUN-EU FASAs will ensure that teachers, curricula, and RUN-EU third level institutions offer the required disciplinary skills and expertise for each course, while also embedding future skills in the overall learner experience. Skills bulletin #3 engaged with RUN-EU students to understand their experiences and interpretation of the 'future skills' they will require in their careers. Students who engaged with the process identified communication, collaboration & teamwork, technology, IT, creativity, and adaption as being the future skills they identified with most in addition to complex problem solving, creativity, innovative and critical thinking, and digital/media literacy.

Skills bulletin #4 presents a collated summary of future skills from the perspective of educators and researchers and includes their view on the learning environments appropriate to support the development and teaching of these future skills. This bulletin also refers to the importance of internationalization and wellbeing as key themes in preparing students for uncertain and unknowable future professions.

Researchers themselves estimate that success as a researcher means not only identifying and implementing objective success factors (such as obtaining complementary research funding or the number of publications) but also subjective success factors, such as the experience of being involved in impactful research, contributing something 'good' to society, and maintaining the balance of one's own life (Sutherland 2017). For a researcher, employment in teaching is more meaningful due to the individual experience of being valued, having impact, and belonging to a collaborative community (Tapanila 2022). Related to these research results, the wellbeing of researchers is one topic included in RUN-EU PLUS Researcher Training Programme (RUN-EU PLUS D4.2) and is also embedded in the Research and Career Evaluation System.

We again refer to the report RUN-EU PLUS D4.1 Institutional Audit and GAP analysis of current Human Capital Resource Strategies and Practices (Kallioniemi-Chambers, Friman, Hailikari, Moane, & Murray, 2022). In this report, many gaps relating to researcher career paths in RUN-EU partner universities are identified. In addition, the need for discussion among administrative and HR levels of the RUN-EU partner universities is raised, with a view to a change requirement to some national guidelines and policy processes and procedures. Our RUN-EU PLUS GAP analysis demonstrated that career progression by PhD researchers to more senior positions

within their organisations often depends on new higher-level positions becoming available. While researchers were generally aware of the promotion requirements, there remained 'silent knowledge' implying that the researchers knew what was required to progress to a higher professional level though it is was not always clear where such information was clearly documented or made available. Our RUN-EU PLUS Researcher Career Training Programme (D.4.2) in conjunction with our RUN-EU PLUS Research and Career Evaluation System (D4.6 RUN-EU PLUS Research and Career Evaluation System) aims to make progression opportunities more transparent to the researcher through career development.

2.2. Aims and Objectives of the RUN-EU PLUS Research and Career Evaluation System

Based on different researcher evaluation studies which identify the need for such a tool and on the current situation regarding researcher evaluation systems in RUN-EU partner universities, we have identified the need to develop the RUN-EU PLUS Researcher Career Development Evaluation Tool as a shared need across our RUN-EU alliance. This tool will form an essential part of the entire evaluation system development work undertaken by RUN-EU PLUS.

The objective is to build a **Researcher Career Evaluation tool** that:

- **support researcher competences, focusing particularly on** practice-based research
- helps to **identify and raise awareness** of one's own expertise as a researcher
- supports researchers to **conceptualize** one's own skills and expertise
- helps researchers to **identify training needs**
- helps to assess own **well-being** and construct well-being of the community
- helps **recruiters to assess a researcher's performance/developments** at each of the researcher career stages
- **is suitable for use at different researcher career stages, from doctoral researchers** to **senior researchers**
- provides **the structure for** (some of) **the professional development and supervision discussions**, e.g., with the individual study plan
- **improves equality in supervision**

- supports identification of researcher career development domains and goals **in writing funding proposals** such as international EU funding project proposals
- supports discussions **on developing and integrating the necessary career support services and training for researchers** across our RUN- European University
- **can be used flexibly** thereby supporting strategic goals for researcher development at RUN-EU partner universities
- is useful both those researchers that are interested **in an academic career or a career outside of academia, and for those whose goal is to develop a hybrid of both**
- will be relatively easy and not too time consuming to use and can be **integrated into work routines of researchers, research group leaders and HR function**
- has clear user **guidelines** for all users
- offers **regularly organized support workshops** according to user needs
- can be implemented across the RUN-European University
- **can be easily modified** when needed and
- supports the **systematic identification of gaps** in existing career development activities.

