Sustainable Careers for Researcher Empowerment

DELIVERABLE 3.3

WP3

Final Version of Tenure Track-Like Models

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Final Version of Tenure Track-Like Models

SECURE
Sustainable Careers for Researcher Empowerment

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1 Introduction

SECURE Work Package (WP) 3 – Development of Tenure Track-Like (TTL) Models aims to provide examples of tenure track-like models from across Europe including recommendations on funding schemes, recruitment, employment, training, development, and career progression to implement TTL models for researcher organisations. WP3 builds on the work of WP1 – State of the Art on Researcher Careers and works in tandem with WP2 – Development of a Research Career Framework as a response to the Council Recommendation on a European Framework to attract and retain, research, innovation and entrepreneurial talents in Europe. It has also informed WP4 – Implementation of the Research Career Framework and WP5 – Mainstreaming the Research Career Framework.

This final Deliverable 3.3 refines and finalises the SECURE work on Tenure Track-Like Models. These are derived from several case studies covering TTL models currently implemented at research performing institutions (RPI) in nine different countries. Each case study has been drawn from a combination of desk research and interviews with representatives from these institutions. Alongside development of these case studies we have developed a set of principles that provide guidance on good practice for implementation of tenure track-like models for both institutions and researchers. This set of principles acknowledge national variances in tenure track schemes but provide common agreement in what a tenure track should offer.

Moreover, the principles are put into a national and institutional context for each case study, offering a deeper understanding on how each TTL model is embedded nationally. We have also tried to match the principles to what is of particular relevance to the TTL model in the case study. Whilst this is not always possible it does provide context.

Together, the case studies form instances of TTL models which need to be viewed against their national contexts. Therefore, this Deliverable summarises the main take aways and learnings that can be drawn from this collection and provides consolidated recommendations for future TTL models which may be developed at Research Performing Organisations.

2 Methodology

2.1 Contextualisation

This section outlines the methodology employed to contextualize case studies within their respective national and institutional frameworks. The aim of this approach is to provide a comprehensive understanding of how tenure-track-like (TTL) models are integrated within varying national contexts, thus identifying areas for development and alignment with overarching principles.

The contextualization process draws on the "nested view" of the Academic Career Framework[1], which identifies the national context for academic career models. This framework outlines the structural, regulatory, financial, and policy conditions that shape the development and management of academic employment. Key conditions include:

- Legislation: Labour legislation or civil service legislation.
- Higher-Education Acts: Requirements for qualifications and other legal mandates.
- Science funding: National policies and mechanisms for funding research and academic initiatives.
- National policies: Broad policies guiding education, research, and workforce development.
- National (collective) salary systems and agreements: Salary structures and collective bargaining agreements.[2]

To begin the contextualization, the foundational **principles for TTL models were systematically mapped against the national and institutional frameworks** of each case study's country. This mapping process involved:

- Extracting the SECURE principles as a standard for comparison.
- Examining the compatibility of these principles with national legislation, policies, and institutional practices.
- Assessing the degree to which each principle was explicitly or implicitly addressed within the national context.

This mapping exercise was conducted across a diverse set of case study countries, including Belgium, Croatia, Finland, Germany, the Netherlands, Portugal, Spain, Cyprus, and the UK. The analysis revealed key trends and areas for improvement:

- Certain principles were robustly embedded within specific national contexts, supported by existing frameworks and practices in these countries.
- Other principles were only implicitly recognized, pointing to gaps in their implementation requiring further exploration and emphasis.
- Variation across disciplines and institutional settings underscored the need for tailored approaches to TTL implementation.

This integrated methodology emphasizes the interplay between national frameworks and institutional practices in shaping TTL models. The insights gained highlight the need for an ongoing development of tenure-track systems that are responsive to national legislation and institutional variations. These findings

[1] https://www.elgaronline.com/edcollchap-oa/book/9781035302451/chapter2.xml
[2] https://www.elgaronline.com/edcollchap-oa/book/9781035302451/chapter2.xml

provide a foundation for further refinement and adaptation of TTL models to support their long-term sustainability and relevance across diverse settings.

2.2 Revision and Additional Case Studies

In Deliverable 3.1 we collected seven case studies to illustrate the principles. The approach that we used was to allow institutions to select which principles they felt they were most able to evidence or drawn to (for two institutions we had to select for them where it was most obvious that we could evidence). Each selected three principles.

When we mapped the principles it was clear that we had not achieved a balance across the nine principles.

Stability, responsible evaluation and transparency were fairly easy to evidence, however, recognition through career pathways and inclusive and healthy working environments were not demonstrated at all in the first round of case studies. On reflection we felt that these were topics that were perhaps harder to evidence and perhaps we had not asked the right questions in order to gather examples. It was perhaps not that our case study institutions did not have for example, inclusive and healthy working environments but more that we did not ask if they did or explore the relationship between this principle and the tenure track model. We therefore decided to return to our case study institutions and ask some additional questions in order to revise the original case studies. For these additional interview questions, see Appendix (15.2)

It was possible to revise three of the original case studies (Portugal, Croatia and Belgium), whilst four have remained the same. Alongside this we chose to include two additional case studies. Firstly, we chose to include the University of Cyprus which is a SECURE trial organisation and was the only one of our three trial organisations not included in Deliverable 3.1. Although a more complex case study we have chosen to include this in order to fully reflect SECURE trial organisations. The second case study that we have chosen to include is from FECYT in Spain. The SECURE project team were approached after a presentation at the EURAXESS biennial conference with the suggestion that we should include a case study from Spain in order to highlight the position of tenure track in the Spanish system and tensions with national law.

We believe that these revised suite of case studies provide a more detailed and considered picture of tenure track systems in specific institutions. This is in partnership with the National context provides a much richer profile of tenure track systems in nine European countries.

2.3 Consultation

As part of the project as a whole a wider consultation was held on the Research Career Framework. Within this process we were able to do some limited consultation on tenure track-like models.

Two stakeholder workshops were held for institutions and researchers with a focused discussion on tenure track and the opportunity to disseminate the principles, discuss and receive feedback.

Alongside this a survey on the researcher career framework was developed and received over 250 responses. Outcomes from this process and the survey can be found in D3.2 Consultation on tenure track-like models. These results have been assimilated in order to create the final version of the SECURE principles for tenure track-like models.

One set of questions in the survey particularly focussed on tenure track. Respondents were asked to rank the principles in order of importance. Alongside this they were asked about tenure track as a way of addressing precarity and for any other comments they had on either tenure track or the principles specifically.

Results from the stakeholder workshops

The main themes from the researcher group were:

- The consultation revealed mixed experiences with tenure-track systems, with some participants suggesting that tenure-track may not be the only solution to academic precarity. Longer contracts were suggested as a more practical alternative.
- Tenure-track systems must be flexible and adaptable to different career paths, including research and teaching, as well as non-academic routes, and they should not restrict researchers
- There is a conflict between tenure track and mobility with tenure track potentially limiting the mobility of an individual.
- There was a call for clearer definitions and information on tenure-track positions, more transparent career progression frameworks and improved support for researchers particularly for opportunities in other countries and institutions.
- There is a need to be transparent about the number of people that can benefit from tenure-track as not every researcher can achieve a professorship.

The main themes from the researcher institutions were:

- The varying structures of tenure-track models across Europe were discussed, which could be a potential solution to academic precarity and a challenge to implement effectively.
- Tenure-track systems should be re-designed allowing for continuous development, maintaining motivation and performance.
- A need for mentoring and clear career frameworks was emphasised, alongside institutional clarity on long-term goals before implementing new schemes.
- A bank of good practices was suggested to help guide institutions in crafting more sustainable academic career models.

2.4 Results from the survey

As part of the consultation on the Research Career Framework we included some questions on tenure track which have informed our thinking and the final principles on tenure track-like models

In addition to the consultation meetings we held a public survey. We received approximately 250 response from throughout Europe.

The respondents were also asked a small number of qualitative questions regarding tenure track and the principles. Comments were generally positive:

"Self evidently good principles"

"These nine principles cover almost all areas of action to reduce the precarity of researchers careers"

The main concerns were around institutions ability to implement them.

"Providing a strategy is a good way to start but it will depend on the people will to implement it."
Principles are very good, putting them into practice is a colossal task"

"Principles such as stability, fair pay and benefits are strongly defined by national policies and the organisational capacity to change/improve these is limited."

The survey did draw out some interesting points about tenure track in general but it is difficult to bring them into the principles eg.

"The financial support for some TTLMs - for small organizations this can be a problem"

"The ability of different organisations to recognise challenges and support staff may vary vastly from institution to institution to institution. Not all institutions have the capacity to support staff."

Finally, respondents were asked to prioritise each of the nine principles and ranked them as follows:

Table 1 Rank of SECURE principles for Tenure-Track like models by survey respondents

Principle	Top	High	Low
Stability	170	61	8
Transparency	153	73	8
Competitive and Inclusive Recruitment	114	106	19
Fair Pay and Benefits	179	54	6
Recognition through Career Pathways	129	90	20
Professional Development	139	86	14
Inclusive and Healthy Working Environments	144	78	17
Supportive Management	123	95	21
Responsible Evaluation	138	86	15

As a result of this the final principles will be reordered to match this ranking.

2.5 The revised principles

Revision of the principles is limited as they have generally been accepted in the consultation and the survey. The key change is in the order of the principles, which has been adapted according to the survey results (Table 2).

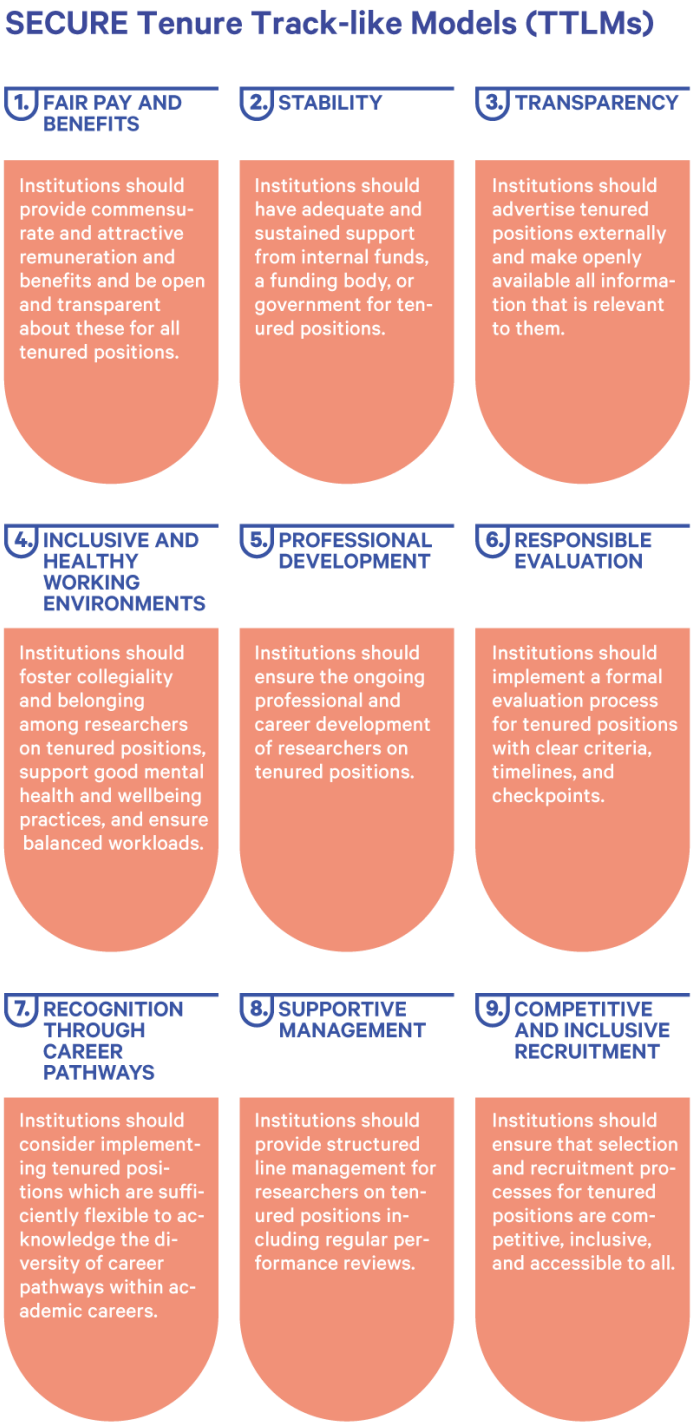
Table 2 SECURE principles for Tenure-Track like models in revised order

Principle	
1. **Fair pay and benefits**	**Researchers** expect to receive attractive commensurate remuneration and benefits with pay increases linked to progression, and to be made aware of the review of remuneration conditions, for example once they

	are successful in obtaining a permanent or open-ended contract. This should include access to adequate social protection. **Institutions** should provide commensurate attractive remuneration and benefits and be open and transparent about these. The benefits should be independent of the researchers' status and contract type (permanent or open-ended), as far as is possible under existing employment legislation and collective bargaining agreements.
2. **Stability**	**Researchers** expect to have a clear and defined progression pathway that leads to permanent employment or an open-ended contract. **Institutions** are recommended to have adequate and sustained support from internal funds, a funding body, or government. When developing a strategy for TTL positions, they should consider funding and workforce planning, wider institutional strategies (e.g., human resources, research, teaching) and relevant external normative and legal frameworks (e.g., Council Recommendations and national legislation). Involving researchers in this process is recommended (e.g., through consultation or relevant committees).
3. **Transparency**	**Researchers** expect to have been thoroughly informed about the recruitment process, expected skills and competencies, selection criteria, working conditions and benefits, contractual status, and progression pathway(s). **Institutions** should advertise TTL positions externally, and make openly available information about the recruitment process, expected skills and competencies, selection criteria, working conditions and benefits, contractual status, and progression pathway(s).
4. **Inclusive and healthy working environments**	**Researchers** expect to work in environments that welcome and value diversity, which are healthy and accessible, and have no tolerance for bullying, harassment, or pressure to compromise research integrity. **Institutions** are recommended to foster collegiality and belonging among researchers on TTL models, support good mental health and wellbeing, and offer balanced, flexible, and achievable workloads. There should be clear mechanisms for dealing with bullying and harassment and poor research integrity. Researchers on TTL models should also have opportunities to take breaks and request reasonable adjustments (e.g., for health reasons), without any negative effects. Onboarding processes should be established to support this.

5. **Professional development**	**Researchers** expect to have the time and ability to engage in meaningful professional and career development, including access to relevant training and opportunities (including in other sectors) that develop the leadership qualities necessary for academic progression and independence. Mentoring schemes should also be offered. **Institutions** are recommended to ensure ongoing professional and career development, enabling researchers on TTL models to access training and development opportunities and to encourage upskilling and reskilling opportunities. The career development offers should be relevant to needs and career stages, and align with relevant tools and frameworks (e.g. ResearchComp). They should also support other professional outcomes, offer counselling for career alternatives, and support non-linear, multi-career and hybrid paths.
6. **Responsible Evaluation**	**Researchers** expect there to be a formal evaluation process at set checkpoints and against clear criteria. These criteria and timeline should be made available to them before or at the time of appointment. Where it becomes clear that they may not meet the criteria, researchers expect this to be communicated as early as possible and a support plan and process of remediation should be put in place. **Institutions** are recommended to set out a formal evaluation process with clear criteria, timelines, and checkpoints. Assessment should be balanced between the qualitative and quantitative evaluation of research and recognise a diversity of outputs and contributions. The criteria and timelines should consider the effects of career breaks and other disruptions, thus respecting non-linear career progression. They should include an appeals process and mechanisms to support researchers who are unlikely to be offered a permanent or open-ended position. Criteria should include other elements beyond research quality for example behavioural competence and contribution to the department and institution.
7. **Recognition through career pathways**	**Researchers** expect to be supported to pursue their career ambitions, with recognition for diverse contributions and outputs (e.g., across research, teaching, leadership, innovation, and engagement) through a range of possible career pathways. Where possible this should include the opportunity for non-linear, multi career and hybrid paths that are recognised on par with linear career paths. **Institutions** should consider utilising a tenure track-like model which is sufficiently flexible to acknowledge the variation within academic careers and offers different pathways reflecting differing contributions (e.g., research, teaching) and which recognises and values collaboration (e.g., with industry). Where possible, they should support non-linear,

	multi career and hybrid paths that are recognised on par with linear career paths.
8. **Supportive management**	**Researchers** expect to have a named line manager (or named senior member of staff) with allocated time, availability, and expertise to offer them regular points to check-in, appraise their performance, and provide the support needed to achieve their full potential. **Institutions** should provide structured line management for researchers on TTL models, including regular appraisals and performance reviews, and support line managers or counselling bodies through training to provide honest and constructive feedback, aid professional and career development, and to acknowledge and mitigate the effects of career breaks, disruptions, and inequalities.
9. **Competitive and inclusive recruitment** .	**Researchers** expect a competitive recruitment process with selection criteria that consider a diverse range of skills, competencies, and experiences (including inter-sectoral) in an inclusive and accessible manner. **Institutions** should ensure that selection and recruitment processes are competitive, with merit-based selection criteria that consider a diverse range of skills, competencies, and experiences (including inter-sectoral), and are inclusive and accessible to all. Institutions should consider equal opportunities and ways of supporting applications from under-represented groups.


SECURE Tenure Track-like Models (TTLMs)
1. FAIR PAY AND BENEFITS
Institutions should provide commensurate and attractive remuneration and benefits and be open and transparent about these for all tenured positions.
2. STABILITY
Institutions should have adequate and sustained support from internal funds, a funding body, or government for tenured positions.
3. TRANSPARENCY
Institutions should advertise tenured positions externally and make openly available all information that is relevant to them.
4. INCLUSIVE AND HEALTHY WORKING ENVIRONMENTS
Institutions should foster collegiality and belonging among researchers on tenured positions, support good mental health and wellbeing practices, and ensure balanced workloads.
5. PROFESSIONAL DEVELOPMENT
Institutions should ensure the ongoing professional and career development of researchers on tenured positions.
6. RESPONSIBLE EVALUATION
Institutions should implement a formal evaluation process for tenured positions with clear criteria, timelines, and checkpoints.
7. RECOGNITION THROUGH CAREER PATHWAYS
Institutions should consider implementing tenured positions which are sufficiently flexible to acknowledge the diversity of career pathways within academic careers.
8. SUPPORTIVE MANAGEMENT
Institutions should provide structured line management for researchers on tenured positions including regular performance reviews.
9. COMPETITIVE AND INCLUSIVE RECRUITMENT
Institutions should ensure that selection and recruitment processes for tenured positions are competitive, inclusive, and accessible to all.

