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# GUIDANCE TOOL FOR RESEARCHER CAREER DEVELOPMENT (g-RCD)

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# // PART I - INTRODUCTION

## 1.1. INTRODUCTION

One of the main objectives of ENHANCERIA and the overall aim of the WP5 is to identify and share best practices in the areas of recruitment, researchers' career development and mobility with the aim to enhance the implementation of the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers at the partner institutions. Moreover, ENHANCERIA's WP5: Joint Human Resources Development, has established a Researcher Career Development (RCD) Working Group with all the universities from ENHANCERIA that are contributing to WP5, which will be acknowledged in the next section of this document. The purpose of the RCD Working Group when designing this toolkit for RCD was to inspire improvement in RCD conditions at the partner institutions in a first stage, but this toolkit can also be used by researchers and researchers' employers from other institutions, even outside the European Research Area, as it has been formulated taking into account experiences, advice and expertise from a wide variety of researchers and RCD experts, which can be applied to any researcher or research institution in the world.

We have established different sections in an effort to present the selected information with a user-friendly approach and taking into account the different importance of each aspect of the RCD. Inside the toolkit, you will first find a short compendium of the most relevant factors of the legal situation for researchers in each of the countries of the ENHANCERIA partners that are participating in WP5. After it, we have curated a compendium of skills and competences that every researcher should aim to develop and organized them into categories of work. You will also find tips for three activities on the RCD that are very crucial and can help define your own career path: publishing, accessing research groups and accessing jobs at the private sector. This topics are one of the most requested by researchers' in mentoring sessions and are often poorly adressed in the literature of the field. We will also provide a review of the international aspect of the RCD and the challenges that it may present and researchers may not be fully aware of. The two last sections are general advice adressed to the two actors of the RCD: researchers and their employers.

In short, have designed this toolkit for RCD to help answer the most frequent asked questions among researchers when it comes to their career development and to inspire both researchers and researchers' employers to improve the RCD conditions at the ENHANCERIA partner institutions, with an approach that can be also useful for researchers and institutions outside the ENHANCERIA partners.



#### 1.2. ENHANCERIA WP5

The present toolkit is part of ENHANCERIA's WP5 Task 5.1: Inspire improvement in researchers' career development conditions. This task began on March 2022 and has ended on February 2023 as stated in the ENHANCERIA working plan, and has been lead by UPV with the collaboration of NTNU, POLIMI, RWTH and WUT as it was contemplated in the ENHANCERIA working plan, with the additional support of experts from TU Berlin. As some of the members of the ENHANCERIA project are not working on WP5, you may not find contributions from the institutions/countries that these members represent.

## Task 5.1 Description:

A Researcher Career Development (RCD) working group will be set up at consortium level to identify and share good practises in the implementation of the Charter & Code principles pertaining to the career development of researchers. Good practises including strategies, policies and activities will be identified at the partner universities, as well as recommendations for further institutional development in this area.

The working group will share practices and gather relevant information about career development in WP2. This information will be processed in order to select best practices that could be shared among all members. As a result, guidance and recommendations for researchers, and recommended activities and strategies related to research career development will be developed and subsequently distributed among all members. The RCD working group will be coordinated by UPV, with regular online meetings. The consortium recognizes the Charter & Code principles as an effort to describe "best practises" in Europe. Taking into account that the principles were adopted in 2005, the RCD working group may include additional aspects or suggest revisions of the Charter & Code principles if they find this appropriate to the objective of identifying, sharing and enhancing good practises in this area. This task will contribute to D5.1.1 and D5.1.2.



// PART II - TOOLKIT

## 2.1. LABOR SITUATION at ENHANCE COUNTRIES

This section aims to provide a quick and explanatory summary of the research labor figures recognized by the national law, tips, regulation considerations or general advice for researchers that purchase to start a career in one of the ENHANCERIA countries.

Moving to another country can be an exciting and challenging experience for researchers. Whether it is for a short-term visit or a long-term relocation, there are many factors to consider when embarking on research in a new country. It is important for researchers to be aware of the unique cultural, social, and legal aspects of the country they are moving to successfully adapt to their new environment and conduct their research effectively. Understanding the local customs, regulations, and language can help researchers establish meaningful connections with local colleagues, navigate the local research landscape, and develop research collaborations that can benefit their work and their careers. In this context, it is crucial for researchers to undertake thorough preparation and research prior to their move, seeking advice and guidance from relevant stakeholders, including research institutions, funding agencies, and legal experts. By taking these steps, researchers can maximize the opportunities offered by their move to another country and minimize the challenges and uncertainties that may arise.

In this section, we will try to give a comprehensive yet summarized introduction to the most important considerations researchers have to consider when looking for a job in one of the ENHANCERIA's WP5 partners' countries. Our experts from each university have gathered a mini-guide for each of the countries, which is summarized in the following table:





COUNTRY	CONTENT SUMMARY
ITALY	- National Laws
	- Labor figures for researchers
	- Types of contracts and features
GERMANY	- National Laws
	- Recognition of titles
	- European directives and resources
NORWAY	- National Laws
	- Directives for researchers
	- Policies for new employees
POLAND	- National Laws
	- Polish National Agency for Academic Exchange
	- Policies for new students
	- National funding agencies
SPAIN	- National Laws
	- Labor figures for researchers
	- National fundign agencies



#### **ITALY**

The following is a description of the Academic Career Path in Italy. In compliance with the autonomy recognized to universities, the recruitment procedures for access to university careers, both for teaching staff and administrative technical staff, are managed directly by the universities through public open calls. The university career related to research and teaching activities is carried out by the following figures:

- 1) Full Professor
- 2) Associate professor
- 3) Permanent researcher (title no longer granted after the enforcement of Law 240/2010).
- 4) Fixed-term researcher Senior Researcher: Three-year non-renewable contracts at the end of which it is possible to directly access the role of Associate Professor, if in possession of the "National Scientific Qualification, and following a positive evaluation by the university.
- 5) Fixed-term researcher Junior Researcher: contracts with a duration of 3 years, extendable for a further two 2 years.
- Research fellow: individual contracts with a minimum duration of one year and a maximum of three years
- 7) Ph.D. candidate: three-year duration programme.

The overall duration of the relationships as research fellow of the single subject cannot exceed six years. The overall duration of the contracts as a research fellow and as a fixed-term researcher, even with different institutions, cannot in any case exceed twelve years, even if not continuous.

 Job postings: openings for competitions in academia are published in the National Official Journal.

With the law number 79 of the 29th June 2022, some changes are introduced

- PhD title (3years)
- Postdoc experience: possibility to receive a yearly contract as ASSEGNO DI RICERCA up to 6 years within the Italian University system; from January 2024 the Assegno di Ricerca will be replaced by the Contratto di Ricerca (becomes a two-year research contract, extendable to five if it is linked to a European project. The new law brings the salary from €19,000 to €40,000 including social security and tax contributions)



- Junior Researcher (RTDA): 3 years duration + possible renewal for 2 additional years; can be activated until 30/6/2025; thereafter it will be replaced by RTT Tenure Track Research contract (up to 6 years)
- Senior Researcher (RTDB): 3 years duration; can be activated until 30/6/2023; thereafter it will be replaced by RTT Tenure Track Research contract (up to 6 years)

(These means that the distinction between RTD-A and RTD-B is replaced by a unique researcher position: a six-year path that give access to associate professorship, and that can be reduced to four for those who already have a senior level and a paramount scientific production.)