Section 4 presents several researcher skills that are specifically referenced in the strategic goals of RUN-EU PLUS, in addition to the Researcher Career Training Programme Framework that was developed by RUN-EU PLUS (MS6 Researcher Career Development Framework Training Workshop Programs, D4.2 Researcher Career Development Framework Training Workshop Programs) in 2022.

4. Training supports for researcher personal development in RUN-EU PLUS

As previously stated, one essential goal in RUN-EU is that researchers will develop strong competencies in research and transferable skills and the ability to plan their future career and learning paths. The competencies in the fields of research impact, research ethics and integrity form the essential foundation for further skills development of researchers. Open Science skills

and awareness of challenges in Gender and Diversity questions in different contexts are essential overlapping topics in which all RUN-EU researchers will grow their understanding.

The RUN-EU PLUS Research and Career Evaluation System will emphasize the support for researchers on all stages of a researcher career path. In the RUN-EU PLUS Work Plan (Grant Agreement) there is reference to particular focus of the system being placed on recognition of team performances, the quality of work, Open Science, and Research Quality.

In addition to the general researcher competencies (including critical thinking, problem solving, research methods, etc.), more information on this topic can be encountered in the RUN-EU PLUS D4.1 Report on Audit and Gap Analysis of Current Human Resource Strategies and Practices across the RUN-EU PLUS Consortium. Based on this report and on the RUN-EU PLUS report D4.2 Researcher Career Development Training Workshop Programmes, and on the existing research on researcher career paths we recognise that the following special features should be covered in the RUN-EU PLUS Research and Career Evaluation System (D4.6) as they support personal development in general and in the field of practice-based research:

- skills to build bridges between different actors in collaboration, especially bridges between academic and non-academic contexts
- abilities to undertake transnational cross-networking between researchers and stakeholders
- abilities to construct knowledge and research practices in different environments (academia, public sector, industry, business etc.)
- skills to integrate the knowledge from different sources and communicate it to different kind of collaborators
- abilities to face uncertainty, uniqueness and conflicts in research environments, and tackle these with innovative approaches
- skills in business and innovation practices
- possess a co-creative and experimental approach

- skills to identify and understand context (skills not just applicable to one organisation but society in general)
- skills to take local-global approaches to the phenomenon under investigation (skill sustainability)
- best practice in Open Science and Citizen Science are familiar to the researcher and
- abilities to pay attention on the wellbeing of themselves others and an increase in awareness of good practice in promoting equality in the research community.

Researcher development of the variety of skills required in research which are relevant at each researcher career stage happens in variety of ways on an individual level, but in the RUN-EU PLUS project, we refer to the existing TUS Researcher Career Development Framework which defines researcher career stages and their respective skills requirements (**Figure 1**). It helps us to identify skills training requirements relevant to each researcher career stage, to develop bespoke training programme activities which are appropriate to each career stage, and to deliver events for specified target researcher groups.