3 Belgium – University of Antwerp

3.1 Introduction

Belgium has a national research eco system which provides a robust environment for researchers, combining structured career pathways, competitive recruitment processes, and significant funding opportunities with ongoing challenges such as job security and inclusion. As shown in Table 3, the R&D intensity in the country exceeds 3% of GDP and the number of researchers per million inhabitants is higher than the EU average. Public funding for EU cooperation is high, with Belgium performing twice the EU average in funding and six times the EU average in international co-publications.

Table 3 National R&D metrics for Belgium

Indicator	Most recent EU average (2021)	Most recent metric (2021)
Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP	2.26 %	3.22 %
Government Budget Allocations for R&D (GBARD) as a share of GDP	0.76 %	0.73 %
Researchers (in full-time equivalent) per million inhabitants	4.5	6.6
Business Enterprise expenditure on R&D (BERD) as a percentage of GDP	1.49 %	2.4 %

Source: ERA Scoreboard and ERA Dashboard indicators[3]

Higher education and research in Belgium are the authority of the regions. Antwerp is situated in the Flemish part of the country; the information provided in this section refers to the Flemish context, unless stated otherwise. In the Flemish region, recruitment is merit-based, with clear principles outlined in the Higher Education Codex. Academic positions, from Assisting Academic Staff (AAP) to Independent Academic Staff (ZAP), emphasize academic qualifications, research achievements, and teaching experience. ZAP roles offer the potential for tenure, while AAP positions are typically temporary, reflecting broader trends of fixed-term contracts.[4] In addition Universities can also hire researchers funded by external grants (in Antwerp & Leuven University abbreviated as “BAP”; in Ghent University they are abbreviated “WP”)

In terms of civil service legislation, academic staff in public law universities are treated similarly to civil servants, while those in private universities are classified as employees. Universities have autonomy in hiring and promotions, basing decisions on performance evaluations that prioritize research output, academic excellence, and teaching effectiveness. Professional development is supported through institutional initiatives such as the PhD Career Hub at Ghent University, YOURECA at KU Leuven or the Talent Center at

[3] https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-05/ERA%20Country%20Report%202023%20Belgium.pdf
[4] https://www.oecd-ilibrary.org/docserver/0f8bd468-en.pdf?expires=1726054868&id=id&accname=guest&checksum=90575AF68BCB30D254EDCE75A335F766

Antwerp University, which provide resources for career guidance, mobility opportunities, and structured professional growth.

Inclusivity is a key focus, with regions like Flanders integrating gender diversity into performance-based funding systems, making it the first European region to do so. Gender Action Plans in the French Community of Belgium promote gender balance in senior academic roles through initiatives such as mentoring, unconscious bias workshops, and cascade models that ensure gradual progress in representation. Flexible job descriptions, parental leave, and care leave further enhance work-life balance for researchers.

The national context provides **stability** even if challenges in terms of fixed-term contracts and limited job security remain. This prompts initiatives like the Observatory of Research and Scientific Careers in the French speaking part of Belgium, whilst in Flanders careers are monitored by ECOOM[5].

Considering these challenges, the University of Antwerp has been selected as a case study. The university serves as a notable example due to its long-established tenure track like system with most full-time positions recruited at junior professor level (R2-3) being offered a pathway to a permanent contract. Whilst this was introduced with the intention of reducing precarity for researchers, the system also allows universities an opportunity to recruit individuals who have not yet proven themselves as established academics.

Clear criteria are set at the start of the 5-year tenure track, and if successful, the candidate receives a lifetime contract, allowing the opportunity for researchers to acquire the broader skills required as an academic (including teaching, service to society and leadership). Candidates on a tenure track-like model at Antwerp receive the benefits of civil servants, just like tenured academics do. Criteria established at department level allow assessment to be relevant and appropriate to the academic discipline.

3.2 University of Antwerp: A TTLM as a way of committing researchers

The TTL-model in Antwerp provides an ‘in-between step’ and way of committing to the researcher, but in a trial setting with a clear exit point, should it not be mutually beneficial. The tenure track is limited to a five-year period, with a maximum extension of one year due to sickness or maternity leave. There is no opportunity to fast track the five-year period; five years must always be completed. However, the University of Antwerp retains some flexibility for other employment options and contracts, for example fixed term contracts leading to permanent employment. This allows the university to accommodate researchers with substantial/specific expertise who wish to progress more quickly. There is some potential for part-time employment but to be considered for the tenure track a position would need to be at least 50%.

Researchers have room to transition into fully-fledged independent academics, including teaching, service, and leadership responsibilities. The institution is legally obliged to provide a permanent position if the academic in a tenure track position meets the specified criteria. Nevertheless, the requirement to master Dutch at B2 level can be a challenge for some international academics.

The institution sets university-wide policies on evaluation criteria and an agreement is developed for each individual researcher with both education and research performing outputs that are transparent, and merit based. This is reached within the faculty allowing tailored criteria that are applicable to the academic discipline. The University of Antwerp has recognised the need to consider behavioural competencies as part of assessment criteria and is currently in the process of defining these further. When considering criteria for a tenure track, flexibility is required around disciplines particularly when competing with business and industry.

[5] https://www.ecoom.be/en/research/research_careers

Mid-term assessment conversations are held with Deans, Heads of Department, and relevant committees to discuss progress and whether it is feasible to meet criteria, alongside professional development support needs, before final evaluation by committee is completed. As a guide, the typical candidate would have two to five years post doc experience (R2-R3 phase) before embarking on a five-year tenure track which would indicate 7-10 years from completion of PhD to tenured professorship, although candidates with more than 5 years post PhD experience are still eligible to apply. Salaries for all positions are fixed in relation to central salary scales established in the Flemish Higher Education Code.

What have been the challenges in implementation?

- Most ERC grant recipients that are hosted at Antwerp will as per institution policy be awarded a tenure track-like position. This needs to be considered in terms of long-term budget planning before the grant application is endorsed by the university.
- There is a requirement to achieve a B2 level in the Dutch Language within the 5-year period, potentially this may make the positions unattractive to international applicants.
- Tenure track positions may only be extended by one year above the initial five-year period, this may be a challenge for those whose personal circumstances require any extension for a longer period.

What are the key learnings?

- Assessment criteria established at department level and relevant to the academic discipline, within a university-wide approach, is important in ensuring researchers are being measured appropriately and meeting both their own and departmental needs. The level of seniority of the applicant will influence whether a tenure track scheme is required.
- There is a need to also measure individuals' behavioural competencies, and this is being considered and developed.
- Measurable performance-based criteria may involve a risk of focusing too much on the criteria themselves, at the cost of developing behavioural competencies, which are much harder to assess (in other words: risk of focusing on the “what” instead of the “how”: collaboration, leadership, supervision skills…)
- This model does not suit everyone, and it is essential to keep the flexibility to offer options around employment and contracts for example for those who wish to work part-time at the institution or those that bring a more senior level of expertise.

3.3 SECURE principles at national and institutional levels in Belgium and their implementation at University of Antwerp

The Secure principles for TTLM are clearly mirrored both at national and institutional level. Table 4 illustrates how the principles can be identified on these levels in Belgium, including which of the principles and in what way they have been implemented at University of Antwerp.

Table 4 Mapping of SECURE principles to the national and institutional level in Belgium and University of Antwerp

TTL-Principle	National level	Institutional level	University of Antwerp
Fair Pay and Benefits	Salary scales are determined by *Higher Education Codex and civil service legislation*.	Universities can offer performance-based awards (up to 1% of projected staff	Each researcher on the tenure track is categorised as a civil servant and

	The Special Research Fund (Bijzonder Onderzoeksfonds, BOF) and the Industrial Research Fund (IOF) funds provide research funding, with limited additional allowances based on performance. Tenure Track Professors have access to this funding through these channels although positions are not funded through them. Pensions are uniform, with all postdocs having full social security and pension contributions. Non- EU postdocs who under specific circumstances and for a limited time may be hired with a tax-free postdoctoral grant that does not include these contributions.	expenses). Competitive research projects can be applied for but are often also part of the recruitment package, while holiday arrangements and leave policies are managed by national law and by university boards. ZAP positions offer more stability than AAP positions, which are . temporary. Additionally BAP positions are grant-funded and usually temporary. Universities, research centres, and strategic innovation hubs offer competitive salaries and opportunities for career progression.	therefore achieves comparable salaries and benefits as outlined in the Flemish Higher Education Code. Pay scales at each position are available on the university website. A research project amounting to the equivalent of a fully salaried 4 year PhD position is usually part of the TT recruitment package.
Stability	Labour legislation is governed by the Civil Service Act and Higher Education Acts. The federal authority, along with federated entities (Flanders, Wallonia, Brussels), funds research under policies such as the Special Research Funds (BOF) and Industrial Research Funds (IOF).	Academic positions in Flemish universities are governed by internal regulations such as the Higher Education Codex. ZAP (Independent Academic Staff) positions include tenure-track systems, while AAP (Assisting Academic Staff) positions are always temporary. Externally funded researchers are hired as BAP/WP. Funding often involves performance-based research funding system (PRFS)	A tenure track appointment at the University of Antwerp offers a minimum of five years' security with clear assessment criteria to meet to achieve a permanent contract. Professional development support and the research culture at Antwerp means that most researchers will achieve this.
Transparency	Flanders' *Higher Education Codex* sets clear guidelines for academic roles.	Universities in Flanders, Wallonia, and Brussels follow transparent merit-based recruitment processes for ZAP and AAP positions. Recruitment for tenure-track and permanent posts prioritizes academic qualifications , research outputs or an educational component. Public job advertisements ensure	The university usually advertise in at least 4 public non-fee-paying channels. Advertisements are in a standard format, job description, candidate profile with expected work experience, knowledge and skills and defined recruitment process.

		competitive recruitment and international openness.	
Inclusive and Healthy Working Environments	Since 2006, Flanders includes gender diversity in its Performance-Based Research Funding System (PRFS). However, Belgium lags behind the EU average in gender equality and environmental R&I. The Recovery and Resilience Plan (RRP) includes new measures to address these gaps.	Universities promote diversity and inclusivity through transparent recruitment and open access initiatives. Institutions also provide support for care leave and flexible job descriptions to promote a work-life balance.	The University has a series of preventive measures to support inclusive and healthy working environments. These include a set of values communicated through the onboarding process alongside a code of conduct, various well-being campaigns, investment in a culture of psychological safety (addressing problems when they are still small) and a strong EDI team that are closely connected to the academic community.
Professional Development	Federated entities prioritize R&I for societal challenges such as the green and digital transitions, which influence career development opportunities.	Universities and research centres offer staff training, career development workshops, and international mobility programs. Universities encourage performance-based promotions to retain academic talent. In Flanders, the European Regional Innovation Scoreboard benchmarks regional innovation, and universities aim to be in the top five by fostering interdisciplinary research and professional mobility.	The HR department have campaigned for a university wide "learning culture" which included a stronger component of training and development for tenure track professors. This remains in development.
Responsible Evaluation	Belgium's R&I system is highly integrated into the EU's framework, with national and regional strategies emphasizing performance evaluation. Evaluations play a critical role in career progression, particularly in the tenure-track system.	Performance evaluations at universities influence promotion, salary adjustments, and tenure decisions. The French Community of Belgium are launching initiatives to track the careers of postdoctoral researchers and survey their	A formal evaluation process with clear and tailored criteria exists for each position. This is defined at the time of appointment and is tailored to both the individual and the academic discipline. A

		working conditions through the recently created Observatory of Research and Scientific Careers to monitor and support the professional development of researchers, whilst in Flanders careers are monitored by ECOOM.	midterm review highlights individuals' progress and allows the opportunity to reflect on criteria and where additional support is required.
Recognition through Career Pathways	Academic career progression is guided by the *Higher Education Codex and civil service legislation*. In Flanders, Wallonia, and Brussels, academic staff can advance from lecturer to professor based on performance-based evaluations and professional experience. Horizontal mobility within regions ensures salary scales are retained.	Internal evaluations, performance assessments, and institutional autonomy in appointments help universities manage academic career pathways. Promotion to senior roles (professor, dean) is based on performance. Opportunities for interdisciplinary work and external engagements help retain skilled staff.	
Supportive Management	--	Universities offer flexible management practices, including sabbatical leave and career mobility. For instance, ZAP staff may take up to two years' sabbatical for research at foreign institutions.	The faculty dean is the formal line manager of all professors. Faculties have autonomy but tend to form a support team around the individual on the tenure track programme. Research Professors have a mixed career support team including members from the faculty and the research council. Formal feedback is provided halfway through the five-year TTL programme although this is no longer mandated by law. The University have a culture of "goal setting interviews" TTL performance targets are embedded in this at the start of the TTL period, but goal setting is much broader and includes training and development needs.

Competitive and Open Recruitment	Recruitment in Belgian universities follows the Higher Education Decree of 11 October 2013.[6] Candidates for ZAP positions generally need a doctoral degree. Belgium's R&I system promotes openness, with a strong focus on EU integration and collaboration. *EURAXESS* supports open recruitment across the EU and beyond.	Recruitment criteria for academic roles are based on academic achievements, education and research experience, and qualifications. Tenure-track systems and internal appointments are merit-based and depend on evaluations and merit.	There has been a shift from a productivity focused application form to one that better reflects quality. Based on the advice of the gender and diversity team, the University aims to ensure fair opportunities by collecting information in a standardised way, by focussing on quality instead of quantity and by adding a section in which candidates can provide personal information to address for example atypical careers.

As seen in the Table 4, the University of Antwerp has a clear pathway for researchers to transition from temporary to permanent roles through its tenure-track system, which is part of the broader national system and provides more stability when compared to the AAP and BAP/WP roles where temporary contracts are common. Moreover, the university has incorporated practices such as addressing atypical career paths and focusing on quality rather than just productivity, making its recruitment process more comprehensive. In terms of pay and benefits, the University of Antwerp provides stable salaries and benefits for tenure-track researchers, ensuring they have access to the same benefits as civil servants, which is not always the case for temporary or grant-funded positions in other institutions.

All Flemish universities however adopt the same tenure track like system and therefore are comparable. Of particular interest at Antwerp are a developed set of values and preventive measures to ensure an inclusive and supportive work environment, addressing well-being and psychological safety. The university's approach to evaluations is personalized, with clear criteria established at the outset and regular feedback during the tenure-track period.

[6] wet: Besluit van de Vlaamse Regering tot codificatie van de decretale bepalingen betreffende het hoger onderwijs (citeeropschrift: "Codex Hoger Onderwijs")

4 Croatia – University of Rijeka

4.1 Introduction

Croatia's research ecosystem benefits from a stable legal framework and international engagement. However, as shown in table 1, the R&D intensity in the country is low with only 1.24% of GDP and the number of researchers per million inhabitants is half the EU average. However, improving job security, salaries, and infrastructure is essential for a more sustainable research environment.

Table 5 National R&D metrics for Croatia

Indicator	Most recent EU average (2021)	Most Recent Metric (2021)
Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP	2.26 %	1.24%
Government Budget Allocations for R&D (GBARD) as a share of GDP	0,76 %	0.71%
Researchers (in full-time equivalent) per million inhabitants	4.5	2.36
Business Enterprise expenditure on R&D (BERD) as a percentage of GDP	1.49 %	0.6 %

Source: ERA Scoreboard and ERA Dashboard indicators[7]

On the national level the Act on Scientific Activity and Higher Education provides a legal framework, while recent legislation has improved the research and innovation context. However, institutions face challenges due to a decentralized structure for Zagreb, Split Rijeka and Osijek, impacting policy application. Other institutions in Croatia are not decentralised. Academic recruitment, governed by the Act, includes positions from doctoral candidates to full professors. While senior roles offer greater stability, early-career researchers are often on fixed-term contracts, limiting job security and long-term career progression. Researchers are employed as civil servants under national regulations, ensuring fair working conditions and career growth. Salaries, though regulated by public service laws and supported by reforms and European funding through ESIF and Horizon Europe, remain lower than the EU average.

Career advancement follows a clear pathway, from PhD candidates to postdoctoral researchers, assistant professors, and full professors. National policies promote work-life balance, including parental and care leave, and Croatia is committed to open science and gender equality within the European research framework, fostering a diverse academic environment. Evaluation processes, also governed by the Act, ensure transparency in academic appointments, while quality assurance mechanisms align Croatia's research ecosystem with European standards.

[7] https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-05/ERA%20Country%20Report%202023%20Croatia.pdf

4.2 University of Rijeka: A TTLM as a "brain-gain model"

The University of Rijeka (UNIRI) is implementing a 'brain gain model' to stimulate Croatian academics to return to their home country. The programme has existed in various forms at the national level since 2004; however, following a new Act on Higher Education and Scientific Activity, it has recently been revised to be in accordance with national law. The model is primarily devoted to researchers being appointed to the level of Assistant Professorships (R2). UNIRI is making wide use of it so that ca. 6-7% of all current UNIRI faculty staff are in fact returning scientists.

What was the rationale?

Prior to the introduction of this model, the opportunity for new permanent positions were mostly available after the retirement of a professor. This system allows more flexibility for departments to employ individuals that would be of benefit to the institution. The model described here targets Croatian researchers who have been abroad for five years or in some cases, three years at a 'research-intensive university'. The government opens a position on the request of an institution where generally a candidate has been identified, (although all positions remain fully open to applications from any interested candidates.) All positions are advertised in the Official Gazette of the Republic of Croatia, University website and EURAXESS. All professors carry a significant teaching load and pay scales are set nationally.