- Associate Professor (eligible position ONLY if the Researcher has previously obtained the ABILITAZIONE SCIENTIFICA NAZIONALE, National Scientific assessment evaluation)
- Full Professor (National Scientific assessment evaluation is required)



#### **GERMANY**

The following is a compendium of the National and international laws and guidelines that that establish and define the legal framework for researchers work in Germany. We have divided it into general resources for researchers that want to pursue a career in Germany, labor laws for Germany, academic recognition processes and resources and European Guidelines and Recommendations that define the legal framework for researchers.

## **GENERAL RESOURCES**

- Charter of Fundamental Rights of the European Union (Charta der Grundrechte der Europäischen Union) URL: <a href="https://www.europarl.europa.eu/charter/pdf/text\_de.pdf">https://www.europarl.europa.eu/charter/pdf/text\_de.pdf</a>
- German Basic Law (Grundgesetz für die Bundesrepublik Deutschland) URL: https://www.bundestag.de/gg
- Berlin State Higher Education Act (Gesetz über die Hochschulen im Land Berlin (Berliner Hochschulgesetz BerlHG)) URL: <a href="https://gesetze.berlin.de/bsbe/document/ilr-HSchulGBE2011rahmen">https://gesetze.berlin.de/bsbe/document/ilr-HSchulGBE2011rahmen</a>
- The German Framework Act for Higher Education (Hochschulrahmengesetz) URL: <a href="https://www.gesetze-im-internet.de/hrg/">https://www.gesetze-im-internet.de/hrg/</a>
- Statutes of the German Research Foundation (Satzung der Deutschen Forschungsgemeinschaft (DFG))
   https://www.dfg.de/en/dfg\_profile/statutes/index.html
- Memorandum of the German Research Foundation URL: https://www.dfg.de/en/research funding/principles dfg funding/good scientific practic e/ https://www.dfg.de/download/pdf/foerderung/rechtliche rahmenbedingungen/gute wis senschaftliche praxis/empfehlung wiss praxis 1310.pdf
- Recommendation of the 14th German Rectors' Conference (Hochschulrektorenkonferenz HRK)

  <a href="https://www.hrk.de/fileadmin/migrated/content-uploads/Empfehlung GutewissenschaftlichePraxis">https://www.hrk.de/fileadmin/migrated/content-uploads/Empfehlung GutewissenschaftlichePraxis</a> MV 14042013 EN.pdf
- European and world-wide Agreements Regarding Intellectual Property Rights URL: <a href="https://policy.trade.ec.europa.eu/enforcement-and-protection/protecting-eu-creations-inventions-and-designs">https://policy.trade.ec.europa.eu/enforcement-and-protection/protecting-eu-creations-inventions-and-designs</a> en



https://www.pressestelle.tu-

berlin.de/menue/tub medien/newsportal/innenansichten/urheberrechtsgesetz faq/

- Patent Act (Patentgesetz (PatG) URL: <a href="https://www.gesetze-im-internet.de/patg/">https://www.gesetze-im-internet.de/patg/</a>
- Occupational Health and Safety Act (Arbeitsschutzgesetz) URL: <a href="https://www.umwelt-online.de/regelwerk/arbeitss/arbsch/arbs1.htm">https://www.umwelt-online.de/regelwerk/arbeitss/arbsch/arbs1.htm</a>
- Berlin Audit Office (Rechnungshof) URL: <a href="https://www.berlin.de/rechnungshof/wir-ueber-uns/">https://www.berlin.de/rechnungshof/wir-ueber-uns/</a>
- Federal Data Protection Regulations (Datenschutzgrundverordnung DSGVO)
   https://www.bmj.de/DE/Themen/FokusThemen/DSGVO/DSVGO\_node.html
- Directive 95/46/EC URL: <a href="https://www.datenschutz-grundverordnung.eu/wp-content/uploads/2015/12/CELEX 31995L0046 DE TXT.pdf">https://www.datenschutz-grundverordnung.eu/wp-content/uploads/2015/12/CELEX 31995L0046 DE TXT.pdf</a>
- Civil Servant Status Act (Beamtenstatusgesetz) URL: <a href="http://www.gesetze-im-internet.de/beamtstg/">http://www.gesetze-im-internet.de/beamtstg/</a>
- Berlin General Data Protection Regulation (Berliner Datenschutzgesetz BlnDSG) URL:
   https://www.datenschutz berlin.de/fileadmin/user upload/pdf/publikationen/informationsmaterialien/2018 BlnBDI BlnDSG.pdf
- Freedom of Information Act (Berliner Informationsfrei-heitsgesetz) URL:
   <a href="https://gesetze.berlin.de/bsbe/document/jlr-InfFrGBErahmen">https://gesetze.berlin.de/bsbe/document/jlr-InfFrGBErahmen</a>
- European Social Fund for Germany ESF (Europäischer Sozialfonds) URL: <a href="https://www.esf.de/portal/DE/Startseite/inhalt.html">https://www.esf.de/portal/DE/Startseite/inhalt.html</a>
- German Social Code (Sozialgesetzbuch SGB) URL: https://www.sozialgesetzbuch-sqb.de/

#### LABOR LEGISLATION

- Law on equal rights for people with and without disabilities
   (Landesgleichberechtigungsgesetz LGG) URL:
   <a href="https://www.berlin.de/sen/soziales/service/berliner-sozialrecht/kategorie/rechtsvorschriften/lgbg-573403.php">https://www.berlin.de/sen/soziales/service/berliner-sozialrecht/kategorie/rechtsvorschriften/lgbg-573403.php</a>
- General Equal Treatment Act (Allgemeines Gleichbehandlungsgesetz AGG) URL:
   <a href="https://www.gesetze-im-internet.de/englisch agg/">https://www.gesetze-im-internet.de/englisch agg/</a>
- DFG's Research-Oriented Equality Standards URL:
   <a href="https://www.dfg.de/en/research funding/principles dfg funding/equal opportunities/general information/research oriented/">https://www.dfg.de/en/research funding/principles dfg funding/equal opportunities/general information/research oriented/</a>
- Diversity Charta URL: <a href="https://www.charta-der-vielfalt.de/en/">https://www.charta-der-vielfalt.de/en/</a>



- Collective Agreement for the Public Service of the Länder/ TV-L Regulations (Tarifvertrags
  für den öffentlichen Dienst der Länder TV-L) URL: <a href="https://www.tdl-online.de/tv-l/tarifvertrag.html">https://www.tdl-online.de/tv-l/tarifvertrag.html</a>
- Fixed-Term Employment in Science Act (Wissenschaftszeitvertragsgesetz WissZeitVG) URL: <a href="https://www.gesetze-im-internet.de/wisszeitvg/BJNR050610007.html">https://www.gesetze-im-internet.de/wisszeitvg/BJNR050610007.html</a>
- Equality of Women and Men in the Federal Administration and in the Federal Courts Act
   (Gesetz für die Gleichstellung von Frauen und Männern in der Bundesverwaltung und in den
   Gerichten des Bundes Bundesgleichstellungsgesetz BGleiG) URL: <a href="https://www.gesetze-im-internet.de/bgleig\_2015/BJNR064300015.html">https://www.gesetze-im-internet.de/bgleig\_2015/BJNR064300015.html</a>
- HRK Guidelines for the Design of Temporary Employment Relationships with academic and artistic staff URL: <a href="https://www.hrk.de/resolutions-publications/resolutions/beschluss/detail/guidelines-on-fixed-term-employment-contracts-with-academic-and-artistic-staff/">https://www.hrk.de/resolutions-publications/resolutions/beschluss/detail/guidelines-on-fixed-term-employment-contracts-with-academic-and-artistic-staff/</a>
- Civil Servant Status Law for the States (Beamtenstatusgesetz BeamtStG). URL: <a href="http://www.gesetze-im-internet.de/beamtstg/">http://www.gesetze-im-internet.de/beamtstg/</a>
- Administrative Procedure Act (Verwaltungsverfahrensgesetz VwVfG) URL: <a href="https://www.gesetze-im-internet.de/vwvfg/">https://www.gesetze-im-internet.de/vwvfg/</a>
- Pay Scale (Besoldungsordnung) URL: <a href="https://www.finanzen.tu-berlin.de/fileadmin/abt5/W-Besoldung/BerlProfBesAendG">https://www.finanzen.tu-berlin.de/fileadmin/abt5/W-Besoldung/BerlProfBesAendG</a> 20150407.pdf
- ELFI (Servicestelle für Elektronische ForschungsförderInformationen) URL: https://www.elfi.info/
- Maternity Allowance (Mutterschaftsgeld) URL:
   <a href="https://www.bundesamtsozialesicherung.de/de/mutterschaftsgeld/haeufige-fragen/">https://www.bundesamtsozialesicherung.de/de/mutterschaftsgeld/haeufige-fragen/</a>
- Parental Allowance (Elterngeld) URL: https://www.bmfsfj.de/bmfsfj/meta/en