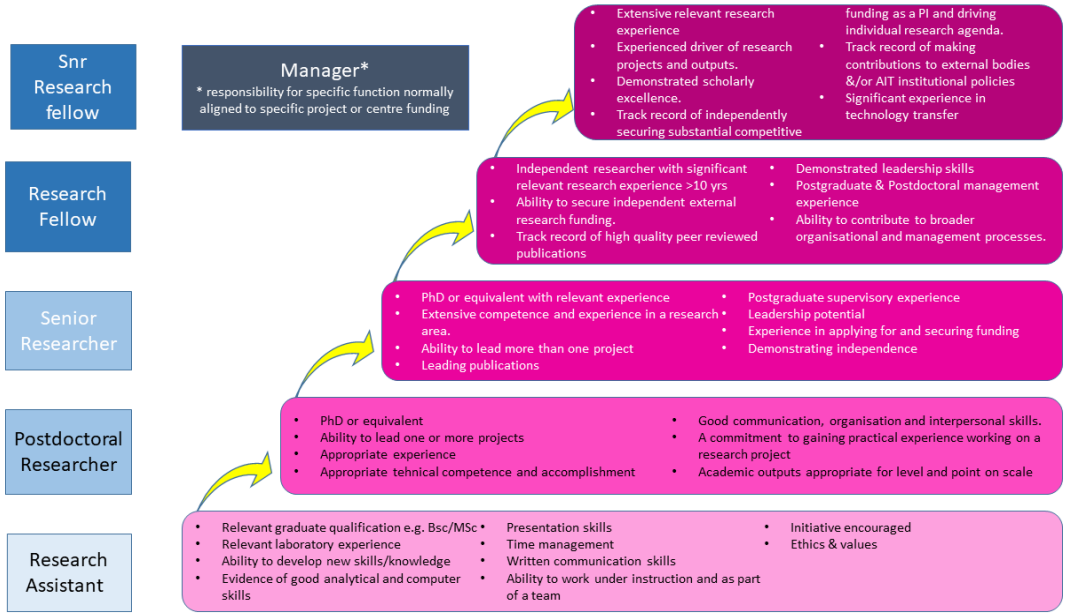

Figure 1. Researcher Career Development Framework (figure caption from TUS Researcher Career Development framework)

A critical objective of the RUN-EU PLUS project was to design a framework for a Researcher Career Development Training Programme and to plan the first five workshops under Work Package 4 and 5 to be implemented in 2022. RUN-EU PLUS has taken this opportunity to develop a long-term Researcher Career Training Programme for RUN-EU researchers. Together with focusing on the short-term researcher requirements, workshop themes have also been selected based on the long-term career training needs of RUN-EU researchers as identified in the audit and GAP analysis of current human capital resource strategies and practice across the RUN-EU PLUS consortium (**D4.1**).

According to the GAP analysis (D4.1), some RUN-EU partner universities have extensive training options for researchers whereas others provide much less formal training for their researchers. Numerous partner universities reported a lack of methodology and supervision courses and workshops on specific areas for researchers. A lack of advanced courses for researchers was also reported. A more detailed list of the gaps in career path support and training was discussed also in the RUN-EU PLUS workshop for researchers in June 2022. The workshop participants were asked 'What is the biggest structural challenge you face in your daily life concerning your research career?'. The discussions and summaries from them mentioned the needs for mentorship provided by experienced researchers (e.g., industry interactions), rewards for research excellence, support for career stability and travel opportunities, more stable contracts, and the support needs on time/task management and work/life balance (wellbeing). The needs were discussed further, and these identified needs are presented in **Table 3** (RUN-EU PLUS D4.3).

Table 3: RUN-EU PLUS researcher training needs identified by RUN-EU researchers and discussed in the 'Attractive Researcher Career Paths' workshop (9 June 2022)

BREAKOUT ROOM TOPIC: 'WHAT IS THE MOST IMPORTANT COMPETENCE YOU NEED IN YOUR DAILY WORK AND WHAT YOU WANT TO IMPROVE'
Research skills, digital skills - Data analysis (mathematical models etc.) - Critical thinking
Enterprise - Commercialisation - Entrepreneurship - Intellectual property rights (IPR) e.g., 'what I can write in my publication about, and what not?' - Legal/ business standardisation
Communication skills - Academic writing - Grant writing - Oral presentation/ pitching your research/ storytelling - Science for non-academics - Social media - Language skills (not just English) - Open Science
Teaching and supervision - supervision in general - mentoring - mentoring programme - collaborative supervision, also how to find co-supervisors
Interpersonal Competences - Time management - Energy management - Well-being - Networking - Where to find information about the grants for master students in RUN-EU?
Career development - Career planning, management, assessment - career path to become an entrepreneur & researcher

It is recognised that researchers require training in multiple facets of research activity including critical thinking, disciplinary knowledge and concepts, research methods, research ethics, Intellectual Property Rights issues, data analysis methods etc. The RUN-EU PLUS Researcher Career Development Training Programme model (D4.2 Researcher Career Development Framework Training Programmes) was developed during spring and summer of 2022 to address researcher training requirements across the RUN-European University. This training programme will set solid foundations for planning and implementing the RUN-EU Masters and Doctoral Research Programmes designed and developed by the RUN-EU PLUS project. Individual researchers will use the Research and Career Evaluation Tool developed by RUN-EU PLUS (and presented in this report) to develop their personal Career Development Plan. Essential skills deficits identified by the tool may be addressed by researchers through the training programme developed by RUN-EU PLUS. A key focus of the training programme will be on Open Science skills. Attention is also paid to the awareness of challenges in gender and diversity questions in different contexts through separate workshops dedicated to this topic, however these questions will also be integrated to the themes of all training as appropriate.