Policy on tenure track is standardized in Croatia by national law. The introduction of the new Act on Higher Education in Science requires adjustment of institution policies. As the University of Rijeka has gained expertise on and has established tenure track schemes for several years, it is anticipated that this will be a smaller reform compared to other institutions nationally. Whilst the new Act dictates criteria for assessment, which are ratified at the level of the National Council for Science, Higher Education and Technological Development, in order to have a transparent process, universities and faculties are able to further define these criteria. Each faculty can establish their own criteria that can go beyond the national threshold. This allows for flexibility and an approach suitable for the respective academic discipline (see above).

The current updating of policies has provided an excellent opportunity to align with other European initiatives, for example the development of the UNIRI COARA action plan.

The national criteria being revised are based on purely scientific merit (PhD degree and appropriate number and quality of scientific publications (discipline specific)) as well as criteria based on teaching contribution (adequate number of teaching hours, papers co-authored with students, experience in supervising (BSc, MSc … PhD theses), professional development, publication of teaching materials and textbooks, innovation of teaching content (introduction of new teaching methods (incl. those using open education approaches), peer review of study programs or textbooks, …), cooperation with teaching bases), scientific and professional contribution/impact (presentations of work on conferences, invited lectures, scientific and professional projects, scientific centres of excellence, editorial of proceedings, peer review of papers …, projects, organisation/programming boards of conferences, scientific/professional awards, science outreach activities) and leadership contributions (leadership positions at institutional level, activities at university level, university development projects, alumni activities, development of LLL programs, contribution to knowledge transfer, membership in (inter)national science and HE bodies, membership in editorial boards of journals, special awards and recognitions).

The UNIRI institutional Guidelines for the additional (institutional) criteria for the selection of scientific-teaching, artistic-teaching, teaching, associate and professional staff at the University of Rijeka and its constituents take into account also:

- academic skills: quality of publications, knowledge of research methodologies, multi-, inter- and trans-disciplinarity in research activities, internationalisation, usage of open science principles and practices, teaching skills, management of research, peer review, financing, community engagement;

- skills related to academic and institutional behaviour: professionalism, leadership, institutional policies, contributions to United Nations' Sustainable Development Goals (SDGs) / European Research Area / European Higher Education Area principles and actions, teamwork, communication skills;

- personal qualities and skills: basic disciplinary knowledge, enthusiasm, persistence, integrity, self-confidence, responsibility, adaptability, conflict resolution, cognitive abilities, career development (incl. mobility), management of own resources, creativity, understanding of societal and cultural contexts.

On completion of the initial five-year scheme, the Assistant Professor will have five yearly review points until fifteen to twenty years post receiving tenure when there is no longer a requirement for evaluation (Full Professor with Tenure). The revised criteria as defined by the new Act on Higher Education in Science will allow for wider non-traditional criteria for assessing academic excellence.

What have been the challenges in implementation?

- Whilst policy is dictated nationally, there is an additional challenge in the fact that most faculties are separate legal entities and therefore, the university can only make suggestions which may or may not be implemented at the faculty level.

- Croatian salaries are not attractive when compared to other countries and other sectors nd research resource is limited, for example there are few technicians. This makes attracting researchers difficult. However, the salary system is in the process of reform with the elements of this still unclear at this point.

- The five-year review period may be too long for some individuals whose level of excellence would enable them to progress more quickly. There is no way to bypass this within the system, equally there is an emphasis put on having five years to prove yourself which may disincentivise longer term projects.

- There is a requirement for all to teach and this may impact on scientific excellence as perception is that the teaching burden may impact on time to pursue research.

What are the key learnings?

- It would be useful to have more nuance in salary bands and the opportunity to reward within the five-year period in order to offer flexibility and incentivise excellence.
- It is important to recognise a range of skills alongside teaching and research and there is a need to develop wider criteria for assessment based on qualifications, academic achievement, and personal qualities. Contributions to the community, international collaborations, and other non-traditional indicators, should also be considered.
- Public salaries still do not compare favourably with business and industry, and this creates a challenge for Croatian research, alongside comparisons with other European countries. Individuals attracted to positions tend to be from countries outside of Europe as salaries are more competitive.

4.3 SECURE principles at national and institutional levels in Croatia and their implementation at University of Rijeka

The Secure principles for TTLM are clearly mirrored both at national and institutional level. The table below illustrates how the principles can be identified on these levels in Croatia, including which of the principles and in what way they have been implemented at the University if Rijeka.

Table 6 Mapping of SECURE principles to the national and institutional level in Croatia and University of Rijeka

Principles - Croatia	National level	Institutional level	University of Rijeka
Fair Pay and Benefits	The salary of academic staff is regulated by the Act on Salaries in Public Service, the Basic Collective Agreement for Civil Servants and Employees in Public Services and the Act on Scientific Activity and Higher Education. Croatian researchers are funded through competitive grants and institutional funding, but salaries are not as competitive as in other European countries, especially in the private sector. Reforms to improve salary systems are in progress.	The remuneration scheme for TTL positions is primarily governed by national regulations, specifically the Regulation on the Coefficient of Complexity of Jobs. These regulations determine the salaries for researchers at all career stages, including Early Career Researchers (ECRs – i.e., doctoral candidates). While there have been some recent salary increases, it is important to note that overall, academic salaries in Croatia have historically lagged behind those in the economic sector. This has made the Croatian scientific sector less attractive to emerging researchers. A significant salary increase in the second quarter of 2024 has helped to bridge this gap in many sectors, making academic careers more competitive relative to industry.	
Stability	Government institutions like the Ministry of Science and Education and the Croatian Science Foundation provide research funding. New legislation introduced under the Recovery and Resilience Plan (RRP) has redefined Croatia's research environment, and performance-based funding has been	Faculties in Croatia function as separate legal entities, meaning universities can suggest policies, but faculties are free to implement them as they see fit, leading to variations. Institutions are responsible for providing research facilities and benefits, but limited resources and infrastructure can impact stability.	This programme is entirely funded by both the Croatian Ministry of Science and Education and the University of Rijeka and is thus financially sustained. The tenure track has a clear five-year career progression cycle to advance from the level of Assistant Professor towards higher scientific teaching grades and offers a rather secure career path

	implemented. Researchers are employed as civil servants with national regulations governing working conditions and career progression.		linked to the compliance with national criteria.
Transparency	The Act on Academic and Professional Titles and Degrees ensures transparency in academic credentials.	-	This model is clear, once on the tenure track with ongoing five-year review periods and accompanying targets in order to progress to the next level, an Assistant Professor with accompanying salary and benefits. If criteria are not met, the individual will remain at their current level with another five years to achieve promotion should they wish to.
Inclusive and Healthy Working Environments	National policies ensure fair and inclusive work conditions for researchers, with support from CROZ for workplace inclusivity and development. Croatia excels in promoting gender equality, contributing to a healthy research environment.	As per national law, institutions are required to provide positive work environments, following national policies, and supported by workplace inclusivity initiatives under, for instance, the ERA Agenda.	As previously referred to the University have developed a set of guidelines for parents and carers. Guidelines for balancing business and private life of employed parents/carers at the University of Rijeka, and the respective Recommendations for ensuring the balance between professional and private life of working parents.
Professional Development	Progress for doctoral students and Postdocs is monitored through mentor reports and council sessions. The Croatian Institute for Development of Education (CROZ) supports professional development programs to enhance skills and career prospects.	Institutions offer continuous professional development programs, supported by CROZ, focusing on improving education and work environments. Researchers are often required to teach, which can limit their research capacities.	The professional development of early and mid-career researchers (doctoral candidates and post-docs) is assured via a structured mentoring/supervising system, where UNIRI has defined a structured set of criteria for the selection of the supervisors, based on their research merits, but also mentoring track-record, academic integrity and other considerations.

			For all the career stages, the Rules of the Rectors' Conference require that the candidates preferentially spend a period of study abroad via various mobility programs. Additionally, transversal skills such as e.g. those needed to initiate entrepreneurial activities, as well as of acquiring knowledge on open science, all developed within the Open Science and Open Innovation for Early Career Researchers (DIOSI) Horizon 2020 project, and the activities of the Young Universities for the Future of Europe (YUFE) European University alliance, and promoted by concrete measures of the UNIRI Doctoral School.
Responsible Evaluation	The Act on Quality Assurance in Higher Education and Science regulates both external and internal quality assurance, ensuring high standards in research and education. Postdocs are evaluated based on national and international standards to maintain accountability in research.	Institutions are responsible for evaluating postdocs according to national and international standards, e.g. in the context of tenure decisions. The Act on Quality Assurance provides a framework for evaluation, ensuring accountability in research programs.	Criteria for assessment are nationally defined and ratified at the National Council for Science, Higher Education and Technological Development, allowing a level of scrutiny and comparability. Institutions and faculties can choose to set additional criteria as required. This allows for institutions to set criteria that meet with their individual priorities or reflect needs of an academic discipline. UNIRI Senate has adopted new guidelines for the additional institutional criteria for the selection of scientific-teaching, artistic-teaching, teaching, associate and professional staff at the University of Rijeka and its constituents.

Recognition through Career Pathways	Career progression in Croatia is regulated by national laws, which set clear criteria for advancement based on research and academic achievements. Researchers benefit from structured career paths, but many postdocs are employed on fixed-term contracts. The Croatian Qualifications Framework Act and the Act on Recognition and Evaluation of Foreign Educational Qualifications govern the recognition of both domestic and foreign qualifications for the labour market and further education.	As defined by national laws, career progression within institutions follows structured paths from doctoral studies to academic positions. But the permeability of these paths varies by institution. Research merits and academic achievements play a decisive role in career advancement, but faculty-specific regulations and the availability of positions may affect the overall process.	This does not really apply in the Croatian higher education sector. Some disciplines (e.g. medicine) have provisions for university employees working concurrently in the public health sector, via the so-called "cumulative working contract", with the resulting positive impact on their total salaries. What is more, UNIRI has an elaborated scheme of scientific, scientific-teaching and professional collaborating institutions from the public and economic sectors (currently more than 200 of them) which provide support in our activities, promote the transfer and exchange of experiences, promote the (intersectoral) involvement of external personnel in research and teaching activities and similar.
Supportive Management	Research activities are guided by the National Council for Science, Higher Education, and Technological Development. Institutions are required to provide resources and mentorship to researchers, following the Act on Scientific Activity and Higher Education.	Universities and faculties have management structures aligned with national regulations to support researchers. Institutions must provide mentorship and resources to ensure researchers' success.	
Competitive and Open Recruitment	Croatia's Law on Strategic Planning and Development Management outlines the National Development Strategy for 2030 which serves as a roadmap for researchers in areas related to development and innovation policies. Croatia	Institutions have autonomy in setting recruitment criteria and quotas, which are transparently advertised on institutional websites and in newspapers. Doctoral positions are often filled through a competitive process, but institutions	The recruitment process at UNIRI is clearly prescribed by the newly adopted Act on Higher Education and Scientific Activity (October 2022), alongside the Rulebook of the Conference of Croatian Rectors. These regulations are publicly

	actively participates in EURAXESS, with local contact points and service centers supporting researcher mobility and international collaboration. Despite efforts to encourage academic mobility, Croatia ranks last in the EU for the mobility of researchers post-PhD.[8]	decide internally based on infrastructure, mentorship availability, and research needs. Researcher recruitment beyond the doctoral level. To be hired, postdocs typically require a PhD, proficiency in English (and Croatian for local institutions), and proven research experience, including publications and involvement in international projects.	available and ensure transparency and accessibility for all prospective candidates. The University adheres to the principles set out in the Code of Conduct for the Recruitment of Researchers and is recognised for its commitment to these standards by being entitled to use the HRS4R logo (see https://uniri.hr/en/science-and-research/hrs4r/).

In Croatia, the research and academic landscape is shaped by national policies and institutional autonomy, with the University of Rijeka (UNIRI) offering a more structured approach. National regulations provide a foundation for research funding and career progression, though many researchers still face temporary contracts and lower salaries compared to other European countries. At UNIRI, the tenure-track system offers clearer career paths with a five-year cycle tied to national criteria, providing more stability and long-term development compared to the broader national trend of short-term contracts. The university also stands out with structured professional development, mentoring, and international collaboration opportunities. UNIRI emphasizes inclusivity, work-life balance, and ethical standards, aligning with national laws while implementing comprehensive guidelines for parents and caregivers. Its recruitment process is transparent and aligned with open science principles, ensuring accessibility and merit-based selection. Overall, UNIRI combines national regulations with institutional support for career progression, making it a likely more stable and supportive environment for researchers compared to the broader Croatian context.

[8] https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-04/ERA%20Country%20Report%202023%20Croatia_FINAL.pdf

5 Finland – University of Helsinki

5.1 Introduction

Finland's research system offers a well-structured career path and support for professional development but faces challenges related to job insecurity, competitive advancement, and diversity in higher academic positions. With a R&D expenditure at 2.98% of GDP (2021), Finland's research environment offers a blend of stability and competition.

Table 7 National R&D metrics for Finland

Indicator	Most recent EU average (2021)	Most Recent Metric (2021)
Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP	2.26%	2.98%
Government Budget Allocations for R&D (GBARD) as a share of GDP	0.76%	0.89%
Researchers (in full-time equivalent) per million inhabitants	4.5	7.87
Business Enterprise expenditure on R&D (BERD) as a percentage of GDP	1.49%	2.0%

Source: ERA Scoreboard and ERA Dashboard indicators[9]

Universities in Finland are primarily funded by the Ministry of Education and Culture, receiving multi-year block grants (c. 5 years). Additional financial support comes from competitive funding bodies such as the Academy of Finland and Business Finland. Funding for positions is delegated to faculties and there is additional short-term support available from the Research Council of Finland.

The Universities Act (2009) established Finnish universities as independent entities and employers, with staff no longer having civil servant status. Since the reform, universities have been responsible for recruitment and career progression. Universities now operate under a more flexible legal structure, either as public law corporations or private foundations. The 2009 Act also introduced a tenure-track system, with the intention to bridge the gap between fixed-term university assistant positions and professorships by introducing a trial period from assistant to associate and full professor. Institutions follow the four-tier academic career structure: from PhD candidates and postdocs to university lecturers, and then to professors. Despite the structured path, progression remains highly competitive, with significant reliance on external funding for research.

Job security remains an issue. Around 70% of academics in Finland are on fixed-term contracts, particularly in early career stages. The tenure-track system is intended to bridge this gap, offering clear progression from junior to tenured positions, yet many postdoctoral researchers face pressure to secure external grants. The

[9] https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-05/ERA%20Country%20Report%202023%20Finland.pdf

Academy Research Fellowship, for instance, offers up to four years of funding to help postdocs become independent researchers, but limited permanent positions leave many looking outside academia.

Salaries in Finland are performance-based, with a reward system that includes a job-related salary based on duties and a personal salary component based on individual achievements. Universities, such as the University of Oulu, have clear criteria for recruitment and career progression, though evaluations often rely heavily on performance metrics, which can discourage researchers who find the pressure overwhelming. Moreover, despite high national standards, Finland faces challenges with gender and ethnic diversity in academia. Initiatives like the KOTAMO project aim to address the underrepresentation of ethnic minorities in academic roles, though progress is slow.

5.2 University of Helsinki: A TTLM to attract top international researchers

The tenure track-like scheme at the University of Helsinki was Initiated in 2010 at assistant professor and associate professor levels. The scheme was extended in 2015 to include recruitment at professor level. The tenure-track takes 3-10 years depending on entry point, spanning assistant professor (R3, 3-5 years), associate professor (3-5 years), and then professor (R4, permanent). The criteria for each stage of the tenure track are clear and wide-ranging, including publications, teaching, public engagement, leadership, and future potential. The university emphasises that researchers should take responsibility for their own careers, with flexibility in workload models (including research and teaching allocations).

What was the rationale?

The Universities Act (2009) provided an opportunity to change the way the University of Helsinki attracted researchers. The tenure-track scheme is part of a strategy to attract, support, and retain leading international researchers in a global academic market.

Moreover, limited government funding for academic positions means that there are few academic options in Finland. The introduction of tenure track-like schemes in Helsinki, as in other Finnish universities, is part of a desire to introduce formal and structured career pathways.

What have been the challenges in implementation?

- Individuals on the tenure track have reviews based on individual criteria at each progression point, with appointment to professor also involving an external assessment and confirmation by the rector. Communicating expectations around criteria remains a challenge, however, with some candidates feeling that they need to meet all criteria and not fully understanding the flexibility available in assessment.
- There has not yet been much attention paid to preparing candidates for alternative careers or other options, should they be unsuccessful in progressing through the track. In part this is due to the high success rate of individuals, with few leaving the track. The university may consider support for alternative careers as part of their review of the scheme in 2024.

What are the key learnings?

- The importance of communicating, early on, with all stakeholders. To be successful, senior leaders in particular need to be committed to the scheme.
- Similarly, the importance of open communication in relation to criteria and providing structured opportunities, at regular intervals, to discuss with individuals and ensure they understand where they are in relation to the criteria; and what they need to do to meet expectations.

- Further attention should be given to contractual status while on the tenure track. At Helsinki, both assistant professor (3-5 years) and associate professor (3-5 years) are offered as fixed-term contracts, with progression criteria. This might affect the choices of candidates looking for tenure track positions, as in other countries permanent contracts are offered sooner. The longer process might also have an impact on productivity (or expectations of productivity) and in turn mental health and wellbeing.

5.3 SECURE principles at national and institutional levels in Finland and implementation at University of Helsinki

The Secure principles for TTLM are mirrored both at national and institutional level. The table below illustrates how the principles can be identified on these levels in Finland, including which of the principles and in what way they have been implemented at University of Helsinki. Only a small number of principles have been possible to be mapped to the University of Helsinki at this stage.

Table 8 Mapping of SECURE principles to the national and institutional level in Finland and University of Helsinki

Principles - Finland	**National level**	**Institutional level**	**University of Helsinki**
Fair Pay and Benefits	Finnish researchers receive compensation aligned with national standards, including healthcare, pensions and family support.	Since 2005, universities have operated under a reward-based salary system, further emphasising performance metrics. Recent reforms have intensified competition in this system.	The different stages of the tenure-track (assistant professor and associate professor) are remunerated in accordance with pay scales set by the university. Since the tenure track applies to all assistant and associate professorships, all appointees are on the same salary scale. In addition, researchers receive an additional salary component based on personal performance.
Stability	Public funding for universities is allocated in phases by the Ministry of Education and Culture. Significant public investment into research stems from organisations like Business Finland and the Academy of Finland. However, funding is increasingly competitive and often tied to short-term, third-party sources, leading to a 144% rise in the number of temporarily employed postdoctoral researchers in Finland over the past decade.	The Universities Act (2009) restructured universities as entities independent from the state increasing universities' autonomy and removing the civil servant status of academic staff.	