## **ACADEMIC TITLE RECOGNITION**

- Determination of the Equivalence of Professional Qualifications (Feststellung der Gleichwertigkeit von Berufsqualifikationen, Berufsqualifikationsfeststellungsgesetz - BQFG)
   URL: <a href="https://www.gesetze-im-internet.de/bqfg/">https://www.gesetze-im-internet.de/bqfg/</a>
- Recognition of foreign professional qualifications (Anerkennung ausländischer Berufsqualifikationen - BMBF) URL: <a href="https://www.bmbf.de/bmbf/de/bildung/integration-durch-bildung-und-qualifizierung/anerkennung-auslaendischer-berufsqualifikationen/anerkennung-auslaendischer-berufsqualifikationen node.html">https://www.bmbf.de/bmbf/de/bildung/integration-durch-bildung-und-qualifizierung/anerkennung-auslaendischer-berufsqualifikationen node.html</a>



#### **EUROPEAN DIRECTIVES AND RESOURCES**

- Lisbon Convention of the Council of Europe (Lissabon Konvention) URL: <a href="https://www.kmk.org/fileadmin/pdf/ZAB/Konventionen und Uebereinkommen von Europarat UNESCO/Lissabonkonvention.pdf">https://www.kmk.org/fileadmin/pdf/ZAB/Konventionen und Uebereinkommen von Europarat UNESCO/Lissabonkonvention.pdf</a>
- European Network of National Information Centres on Academic Recognition + European Network of Information Centres (Europäisches Netz nationaler Informationszentren für Fragen der akademischen Anerkennung + Europäisches Netz der Informationszentren -ENIC-NARIC Netzwerk) URL: <a href="https://www.enic-naric.net/">https://www.enic-naric.net/</a>
- Central Office for Foreign Education (ZAB) URL: <a href="https://www.kmk.org/zab/central-office-for-foreign-education.html">https://www.kmk.org/zab/central-office-for-foreign-education.html</a>
- German Academic Exchange Service (DAAD) URL: https://www.daad.de/en/
- Part-Time and Fixed-Term Act (Teilzeit und Befristungsgesetz TZBfG) URL:
   <a href="https://www.gesetze-im-internet.de/tzbfg/BJNR196610000.html">https://www.gesetze-im-internet.de/tzbfg/BJNR196610000.html</a>
- General Law for the Protection of Public Safety and Order in Berlin (Allgemeine Gesetz zum Schutz der öffentlichen Sicherheit und Ordnung in Berlin - ASOG) URL: <a href="https://gesetze.berlin.de/bsbe/document/jlr-ASOGBE2006V41IVZ">https://gesetze.berlin.de/bsbe/document/jlr-ASOGBE2006V41IVZ</a>
- Ordinance on the Working Hours of Civil Servants (Verordnung über die Arbeitszeit von Beamten - AZVO) URL: <a href="https://gesetze.berlin.de/bsbe/document/jlr-ArbZVBEV4P1">https://gesetze.berlin.de/bsbe/document/jlr-ArbZVBEV4P1</a>
- Working Hours Act (Arbeitszeitgesetz ArbZG) URL: <a href="https://www.gesetze-im-internet.de/arbzg/">https://www.gesetze-im-internet.de/arbzg/</a>
- Berlin Educational Leave Act (Berliner Bildungsurlaubsgesetz BiUrlG) URL:
   file:///C:/Users/Meike/Downloads/berliner-bu-gesetz.pdf
- Council Directive 1999/70/EC URL: <a href="https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=CELEX:31999L0070">https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=CELEX:31999L0070</a>
- Employment Protection Act (Kündigungsschutzgesetz KSchG) URL: <a href="https://www.gesetze-im-internet.de/kschg/BJNR004990951.html">https://www.gesetze-im-internet.de/kschg/BJNR004990951.html</a>
- Act on the Protection of Mothers at Work, in Training and Studies (Gesetz zum Schutz von Müttern bei der Arbeit, in der Ausbildung und im Studium) URL: <a href="https://www.gesetze-im-internet.de/muschg">https://www.gesetze-im-internet.de/muschg</a> 2018/
- Crediting of Periods of Child-rearing (Anrechnung von Zeiten der Erziehung) URL:
   https://www.deutsche-rentenversicherung.de/DRV/DE/Rente/Familie-und-Kinder/Kindererziehung/kindererziehung node.html
- Administrative Agreement for Young Academics (Bund-Länder-Programm zur Förderung des wissenschaftlichen Nachwuchses). Administrative agreement URL: <a href="https://www.tenuretrack.de/de/dateien/tenure-track/verwaltungsvereinbarung-wissenschaftlicher-nachwuchs-2016.pdf">https://www.tenuretrack.de/de/dateien/tenure-track/verwaltungsvereinbarung-wissenschaftlicher-nachwuchs-2016.pdf</a>





- Guidelines URL: <a href="https://www.tenuretrack.de/de/assets/dateien/foerderrichtlinie-zweite-bewilligungsrunde.pdf">https://www.tenuretrack.de/de/assets/dateien/foerderrichtlinie-zweite-bewilligungsrunde.pdf</a>
- Audit Internationalisation of Higher Education Institutions URL: <a href="https://www.tu-berlin.de/menue/internationales/hrk">https://www.tu-berlin.de/menue/internationales/hrk</a> audit internationalisierung/
- Employee Invention Act (Arbeitnehmererfindungsgesetz ArbnErfG) URL:
   <a href="http://www.gesetze-im-internet.de/arbnerfg/">http://www.gesetze-im-internet.de/arbnerfg/</a>
- Ordinance on Teaching Obligations at Universities (Verordnung über die Lehrverpflichtung an Hochschulen – LVVO) URL: <a href="https://gesetze.berlin.de/bsbe/document/ilr-LehrVPflVBEV2P3">https://gesetze.berlin.de/bsbe/document/ilr-LehrVPflVBEV2P3</a>
- Staff Representation Act (Personalvertretungsgesetzes PersVG) URL: <a href="http://www.bsbd-berlin.de/pdf/personalratswahlen/personalvertretungsgesetz">http://www.bsbd-berlin.de/pdf/personalratswahlen/personalvertretungsgesetz</a> berlin.pdf
- UniWIND GUAT URL: <a href="https://www.uniwind.org/">https://www.uniwind.org/</a>
- EUA-CDE European University Association URL: <a href="https://eua.eu/events/33:2019-european-quality-assurance-forum.html">https://eua.eu/events/33:2019-european-quality-assurance-forum.html</a>
- Centre for Higher Education Development (Centrum f
  ür Hochschulentwicklung CHE) URL: <a href="https://www.che.de/">https://www.che.de/</a>



#### **NORWAY**

The national law regulates our working conditions is The Working Environment Act (Arbeidsmiljøloven). There is also the law Public Employees Act (Statsansatteloven, abbreviated to sal. in Norwegian), for all employees employed in the public sector in Norway (Staten).