Basic researcher competencies will be addressed in the research degree programmes (master's and doctoral programmes of RUN-EU PLUS) with training in transferable skills addressed within the framework of the Researcher Training Programme. The training programme will also support successful career planning and development. The programme model is presented in **Figure 2** (see D4.2 Researcher Career Development Framework Training Programmes for more information).

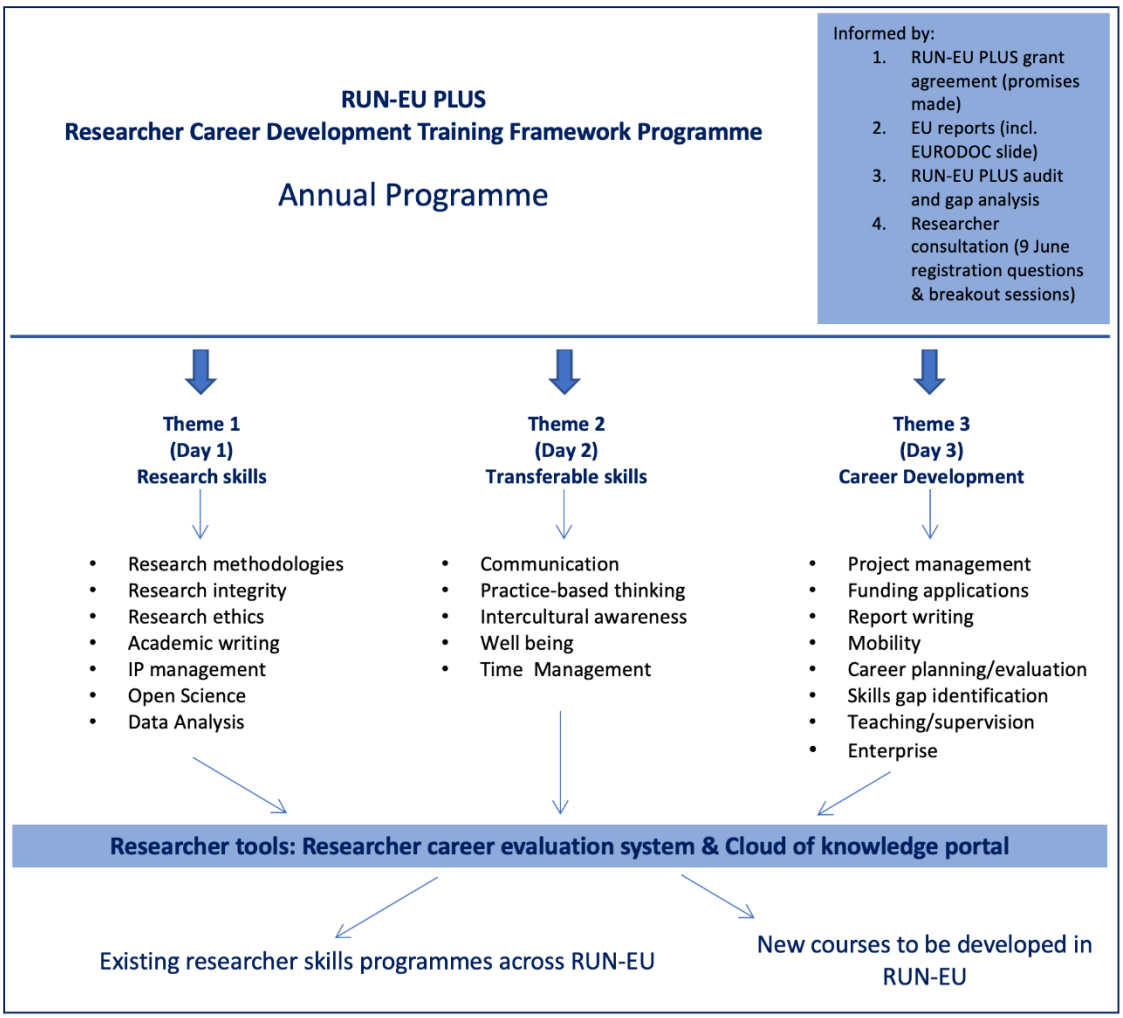

Figure 2: Researcher Career Development Training Programme model

The training programme is available to all RUN-EU researchers (postgraduate students, research assistants, postdoctoral fellows as well as academic researchers) and is designed to allow participation at any stage during career development. The programme will be complemented by discipline specific training programmes undertaken by research students as part of their structured masters/doctoral programmes. Each edition of the programme will consist of 3 themes, namely Research Skills (Theme 1), Transferable Skills (Theme 2) and Career Development (Theme 3). The objective of these themes is to introduce the researcher to each topic thereby raising their awareness of the relevance of these skills to their researcher career. The workshops covering Open Science are part of the training resources and provided under

RUN-EU PLUS Work Package 5. The RUN-EU PLUS Cloud of Knowledge Portal (RUN-EU PLU D4.8) is designed to support researchers with their skills development and will be a repository for all training material and therefore a support tool to all researchers. Via the RUN-EU PLUS Cloud of Knowledge Portal, researchers can find the delivered workshops, courses, research grants, mobility possibilities, contact points in different fields. The Research and Career Evaluation System presented in this deliverable report has been designed and developed by this RUN-EU PLUS project. Its implementation is by means of a Researcher Career Development Evaluation tool and we describe it in the following **Section 5**.

In addition to supporting the career development of our researchers, the RUN-EU PLUS Researcher Career Development Training Programme, complimentary to the RUN-EU PLUS Innovation Capacity Programme (MS11), plays a pivotal role in the foundation of the RUN-EU Research and Innovation Eco-system (RUN-EU PLUS WP6). This eco-system will continuously consult with RUN-EU associated partners in regional business and industry to identify their needs for specialist knowledge, skills and talent in specific domain areas which are identified as being essential to the strategic development of their region.