Transparency	Following The Universities Act (2009), a four-tier academic career structure was introduced (PhD candidates, Postdocs, University lecturers, Professors).		
Inclusive and Healthy Working Environments	Finland ranks high in gender equality, but studies show underrepresentation of women and ethnic minorities, particularly in tenure-track positions. Family commitments and a lack of gender-equality in leadership remain challenges.	Institutions are working to improve diversity and inclusivity, but progress is slow. The KOTAMO project highlights the underrepresentation of ethnic minorities among researchers (and staff), especially in language and nationality.	
Professional Development	National-level support for the career development of postdocs includes a range of initiatives. The Academy of Finland, offering programs such as the Academy Research Fellowship. The aim is to help postdocs establish themselves as independent researchers, often a crucial step in securing permanent academic positions.		
Recognition through Career Pathways	The tenure-track system provides a clear path from junior researcher to tenured professor, offering career progression through a trial period. 70% of postdoctoral academics are on fixed-term contracts, particularly affecting early-career researchers.	Following the 2010 reform a typical career path at full universities is: PhD, followed by a postdoc, then a university lecturer, and finally a professor. In universities of applied sciences (UAS), the path progresses from lecturer to senior lecturer.	
Responsible Evaluation		Since 2005, universities have operated with a reward-based salary system, which emphasises individual performance metrics. Internal evaluation processes rely heavily on quantitative performance metrics, which can	There is clear guidance for assessors serving in review processes, including principles of disqualification, information about the need to follow responsible evaluation principles (e.g., the Declaration on Research Assessment), and a reminder that assessor

		negatively impact early-career researchers, especially those seeking permanent positions.	statements are shared with shortlisted candidates. The university also aims to ensure that equality and diversity is considered in evaluation, with both male and female assessors as far as is possible.
Supportive Management			
Competitive and Open Recruitment	Platforms like Academic Positions and EuroScienceJobs advertise postdoc opportunities with clear qualifications and transparent job postings.	After the 2010 reform universities operate either as corporations under public law or as private foundations, with recruitment and qualification requirements determined internally by each institution. Recruitment is merit-based, and positions are advertised internationally. However, career progression often relies on informal processes, despite improved transparency post-2010. Finnish universities, such as the University of Oulu and Tampere University, publish recruitment policies and open calls, offering structured onboarding, mentoring, and professional development to support postdocs.	The University of Helsinki has published information on the gender balance of assistant and associate professors (51% women) and professors (36% women). Clear information about recruitment criteria and processes, evaluation, and progression criteria are also available. There is openness about the preference to fill tenure track positions through an open and competitive process, but they reserve the right to fill professorships (and, in exceptional circumstances, associate professorships) by invitation.

While the national level sets a broad framework for transparent career progression, universities like the University of Helsinki go further by actively publishing detailed recruitment and progression criteria, as well as gender balance data, to make the process even more accessible to all potential candidates. Both the national and university levels adopt a performance-based salary system, but the university of Helsinki ensures that salary scales are applied consistently to all tenure-track positions, adding a personal salary component based on individual achievements. At the national level, performance metrics are widely used to evaluate researchers, but the university of Helsinki provides structured guidance to assessors, emphasizing responsible evaluation principles, transparency in feedback, and equality in the review process, with a clear effort to include both male and female assessors.

6 Germany – Goethe University Frankfurt

6.1 Introduction

Germany's research system provides a well-structured career path with support for professional development but continues to face challenges such as job insecurity for early-career researchers, competitive advancement, and gender inequality in leadership roles. With an R&D intensity reaching 3.13% of GDP, Germany maintains a research environment supported by funding by the Federal Ministry of Education and Research (BMBF). Policies like the Excellence Strategy and the Pact for Research and Innovation (PFI) ensure long-term financial stability. Germany's research system fosters transparency through regulations like the Higher Education Acts, while universities adopt departmental structures to enhance openness in career progression. The Joint Federal Government-Länder Funding Programme for Junior Academics ("Tenure Track Programme") provides large scale funding to create approximately 1000 tenure track professors.

Table 9 National R&D metrics for Germany

Indicator	Most recent EU average (2021)	Most Recent Metric (2021)
Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP	2.26%	3.13%
Government Budget Allocations for R&D (GBARD) as a share of GDP	0.76%	1.12%
Researchers (in full-time equivalent) per million inhabitants	4.5	5,5
Business Enterprise expenditure on R&D (BERD) as a percentage of GDP	1.49%	2.1%

Source: ERA Scoreboard and ERA Dashboard indicators[10]

Germany offers standardized pay scales defined by federal agreements like TVöD and TV-L, with professors paid under the W-Besoldung system. While additional benefits may be negotiated, such as research staff funding, pay discrepancies remain, with female postdocs earning less than male counterparts. Institutions like the Max Planck Society provide benefits including health insurance and retirement plans, though unpaid overtime is common for postdocs.

Professional development is supported by initiatives like the Excellence Strategy and Max Planck Research Schools, with programs promoting work-life balance, particularly for researchers with children. However, women face more career challenges related to parenthood.

The German government monitors the relevance of different career tracks in German academia systematically in periodic reports, such as the National Report on Junior Scholars (Bundesbericht Wissenschaftlicher Nachwuchs). This report is prepared by an independent scientific consortium – since 2017 under the direction of the Institute for Innovation and Technology (iit) at VDI/VDE-IT. It aims to compile and analyse current findings and data concerning young academics in Germany, making this information

[10] https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-05/ERA%20Country%20Report%202023%20Germany.pdf

accessible for research purposes.[11] The most recent data show that in Germany, most early career researchers are employed on fixed-term contracts (2022: R1 = 98%; R2 = 75%). Efforts to reduce reliance on short-term contracts include creating permanent postdoc roles and coordinated support through the Future Research and Innovation Strategy, providing mentorship and resources. In 2016, the Joint Federal Government-Länder Funding Programme for Junior Academics ("Tenure Track Programme") was launched with the aim to establish the Tenure-Track professorship in Germany. In addition to creating this new predictable and transparent career path for junior scholars, it requires institutions to develop personnel strategies that outline career trajectories for non-professorial staff. Although these efforts aim to reduce uncertainties, many postdocs continue to work under fixed-term contracts, limiting long-term job security.

6.2 Goethe University Frankfurt: TT career tracks towards professorship and to permanent researcher/teaching positions

The Goethe University Frankfurt/Main has defined three career paths for researchers with R1/R2 profiles: (a) the Advanced Academic Track (research-focused career path with less teaching obligations), (b) the Advanced Teaching Track (scientific teaching-focused career path) and (c) the Academic Support Track (science management career path). Both the Advanced Teaching and Advanced Academic Track are tenure tracks starting with a fixed-term contract for qualification for up to three years that turns into a permanent position after positive external evaluation. The Advanced Academic Track includes the Tenure-Track Professorship (implemented in 2010 and further developed under the German Tenure-Track Programme (see above)). Within the Academics Support Track, the position will be offered for an indefinite period of time upon proof of the required qualification. The three new career tracks came into force as principles issued by the Executive Board in April 2023. They are to be implemented by each faculty individually.

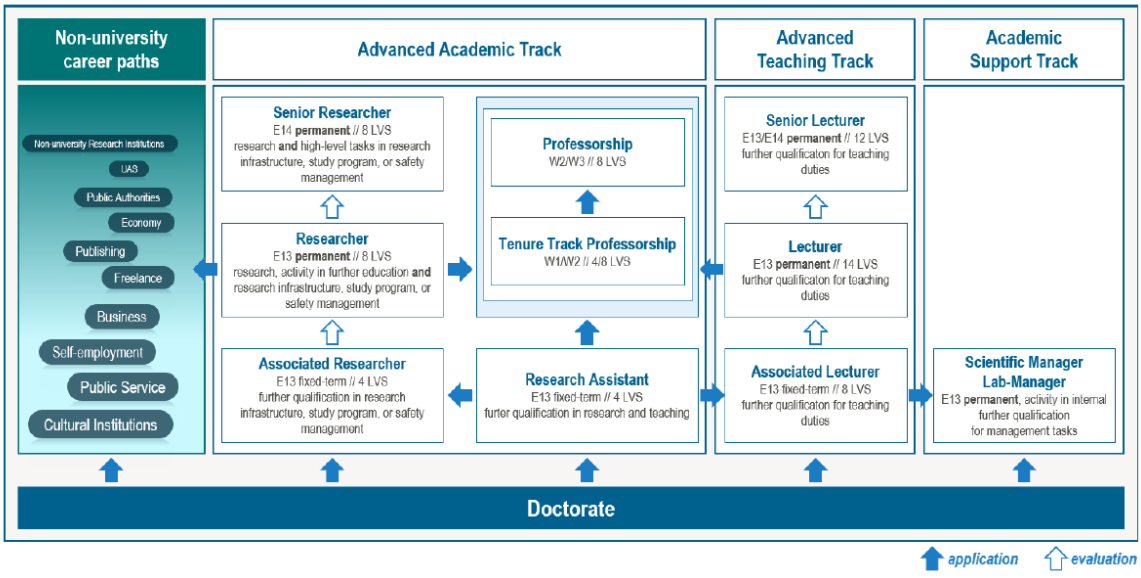


Figure 1 Tenure-Track Model at Goethe Universität Frankfurt (see https://www.grade.uni-frankfurt.de/134192341/Principles_Career_Paths_07_03_23.pdf?)

[11] An English summary of the key results of the 2025 report is available at buwik.de (https://buwik.de/wp-content/uploads/buwik-2025-keyresults.pdf)

What was the rationale?

In 2022, the Goethe University Principles were developed in a participative process together with members of staff, including early-career researchers (ECRs), administrative staff and across all faculties. According to our interview partners, in a situation with increasing skills shortage also at universities, career paths need to become more attractive and transparent to ensure quality. The aim of the principles' further development is, among other things, to represent permanent tasks through permanent positions and to bundle competencies. Against this backdrop, Goethe University is pursuing three main goals with the transparent structuring of career paths for researchers in mid-level academia: (1) Establishment of career paths in academia in addition to professorships, (2) Creating transparency about the various career paths for researchers and (3) Linking permanent position prospects with opportunities for further qualification.

What have been the challenges in implementation?

- The scheme has resulted in a mandatory process for all faculties, because in the future all permanent positions must be advertised according to the new career track model. Therefore, the faculties and scientific institutions must define permanent tasks and specify these in their Strategy and Development Agreements/target agreements with the Executive Board until March 2024. A permanent task with defined qualification criteria and a defined number of working hours is necessary to advertise a position as permanent-after-tenure. For some faculties this may be more challenging than for others.
- Employment is generally full-time, part-time employment of at least 50% is only possible in justified cases, in particular at the request of the employee. This wording is inconsistent with the notion that sustainable research careers should allow to reconcile career and family/kids.
- The number of permanent positions at the university will likely be increased in the next years, because there is a target agreement between Goethe University and the Land Hesse[1] to increase permanent positions continuously each year until 2025 (from 245 in 2021 to 280 in 2025). However, the first step is likely to be the transformation of existing permanent positions that are restaffed according to the new (tenure-track) system defined in the scheme.

What are the key learnings?

- Goethe University Frankfurt has adopted a tenure-track system for filling both professorship and permanent researcher / lecturer positions.
- Selection and evaluation criteria are clearly defined and transparently communicated to candidates before appointment
- The third track (*Academic Support)* includes permanent positions without tenure evaluations.

6.3 SECURE principles at national and institutional levels in Germany and implementation at Goethe University Frankfurt

The Secure principles for TTLM are mirrored both at national and institutional level. The table below illustrates how the principles can be identified on these levels in Germany, including how they are implemented at Goethe University Frankfurt.

Table 10 Mapping of SECURE principles to the national and institutional level in Germany and Goethe University Frankfurt

Principles – Germany	National level	Institutional level	Goethe University Frankfurt
Fair Pay and Benefits	Pay scales are defined by federal agreements like TVöD, and TV-L (at the Federal State level) pay scales, ensuring standardised compensation across federal and state institutions. Professors are paid according to the W-Besoldung system. However, universities typically negotiate additional benefits (e.g., pay for equipment, research staff) when appointing professors. These benefits vary by subject. On average, female postdocs earn slightly less than their male counterparts.	An employment at a university comes with a range of benefits, including health insurance, retirement plans, and family support. Non-academic research institutions, e.g. the Max Planck Society, tend to replace stipends with employment contracts for postdoctoral researchers to provide the benefits mentioned above. Unpaid overtime is common for doctoral candidates and postdocs.	Based on the regulations of the salary structure, the pay-scale classification of a (job) position is defined in the overarching career framework and published in job offers jointly with a general description of tasks (e.g., number of teaching hours).
Stability	Germany maintains a well-funded research environment, with EUR 20.4 billion allocated by BMBF in 2022 and total R&D spending reaching 3.13% of GDP. Legislative amendments and personnel concepts, like the Tenure Track Programme, help to improve stability, but many postdocs remain on fixed-term contracts.	The Excellence Strategy (ExStra) and Pact for Research and Innovation (PFI) ensure financial stability through annual budget increases. Structured doctoral programs at Graduiertenkollegs provide a predictable learning environment. However, postdocs' reliance on short-term contracts presents challenges. Efforts to align contract durations with project lengths aim to increase stability.	The Goethe University principles describe clear and defined progression pathways that include permanent employment and open-ended contracts. Tenure-track professors are initially employed on a temporary basis for up to six years (with a possible extension upon birth or adoption of a child by one year per child, up to a maximum of two years). They transition to a permanent professorship if their performance is evaluated positively. The criteria for the tenure evaluation are made clear at the time of appointment, and the evaluation is the only aspect considered when deciding whether to grant tenure. Both the positions of Associated Researcher and Associated Lecturer include a tenure-track, i.e., the positions are initially announced on a fixed-term basis for up to three years with the option for permanent employment as a Researcher/Lecturer upon successful qualification and positive external evaluation. Scientific

			Manager / Lab Manager positions will be offered for an indefinite period upon proof of qualification, which can also be acquired in additional courses on science management or in the context of employment as a Research Assistant, Associated Researcher or Associated Lecturer.
Transparency	National regulations like the Higher Education Acts of the Länder and the ERA Action Plan ensure transparency of research careers.	Universities are moving towards departmental structures for greater transparency. Applications to the publicly funded Tenure Track Programme required personnel development strategies that outline career paths for non-professorial staff.	The university publishes clear statements on international job postings,on selection procedures and hiring requirements. The positions are to be advertised both internally and externally and as a rule also internationally. In accordance with legal regulations, the positions in the Academic Support Track will be advertised and filled directly as open-ended positions. As a rule, the positions of Researcher, Senior Researcher, Lecturer or Senior Lecturer are not advertised since they are granted after positive evaluation.
Inclusive and Healthy Working Environments	Gender equality policies and initiatives are employed. For instance, the publicly funded Professorinnenprogramm (2008-2030) supports equality of all at universities. Yet, female professors remain underrepresented in some subjects and in leadership positions, although to a decreasing extent. In addition, parents can take up to three years of parental leave. However, data show that men are more likely to view family life and academic careers as compatible.	Universities are instructed to implement family-friendly policies and keen to do so, e.g., through flexible hours, mentorship programs and opportunities for childcare. Thus, efforts are ongoing to improve gender equality and inclusiveness across research institutions.	In line with the university's aim "to create a diversity-oriented organizational structure and culture that offers equal opportunities to all members of the university, regardless of their heritage and life situation, and counteracts discrimination", the Equal Opportunities Office provides, inter alia, guidelines and counseling on diversity-related topics and help to reconcile careers (and studies) with family responsibilities (with its Family Service and the Dual Career Service Frankfurt).
Professional Development	National initiatives like the Excellence Strategy and Max Planck Research Schools promote interdisciplinary skills development. Data show that junior scholars with children are more satisfied with their work-life balance	Institutions support professional development through mentorship programs and structured doctoral training. Workshops and coaching on work-life balance are available, as well as family	The university has defined the competencies that R1-R3 researchers need to develop and offers different types of support in this regard. For instance, the university fosters "academic independence and individual responsibility", commits to

	than junior scholars without children. However, women report more challenging career impacts from parenthood, including fewer opportunities for advancement compared to men.	support measures like flexible working hours and childcare provisions, improving conditions for parents. Efforts to create permanent postdoc-roles for non-professorial staff, as part of the personnel concepts, aim to reduce reliance on short-term employment.	"transparent and high-quality qualification, supervision and mentoring structures, with equal access for all" early-career researchers, and to shaping "the transitions between academic career phases and various professional fields both within and outside the university in an individual and tailored approach". Moreover, the universities' Research Support provides information and answers questions on research project (management), third party funding and career development, while the Goethe Research Academy for Early Career Researchers offers several training and networking opportunities.
Responsible Evaluation	Policies like the Tenure Track Programme encourage structured career development and transparent evaluation criteria. The ERA Action Plan and government strategies are designed to promote long-term academic contributions over short-term achievements.	Universities rely heavily on project-based funding, which can tie evaluations to the short-term success of research projects. Efforts are underway to increase opportunities for more extensive research impact and longer-term personal development in academia, but more consistency and comprehensiveness is needed, especially for early-career researchers.	The evaluation process and criteria for tenure-track positions are clearly defined and it is stated that they are to be recorded in the job posting in writing as a basis for the evaluation. The evaluation must be completed by the faculty dean or the head of an academic institution and an external reviewer (appointed by faculty dean/head of), at the latest six months before the end of the fixed-term employment contract. Relevant documents include an overview of completed qualification measures, i.e., achievement of goals defined in the initial target agreement.
Recognition through Career Pathways	The Tenure Track Programme and junior professorships offer structured career paths, based on transparent, structured evaluations of academic achievements, and subsequent career opportunities. The BMBF supports recognition in cutting-edge domains	Career development programs at universities and research institutions promote recognition through transparent evaluation criteria. The recently implemented tenure-track system provides junior scholars with transparent and predictable academic progression	By implementing the Advanced Teaching Track focusing on scientific teaching, and the Academic Support Track focusing on science management as new career paths, Goethe university acknowledges the variation within academic careers. Also, it recognizes and values knowledge transfer and, in this aim, entrepreneurship and research cooperation with industry, as well as the dialogue with policy

	emerging fields, such as green hydrogen.	opportunities. Nonetheless, the prevalence of fixed-term contracts still hampers long-term career advancement.	makers, business, and society, and transfer activities linked to studying and teaching.
Supportive Management	The Future Research and Innovation Strategy encourages ministries to support the management and development of academic careers through coordinated efforts, ensuring that junior researchers have access to the resources, mentorship and career perspectives needed.	Supportive management is provided through mentoring and supervision programs, particularly for doctoral candidates and postdoctoral researchers. Universities and research institutions offer tailored career support, though reliance on fixed-term contracts still creates challenges.	The university has defined transparent processes, timelines and the bodies involved in the (mid-)evaluations and promotions within the different career paths mentioned above. The management structures themselves depend on regulations in the faculties/ chairs.
Competitive and Open Recruitment	National policies promote open and competitive recruitment through platforms like Euraxess and academics.de. The Tenure Track Programme supports competitive recruitment by requiring personnel strategies that allow recruitment from various academic roles meeting qualification criteria. OBJ	Institutions follow merit-based recruitment practices which align with the goals of the ERA. Universities and research institutions must ensure that recruitment for both permanent and tenure-track positions is transparent, merit-based, and inclusive. However, there is still a very high proportion of fixed-term contracts (so-called “chain contracts”).	The above-mentioned fact that positions are to be advertised both internally and externally, and, as a rule, also internationally ensures competitive recruitment. Furthermore, competitive recruitment is ensured as selection committees include two professors (of which one is the supervisor), a scientific staff member of the corresponding faculty, a representative of the relevant departmental student council, and the Staff Council. For fixed term Associated Researcher/Lecturer positions a target agreement outlining the qualification goal, teaching and necessary qualification measures is concluded. Following legal regulations, as mentioned above, a representative of the Equal Opportunity Officer and, if applicable, the Representative for Severely Disabled Persons are included into the candidate selection processes to support inclusive recruitment. In addition to the general service and employment suitability,

			prerequisites for employment are a university degree and, as a rule, a doctorate. Exceptions of these requirements are permitted for the career path in Academic Support if there are adequate prior achievements and qualifications.