Additionally, there is "Staff regulations including local procedural rules for academic positions at the Norwegian University of Science and Technology (NTNU)". The regulations apply to appointment to positions at NTNU that are subject to the Public Employees Act (Statsansatteloven, abbreviated to sal. in Norwegian), unless specific regulation has been laid down in or is pursuant to the Universities and University Colleges Act (Lov om universiteter og høgskoler, uhl).

For all governmental appointments in Norway, the qualification principle applies. This means that the person best qualified for the position must be employed. The qualification principle is based on fundamental and non-statuary principles of equal treatment, fairness and objectivity. The criteria in the qualification assessment are education, experience and personal suitability. This entails cumbersome and lengthy appointment processes.

#### New employees

Employees who start in a new position will usually have an introductory meeting for the purpose of getting to know their new division and institution. The different faculties offer PhD candidates their own separate course.

Employees will also have their personal mentor. The mentor's assignment is to give them a practical and social information so that they can get settled in their new position as quickly as possible. The mentor will often have the same type of job, and the arrangement usually lasts 2-3 months. Institutions often follow up with additional meetings, such as for example at NTNU the the option to participate at the annual Rector's meeting with new employees.



#### **POLAND**

A comprehensive description of the Polish education system (the structure and main aspects) is available here: <a href="https://nawa.gov.pl/images/users/623/Education System Poland NAWA----2020-08-14">https://nawa.gov.pl/images/users/623/Education System Poland NAWA----2020-08-14</a> 3.pdf)

A foreigner who wants to study or work at a Polish university should first read the information provided by the Polish National Agency for Academic Exchange (referred to in brief as NAWA). NAWA was created to coordinate state activities driving the internationalization process of Polish academic and research institutions.

The objectives of NAWA's activities, as listed in their webpage (https://nawa.gov.pl/en/nawa), are:

- Enhancing international cooperation of scientists within the Polish system of science and higher education
- Enhancing international cooperation of Polish universities and scientific institutions
- Increasing the number of outstanding foreign students at Polish universities
- Disseminating information about the Polish system of tertiary education and science
- Expanding the international community of people familiar with the Polish language and culture

All information regarding diploma recognition can be found on the NAWA website: https://nawa.gov.pl/en/recognition/recognition-for-academic-purposes.

For international students interested in studying in Poland, the Ministry of Science and Education has launched a particular website: <a href="https://study.gov.pl/">https://study.gov.pl/</a>. On this website, students can find basic information, including in particular:

- Reasons to study in Poland
- What you should know about Poland
- Things to do in Poland
- Summer courses of the Polish language and culture
- Scholarship offer
- Programme information: bachelor, master, PHD, non-degree, etc.
- Tuition fees
- Information about Higher Education System
- List of Universities



- Visa and application (5 easy steps to get a visa, Temporary Residence Permit, etc.)
- Accommodation
- How you can find a job
- Health insurance
- Student card
- What to do after graduation?
- Many others...

The two main science funding agencies in Poland are:

- The National Science Centre (<a href="https://www.ncn.gov.pl/en">https://www.ncn.gov.pl/en</a>), which funds "empirical or theoretical endeavours undertaken to gain new knowledge of the foundations of phenomena and observable facts, without any direct commercial use".
- The National Centre for Research and Development (<a href="https://www.gov.pl/web/ncbr/ncbr">https://www.gov.pl/web/ncbr/ncbr</a>),
   which supports innovative technological and social solutions.



#### **SPAIN**

The legal framework for Researchers contracts is established in Spain through the Law of Science, Technology and Innovation (LCTI, 2011), as well as the posterior modifications (2021), which resulted in several labor figures for researchers depending on their level of education and experience. Most common figures for researchers under this framework are:

- "Investigador Predoctoral en Formación": This is a pre-doctoral research position that is typically offered to students who are pursuing a doctoral degree. In this position, researchers receive training and support for the development of the doctoral thesis. This position can last up to 5 years with the latest LCTI modification.
- "Investigador Postdoctoral": This is a postdoctoral research position that is typically offered to individuals who have recently completed their doctoral degree. The main goal of this position is to provide support for the development of new research projects and to help the researcher gain more experience in their field. The duration of this position can last up to 4 years with the latest LCTI modification.
- "Profesor Ayudante Doctor": Temporary teaching and research position typically offered to
  individuals after the completion their doctoral degree. This position provides support for
  teaching and research activities at the university level.
- "Profesor Contratado Doctor": Permanent teaching and research position typically offered
  to individuals who have completed their doctoral degree and have significant experience in
  their field. The main goal of this position is to provide teaching and research activities at the
  university level.
- "Científico Titular": Permanent research position typically offered to individuals who have a
  doctoral degree and have significant experience in their field. This position carry out and
  develop independent research projects and is not tipically involved in teaching activities.
- "Contrato de investigador distinguido": Refers to a type of contract offered to highly
  qualified and experienced researchers or scientists who. t aims to attract and retain talented
  researchers who have a proven track record of excellence in their field. The contract is
  typically offered for a fixed term of up to five years and may be renewable, subject to



performance review and evaluation. It provides researchers with a range of benefits, including competitive salaries, access to research facilities and resources, and opportunities for professional development and networking. Additionally, researchers may be eligible for additional funding and support for their research projects.

There are three main public agencies that provide funding for research projects in Spain, the main ones being:

- The Spanish Agency for Research (AEI), which is a part of the Ministry of Science and Innovation (MICINN) is the main funding agency for research in Spain and is responsible for promoting scientific research and innovation across all disciplines. It was created in 2016. (<a href="https://www.aei.gob.es/en">https://www.aei.gob.es/en</a>)
- Centre for the Development of Industrial Technology (CDTI): is a public agency under the
   Ministry of Science and Innovation that promotes technological innovation in Spanish
   companies. It was created in 1977. (<a href="https://www.cdti.es/index.asp?idioma=2">https://www.cdti.es/index.asp?idioma=2</a>)
- Spanish Foundation for Science and Technology (FECYT): public foundation that promotes
  scientific culture and communication in Spain, as well as providing funding for research
  projects. It was created in 2001. (<a href="https://www.fecyt.es/en">https://www.fecyt.es/en</a>).