5. Researcher Career Development Evaluation Tool

The identified gaps in the career paths and training needs of RUN-EU researchers (D4.1, D4.2) orientate us to the following step, i.e., to design and pilot the practices that will respond to these needs in a positive way. In this work, we benefit from the existing research and researcher evaluation systems of RUN-EU partner organisations, especially the Personal Development Planning and Personal Development Plans template that has been in use at TUS. This document from TUS is written for use by research degree students, but in RUN-EU PLUS, our aim is to have the tool that serves researchers in different career stages.

The Evaluation tool is structured under eight main themes of identified researcher skills. Under each of the main themes, there are subthemes with short explanations. These refer to the skills that the user is asked to assess. The main themes are as follows:

1. Section A: Career planning
2. Section B: Research Skills
3. Section C: Research Environment
4. Section D: Research Management
5. Section E: Personal Effectiveness and Career planning
6. Section F: Communication Skills
7. Section G: Networking and Team working
8. Section H: Career Management

The key overlapping theme in the evaluation tool is the practice-based research. Direct subtopics that aim to support users to improve their skills to plan community-based research practices and focus on regional needs are included.

The Researcher Career Development Evaluation tool will support the researcher in identifying skill gaps and inform their design of a bespoke training plan to support their personal career goals. Once this plan has been developed, the researcher can enroll in more advanced (and accredited) modules, currently being offered across the RUN-European University (as listed previously in **Table 4**), in addition to those being developed during the RUN-EU PLUS project.

The tool can be used 1) individually as a researcher's own self-assessment tool, 2) in bilateral discussions (e.g. supervisor and supervisee), or in 3) the group discussion (e.g. in assessing the potential researchers to be recruited, in assessing the training needs of the research group, in developing the research services and training support for researchers).