Due to the German political system with federal governments and federal states (Länder), it is particularly important to consider the role national and institutional regulations play in the German academic system. National regulations include employment laws such as the Wissenschaftszeitvertragsgesetz (German Academic Fixed-Term Contract Act) which regulates fixed-term employment contracts and working conditions in the academic sector in Germany. Additionally, there are agreements between the federal government and the Länder regulating funding that universities receive to execute research and teaching. Government-Länder funding programs such as the Tenure-Track Programme or the Professorinnenprogramm (addressing the underrepresentation of female professors) play a special role as they implement and support new career paths at institutional level with government funding.

At the institutional level, while universities and research institutions receive their main funding from the federal states (in addition to third-party-funding), they are independent in their research focus and their handling of early career researchers. While a high percentage of ECR are still employed on fixed-term contracts, many institutions have come up with models to counteract this situation. The model by Goethe University presented here is a great example, as it introduces comprehensive, transparent career paths with three different foci (research, teaching, academic support), leading to permanent positions.

7 The Netherlands – University of Maastricht

7.1 Introduction

The Netherlands has an R&D intensity of 3.13% of GDP, with government bodies like the Netherlands Organisation for Scientific Research (NWO) being the primary source of research funding.

Table 11 National R&D metrics for the Netherlands

Indicator	Most recent EU average (2021)	Most Recent Metric (2021)
Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP	2.26%	2.25%
Government Budget Allocations for R&D (GBARD) as a share of GDP	0.76%	0.8%
Researchers (in full-time equivalent) per million inhabitants	4.5	6.01
Business Enterprise expenditure on R&D (BERD) as a percentage of GDP	1.49%	1.50%

Source: ERA Scoreboard and ERA Dashboard indicators[12]

The academic system in the Netherlands follows a structured yet competitive career path for early career researchers. Postdoctoral researchers are typically employed on fixed-term contracts, often funded through external grants. These contracts usually last between two and four years, with limited opportunities for extension. Unlike some other systems, Dutch universities do not have a formalized tenure-track system across all institutions, though tenure-track positions exist in certain cases, particularly for Assistant Professors (UD, *Universitair Docent*, see below*)*.

National regulations set clear standards and requirements for academic positions. The recruitment process is transparent, with universities adhering to the Dutch recruitment code. Platforms such as AcademicTransfer and the Netherlands Recruitment Day foster competitive, merit-based recruitment for doctoral and academic roles.

State steering has shifted towards a more managerial approach, focusing on performance metrics and external funding, while academic staff continue to be classified as civil servants. However, universities retain autonomy over personnel management. Researchers' salaries are determined by collective agreements, with researchers employed by universities receiving salaries, benefits, and health insurance.

Career progression towards a permanent academic position is highly selective. After the postdoc phase, researchers may secure an Assistant Professor position, often with a probationary period before tenure is granted. Advancement to Associate Professor (*UHD, Universitair Hoofddocent*) and Full Professor (*Hoogleraar*) depends on research output, teaching experience, and funding acquisition. The Dutch system

[12] https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-05/ERA%20Country%20Report%202023%20The%20Netherlands.pdf

places strong emphasis on interdisciplinary research, collaboration with industry, and obtaining competitive grants (e.g., NWO Veni, Vidi, Vici funding schemes).

Due to limited permanent positions, many early-career researchers face challenges in securing long-term academic employment. As a result, alternative career paths in industry, policy, or research institutes are increasingly common. Recent discussions in Dutch academia focus on improving job security and broadening evaluation criteria beyond publication metrics to foster a more sustainable academic career trajectory.

7.2 University of Maastricht – a TTLM with focus on professional development

Academic staff pursue career opportunities on a career path within the University of Maastricht with transparent criteria for career advancement. Tenure track is used throughout the institution across all faculties as part of an overall goal of having fewer temporary contracts.

The University is keen to widen criteria for reward and recognition of postdocs. In order to be eligible for a tenure track-like position, the following criteria are considered: education, work experience, teaching, research, management, internationalisation, and competencies. Hence, the university is keen to ensure that postdocs are assessed broadly and transparently, e.g., through annual appraisals and professional development support.

What was the rationale?

To qualify for a permanent position, assistant professors on a tenure track have to meet the defined criteria within a period of five years. Evaluations have clearly defined milestones that build on the criteria defined for the selection into a tenure track. To support this process, two key mechanisms are in place:

- A tailored development plan, which employees and supervisors agree upon during the first three months of the process and update on an annual basis.
- A mentor who will support the career development of a tenure-track candidate in about three meetings per year. These meetings should be career-oriented discussions, ideally without any bureaucracy.

Sustainable employment is at the heart of the university's HR Policy. It includes the aims of diversity, inclusivity, leadership, and career development. The aim is that all employees work in a safe environment in which they can continue learning, developing, and investing in their future mobility (which the University of Maastricht considers as a basic human right). Supervisors are trained to support this process.

What have been the challenges in implementation?

- Finding and training mentors who feel confident to provide guidance on careers and have the time available to commit to the researcher.
- Being able to offer each individual following the career path the support it needs to meet the criteria of the tenure track towards a permanent position.

What are the key learnings?

- As far we are aware there has not been any analysis of the success of the tenure track at the University of Maastricht in terms of retention and mobility goals However, the career development support available, and the measures to enhance to enhance career mobility exceed

what is offered at many other universities. In particular, the mentoring professional and individual development plans.

7.3 SECURE principles at national and institutional levels in the Netherlands and implementation at Maastricht University

The Secure principles for TTLM are mirrored both at national and institutional level. The table below illustrates how the principles can be identified on these levels in the Netherlands, including how they are implemented at Maastricht University. At this stage, only a few principles could be mapped to the case study. Moreover, for some principle no information was found on the national and/or institutional implementation level.

Table 12 Mapping of SECURE principles to the national and institutional level in the Netherlands and University of Maastricht

Principles – The Netherlands	**National level**	**Institutional level**	**Maastricht University**
Fair Pay and Benefits	Postdoctoral researchers in the Netherlands receive competitive salaries based on collective labor agreements (CAOs) for university staff, along with standard employee benefits like vacation days, pensions, and sick leave. However, some positions may offer fewer benefits, depending on the funding source or contract type.	The national regulations apply at institutional level.	
Stability	Government funding is provided through organizations like Netherlands Organisation for Scientific Research (NWO) and the Dutch Research Council. Over the past 25 years, higher education has adopted a managerial approach, with more focus on performance metrics and external funding, while academic staff remain civil servants.	Universities and research institutions manage grants and ensure alignment with national priorities. Postdoctoral researchers are usually employed on 2 to 4-year contracts. Thus far, they experience stability, nonetheless, they often face competitive paths to permanent academic positions. Postdocs are encouraged to apply for tenure-track positions, though securing a permanent position typically requires external funding, publications, and a strong research track record.	

Transparency	The main career path in Dutch academia follows five steps: Appointed PhD students; Other academic staff (postdocs, teachers); Assistant professor; Associate professor; Full professor.	The recruitment process for academic positions varies between universities, with each adhering to the Dutch recruitment code. Universities have transparent recruitment and employment practices, supported by initiatives such as the HR Excellence in Research award. Platforms like AcademicTransfer and events like the Netherlands Recruitment Day ensure that academic positions are widely advertised, and selection processes are merit-based.	At university level, the University of Maastricht has developed a tenure track policy for assistant professors, which is adapted to the needs of individual faculties. This policy covers both Appointment Processes and tenure processes, whilst also offering guidance on professional development plans (including, e.g.,, e.g., recommendations for mentoring).
Inclusive and Healthy Working Environments	The Netherlands lag behind the EU average in gender equality and inclusiveness, particularly in terms of women holding grade A positions in higher education institutions (HEIs) and the proportion of women among doctoral graduates in certain STEM fields. Despite policies aimed at addressing these issues, they have not been fully effective. The country faces a "glass ceiling" problem, although the impact of Dutch women in academia is higher than the EU average. However, the share of women in highly cited publications has been rising in line with the EU.		
Professional Development	--	--	The HR strategy of the university states that self-development is both a right and responsibility. The staff career center offers a range of suitable internal and external programmes, focusing on various target groups and involving a specialized department to support early career

			researchers. Employees of the University of Maastricht have the responsibility to turn their development needs into actions.
Responsible Evaluation	Postdoctoral researchers' work is evaluated through a combination of project-specific performance metrics and broader academic contributions. For higher academic positions, such as associate professors and full professors, the evaluation process is even more rigorous. These positions require a demonstrated track record of significant research contributions, successful acquisition of external funding, and excellence in teaching and mentorship. Evaluations are conducted through a combination of peer reviews, student feedback, and performance metrics related to research impact and academic leadership.		
Recognition through Career Pathways	The system provides clear career pathways from PhD to postdoctoral roles and permanent academic positions.	Universities support structured career progression, including tenure-track roles.	
Supportive Management	--	At the postdoctoral level, institutions like Leiden University provide extensive support for postdocs, including career guidance, training programs, and opportunities for securing research funding.	Annual appraisals have a clear focus on professional development and long-term employability. The appraisals are a conversation based around four themes, namely looking back, looking forward, short term development and long-term development. Employees and supervisors can use a digital

			toolkit and an app to organise the appraisal talks
Competitive and Open Recruitment	While there has been a significant rise in PhD students, the number of permanent academic positions has not increased, making promotion and tenure highly competitive. The Dutch academic labour market is characterized by flexibility and international mobility, with about 50% of PhD candidates being non-Dutch. Approximately 70% of PhD graduates leave academia, although some return after gaining external experience. Tenure track programs are becoming more emphasized as alternatives to traditional academic roles.	In the Netherlands, doctoral positions are publicly advertised, ensuring that recruitment is both competitive and merit-based. Additionally, there is a strong selection mechanism in place at various stages of an academic career, from PhD candidates to postdocs and beyond, with emphasis on qualifications, experience, and research potential.	

8 Portugal – NOVA University Lisbon

8.1 Introduction

In Portugal, research funding is primarily provided by the government, notably through the Foundation for Science and Technology (FCT), and complemented by European Union programs like Horizon 2020 and Horizon Europe. Despite these resources, researchers, particularly postdoctoral researchers, often face job insecurity due to prevalent short-term contracts and project-based funding.

Table 13 National R&D metrics for Portugal

Indicator	Most recent EU average (2021)	Most Recent Metric (2021)
Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP	2.26%	1.66%
Government Budget Allocations for R&D (GBARD) as a share of GDP	0.76%	0.36%
Researchers (in full-time equivalent) per million inhabitants	4.5	5.47
Business Enterprise expenditure on R&D (BERD) as a percentage of GDP	1.49%	1.0%

Source: ERA Scoreboard and ERA Dashboard indicators[13]

At the organizational level, Associate Laboratories (AL) made up of one or more R&D Units with an average dimension of 242 PhD researchers per AL are institutional building blocks of the national science system, and play a key role in driving innovation and public policy. These institutions are crucial in supporting long-term employment, attracting talent to Portugal and fostering career development opportunities.

Portugal also ensures transparency in academic qualifications through the National Qualifications Framework (QNQ) and European Qualifications Framework, with recruitment and promotion processes adhering to national regulations. However, the availability of information in Portuguese may limit accessibility for international researchers.

Competitive and open recruitment is emphasized, with Portugal adhering to the European Charter for Researchers. The system allows both national and international talent to access academic and research positions, though there are challenges related to the integration of researchers into non-academic sectors. Within the academic sector, both research and teaching tracks follow transparent, merit-based recruitment processes.

Regarding fair pay and benefits, Portugal has standardized salaries and benefits for researchers, although short-term contracts can create disparities in job security and benefits. The scientific community continues to push for more stable and sustainable career pathways for researchers.

[13] https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-05/ERA%20Country%20Report%202023%20Portugal.pdf

Portugal offers structured career pathways, with doctoral programs providing a clear progression from PhD to postdoc and then to permanent academic roles. However, career progression for postdoctoral researchers can be hindered by the limited availability of permanent positions. To address this, the Portuguese government and institutions are making efforts to enhance professional development, including mobility programs and international collaborations.

Finally, responsible evaluation of academic institutions and research laboratories is conducted to ensure quality standards and the integration of graduates into the labor market. The quality evaluation process emphasizes career development and public policy contributions, aiming to improve the long-term stability for researchers in Portugal.

8.2 NOVA University Lisbon - TTLMs for research and teaching and for PhD researchers

In Portugal there are two parallel Academic careers: one is more focused on teaching (than on research) and the other more focused on research (than on teaching). Both career tracks have three job levels: Assistant Professor or Assistant Researcher, Associate Professor or Principal Investigator and, Full Professor or Research Coordinator. Both tracks have a tenure track system established by the Portuguese national law.

Based on this national regulation, NOVA has internal regulations for tenure track recruitment standards and contracts. The tenure track system at NOVA starts at the level of Assistant Professor/Assistant Researcher for those holding a PhD. This position has a trial period of five or three years (depending on the track), after which, with positive evaluation, a permanent contract is issued. Upon an open call for Associate Professor/Principal Investigator the Assistant Professor / Assistant Researcher can apply.

Associate Professors/Principal Investigators must have at least five years post PhD. The trial period is one year for the teaching track or three years for the research track unless they already have a permanent contract with any Portuguese institution. An Associate Professor/Principal Investigator can become “aggregated” and therefore apply for the position of Full Professor/Research Coordinator if an open call is launched. The Aggregation (Agregação) is a Portuguese academic title required for career progression in Higher Education. It is awarded by individual universities and has national validity. To apply for the Aggregation, the candidate must possess a PhD diploma, and demonstrate a professional curriculum of high merit, along with significant scientific contribution after the PhD title was awarded. The Aggregation title is a qualification prerequisite for applying to become a Full Professor/Research Coordinator, with candidates required to pass the Aggregation examination.

A Full Professor at a foreign University or an Associate Professor that has the equivalent curriculum of a Full Professor can apply for the position of Full Professor/Research Coordinator at NOVA without the need to become aggregated. Full Professors/Research Coordinators have a trial period of one year unless they already have a permanent n open-ended tn open-ended nn open-ended en open-ended nn open-ended an open-ended mn open-ended rn open-ended en open-ended pn open-ended ontract with any Portuguese institution.

The institution establishes selection criteria and selects the candidate. Evaluations are therefore adapted to each recruitment call. Salaries are defined at national level, however, institutions can supplement salaries, for example through external funding for a specific research project.

Career development support is not yet formalised for Assistant and Associate Professors or Assistant Researchers and Principal Investigators, and it will therefore differ depending on individual supervisors and

academic department. There may be a perception that those on the track have been successful and therefore there is less need for career development support.

What was the rationale?

Whilst tenure track has been an established system at the university since 1979, and options for this model may be available, there are equally large numbers of researchers still working on short-term contracts – generally 3 to 6 years - and there is a general acceptance of this. There is no limit to the number of short-term contracts an individual can have.

More recently, to tackle precarity in research careers, the national Foundation for Science and Technology (FCT) closed the first FCT Tenure call for 1.100 permanent positions in both teaching and research track for PhD holders who have had a precarious contract in Portugal before. These positions are co-funded by the FCT and each host institution. Each institution has been able to apply co-funding for the number of positions they need. Once FCT had granted the positions, an open, international job call had been launched by each host institution. However, the co-funded positions had been limited to candidates who already had a contract from FCT as a postdoctoral researcher.

NOVA has recently secured funding for 228 positions for PhD holders in research and teaching careers under the FCT-Tenure Competition. NOVA is currently revising its regulation for recruiting researchers and the revisions align with the SECURE principles. It will soon be approved and implemented by the Academic Units at NOVA. The advertisements for the FCT-Tenure related position will already follow the new regulation. The positions by the FCT are standardized such that they provide a scalarly structure, comparable benefits and social security across all Portuguese universities.