FECYT also elaborates each year a very useful poster depicting the Researchers Career Path in Spain, which latest version is available here:

 $\frac{https://www.fecyt.es/es/system/files/publications/attachments/2023/02/career-path-6th-edition.pdf}{}$ 



#### 2.2. COMPETENCES & SKILLS COMPENDIUM

This section aims to provide a summary of the most important skills and competences for researchers who want to purchase a career in Europe. These are the skills a researcher has to focus on at the beginning of the career. The set of skills proposed are related to "hard skills" strictly connected to the job (these cannot be ignored to perform daily activities and specific tasks and can be learned through education and professional development), and "soft skills" list that includes the so called transferable skills (these include social competencies and skills, knowledge, and abilities related to human skills and closely linked to people's personality traits, that are useful to perform activities and tasks in a personal way). We proposed a colection of the most usefull skills and competences grouped in categories by sector of labor postions and general competences, in which (H) represents a category of Hard Skills and (S) a category of Soft Skills:

## **SCIENTIFIC/RESEARCH SKILLS (H):**

- Critical thinking
- Problem solving
- Data analysis
- Experiment design
- Statistical analysis

# **COMMUNICATION SKILLS (S):**

- Writing (research papers, grant proposals)
- Presenting (oral presentations, poster presentations)
- Networking (attending conferences, collaborations, co-creation)

## **PROJECT MANAGEMENT (S):**

- Time management
- Planning and organizing
- Budgeting
- Collaboration and teamwork



## **TECHNOLOGY SKILLS (H):**

- Programming (e.g. R, Python)
- Data visualization
- Database management

#### **LANGUAGE SKILLS (S):**

- English proficiency (considered the lingua franca of science)
- Specific field vocabulary comprehension and usage
- Native language comprehension (when working abroad)

#### **INTERPERSONAL SKILLS (S):**

- Leadership
- Mentoring
- Negotiation
- Conflict resolution

# **CREATIVITY AND INNOVATION (S):**

- Ability to generate new ideas and solutions
- Capability to think outside the box

# **ADAPTABILITY AND FLEXIBILITY (S):**

- Capability to work with different people and teams
- Capability to work in a dynamic environment
- Capability to manage expectations and fulfill objectives

# **SELF-MOTIVATION AND DISCIPLINE (S):**

- Ability to stay focused and motivated on long-term projects
- Ability to manage stress and workload



## **PROFESSIONALISM AND ETHICS (S):**

- Ability to conduct research in an ethical and responsible manner
- Understanding of research ethics and integrity

## **CONTINUOUS LEARNING (S):**

- Staying up-to-date with the latest research and developments in the field
- Pursuing professional development opportunities
- Attending courses and online education

# **COMMERCIAL AWARENESS (H-S):**

- Understanding of how research can be commercialized and impact society
- Knowledge of intellectual property and patents
- Knowledge of market situation and companies relevant in the sector

## **NETWORKING AND COLLABORATION (S):**

- Building and maintaining professional relationships
- Collaborating with colleagues on research projects
- Being member of an European alliance or professional organization

#### **LEADERSHIP AND MANAGEMENT (S):**

- Leading a research team or project
- Managing budgets, resources and timelines

## **TEACHING AND MENTORSHIP (S):**

- Communicating research results to students and the wider community
- Mentoring and supporting early career researchers
- Supervising PhD Thesis, Students Master Thesis, etc.



## **WRITING AND PUBLISHING (S):**

- Writing research papers and grant proposals
- Understanding the publishing process and peer-review processes
- Expressing your ideas and results in a simple yet effective manner

## **FUNDRAISING AND GRANT WRITING (S):**

- Raising funding for research projects
- Writing grant proposals and funding applications

## **DIVERSITY AND INCLUSIVITY (S):**

- Understanding and promoting diversity and inclusivity in the research community
- Addressing biases and promoting equal opportunities in research

# **PUBLIC ENGAGEMENT AND OUTREACH (S):**

- Communicating and disseminating research results to the wider public and policy makers
- Engaging with stakeholders and communities implied in research

## **ENTREPRENEURSHIP AND INNOVATION (S):**

- Applying research results to create new products, methodologies or services
- Turning research into commercial opportunities
- Commercial valorization of research results

The following model, prepared by the European Comission, and available at: <a href="https://euraxess.ec.europa.eu/sites/default/files/6">https://euraxess.ec.europa.eu/sites/default/files/6</a> - legislative framework hrs4r-info day 18-10-2022.pdf, contains a complementary categorization of skills and competences that can show visually the general concept of domains of skills and is very related to the one developed in this section:





Conceptual model of the European Competence Framework for Researchers; Research careers: the legislative framework, European Comission.



#### 2.3. TIPS FOR PUBLISHING A RESEARCH ARTICLE

Publishing research articles is one of the main activities of the Researchers' Career, making the researchers' work more visible among other researchers from each field and making it more discoverable within the research community, facilitating the advancement of scientific inquiry and the general progress of science. By disseminating their work through research publications, researchers can receive feedback and constructive criticism from other experts in their field, which helps refining their research and identifying areas that require further investigation or analysis. Moreover, publishing research articles is often a requirement for academic promotion, tenure, and funding opportunities. For this reasons, we have gathered, among the ENHANCERIA experts in RCD working in WP5, a compilation of the most useful considerations any researcher must take into account before publishing a research article. Here are the tips, which are presented in the same chronological order of activities that must be followed when writing a research article:

- 1) Choose a topic that is relevant and interesting to the scientific community.
- 2) Conduct a thorough literature review to identify the gaps in existing research.
- 3) Define your research question or hypothesis clearly and concisely at the beggining.
- 4) Select appropriate research methods and data analysis techniques.
- 5) Use clear and concise language to accurately describe your methodology and findings.
- 6) Use appropriate statistical tests and provide clear explanations of the results.
- 7) Utilize tables and graphs to present results in a clear and concise manner.
- 8) Provide a detailed discussion of your results and their implications for future research.
- 9) Acknowledge any limitations of your study and suggest areas for further research.
- 10) Follow the formatting and submission guidelines of your target journal.
- 11) Write an addecuate abstract that accurately summarizes your research, having in mind that this will be the most read part.
- 12) Use appropriate keywords to improve the discoverability of your article and its overall reach.
- 13) Provide a clear and concise introduction that sets the context for your research.
- 14) Utilize headings and subheadings to organize your article into coherent sections.
- 15) Use clear and concise language.
- 16) Employ references to support your arguments and give credit to previous research.
- 17) Write in active voice and avoid jargon and unnecessary technical terms.
- 18) Proofread your article carefully for spelling, grammar, and formatting errors.
- 19) Share it with colleagues or a mentor and get feedback to improve your article.
- 20) Be persistent and be prepared to revise and resubmit your article.
- 21) Write for your audience and make your article accessible to readers outside of your field.



- 22) Use a logical and coherently structured approach to presenting your arguments and conclusions.
- 23) Ensure that your article is well-organized and easy to navigate, with clear headings and subheadings.
- 24) Consider the ethical implications of your research and address them in your article.
- 25) Use accurate language to convey complex ideas and concepts and favor the use of consensual language in the STEM community.
- 26) Avoid making claims that cannot be supported by your data or evidence.
- 27) Use visuals, such as images or videos, to enhance your article and make it more engaging.
- 28) Be transparent about your methods and data collection processes and acknowledge and provide details about any potential biases or limitations.
- 29) Consider the impact of your research and how it fits into the broader scientific landscape.
- 30) Be open to feedback and criticism and use it as an opportunity to improve your research and writing.