In addition, one element of the testing of our evaluation system is to use the system to support the identification of the criteria for the RUN-EU Research Quality Award. The aim is that the award will be presented annually to the winning researcher or research team at the RUN-EU General Assembly event. The initial criteria for the reward include quality, and the (potential) impact of research, the highest standards of ethics and integrity, research activities and outputs, etc., but emphasis will also be placed on research quality and team working (including cross-disciplinary collaboration and multisectoral collaboration). Research quality and team working have been identified key development areas in the RUN-EU research and researcher evaluation system as described in the RUN-EU PLUS Grant Agreement (2020). The final criteria will be defined based on the Evaluation tool pilot study in 2023.

The tool will be implemented and tested from December 2022 until Month 33 when RUN-EU PLUS D4.7 Report on the Testing of the RUN-EU PLUS Research and Career Evaluation System will present the findings in the report on the testing of the RUN-EU PLUS Research and Career Evaluation System (30th June 2024). While this version of the RUN-EU PLUS Researcher Career

Evaluation a paper-based tool (see **Appendix 1**), but the final home for the tool will be the RUN-EU PLUS Cloud of Knowledge Portal (D.4.4).

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Appendix 1:

RUN-EU PLUS RESEARCHER CAREER EVALUATION TOOL FOR THE PRACTICE-BASED RESEARCHER

RUN-EU PLUS RESEARCHER CAREER EVALUATION TOOL FOR THE PRACTICE-BASED RESEARCHER

Overview:

This Researcher Career Evaluation tool has been developed by the RUN-EU PLUS project to support researchers in the identification of their own skills and expertise as a researcher. The tool will be implemented across the RUN-European University and is designed to help researchers identify training needs and develop their personal skills training plan for their chosen career path. The tool is suitable for use at different researcher career stages, from doctoral researchers to senior researchers and academic research staff. The tool provides the structure for professional development discussions between academic supervisors/research managers and early-stage researchers. It is designed be relatively easy and not too time consuming to use and may be used flexibly and modified to fit requirements.

Section A: Career planning

Please rate yourself on the following:	**Level of expertise**	**Your own comments**
How long do you plan your career ahead?	o less than 1 year o 2-3 years o 4-7 years o more than 8 years	

To what degree do you see yourself to work in academia in the future?	1 = I do not consider working in academia at all. .... 5 = I fully see myself working in academia	
To what degree do you see yourself working outside academia?	1 = I do not consider working outside academia at all. ... 5 = I fully see myself working outside academia in the future.	
To what degree you know the researcher platforms that inform the researcher positions for the potential applicants?	1= I know well both on national and international level 2= I know some 3= I don't know where to seek this information	

Section B: Research Skills

LEVELS
1 – Need to gain experience
2 – Some experience, need more
3 – Experienced
4 – Very experienced

Relevant researcher skills	Comments	Level of expertise	Training or other activities improving these skills
The ability to recognise and validate problems.	Be able to see and understand research problems.	1 2 3 4 ☐ ☐ ☐ ☐	
Original independent and critical thinking and the ability to develop theoretical concepts.	Be able to think for yourself and be able to develop theoretical ideas	1 2 3 4 ☐ ☐ ☐ ☐	
Demonstrate knowledge of recent advances within one's field and in related areas.	Know about recent advances in your research area.	1 2 3 4 ☐ ☐ ☐ ☐	
An understanding of relevant research methodologies and techniques and their	Know different research techniques and know when to use them.	1 2 3 4 ☐ ☐ ☐ ☐	

appropriate application in ones' research field.			
The ability to critically analyse and evaluate one's findings and those of others.	Be able to look at results and know what they mean and judge them.	1 2 3 4 ☐ ☐ ☐ ☐	
An ability to summarise, document, report and reflect on progress.	Be able to write down results clearly and assess progress.	1 2 3 4 ☐ ☐ ☐ ☐	

LEVELS
1 – Need to gain experience
2 – Some experience, need more
3 – Experienced
4 – Very experienced