What have been the challenges in implementation?

- The R1 – R4 research profile descriptors as defined in the European Commission's communication "Towards a European Framework for Research Careers" are not equivalent to the Portuguese system. In Portugal a PhD candidate would fall in the R1 category, but PhD students are not contracted employees, nor they receive full social protection.
- Mobility may be limited by a bias to Portuguese researchers that prefer to stay in Portugal and/or in the same sector.
- Portuguese legislation is only written in Portuguese, and this might be a limitation to foreigners. The same applies to many internal regulations in universities, although this has been changing lately.
- In Portugal there was no limitation on the number of short-term grants an individual could receive and there was a general acceptance of this in research culture. More recently, the government has been trying to change this paradigm by replacing "scholarships" for contracts, even though the vast majority are still fixed-term contracts.
- Some contracts are associated with projects, which leaves researchers in a very precarious position when the project ends.

What are the key learnings?

- For the time being, NOVA has not performed any structured analysis on the tenure track system first implemented in 1979 but this is a possibility under the scope of SECURE. It is early days in the new FCT tenure but it is anticipated that there will be evaluation in the future.

8.3 SECURE principles at national and institutional levels in Portugal and implementation at NOVA University Lisbon

The SECURE principles for TTLM are reflected at both the national and institutional levels. The table below provides an overview of how these principles are manifested in Portugal, highlighting which principles have been implemented and how at NOVA University Lisbon and within the FCT Tenure program.

Table 14 Mapping of SECURE principles to the national and institutional level in Portugal and NOCA University Lisbon

Principles – Portugal	National level	Institutional level	NOVA University Lisbon
Fair Pay and Benefits	The OECD notes that salaries for academic researchers may lag behind other sectors, while regulated pay scales include health insurance and pension plans. A standardisation of positions is provided by the FCT.	Postdocs receive benefits as contracted employees, but their specifics are less defined. Salaries and benefits may come with job insecurity due to short-term contracts. Postdocs receive social protection and benefits as contracted employees, and compensation if contracts end.	At NOVA, salary scales are defined according to national legislation, and therefore are comparable across Portugal. All contracts include the same general social benefits and protection. Regarding research Scholarships (including pre, doc and postdoc scholarships) NOVA launched a regulation in 2023 (Despacho n.º 9484/2023) that allows NOVA Schools to double the stipends compared to the amounts annually fixed by FCT.
Stability	Research funding is provided by the Foundation for Science and Technology (FCT) and the Ministry of Science, Technology, and Higher Education. The Recovery and Resilience Plan (RRP), National Strategy for Smart Specialization (NSSS) 2030, and Technological and Business Innovation Strategy 2018-2030 support research stability. Short-term contracts and project-based funding result in job insecurity for researchers. Efforts are ongoing to improve employment stability.	Associate Laboratories are R&D institutions or consortia with significant capacity and (missing text)	The positions of Assistant Professors and Assistant Researchers are reached on a tenure track-like career path that allows a qualification period of five or three years (depending on the track) to fulfill qualification criteria needed for a permanent contract. Tenure tracks are valued by early career researchers who believe that they will succeed on these tracks despite the limited number of positions.

Transparency	Recruitment and promotion processes are published on university websites and national portals like EURAXESS Portugal. Portuguese legislation and internal regulations are often in Portuguese, which may limit accessibility for foreign researchers.	HEIs publish annual employability reports on career outcomes of researchers.	In accordance with NOVA internal recruitment regulation for both teaching and research tracks, applications for a TTL position at NOVA should assure equal opportunities for all and be advertised in Portuguese in the Official Gazette of the Republic of Portugal and the public job portal (Bolsa de Emprego Publico). Moreover, TTL positions are published openly in Portuguese and English on the NOVA website, or the website of the respective Academic Unit, and on at least one international media platform (typically in the Euraxess portal. Job descriptions include selection criteria.
Inclusive and Healthy Working Environments	The Portuguese Labour Code and the Research Career Law stipulate that postdocs and other contracted employees at HEIs must receive health benefits, social protections, and unemployment compensation. These regulations are set at the national level and apply to all institutions employing researchers.	Gender equality and work-life balance are mandated by national regulations and policies such as the Gender Equality Action Plan.	NOVA's gender equality plan displays several measures to support a healthy career family balance and equal opportunities. These include availability of flexible working time arrangements, provision and promotion of leisure (sport/gym) and healthcare facilities, active support of parental leave, career/parent friendly workplaces, entitlement to time off for breast feeding, child-care facilities, mentoring and empowerment courses focused on the underrepresented gender, sharing of career development good practices and consideration of parental leave periods in the context of internal research evaluation procedure. This is supported by the NOVA office for Equality and Inclusion.
Professional Development	The Ministry for Science, Technology, and Higher Education, supports research		NOVA is committed to providing career development measures to its

	training, mobility programs, and international collaborations alongside national and European funding schemes. FCT assesses and tracks researchers' career progress and working conditions. Researchers' mobility may be limited by a preference for staying within Portugal or the same sector		researchers. NOVA has both centralised (Rectorate) and decentralised (each school) support structures. The Rectorate has an R&I Support Directorate responsible for promoting transversal activities responsible for promoting transversal activities, in close articulation with each units of the School. Professional development includes funding, impact and project management, infrastructure management, innovation knowledge, transfer and entrepreneurship, science communication and outreach, scientific information and management, HR recruitment and career management and community services, internationalisation and mobility opportunities. The training offered by the NOVA Doctoral School is aimed at the doctoral students of NOVA University Lisbon. It complements the academic path and promotes the development of transversal skills for a solid and comprehensive training.
Responsible Evaluation	The A3ES evaluates HEIs based on the employability and labour market integration of their postdocs. The evaluation system for Associate Laboratories includes criteria like public policy impact, career development, and diversification of funding. R&D Units in Portugal are also evaluated by international panels of experts and the multiannual funding to these structures	HEIs are assessed on graduate employability and their ability to offer permanent scientific careers. Evaluation includes submission of study cycles to A3ES and reporting on graduate integration into the labour market.	Clear evaluation criteria are set by NOVA in its internal regulations for both tracks (3). These criteria are both qualitative and quantitative with a focus on scientific excellence, research, teaching, innovation, knowledge transfer, and management. Evaluation is carried out by a scientific committee.

	depend on the evaluation of their performance.		
Recognition through Career Pathways	Academic careers are structured from PhD to postdoctoral and permanent academic positions. The Agência de Avaliação e Acreditação do Ensino Superior **(**A3ES) ensures structured career pathways. The FCT monitors and examines postdoctoral careers and working conditions to improve career progression information.	HEIs have structured pathways to reaching higher qualification and promotions, including public thesis defence and merit-based evaluations.	NOVA's recruitment regulation assures that, during selection process, candidates should be evaluated based on different criteria. These are, for example, not only scientific excellence, but also related to innovation, impact and knowledge valorisation, or management and administrative tasks. These criteria are also applied in periodic assessments of researchers' performance. Thus, NOVA has been encouraging the recognition of the diversity of researchers' contributions, and acknowledges non-linear career paths.
Supportive Management	The Ministry for Science, Technology, and Higher Education coordinates research and higher education policies, ensuring a framework for supportive management in HE.	Universities and research institutions are required to offer guidance and supervision to researchers, with an emphasis on research training and professional development. Inclusive and healthy working environments are also a priority, with policies in place to ensure work-life balance, gender equality, and social protections for contracted researchers.	NOVA is committed to improving research careers and mitigating precarity. Establishing a stable workforce with transparent policies for career entry, advancement and fair promotions is crucial for attracting and retaining talent. Therefore it is a priority to decrease the percentage of researchers with precarious contracts, decrease the average age when entering Teaching or Research careers, increase career opportunities for young researchers, and implement transparent and fair systems for promotion and recognition of merit. NOVA has innovative HR priorities aligned with COARA principles. These include advocating for merit-based advancements and awards, alongside holistic evaluation

			systems for each career level. Particularly, NOVA has revised both Reg. for the Evaluation of Researchers' Performance and the Reg. for Additional Incentives for Researchers. NOVA's policy seeks to accommodate various research profiles and acknowledge diverse outputs. The triennial performance for staff comprises teaching, scientific R&I, impact, knowledge valorisation, administrative tasks and community engagement with qualitative and quantitative indicators informing the evaluation process including counselling feedback on what could be improved. Research Support Offices at NOVA are equipped with teams of talented research managers that provide counselling, training and support for competitive funding, publication management, science communication and career development training opportunities.
Competitive and Open Recruitment	Portugal follows the European Charter for Researchers with principles of open, transparent and merit-based recruitment. The evaluation of Associate Laboratories assesses public policy contribution, career development (particularly offering permanent contracts), and diversification of funding.	Academic positions are publicly advertised with scientific panels overseeing recruitment. Universities evaluate candidates based on research outputs, teaching experience, and project management skills.	Applications that meet the admission requirements are subject to an assessment of absolute merit, expressed by the terms "approved" and "not approved" based on the overall merit of the candidates' curricula in the disciplinary area of the competition, in terms of performance in scientific research activities and innovation, impact and knowledge valorisation, compatible with the category for which the competition is

			open, and taking into account any specific requirements. The selection criteria are weighted according to the job position: scientific research is weighted between 40 – 85%, innovation, impact and knowledge valorisation is weighted between 10 – 45%, teaching and training is weighted between 0 – 30%, administration and management is weighted between 0 - 40%. Regarding gender equality, data of 2022 show that 48% of researchers at NOVA are women. Hence, NOVA's gender balance measures appear to be successful. (NOVA approved the Policy for Gender Equality, Equal Opportunities and Diversity in 2020).

9 United Kingdom – University of Edinburgh

9.1 Introduction

Higher education in the UK operates under a devolved system, with separate funding bodies in England, Scotland, Wales, and Northern Ireland, and national bodies like UK Research and Innovation (UKRI) overseeing research funding. Research funding, primarily from government, charities, and the EU, is supported by a GERD of 2.9% of GDP, while teaching funding relies heavily on student fees. Despite that, the research sector faces challenges such as job insecurity, especially for early-career researchers.

Table 15 National R&D metrics for the United Kingdom

Indicator	Most recent EU average (2021)	Most Recent Metric (2021)
Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP	2.26 %	2.9%
Government Budget Allocations for R&D (GBARD) as a share of GDP	0.76 %	--
Researchers (in full-time equivalent) per million inhabitants	4.5	--
Business Enterprise expenditure on R&D (BERD) as a percentage of GDP	1.49%	2.05%

Source: OECD Data Explorer[14]

UK universities are autonomous, setting their own academic titles, hiring practices, and advancement criteria. Academic staff are employed by the universities, not the government, and are not considered civil servants, despite receiving public funding. The academic career path in the UK is competitive, and many institutions have adopted American-style academic titles to enhance internationalization. Research and teaching positions are filled through transparent recruitment processes, with an emphasis on international mobility and equal opportunity.

The UK has a national framework for staff pay and benefits, with ongoing negotiations to address pay gaps and workload issues. However, researchers often face financial challenges and job insecurity, prompting initiatives like the Future Leaders Fellowships to support early-career researchers. At the institutional level, universities are encouraged to improve management practices and support systems, particularly in addressing issues like harassment and mental health.

Career development is central to the UK system, with initiatives promoting mobility between academia, industry, and government. Universities offer various professional development programs and mentorship, supported by organizations like Vitae and the British Academy. There is also an increasing emphasis on fostering inclusive and supportive environments for all staff and students, with national frameworks like Athena SWAN promoting diversity and equality.

[14] https://data-explorer.oecd.org/

National evaluations like the Teaching Excellence Framework (TEF) and Research Excellence Framework (REF) assess institutional performance, shaping funding and career progression. Institutions are expected to adhere to guidelines for doctoral research supervision, though early-career researchers often report inadequate support, signalling a need for improvement in management practices.

9.2 University of Edinburgh: TTLM for investments in international and early career researchers

The Chancellor's Fellowships scheme at the University of Edinburgh is a five-year research fellowship, promoted as a tenure-track program, where fellows are expected to transition to a permanent position following a successful review at the end of year three or four. The scheme has appointed over 450 fellows since 2014.

Chancellor's Fellowships are aligned with College and University research strategies, with fellowship rounds highlighting priority themes (e.g., AI and Datascience, Climate and Environment Sustainability). Successful candidates have access to a leadership programme and mentoring and teaching responsibilities increasing over the 5-year period.

What was the rationale?

The Chancellor's Fellowships scheme is part of the university's strategy to attract talented researchers internationally and support major investment in early career researchers. In 2012 and 2013, 62% of appointments to the scheme were non-UK nationals.

The scheme has continued to evolve in line with school and university strategies. An internal recruitment round during Covid-19, for example, was explicitly linked to the recognition of the unequal impact of Covid-19 on particular groups, as well as a way of reducing precarity among staff already employed by the university. All those in the 2020 appointment round were internal candidates on fixed-term contracts.

What have been the challenges in implementation?

- In the initial years of the scheme, more men applied than women, and the proportion of white applicants was much higher than the proportion of other racial and ethnic backgrounds. The gender and ethnicity distribution of the applications was then reflected in the appointment distributions. This has prompted the need for more proactive approaches to diversify the candidates applying for and being appointed as fellows.
- The research fellowships are advertised externally as tenure-track positions to attract international candidates. However, tenure does not exist in the UK in the same way that it does in the United States. Some in the sector have questioned how such schemes differ from the more common use of probationary periods in standard academic contracts (beyond protected time for research).
- Many of the fellows undertake interdisciplinary research, and the line management of research staff undertaking interdisciplinary research has been challenging for academics and Schools.

What are the key learnings?

- The present professional and career development activities needed to evolve to better support the specific needs of research fellows. The university therefore needed to develop targeted, cohort-based support to facilitate networking and develop leadership skills. The current programme includes opportunities for research fellows to improve their ways of leading teams, collaboration, and using their fellowships strategically.

- Attracting talented applicants has been straightforward but retaining staff requires attention to the effective performance and line management of individuals. This is notable in the UK who have a very open and mobile academic population when compared to the rest of Europe. This includes close attention to progression criteria to minimize ongoing feelings of job insecurity, as well as the need for effective performance and line management.

9.3 SECURE principles at national and institutional levels in the UK and implementation at University of Edinburgh

The SECURE principles for TTLM are reflected at both the national and institutional levels. The table below provides an overview of how these principles are manifested in the UK, highlighting which principles have been implemented and how at the Chancellor's Fellowships scheme at the University of Edinburgh. At this stage, only a few principles could be mapped to the case study.

Table 16 Mapping of SECURE principles to the national and institutional level in the UK and University of Edinburgh

Principles – UK	National level	Institutional level	University of Edinburgh
Fair Pay and Benefits	Pay is regulated by the national framework agreement, with phased increases negotiated through JNCHES. Nonetheless, pay and benefits remain a concern, particularly for early-career researchers, as do access to pensions and social security. The Future Leaders Fellowships scheme aims to address some of these challenges.	Universities are tasked with implementing fair pay structures and improving management practices. Surveys show gaps in formal feedback for researchers, and institutions are encouraged to address workload management, pay gaps, and career support for academic staff.	
Stability	Universities in the UK operate under a devolved system with different funding bodies for each region: Research England, Scottish Funding Council, Higher Education Funding Council for Wales, and Department for the Economy, Northern Ireland. UK Research and Innovation (UKRI) plays a critical role in funding research. However, challenges such as reliance on fixed-term contracts and teaching-only roles affect researchers' job security.	Higher Education Institutions (HEIs) are independent and autonomous, with institutional stability protected by the Higher Education and Research Act 2017. This autonomy allows them, e.g., to determine their own criteria for staff selection and promotion, creating distinct systems across institutions. Universities in the UK receive quality-related block grants for research (Research Excellence Grant, REG), allocated based on prior performance, and which provide stability over 5-7 years. The scheme has benefited from additional	

		funding from the Scottish Funding Council.	
Transparency	The Quality Assurance Agency (QAA) ensures transparency in the UK's doctoral education through the Quality Code for Higher Education. Chapter B11 focuses on research degrees, ensuring consistency and high appointment standards for researchers across institutions. UKRI's Future Leaders Fellowships also promote open and transparent recruitment.	Due to institutional autonomy, academic job titles and promotion criteria vary across universities. Institutions manage their own recruitment processes.	
Inclusive and Healthy Working Environments	National initiatives, such as UKRI's efforts and frameworks like Athena SWAN, promote equality, diversity, and inclusion (EDI) in research environments. The Concordat to Support the Career Development of Researchers encourages better working conditions for underrepresented groups.	Universities are responsible for implementing their own EDI strategies in line with national policies. Institutions work to create supportive environments, addressing issues like bullying, harassment, and mental health, while promoting inclusivity for staff.	
Responsible Evaluation	National evaluation frameworks like the Research Excellence Framework (REF) and Teaching Excellence Framework (TEF) assess research and teaching quality. These evaluations influence career progression, institutional reputation, and funding distribution.	Institutions are evaluated based on national frameworks like REF and TEF, which shape their priorities and impact career progression for academic staff. Institutions also conduct internal evaluations to ensure the effectiveness of academic programmes and career advancement criteria.	
Recognition through Career Pathways	Traditional academic career paths are changing with fewer linear advancements from lecturer to professor. UKRI supports diverse career pathways through initiatives like the Future Leaders Fellowships, encouraging cross-sector experience and interdisciplinary research.	Organisationally, career advancement criteria vary between institutions. Many early-career academics face competition for promotions, with frustration arising from the assumption of linear career progression. Some institutions have abolished the title of "reader."	
Supportive Management	The Concordat to Support the Career Development of Researchers sets a national framework for improving the	At the organisational level, universities provide doctoral candidates with supervisory teams and guidelines to ensure	Clear guidelines outline the line manager's role in supporting fellows, including workload

	management and career support of researchers. Institutions that sign up commit to reporting on HR practices and supporting researchers' career development.	quality supervision. However, many early-career researchers report feeling inadequately supported, highlighting a need for improvement in management practices.	management, setting objectives, and performance reviews. Developed with researchers, these guidelines help line managers assist fellows in prioritizing tasks and reaching their full potential.
Competitive and inclusive recruitment	Competitive recruitment is ensured through UKRI's promotion of open and fair hiring practices. National bodies like the QAA and Office for Students (OfS) provide oversight, and initiatives like Future Leaders Fellowships reinforce diversity and international mobility in recruitment.	At the organisational level, universities openly advertise PhD and postdoc positions, often using platforms like Jobs.ac.uk. Research-intensive roles are typically funded through specific research projects. Universities compete to attract top talent, and frameworks like the Russell Group enhance competitive recruitment practices.	The University of Edinburgh has set aims around equality, diversity, and inclusion in recruitment practices of fellowships. In 2023, the aim was that at least 50% of appointments were women and 20% were individuals from Black and minority ethnic groups. This resulted in 80% women and 19% Black and minority ethnic individuals being appointed.