#### 2.4. TIPS FOR ACCESSING RESEARCH GROUPS

- 1) Network: Attend conferences and other events in your field, and connect with other researchers and professionals, offering yourself for collaborations if you're interested. This can help you learn about new research groups and opportunities, and also help you establish relationships with people who may be able to help you connect with a research group.
- 2) Research the group: Before reaching out to a research group, research their work and publications to see if their lines of research align with your research interests. It is important to get know the kind of expertise and know-how that a group can potentially have and it'll help you get accepted into it.
- 3) Finding relevant / excellent group research groups through bibliometric analysis: Researching scientific databases through a bibliometric analysis can help you identify the lines of work of each research group and which are the most relevant researchers or groups in your field of work.
- 4) Reach out to the group leader: Once you've identified a research group that aligns with your interests, reach out to the group leader directly. Introduce yourself, explain your research interests and experience, and express your interest in joining the group.
- 5) Be persistent: If you don't get a response right away, don't give up, follow up with the group leader and continue to express your interest in joining their group.
- 6) Look for postdoc positions: Many research groups have postdoctoral positions available on their webpages or LinkedIn, which can be a great way to get your foot in the door and gain experience in a specific research group.
- 7) Look for internships: Some research groups offer internships to students or early-career researchers. This can be a great way to gain experience and introduce yourself to a different research environment.
- 8) Be flexible: Be open to different opportunities and be flexible about the type of research group or project you join, you may find different projects and topics of interest that you were not looking for in the beginning, and this can help you find new opportunities that are better aligned with your interests and career goals.



- 9) Look for opportunities in industry: Research groups in industry often have different requirements and funding opportunities compared to academic groups. Look for opportunities in industry, such as Industry PhDs, collaborations, or even jobs at the private sector (see section 1.5) and consider applying for positions in these groups.
- 10) Utilize online resources: Utilize online resources like LinkedIn, ResearchGate, and academic social networks to find and connect with researchers in your field. This tools constitute one of the most powerful networking platforms.
- 11) Look for opportunities in international research groups: Many research groups have collaborations with international partners, so look for opportunities in research groups outside of your country. Euraxess is one of the most usefuls tools to find research groups at europe:
- 12) Build relationships: Build relationships with other researchers in your field, whether they are in your own institution or in other institutions. Strong relationships can open doors to new opportunities and collaborations, and create a better work environment at a general level.
- 13) Be proactive: Don't wait for opportunities to come to you, actively seek out opportunities and take initiative to make connections with researchers and research groups.
- 14) Be clear about your goals: Be clear about your goals before joining a research group and how your skills and experience align with the group's research, this will make it easier for the group leader to see how you can contribute to the group's research and for you to fit in easily.
- 15) Show your enthusiasm: Show your enthusiasm for the group's research and how you can contribute to it, this creates a better working environment and will make you more attractive to collaborate with.
- 16) Be prepared to negotiate: Be prepared to negotiate the terms of your involvement in the research group, such as your role, responsibilities, funding, timescales...
- 17) Be patient: Finding the right research group and/or waiting for a response can take time, so try to not overthink it and keep looking until you find the right fit.



- 18) Be open to different career paths: The researchers career path is not a one-way line, there is a lot of roles that a researcher can adopt in their job. Be open to different paths, as a research group may lead to other opportunities such as collaborations, consulting or even starting your own company.
- 19) Look for opportunities in interdisciplinary research groups: Interdisciplinary research groups can provide a unique opportunity to work with researchers from different fields and gain new perspectives on your research. Don't be restricted to just a field of work, researchers work and skills can be transferrable to a variety of fields.
- 20) Look for opportunities in government research groups: Government research groups and agencies often have their own lines of work and research groups, different from academia or the private sector.
- 21) Look for opportunities in non-profit research groups: Non-profit research groups often focus on specific social or environmental issues and can provide unique opportunities to contribute to important causes, consituting a part of the researchers career path often forgotten.
- 22) Look for opportunities in international organizations: International organizations such as the European Union or the United Nations often have their own research programs that can provide opportunities to work with researchers from different countries and cultures.
- 23) Look for opportunities in startup companies: Start-up companies in a specific field often look to expand their staff members and researchers, check your Linkedln and the Euraxess Job Portal for opportunities.
- 24) Volunteer: Offer to volunteer in non-profit organizations research or project development can be a highly rewarding activity on the personal level and help you gain experience and complete your CV.
- 25) Attend seminars and workshops: Attending events in your field of research helps you stay up to date with the latest developments in your field and also to stay in touch with your colleagues or make new connections.
- 26) Be open to relocate: If your desired group is from another location.



- 27) Be prepared to take on additional responsibilities: Additional responsibilities, such as mentoring junior researchers or managing lab equipment will help you grow professionally and expand your skill set.
- 28) Be open to different types of research: Be open to different types of research, such as applied or basic research, as it will help you expand your skills and knowledge.



#### 2.5. TIPS FOR ACCESSING JOBS AT THE PRIVATE SECTOR

- Network: Attend conferences and other events in your field, and connect with people in companies relevant for your field. This can help you learn about new companies and the market situation and new opportunities, and also help you establish new contacts and new labor or collaboration opportunities.
- 2) Research companies: Research companies in your field of interest to learn about their products, services, and research focus. This will help you identify companies that align with your interests and skills.
- 3) Tailor your CV and cover letter: Tailor your CV and cover letter to the specific company and position you are applying for, highlighting how your skills and experience align with the company's needs. Don't introduce unnecesary information if it is not relevant for the position, as it may reduce your chances of success.
- 4) Highlight your industry experience: Highlight any industry experience you have on your CV and cover letter, demonstrating you have the skills and experience to succeed in an industry setting.
- 5) Show your problem-solving skills: Show how you have solved complex problems in your research and how you can bring this problem-solving approach to the company. This is a type of soft skill that most employers of researchers pursue in research candidates.
- 6) Look for internships or co-op: Look for internships or co-op opportunities with companies in your field. This can be a great way to gain experience and build relationships with company representatives, and will help you if you are looking for a position in that company in the future.
- 7) Look for postdoc positions: Many companies have postdoctoral positions available, which can be a great way to gain industry experience and build relationships with company representatives. Look for opportunities in Industrial PhDs if you would like to carry out your thesis research at a company.
- 8) Leverage your connections: Leverage your connections and network to learn about job opportunities and to get your foot in the door.



- 9) Be prepared for an interview: Be prepared for an interview by researching the company, practicing your interviewing skills, and preparing answers to common interview questions. Practice with a colleague or mentor if possible, and be honest with the recruiter and highlight your strenghts.
- 10) Be open to different roles: Be open to different roles such as consulting, data analysis, or product development as these roles could lead to other opportunities within the company. It is normally easier to change a role once you are inside a company than to change roles coming from outside the company, so don't overlook opportunities that may sound not suited for you!
- 11) Be persistent: Job searching in the private sector can be competitive, so don't give up if you don't get a response right away. Follow up with companies and continue to express your interest in working with them. Use online tools such as Linkedln or access the companies web and contact them through it.
- 12) Highlight your soft (transferable) skills: Highlight transferable skills such as project management, problem-solving, and data analysis that are valuable in industry. Employers of researchers may be looking for people in different positions, so this soft skills will be very valuable for them.
- 13) Highlight any relevant industry certifications: Highlight any relevant industry certifications that you have, such as Six Sigma or Lean certifications, as employers of researchers have this in high consideration and may be required for some jobs.
- 14) Look for opportunities in startups: Look for opportunities in startups that are in the early stages of development and can benefit from your research expertise.
- 15) Look for opportunities in small- and medium-sized enterprises (SMEs): Small- and medium-sized enterprises (SMEs) often have different requirements and funding opportunities compared to large companies, and may not be as tipically involved in R&D, but depending on the field, there exist different SMEs looking for researchers in Europe.
- 16) Look for opportunities in multidisciplinary companies: Multidisciplinary companies may have different research needs and can offer a broader range of opportunities, or often have different branches of companies specialized in a specific sector, so research the organization of the companies you would like to work in.