Section C: Research Environment

Relevant researcher skills	Comments	Level of expertise	Training or other activities improving these skills
Demonstrate awareness of the issues relating to the rights of other researchers, of research subjects, and of others who may be affected by the research e.g.:- confidentiality, ethical issues, attribution, copyright, malpractice ownership of data and the requirements of the data protection act.	Know how your research affect others, and know what rules must be followed	1 2 3 4 ☐ ☐ ☐ ☐	
Demonstrate awareness of the issues relating to the rights of other researchers, of research subjects, and of others who may be affected by the research, e.g., confidentiality, ethical issues, attribution, copyright, malpractice ownership of data and the requirements of the data protection act.	Understand the Open Science principles and how to implement them into own research practices	1 2 3 4 ☐ ☐ ☐ ☐	

Demonstrate appreciation of standards of good research practice in your institution and/or discipline.	Know the standards you must work to	1 2 3 4 ☐ ☐ ☐ ☐	
Understand relevant health and safety issues and demonstrate responsible working practices.	Know the relevant health and safety issues	1 2 3 4 ☐ ☐ ☐ ☐	
Understand the processes for funding and evaluation of research.	Know about research funding and assessment	1 2 3 4 ☐ ☐ ☐ ☐	
Understand the different requirements of the main research funding agencies in own research field	Know the profiles of the main research funding resources for own research filed and can orientate own proposal based on this information	1 2 3 4 ☐ ☐ ☐ ☐	
Understand the different requirements of the main research funding agencies in own research field	Know the profiles of the main research funding resources for own research filed and can orientate own proposal based on this information	1 2 3 4 ☐ ☐ ☐ ☐	

Understand the process of academic of commercial exploitation of research results.	Know how research results can be used commercially	1 2 3 4 ☐ ☐ ☐ ☐	

LEVELS
1 – Need to gain experience
2 – Some experience, need more
3 – Experienced
4 – Very experienced

Section D: Research Management

Relevant researcher skills	Comments	Level of expertise	Training or other activities improving these skills
Apply effective project management through the setting of research goals, intermediate milestones and prioritisation of activities.	Manage research correctly, setting goals to achieve targets and prioritizing work	1 2 3 4 ☐ ☐ ☐ ☐	
Design and execute systems for the acquisition and collation of information through the effective use of appropriate resources and equipment.	Obtain data/results with correct methods and/or use of equipment	1 2 3 4 ☐ ☐ ☐ ☐	

Identify and access appropriate bibliographical resources, archive, and other sources of relevant information.	Search for information and references in an effective way.	1 2 3 4 ☐ ☐ ☐ ☐	
Use information technology appropriately for database management, recording and presenting information.	Record data properly in databases or spreadsheets	1 2 3 4 ☐ ☐ ☐ ☐	

LEVELS
1 – Need to gain experience
2 – Some experience, need more
3 – Experienced
4 – Very experienced

Section E: Personal Effectiveness

Relevant researcher skills	Comments	Level of expertise	Training or other activities improving these skills
Demonstrate a willingness and ability to learn and acquire knowledge	Be willing to learn about new topics and acquire new skills.	1 2 3 4 ☐ ☐ ☐ ☐	
Be creative, innovative, and original in ones' approach to research	Be able to have you own ideas in your research	1 2 3 4 ☐ ☐ ☐ ☐	
Demonstrate flexibility and open-mindedness	Show that you are flexible and open to alternative approaches to problems/tasks	1 2 3 4 ☐ ☐ ☐ ☐	
Demonstrate self-awareness and the ability to identify own training needs	Able to evaluate your own skills and plan future training	1 2 3 4 ☐ ☐ ☐ ☐	

Demonstrate self-discipline motivation, thoroughness and good practices	Know how to organise and motivate yourself and work accurately without supervision	1 2 3 4 ☐ ☐ ☐ ☐	
Demonstrate the knowledge on possible support resources for researchers	The ability to seek support and information within own institution from research services	1 2 3 4 ☐ ☐ ☐ ☐	
Recognise boundaries and draw upon/use sources of support as appropriate	Know limiting factors and know when to ask for help	1 2 3 4 ☐ ☐ ☐ ☐	
Show initiative, work independently and be self-reliant	Show that you have your own ideas and can work on your own when necessary.	1 2 3 4 ☐ ☐ ☐ ☐	

LEVELS
1 – Need to gain experience
2 – Some experience, need more
3 – Experienced
4 – Very experienced