While the national framework in the UK offers job stability, universities like the University of Edinburgh take it a step further through the Chancellor's Fellowships scheme. This scheme not only provides long-term stability with clear career progression pathways but also emphasizes facilitating networking opportunities and developing leadership skills. Both the national and university levels emphasize competitive recruitment, but the Chancellor's Fellowships scheme strengthens this by making recruitment processes more inclusive, setting specific goals for gender and ethnic diversity in fellowship appointments. At the national level, universities are encouraged to foster supportive environments, but the Chancellor's Fellowships scheme provides detailed guidelines for management, ensuring line managers actively support fellows through workload management, objective setting, and regular performance reviews.

10 Spain

10.1 Introduction

The Spanish System of Science, Technology and Innovation (SECTI, in its Spanish acronym) is composed by all public and private agents coordinating, funding and executing -together with their networks, structures and actions for promoting, developing and supporting- RD&I in Spain, together with all their promotion, development and support networks, structures and actions. Spain has an established system with 75% of Spanish research activity taking place in Universities.

In the table below you can see that Gross Domestic Expenditure on R & D is however lower than the EU average, as are all the other metrics indicating that research is not receiving as much investment when compared to other EU countries.

Table 17 National R&D metrics for Spain

Indicator	Most recent EU average (2021)	Most Recent Metric (2021)
Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP	2.26%	1.43%
Government Budget Allocations for R&D (GBARD) as a share of GDP	0.76%	0.62%
Researchers (in full-time equivalent) per million inhabitants	4.5	3.25
Business Enterprise expenditure on R&D (BERD) as a percentage of GDP	1.49%	0.8%

Source: Euraxess[15], ERA Scoreboard and ERA Dashboard indicators[16]

Spain's research funding is guided by the Science, Technology, and Innovation Strategy (EECTI), promoting stable R&D careers through multi-year funding. Key national regulations promote standardized contracts for postdoctoral researchers and career progression, though challenges remain, particularly around temporary contracts and limited permanent roles. Universities, like Carlos III University, have implemented tenure-track models, but transitioning to permanent positions remains highly competitive.

The Spanish research ecosystem fosters competitive recruitment and funding opportunities. Academic positions, from Assistant Professors to Full Professors, are merit-based and evaluated based on research achievements, teaching quality, and academic credentials. While tenured roles offer long-term stability, early-career researchers often face temporary contracts that contribute to job insecurity and limited advancement opportunities.

National regulations govern researcher compensation, ensuring fair salaries and benefits. The national framework includes allowances for seniority and productivity, with additional bonuses linked to research and

[15] EURAXESS – Spain EURAXESS |
[16] https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-05/ERA%20Country%20Report%202023%20Spain.pdf

teaching output. However, many early-career researchers report dissatisfaction with their pay, noting that it often does not reflect their skills or meet the cost of living. Despite this, researchers receive health and pension benefits, as well as funding for research-related expenses and career development.

Professional development is supported through national initiatives, such as mentorship programs, fellowships, and mobility opportunities, designed to enhance researchers' skills and career trajectories. However, many early-career researchers report that there are insufficient training and interdisciplinary opportunities available to them, which hinders their professional growth.

Inclusivity is a national priority, with regulations in place to promote gender equality, work-life balance, and diversity in the research environment. While some universities have made strides to foster inclusive environments, survey results indicate that diversity and inclusion efforts vary across institutions, with challenges like academic “inbreeding” and underrepresentation of minority groups persisting.

While national regulations ensure that researcher evaluations are merit-based and aligned with European standards, feedback mechanisms are often seen as lacking. Greater clarity and transparency in evaluation processes would improve satisfaction, particularly among junior staff seeking clearer career development pathways. Despite advancements in researcher support, issues like temporary contracts, job insecurity, and the need for better professional development resources remain ongoing challenges in Spain’s research landscape.

10.2 Spanish National Case Study R3 Accreditation – A Common Currency to Access Tenure Track

A relatively new initiative in Spain is the R3 accreditation, which has been recently added to the Spanish research system in order to provide some predictability to researchers careers. It provides recognition of research excellence and maps to the European profile of an R3 established researcher providing a common currency and therefore access to specific funding and public positions.

There are two ways in which R3 certification can be obtained by a researcher, firstly those that have obtained a fellowship on competitive national or regional programmes for R2 and secondly through an annual call from the state funding agency.

Obtaining the R3 certification is optional and a researcher is not required to have it to continue a research career in Spain, other pathways are available. However, it is an important addition to a researcher CV and allows access to certain positions reducing the requirement for a merit based evaluation.

To apply for R3 accreditation you must be either:

- R2 level researchers that have been contracted for longer than 2 years with a Contrato de Accesso del Personal Investigator and obtained a competitive fellowship programme
- R2 researchers that have more than 3 years of experience and have obtained a competitive fellowship from the Spanish system of Science and Technology or
- R2 researcher that have more than 5 years of experience

It is required for all R2 cases explained above to have accumulated at least of 2 years’ experience abroad. This could be experienced in intermittent or continuous periods of time.

There are two ways of achieving the R3 accreditation. For those researchers who have obtained a national or regional competitive fellowship, the funding bodies of the programmes will evaluate their research performance. After receiving a positive evaluation researchers can obtain an R3 certification providing all

criteria set by the National Funding Agency are fulfilled. For all other researchers they need to apply for an annual opening call led by the National Funding Agency.

This R3 certification is linked to merit based experience and criteria are deliberately crafted to consider more than just traditional research assessment and map well to DORA and COARA. If you pass accreditation you are a R3 accredited researcher. It is viewed as a sign of excellence and recipients are regarded as being amongst best in Spain.

This allows you access to permanent positions (Tenure Track-Like Systems). At RPOs – 25% of annual Cientificio Titular positions will be reserved to be only applied for R3 certification. Whilst at universities – 15% of annual Professor Permanente Laboral or Professor Titular will be reserved to be applied by those with an R3 certification.

What have been the challenges in implementation?

- The restrictions of national and regional laws mean that this is as far as the Spanish system can shift to implement types of tenure track.
- R3 accreditation was only implemented two years ago so analysis of who has been successful whether institutions have stuck to the suggested 25% positions It may be implemented or in fact implemented more is not yet known. It may be many more , this analysis is planned.

What are the key learnings?

- A way to recognise researchers by their own peers and help them achieve a national agreed standard.
- This provides a way of ensuring that the process is streamlined for researchers applying for a role. They have achieved a national standard and therefore can concentrate.

10.3 SECURE principles at national and institutional levels in Spain and implementation in the R3 Accreditation

The SECURE principles for TTLM are reflected at both the national and institutional levels. The table below provides an overview of how these principles are manifested in Spain, highlighting which principles have been implemented and how within the R3 accreditation model.

Table 18 Mapping of SECURE principles to the national and institutional level in Spain and within R3 accreditation model

Principles – Spain	National level	Institutional level	R3 Accreditation
Fair Pay and Benefits	The Science and Innovation Pact and Royal Decree 103/2019 define pay and benefits for researchers aligned with EU standards. Civil servant salaries and research productivity allowances, including “sexenio de investigación”, ensure fair compensation. Health and pension benefits, along with allowances for research and teaching productivity, support	Universities adhere to national pay scales and provide additional allowances based on research and teaching productivity. Institutions like the Polytechnic University of Madrid (UPM) also offer travel and conference grants to support academic mobility and collaboration.	R3 accreditation is helpful in achieving fair pay and benefits as it provides a base mark by which an individual’s merit can be recognised. Permanent and civil servant positions are subject to national law, however it is important to consider that there is also laws that are applicable in different regions and therefore there may be variance. Generally individuals in the public system would be paid

	sustainable early research careers.		less favourably than those in the private sector.
Stability	The Spanish Science, Technology, and Innovation Strategy (EECTI) 2021-2027 promotes stable R&D careers, multi-year funding, and collaboration with regional initiatives. Law 14/2011 and Royal Decree 103/2019 ensure career stability through provisions for stable contracts.	Universities within the Spanish University System (SUS), such as Carlos III and Pompeu Fabra, have implemented tenure-track systems offering paths to permanent positions. The Ramón y Cajal postdoctoral contract provides a five-year career development track towards tenure. Other universities also offer tenure-track positions for senior researchers but have limited availability for postdoctoral and early-career researchers.	The new R3 accreditation system has been designed to provide some stability to researcher careers and allow for recognition of research excellence. Alongside this it is important to note the relatively high level of permanent contracts in Spain available at R3 and R4 levels.
Transparency	Royal Decree 903/2017 and Law 14/2011 mandate transparency in recruitment across public institutions, emphasising transparency in academic appointments. ENQA[17] 2023-2027 and ANECA[18] accreditation further support transparent recruitment and career progression. Job announcements are accessible via Euraxess Spain and institutional websites. Royal Decree 678/2023 sets specific evaluation criteria for various academic roles.	Institutions within the Spanish University system follow ANECA's transparent hiring and accreditation guidelines.	This is a transparent open call for researchers with clear established National criteria.
Inclusive and Healthy Working Environments	Laws like Law 3/2007 and Royal Decree 901/2020 promote inclusivity in academia with work-life balance policies such as parental leave. Although challenges like academic inbreeding persist, inclusivity remains a core goal.	Diversity offices, such as those at the University of Seville, provide mental health support and resources for underrepresented groups. Efforts are made to foster diversity and reduce academic inbreeding.	R3 accreditation merely assesses the level that a researcher is operating at. It cannot affect individual culture within institutions or funding programmes.
Professional Development	The Ministry of Science and Innovation funds development programs, e.g.,	Institutions offer further qualification, e.g., on research methodologies, grant writing,	R3 accreditation merely assesses the level that a researcher is operating at. It

[17] European Association for Quality Assurance in Higher Education Home • ENQA

[18] National Agency for Quality Assessment and Accreditation Home - Aneca Web

	training in research management, collaboration, and knowledge transfer. The Ramón y Cajal contracts provide structured development opportunities for early-career researchers, focusing on research productivity and quality teaching.	and project management. Universities like the University of Granada offer advanced training, e.g. in leadership skills, to prepare researchers for senior academic roles.	cannot affect individual culture within institutions or funding programmes. However R3 accreditation has been deliberately open to international researchers.
Responsible Evaluation	ANECA oversees evaluations for academic roles with criteria that reflect contributions to research, teaching, and public service. The evaluation framework aligns with EU priorities for comprehensive assessments.	Universities like Polytechnic University of Valencia conduct regular evaluations of early-career researchers considering research output, grants, and institutional service. External reviews for senior positions ensure transparency and accountability.	The evaluation of R3 accreditation by peer review is important as it allows an individual to be one step further towards a permanent position as merit is already demonstrated.
Recognition through Career Pathways	Law 14/2011 and the National Qualifications Framework establish structured academic career paths, with the Juan de la Cierva and Ramón y Cajal programs offering defined roles and progression based on performance. ANECA's accreditation standardises qualifications for advancement.	Universities like Carlos III Madrid and Autonomous University of Barcelona use internal evaluation committees for career progression, considering criteria such as teaching contributions and research output. Senior roles often also include industry collaboration as an evaluation criterion to support diverse career portfolios.	There are two ways of obtaining R3 accreditation either as part of a fellowship or through a National open call. This allows for researchers to follow different pathways.
Supportive Management	The Ministry of Science and Innovation's National Plan for Scientific and Technical Research and Innovation supports mentoring programs and encourages collaborative work cultures with senior researchers mentoring junior staff.	Universities implement mentoring programs for early-career researchers, with institutions like University of Zaragoza providing training for mentors to foster effective management and support of junior researchers.	R3 accreditation merely assesses the level that a researcher is operating at. It cannot affect individual culture within institutions or funding programmes.
Competitive and Open Recruitment	The Science and Innovation Pact encourages competitive, open recruitment aligned with OTM-R standards. Royal Decree 103/2019 ensures merit-based selection, while selection panels with external experts uphold fair practices. Nonetheless, challenges with, e.g.,	Institutions follow national recruitment regulations, including the "concurso-oposición" competitive selection process for tenure-track positions. External review committees are participate at the hiring process, with universities like Pompeu Fabra prioritising international experience in	R3 accreditation is clear and transparent with criteria set for all applicants by the National Funding Agency. Scoring is by peer evaluation. As there is not limit as to the numbers who can receive R3 accreditation it is not competitive. As the R3 accreditation process is fairly new clear

	academic inbreeding persist.	recruitment, promoting diversity and impartiality.	data is not yet available regarding balance of applicants, however, gender is being monitored.

The Spanish system is governed by rules at National level making any adaptions to it at institution level impossible. This protects the rights as civil servants of researchers and establishes parity but does reduce institution ability to introduce tenure track-like models. There have been some attempts to address this for example Ramón y Cajal but schemes are limited. Introduction of the R3 accreditation whilst not a traditional tenure track-like model is an interesting example of what can be done to best position leading researchers to progress to a tenure track-like position. It establishes a system of parity and allows researchers to achieve a common badge of excellence, allowing the researcher in effect the opportunity to prove their ability prior to applying for a tenured or permanent position. It allows for parity in Spain and may be a system that could be more widely implemented in either other countries or across Europe.

11 Cyprus

11.1 Introduction

Cyprus dedicates 0.87% of its GDP to R&D, with a research ecosystem underpinned by both national and institutional frameworks designed to promote stability, transparency, and career advancement for researchers. The Research and Innovation Foundation (RIF) stabilizes the research sector through long-term funding programs, such as Horizon Europe, which help sustain research initiatives.

Table 19 National R&D metrics for Cyprus

Indicator	Most recent EU average (2021)	Most Recent Metric (2021)
Gross Domestic Expenditure on R&D (GERD) as a percentage of GDP	2.26%	0.87%
Government Budget Allocations for R&D (GBARD) as a share of GDP	0.76%	0.46%
Researchers (in full-time equivalent) per million inhabitants	4.5	1.8
Business Enterprise expenditure on R&D (BERD) as a percentage of GDP	1.49%	0.4%

Source: ERA Scoreboard and ERA Dashboard indicators[19]

At the institutional level, universities like the University of Cyprus and Cyprus University of Technology offer tenure-track roles and long-term contracts for senior researchers, promoting stability within academic careers. However, early-career researchers report dissatisfaction with job security, highlighting a need for improved stability in the early stages of their careers. Transparency in recruitment, evaluation, and promotion is maintained through clear criteria set by CYQAA and accessible platforms like Euraxess Cyprus. Despite moderate satisfaction, there is a demand for clearer promotion pathways.

Cypriot universities follow competitive and open recruitment practices, with positions advertised and selection committees ensuring merit-based evaluations. However, early-career researchers express concerns about the clarity of recruitment processes. National laws regulate fair pay and benefits, with salaries and social security coverage ensured across institutions. Yet, dissatisfaction remains regarding pay scales, particularly in relation to living costs, especially for early-career researchers.

Career progression is structured through the Cyprus Qualifications Framework (CyQF), which standardizes academic titles and ensures recognition of postdoctoral qualifications. The RIF provides funding opportunities that enhance career pathways, including grants and fellowships that support long-term research projects. While senior researchers express confidence in career progression, early-career researchers often report uncertainty about their future development.

[19] https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-05/ERA%20Country%20Report%202023%20Cyprus.pdf

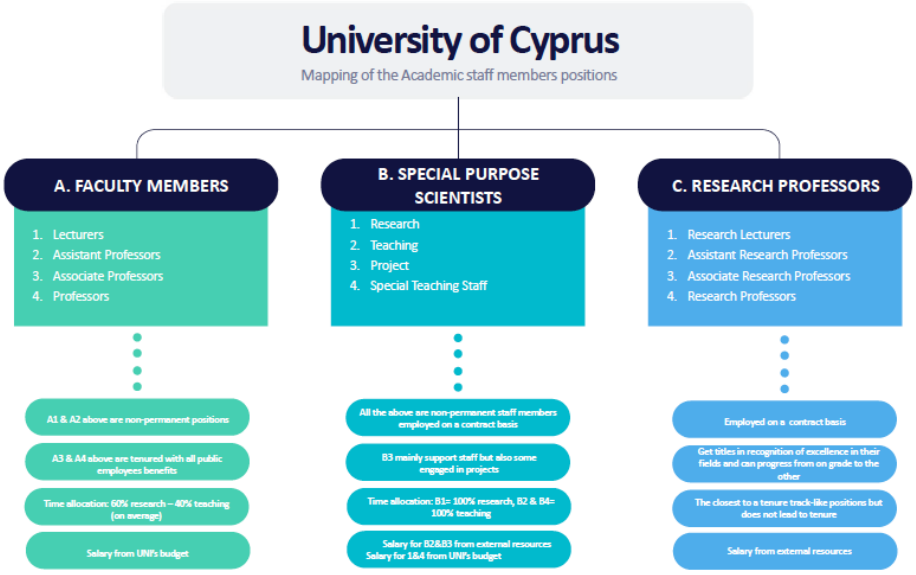
Professional development is supported by various RIF-funded programs, such as the ONISILOS and POST-DOCTORAL programs, which offer training, research funding, and international collaboration opportunities. Despite these initiatives, there remains a 25% dissatisfaction rate regarding training and skills advancement, suggesting that further refinement of these programs is needed to meet researchers' needs.