- 17) Be open to different locations: Keep an open mind and research each country as the best opportunity may be in a different city or country.
- 18) Be prepared to work in a different research environment: As oposed of public research which is traditionally performed in labs, in the private sector you could end up working at a lab, factory, office, etc.
- 19) Be prepared to work in a team: Be prepared to work in a team, as industry often involves working with multidiscilplinar teams and different departments in the same project.
- 20) Be flexible: Consider the different duration of positions such as full-time, part-time, or contract positions and find the most suited for your expectations.
- 21) Participate in Universities' Business Chairs: This can be a good opportunity for degree, master or PhD students or postdoctorate researchers to collaborate with a company and start to put a foot into the private sector. Check for opportunities in universities' webpages.

These are some of the jobs that are typically found at the private sector due to their industry-related nature that can present good opportunities to researchers:

- Consulting: One of the most demanded positions, in which you can apply your research expertise to real-world problems.
- R&D: Perform applied R&D to the necessities of the company.
- Data science and big data: Growing fields that require expertise in data analysis and machine learning.
- Product development
- Business development: Apply your research expertise to the development of new business strategies and partnerships.
- Patent and intellectual property
- Marketing and communication
- Supply chain and logistics: Apply your research expertise to the optimization of production and distribution processes.
- Sustainability and CSR: Jobs require research expertise for the development of sustainable and socially responsible business practices



#### 2.6. International Dimension of the Researchers' Career Path

## **MOBILITY OF RESEARCHERS**

Mobility is an essential component of the International Dimension of the Researchers' Career Path, and it is a very useful process for professional growth. Traveling to different locations allows researchers to access unique research resources, collaborate with colleagues from different backgrounds, and gain new perspectives on their research and gather new ideas. In addition to this, mobility can help researchers advance their careers by providing access to new research opportunities and leadership roles, as well as different sources of funding.

Mobility of researchers also promotes knowledge exchange and interdisciplinary research, leading to more innovative and impactful research outcomes, which greatly benefits the advance of science and the research ecosystem. The cultural exchange and knowledge exchange that arises from mobility of researchers is also a benefit for the whole society. The most important benefits for researchers are:

- International collaboration: Mobility allows researchers to work with colleagues from other countries and collaborate on research projects that require diverse perspectives and expertise.
- Access to unique resources: Researchers may need to travel to access specialized research
  facilities or equipment that are not available in their home country.
- Career advancement: Mobility can be an essential factor in career advancement, as
  researchers may need to move to new institutions or countries to access new research
  opportunities or take on leadership roles.
- Knowledge exchange: Mobility promotes the exchange of knowledge and ideas between researchers from different cultures and disciplines, leading to more innovative and interdisciplinary research.
- Personal and professional growth: Mobility can broaden researchers' horizons, expose them
  to new ideas and ways of thinking, and help them develop new skills and competencies.

However, mobility can also present challenges, such as adapting to new cultural and institutional environments, managing family responsibilities, and dealing with visa and immigration issues. Therefore, researchers need to plan carefully for mobility, taking into account the potential benefits and challenges, and seeking support from their institutions and funding agencies. Many institutions open an "Euraxess Contact Point" to handle some of this support. This can range from helping with finding accommodation to getting visas to navigating interesting cultural events. A good tip could be to check if the institution the researcher is moving to has this facility. "The EURAXESS centers provide free personalized assistance in 18 areas of expertise. They guide with information and hands-on



help with paperwork, but they do not interfere in the relationship with authorities and decision-makers."

(https://euraxess.ec.europa.eu/information/centres/search)

#### RECOGNITION OF ACADEMIC TITLES WHEN LOOKING FOR JOBS ABROAD:

There is no automated way to recognize university titles at a European level. Recognition of academic titles is a process that aims to establish the equivalence of academic degrees and diplomas awarded in one country with those awarded in another country. This process is important for researchers who want to search for a job in another country because it ensures that their qualifications are recognized and valued by employers in their new location.

- Without recognition, researchers may face difficulties in finding employment or obtaining
  funding for their research projects. This is because employers and funding agencies often
  require proof of qualifications, and if their academic degree or diploma is not recognized,
  they may be deemed ineligible for employment or funding opportunities.
- Recognition can also impact the salary and job position that a researcher is offered. In some
  cases, a researcher's qualifications may be undervalued or misunderstood, leading to a
  lower salary or a lower job position than they would have received if their academic degree
  had been recognized.
- Overall, recognition of academic titles is a crucial issue for researchers who want to search
  for a job in another country. It ensures that their qualifications are recognized, valued, and
  rewarded appropriately, and helps to ensure that they can continue to contribute to the
  scientific community in a meaningful way.

A recurring fact is that academic titles for degrees and masters are usually more difficult to recognize than doctoral titles. This is due to the fact that doctoral titles are usually managed by the Doctoral Units at the universities, but titles for degrees and masters are issued by the central authorities of each country. This way, doctoral units can exchange doctoral titles (which imply that a candidate has also passed the degree and the master) with less restrictions than central authorities, which usually accelerates the process of recognition and results in a contradiction for employers: it results in being easier and faster to hire a doctor from another country than to hire a degree-level researcher, due to the fact that the title recognition for the first candidate would be easier and faster. This is an issue that should be tackled at an european policy level to ease the mobility of researchers.

https://europa.eu/youreurope/citizens/education/university/recognition/index en.htm





## 2.7. Challenges of the Researcher Career Path

Some of the most challenging processes that a researcher and research instituitions have to go through in their career and day-to-day activities are the following, gathered by our experts:

## Challenges for researchers:

- Application for funding: Securing funding for research projects can be a significant challenge, as competition for grants and funding opportunities is intense. Researchers must continually apply for funding and navigate complex application processes.
- Lack of information: As researchers often work independently, it may also be difficult to
  get necessary and relevant information about the workplace and for your work situation.
  It is essential to follow appropriate information channels such as the intranet and
  newsletters and to attend information meetings at one's faculty/department.
- Ethical considerations: Conducting research ethically and responsibly is essential, but it
  can be challenging to navigate complex ethical issues, especially when working with
  vulnerable populations or in sensitive research areas.
- Technological advances: The rapid pace of technological advancement can make it challenging for researchers to stay current and adapt their research methods and techniques accordingly.
- Lack of mobility/ recognition of mobility value in many national systems impacts negatively on researchers' opportunity and freedom.
- Funding for investments and the functioning of research infrastructures sometimes is not accessible to Early-stage researchers.
- Lack of independence from Supervisors.
- Feeling lonely: Being a foreigner and a newcomer at a university, it can take some time
  to feel part of the working environment. Early-stage researchers may be more prone to
  feeling lonely, as they often are temporary employees, work independently and may
  not be part of an established research environment. Most work environment initiate
  formal meetings and social activities. Newcomers are highly encouraged to early take
  an active part in such events, as well as informal gatherings at the workplace.
- Demanding career prospects: Career development can be challenging for early researchers such as PhD candidates and postdocs. In Norway, the qualification principle applies, which means that the best qualified applicant for a position or office must be employed or appointed, and thus there is no right to employ or appoint for example the second best qualified or choose freely from among all applicants who are considered qualified. In combination with limited academic positions, career development for this target group can be experienced as demanding and limited as the competition for these positions is high. Based on this it is important for early researchers to continuously acquire relevant competence. Most of PhD candidates choose a career outside academia.
- Control of knowledge transfer concerns responsibility for assessing the sensitivity of knowledge and technology, and for ensuring compliance with the national export control regulations in connection with the employment of foreign researchers. Guidelines regulate individual responsibility for assessing the sensitivity of knowledge and technology, and for ensuring compliance with the export control regulations. Sensitive professional areas are assessed by the various departments, and the export control regulations are followed in relevant processes and activities. Challenges may arise in cases where there are discrepancies in the interpretation of and expectations of these regulations.