Section F: Communication Skills

Relevant researcher skills	Comments	Level of expertise	Training or other activities improving these skills
Write clearly and in a style appropriate to purpose e.g., progress reports, published documents, and thesis.	Write clearly, at the correct level and length for a variety of purposes.	1 2 3 4 ☐ ☐ ☐ ☐	
Express research process and results in one or several foreign languages	Communicate clearly both in written form and orally.	1 2 3 4 ☐ ☐ ☐ ☐	
Construct coherent arguments and articulate ideas clearly to a range of audiences, formally and informally through a variety of techniques	Make clear arguments and explain ideas clearly to a range of audiences using different methods.	1 2 3 4 ☐ ☐ ☐ ☐	

Constructively defend research outcomes at seminars and viva examination	Defend your research outcomes fluently and confidently at seminars and viva examination	1 2 3 4 ☐ ☐ ☐ ☐	
Contribute to promoting the public understanding of one's research field.	Help to promote the public understanding of your research field.	1 2 3 4 ☐ ☐ ☐ ☐	
Effectively support the learning of others when involved in teaching, mentoring, or demonstrating activities	Help in the learning of others when involved in teaching, mentoring, or demonstrating activities.	1 2 3 4 ☐ ☐ ☐ ☐	

LEVELS
1 – Need to gain experience
2 – Some experience, need more
3 – Experienced
4 – Very experienced

Section G: Networking and Team working

Relevant researcher skills	Comments	Level of expertise	Training or other activities improving these skills
Develop and maintain cooperative networks and working relationships with supervisors, colleagues, and peers within the institution.	Get to know people at work and at other institutions and keep good working relationships.	1 2 3 4 ☐ ☐ ☐ ☐	
Develop and maintain cooperative networks and working relationships with research stakeholders like businesses, social institutions, etc. (depending on the research field)	Get to know people at other institutions and keep good collaborative relationships.	1 2 3 4 ☐ ☐ ☐ ☐	
Skills in writing research papers with other co-authors	Abilities to communicate own thoughts and improve the text effectively	1 2 3 4 ☐ ☐ ☐ ☐	

Skills in collaboration with other researchers in multidisciplinary group	Abilities to stand the insurance in the multidisciplinary group working and to develop shared conceptual frame for the research	1 2 3 4 ☐ ☐ ☐ ☐	
Skills to collaborate in joint research projects with teams outside your university	to be able to be constructive and supportive in seeking shared research interests	1 2 3 4 ☐ ☐ ☐ ☐	
Understand one's behaviours and impact on others when working in and contributing to the success of formal and informal teams.	Know that the way you behave affects the success of others and the group.	1 2 3 4 ☐ ☐ ☐ ☐	
Listen, give, and receive feedback and respond perceptively to others.	Know how to listen to others and give helpful feedback.	1 2 3 4 ☐ ☐ ☐ ☐	

LEVELS
1 – Need to gain experience
2 – Some experience, need more
3 – Experienced
4 – Very experienced

Section H: Career Management

Relevant researcher skills	Comments	Level of expertise	Training or other activities improving these skills
Appreciate the need for and show commitment to continued professional development.	Know that you always need to develop professionally.	1 2 3 4 ☐ ☐ ☐ ☐	
Take ownership for and manage one's career progression, set realistic and achievable career goals and identify and develop ways to improve employability.	Know that you are responsible for your own career management. Undertake activities to improve your employability.	1 2 3 4 ☐ ☐ ☐ ☐	
Demonstrate an insight into the transferable nature of research skills to other work environments and the range of career opportunities within and outside academia.	Know that research skills can be used in other situations and jobs not just in academic research.	1 2 3 4 ☐ ☐ ☐ ☐	

Present one's skills, personal attributes and experiences through effective CV's, applications and interviews	Know how to present your qualifications and skills in writing and orally according to the information you have on the target group	1 2 3 4 ☐ ☐ ☐ ☐	
Present one's skills, personal attributes and experiences via social media (e.g., LinkedIn).	Know how to present your qualifications and skills in written or in another form used in social media.	1 2 3 4 ☐ ☐ ☐ ☐	

Adapted from London Metropolitan Institute Skills Training Programme and TUS Researcher Development Plan (2010)

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