- Publication and peer review: It is important to make sure the journal for submission to is registered in the Directory of Open Access Journals, DOAJ, as there is an increasing number of questionable journals attempting to fool researchers into publishing their work in journals without a proper peer-review process.
- Volatility of the job market: The academic job market can be highly competitive, with a limited number of tenure-track positions available in many fields. This can make it difficult for early-career researchers to find stable employment.
- Work-life balance: The research career can be demanding, with long hours and high levels of stress. This can make it challenging to maintain a healthy work-life balance, which can impact researchers' mental health and personal relationships.

#### **Challenges for Research Institutions:**

- Implement Research Assesment based on quantitative/objective criteria.
- Trouble to attract international talent due to difficulties to accredit teaching in foreign countries.
- Equiparate remuneration among countries.
- Equiparate remuneration for young researchers.
- Competition at the international level
- Establish international networks.
- Career progression both in own country but also abroad
- Interdisciplinarity, an opportunity to understand how it enlarge own field of competence.

Overall, the research career presents many challenges that require researchers to be adaptable, resilient, and proactive in navigating these challenges. The rewards of the research career, including contributing to scientific knowledge and making a positive impact on society, can make it a highly fulfilling and meaningful career choice.



#### 2.8. General Advice for Researchers

The following are recommendations that the experts of ENHANCERIA WP5 have agreed on, which can be very important to take into consideration before starting your research career or in the early stages of it:

- Pursue your passions: Choose research topics that genuinely interest you and that you are
  passionate about. This will help you stay motivated and engaged in your research, even
  when facing challenges.
- Be proactive: Take ownership of your career and be proactive in seeking out research
  opportunities, collaborations, and funding. Don't wait for opportunities to come to you;
  actively seek them out.
- Build relationships: Networking and building relationships with colleagues and mentors is critical for career advancement. Attend conferences, join professional organizations, and seek out mentorship and collaboration opportunities.
- Stay organized: Keeping track of research data, notes, and publications can be challenging.
   Use organizational tools such as reference managers, project management software, and data storage solutions to stay organized and efficient.
- Embrace failure: Failure is an inevitable part of the research process. Embrace failures as
   learning opportunities and use them to refine your research approach.
- Communicate effectively: Communication is essential in the research career, both for sharing
  your findings with the scientific community and for collaborating with colleagues. Hone your
  communication skills, including writing, presenting, and interpersonal communication.
- Prioritize self-care: The research career can be stressful and demanding, but prioritizing self-care is critical for maintaining your mental and physical health. Make time for hobbies, exercise, and socializing outside of work.
- Seek out support: The research career can be isolating, but you don't have to go it alone.
   Seek out support from colleagues, mentors, and support services at your institution.



- Check if the institution that you are going to apply to does the following:
  - Implement the Human Resources Strategy for Researchers: HRS4R.
  - Is part of the Coalition to Advance Research Assessment (<u>CoARA</u>) and similar initiatives
  - Has some work-from-home policy and other flexible work time arrangements.
  - Has a wellbeing plan (something like UPVs "Plan Concilia" that is negotiated with trade unions every year)

In conclusion, the research career can be challenging, but by pursuing your passions, being proactive, building relationships, staying organized, embracing failure, communicating effectively, prioritizing self-care, and seeking out support, you can build a fulfilling and impactful research career.



## 2.9. General Advice for Employers of Researchers

Employers of researchers are a key actor in RCD since they are able to provide the foundations of the working conditions for researchers within the national legal framework. They provide working positions, roles, provide resources, opportunities and in general the working ecosystem in which researchers develop their work, within private or public nature institutions. Given the importance these organizations play in the recruitment and career development of researchers, the experts of ENHANCERIA WP5 have agreed on a few general advice recommendations which can be very useful for employers who look to attract research talent into their organizations and provide clear career paths for their researchers:

- Clearly define the role and requirements: Be clear about the expectations of the role and the necessary qualifications and experience required. This will help attract the most suitable candidates for the position.
- Look beyond academic qualifications: While academic qualifications are essential, don't rely solely on them when recruiting researchers. Look for candidates who have relevant experience, skills, and a passion for the research area.
- Foster diversity and inclusion: Diverse teams bring a broader range of perspectives, experiences, and ideas, leading to more innovative and impactful research outcomes. Ensure that your recruitment process is inclusive and encourages diversity.
- Communicate effectively: Clearly communicate the job description, application process, and selection criteria to potential candidates. Be responsive to their queries and keep them updated throughout the recruitment process.
- Provide support: Once a researcher is recruited, provide them with the necessary support and resources to succeed in their role. This includes mentoring, training, and access to research facilities and funding opportunities.
- Foster a positive research culture: Creating a positive research culture is critical for attracting
  and retaining top researchers. This includes providing a supportive and collaborative
  working environment, recognizing and rewarding achievements, and promoting work-life
  balance.



- Build relationships with candidates: Building a relationship with candidates throughout the
  recruitment process can help attract top talent and foster long-term partnerships. Keep in
  touch with candidates even if they are not successful in their application.
- Promote the following following meausures that can make your institution more attractive to talent:
  - Implement the Human Resources Strategy for Researchers: HRS4R.
  - Is part of the Coalition to Advance Research Assessment (<u>CoARA</u>) and similar initiatives
  - Prepare and implement a work-from-home policy and other flexible work time arrangements.
  - Prepare and implement a wellbeing plan (something like UPVs "Plan Concilia" that is negotiated with trade unions every year)



// PART III - REFERENCES

#### 3.1. REFERENCES

- University of Galway, Academic Skills compendium:
   <a href="https://www.universityofgalway.ie/academic-skills/">https://www.universityofgalway.ie/academic-skills/</a>
- Vitae UK, Researcher Development Framework:
   <a href="https://www.vitae.ac.uk/researchers-professional-development/about-the-vitae-researcher-development-framework">https://www.vitae.ac.uk/researchers-professional-development/about-the-vitae-researcher-development-framework</a>
- Euraxess Legislative Framework HRS4R
   https://euraxess.ec.europa.eu/sites/default/files/6 legislative framework hrs4r-info day 18-10-2022.pdf
- Competence Framework for Policymakers and Researchers, EC: <a href="https://knowledge4policy.ec.europa.eu/projects-activities/competence-frameworks-policymakers-researchers">https://knowledge4policy.ec.europa.eu/projects-activities/competence-frameworks-policymakers-researchers</a> en
- Recognition of Academic Titles:
   <a href="https://europa.eu/youreurope/citizens/education/university/recognition/index\_en">https://europa.eu/youreurope/citizens/education/university/recognition/index\_en</a>
   .htm
- CoARA: <a href="https://coara.eu/">https://coara.eu/</a>
- HRS4R: https://euraxess.ec.europa.eu/jobs/hrs4r

## 3.2. USEFUL LINKS

## Additional useful resources:

- EURAXESS CAREER DEVELOPMENT HUB: https://euraxess.ec.europa.eu/jobs#job-tabs-tab-4-name
- EURAXESS JOB OFFER PORTAL: <a href="https://euraxess.ec.europa.eu/jobs/search">https://euraxess.ec.europa.eu/jobs/search</a>
  - EURAXESS CARER DEVELOPMENT E-TOOL:

    https://euraxess.ec.europa.eu/career-development/researchers/careerhandbook-young-researchers/handbook-subpage