Cyprus also emphasizes inclusive and healthy working environments through legal mandates for work-life balance, non-discrimination, and support for underrepresented groups. Universities implement diversity programs and mental health support services to foster a welcoming environment. Mentorship programs are in place to guide junior researchers, although survey responses indicate a desire for more structured and consistent mentorship, particularly in career planning and international networking.

Evaluation standards, set by CYQAA, focus on research quality, societal contributions, and alignment with EU guidelines. While researchers generally express satisfaction with evaluations, there is room for improvement in the transparency and fairness of performance reviews, especially in relation to career advancement.

11.2 University of Cyprus – A range of different tracks

The University of Cyprus deliberately employs a number of different tracks for its academic staff in order to offer a level of agility and flexibility to both the organization and the individuals involved.



Research Professors (C) are researchers who are employed on a contract basis in recognition of their excellence in a particular field with a view to permanence. There are only a small number of these research professors at the University of Cyprus (approximately 30 – 40). Whilst renumeration is of course important, these research professors tend to be attracted to the University for their academic work because of this positions are often created with a particular individual in mind as the subject knowledge and skillset required is extremely specific. Therefore whilst recruitment might be open, the reality is that there is probably only a very small number (if more than one) of individuals that would be eligible for the position.

For Faculty Members (A) – 1. Lecturers and 2. Assistant Professors are non-permanent positions, however, as an individual progresses to 3. Associate Professor and 4. Professor they become tenured with all the associated public benefits. As individuals progress, positions become open at a lower level and are advertised publicly. The hired individual then has three years to achieve the criteria outlined and secure a

positive suggestion by the assigned committee in order to achieve tenure. This has to be approved by a number of UCY decision -making bodies (Department Council, Faculty council, Senate, Council-Personnel Committee). It is only in extreme circumstances, for example, a case of misconduct where an individual would not be able to follow this pathway. Each individual must pass through the relevant career stages.

The final category shown here in the middle is B Ad-Hoc Purpose Scientists (a direct translation from Greek). These are never tenured positions and there is no obvious progression route. They are positions that meet a specific need and therefore always on a contract. They allow the swift employment of an individual to meet a specific need without having to follow lengthy bureaucratic procedures. To progress an individual would simply have to apply for a new contract.

These positions are often better paid than those who are tenured within a faculty, however, as they carry an element of precarity this may be expected and as they are not officially a public servant they do not have the same benefits, for example a pension.

Challenges of implementation

- For research professors there is a discrepancy between open opportunities and recruitment and the specific needs of the research field which will by definition be extremely niche. It is important to be realistic about this and apply criteria appropriately.
- A disadvantage is that even if you are qualified well beyond Lecturer of Assistant Professor you must enter at this point as each individual must pass through the relevant career stages. The laws states that this must take the required three years and there is no way to make this any quicker.

Key Learnings

- It is important to fully consider the means of funding for a position and to plan accordingly. When recruiting a Research Professor it is important to have a long term plan to budget for them becoming long-term members of staff. This can be of significant cost and must be part of institutional strategy. Research professors can attain tenure only by applying for and securing a relevant tenure-track position. Such positions must be publicly advertised and comply with the applicable national laws and recruitment procedures.
- The varying pathways at the University of Cyprus offer a flexible approach to employment which offers individuals the opportunities for career progression and permanence whilst also allowing for short-term contracts and opportunities as appropriate.

11.3 SECURE principles at national and institutional levels in Cyprus and implementation at University of Cyprus

The SECURE principles for TTLM are reflected at both the national and institutional levels. The table below provides an overview of how these principles are manifested in Spain, highlighting which principles have been implemented and how at University of Cyprus.

Table 20 Mapping of SECURE principles to the national and institutional level in Cyprus and at University of Cyprus

Principles – Cyprus	National level	Institutional level	University of Cyprus
Fair Pay and Benefits	Salaries are regulated by national laws based on experience and rank.	Universities may offer additional benefits like travel allowances, e.g., for	Category A faculty members are offered standard employment conditions corresponding to permanent

	RIF ensures standardised benefits across universities. High satisfaction with social security (87.5%) but 50% express dissatisfaction with pay scales relative to living costs.	conference visits and networking activities. Despite competitive packages, early-stage researchers express concerns over remuneration.	contracts. This is dictated by both National Labour Law and policy at the University of Cyprus. This includes 13 months salary, paid leave, sick leave, entitlement to unpaid leave, entitlement to a sabbatical, Insurance public and private (optional) and 1012 hours paid annually in research programmes (if available and coordinated by the faculty member).
Stability	Ministry of Education oversees higher education, ensuring strategic planning and funding. CYQAA enforces quality assurance and accreditation (Law 67(I)/2016). RIF (Research and Innovation Foundation) supports research stability with long-term funding programs like Horizon Europe.	Major institutions offer tenure-track roles and permanent contracts for researchers. RIF funds "Associate Laboratories" for ongoing support. Despite a desire for stability, 33% of researchers express dissatisfaction with job security.	The University of Cyprus offers clear pathways to stability with progression to a permanent contract. Salary is from the university's central budget and when a position is opened at the lower levels, the budget associated already provides for that they will progress up to professor grade. In practice if an individual wishes to progress this is generally straightforward albeit demanding.
Transparency	CYQAA ensures transparency in recruitment and promotion processes. National and European Qualifications Frameworks (NQF & EQF) establish clear standards for qualifications. 74% of researchers express moderate satisfaction with career transparency.	Universities publish criteria for job applications and evaluations. Annual reports detail graduate employability, enhancing transparency in career outcomes.	When a position becomes vacant or is created at Lecturer or Assistant Professor level it is publicly advertised under as per public employment law. Clear criteria are outlined for recruitment. These include resume, list of publications by category, summary of the candidate's research projects, current engagement and future goals, report of the candidate's teaching experience and brief evaluation date on his teaching, report on administrative work, up to

			three representative papers (preferably published).
Inclusive and Healthy Working Environments	Cypriot law mandates inclusivity and non-discrimination policies. RIF encourages diversity in academia. Mixed satisfaction among early career researchers regarding workplace support.	Universities provide counselling and mental health support. Offices at institutions like UCY and CUT promote inclusivity and support underrepresented groups. Programs focus on work-life balance and gender inclusivity, addressing gender imbalances in in academia.	The University of Cyprus has established a series of Codes of Conduct and Policies to guide its community in adhering to academic integrity and scientific research standards. These documents aim to raise awareness among university members to act in accordance with principles of academic ethos and scientific thought, aligning with international standards. Violations may trigger disciplinary procedures as per the University of Cyprus Law and its associated Regulations and Rules.
Professional Development	RIF supports professional growth through various grants and skill-building initiatives. 25% express dissatisfaction with training and skills advancement opportunities.	RIF's ONISILOS Program offers fellowships for postdoctoral researchers. Universities conduct workshops on research methodologies and project management. Satisfaction with training resources varies, indicating a need for targeted development.	Category A faculty members are offered sabbatical leave for research and other career development purposes, start up funding for research ,training schemes for transferrable skills (4/5 annually) and ERASMUS + opportunities to teach/train abroad.
Responsible Evaluation	CYQAA sets evaluation standards focusing on research quality and societal contributions, periodically reviewed to align with EU standards. Perceptions of the fairness of evaluation are mixed, with some early career researchers being dissatisfied with the assessments of their productivity .	Universities evaluate research productivity and overall contributions annually. External reviews enhance transparency, but the need for more transparency in performance reviews for career advancement is noted.	**Assistant Professors and lecturers** are appointed by an Ad-Hoc committee. This committee consists of two external rapporteurs of this or a related subject who are university professors from two foreign countries a, and three internal rapporteurs, one of whom is designated Chairman. Equally for each election in the ranks of **Professor and Associate Professor**, the Senate appoints a Special Committee.

Recognition through Career Pathways	Cyprus Qualifications Framework (CyQF) provides structured pathways from Lecturer to Full Professor. RIF initiatives promote permanent contracts and career development activities for researchers. Senior researchers express confidence in career progression, but 33% of early-stage researchers feel uncertain about career progression.	Internal evaluation committees assess researchers' progress based on multiple criteria. Career advancement resources are available, though younger researchers seek clearer guidelines.	The various pathways outlined in the model demonstrated above allow individuals to progress as they wish depending on their individual career priorities.
Supportive Management	The Ministry and RIF promote structured mentoring programs for junior researchers. Many early-stage researchers desire more structured support in career planning and networking.	Mentorship pairings are established between junior and experienced researchers. Satisfaction with mentorship is expressed, nonetheless calls for consistent guidance across institutions are noted.	No line management exists at the research level. It exists at the Department level (Dept. Chair), programme level (i.e Director of MSc or BSc) but it is not traditional, it is more related to admin organisation rather than hierarchy.
Competitive and Open Recruitment	Recruitment follows open, transparent, and merit-based principles (OTM-R). RIF's evaluation system for Associate Laboratories emphasises public policy contribution. 50% of researchers express dissatisfaction with clarity of recruitment practices .	Institutions implement fair recruitment practices, often involving external evaluators. Positions are advertised openly, and requirements are specified. Open calls for vacancies are common.	In accordance with national law positions are advertised openly, however the nature of the research may well ensure applicants are more limited.

This case study has been included to demonstrate the range of paths at the University of Cyprus and where tenure track is and is not possible. For faculty members there is a clear progression pathway although tenure really is only possible at the higher R3 levels for Assistant and full professors. It is important to view this alongside other pathways and consider when tenure is and is not appropriate. The principles are followed

although often through National legislation. Scalability is key and important to highlight how countries with less developed research infrastructure address this.

12 Relationship to Research Career Framework (WP2)

It is important that SECURE principles and the collected case studies that show TTLMs align with the main output of the project the SECURE Research Career Framework.

Tenure Track-Like Models feature in the framework within Action Area 6 Contract. This SECURE principles and case studies provide guidance and good practice examples to support the following actions.

- Review regulations and status of TTLMs in national context and locally at organisations
- Define TTLMs in discussion and close collaboration with researchers at organisations
- Develop an action plan for future implementation of defined TTLMs at organisations
- Engage with key stakeholders on TTLMs to collect and share best practices on TTLMs
- Engage with national research funding bodies on need for long term funding for TTLMs

13 Conclusions

13.1 Conclusions on Contextualisation

A comparison of the national contexts described in chapters 3 to 11 reveals that the career structures for postdocs in the European countries are similar at an aggregate level: All of these countries have national funding plans for research and innovation, and regulations on working conditions (at the national level). However, the independence of research institutions of the state and its regulations vary with research institutions. For instance, research institutions in the UK and Finland are more independent, e.g., from national funding, definitions of academic roles and pay schemes than research institutions in other countries.

In all countries examined, a relatively high proportion of postdocs with fixed-term contracts is criticized as it leads to job insecurity and, in some countries, also with limited access to social security and pension plans. Furthermore, the countries examined have comparable career structures for postdocs, in the sense that postdocs are recruited internationally, consequently publishing job advertisements openly, utilizing Euraxess. Also, in all countries examined, there are national regulations, or guidelines supporting the application of performance- and merit-based criteria to recruitment-, promotion-, tenure-, and individual funding-decisions. However, the individual research institutions or faculties are responsible for the implementation of these regulations or guidelines. Likewise, all countries provide guidelines and support for postdocs' professional development, while individual research institutions must transform these into individual measures such as postdoctoral training and mentoring.

Of note, all the examined countries have implemented varying types of tenure track like models as a career path for postdocs to (permanent) professorship positions, with Portugal having established them the longest, since 1979, and Germany most recently in 2017. Additionally in some countries research institutions have established or are working towards the implementation of tenure track-like schemes for non-professorial permanent positions, for example in the UK and Germany.

While all countries have laws or guidelines on inclusive and healthy work environments, the provision of these is the responsibility of the individual research institutions. Gender balance remains a goal in all countries, along with equal opportunities.

13.2 Conclusions on principles

With the revised case studies, we were able to find additional information on the SECURE principles for most of the case studies (see TABLE). However, for some principles, it was difficult to find information online.

The principles of professional development and supportive management were the hardest to find evidence for, it was also difficult to find information and evidence relating to inclusive and healthy working environments. This is likely because it is so dependent on institutional context.

The case studies demonstrated that there is limited information on working conditions for researchers above the doctoral level and this could suggest that there is limited support for postdocs. However we have been better able to evidence in the case studies the principles.

Table 21 Evidence of the SECURE principles in the case studies

Principle	University of Antwerp	University of Rijeka	University of Helsinki	Goethe University	University of Maastricht	University of Nova	University of Edinburgh	R3 accreditation, Spain	University of Cyprus
1 Fair pay and benefits									

2 Stability									
3 Transparency									
4 Inclusive and healthy working environments									
5 Professional Development									
6 Responsible evaluation									
7 Recognition through career pathways									
8 Supportive management									
9 Competitive and Inclusive Recruitment									

13.3 Conclusions on Tenure Track-Like Models

Tenure Track-Like Models vary significantly across Europe and comparison of them is almost impossible, however all have the common goal to progress individuals to permanent employment. The SECURE project therefore offers a range of good practice case studies that demonstrate difference in approach and scope but also similarity (see Figure 2 for an overview of the case studies according to career phase, year of implementation and funding of the TTLM). It would be useful to continue to develop these good practice examples and widen the range of countries and schemes that are involved. It would also be helpful to look at a wider range of countries that examples are collected from to understand the longer term impact on research, environment, culture and careers and prove return on investment for the individual, institution and funder.

Tenure Track is one of the potential ways of addressing precarity and provides a permanence and level of certainty for the researchers it benefits. However it will always be limited by the funding and opportunities available. It would be useful to look further at funding schemes for tenure track globally and further explore the role of funders.

D3.1 highlighted the impact on national legislation on these schemes and the extent to which the tenure track must operate in their individual national context and within employment law. Where researchers are civil servants pay tends to be governed on a national basis and therefore institutions are unable to make independent decisions around pay. Whilst this may protect individuals and standardize practice it may well limit the institutions' ability to attract researchers from beyond academia as pay may not be comparable. It will also disadvantage countries in which salaries are less competitive.

Tenure Track positions are often advertised openly but in reality there may often be a preferred candidate and this is often unavoidable given the nature of the position. Although there was variance, a five year period to achieve tenure seems fairly standard across Europe, with some flexibility to extend as required for example due to ill health or caring responsibilities. This may be a barrier for those who may wish to progress further sooner and assumes a standard level of skill for anyone on the track. More flexible and personalized ways of navigating this might be considered potentially with faster options depending the previous experience of an individual.

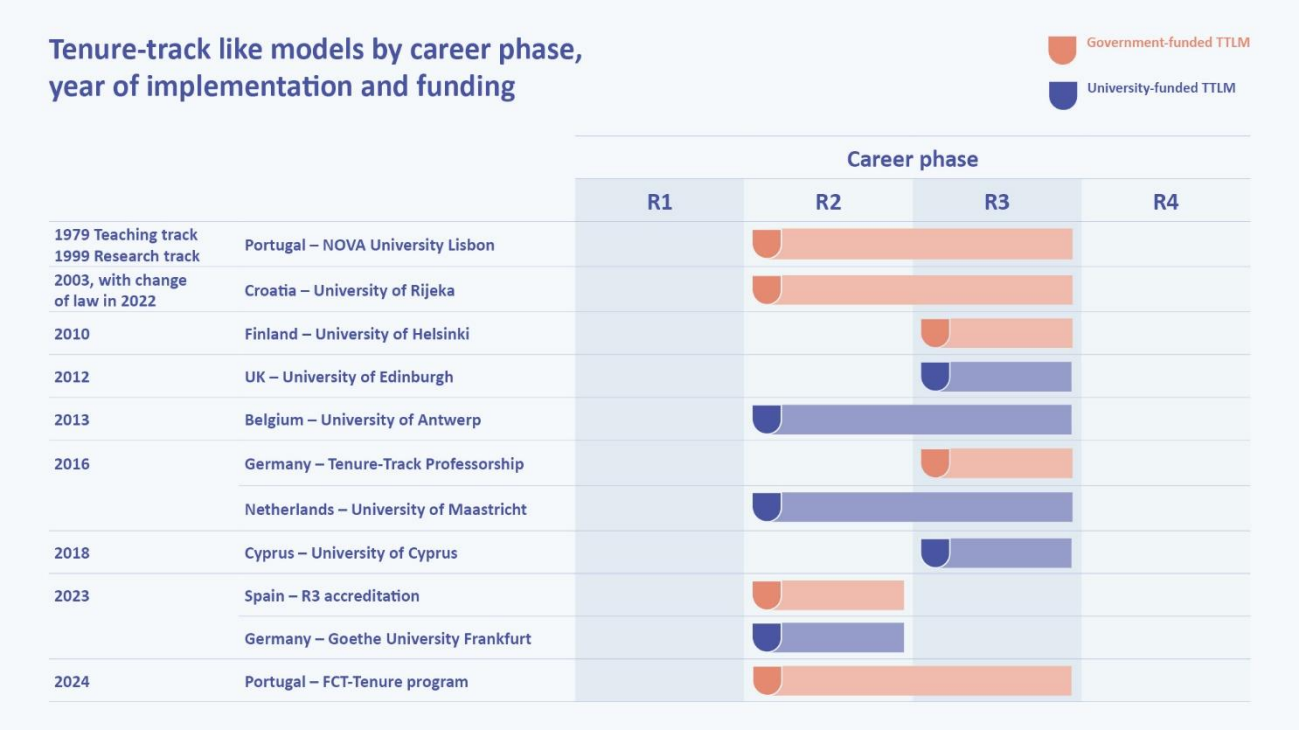
In terms of assessment through the tenure track different methods are used. Models like that used in Antwerp offer a well-developed framework for assessment drawing on a range of different criteria and both compulsory and optional options that can be tailored to the institution, department and discipline. However, it does seem to be fairly common that once on the tenure track a researcher will most likely achieve tenure and instances of non-completion are fairly rare.

Further consideration could be given to tenure track-like positions and their relationship to other wider European initiatives including HR Excellence and CoARA commitments. Mapping systems to this would be beneficial and streamline policies and processes and reporting. The role of the EURAXESS portal could also be further utilized. It is hoped that using the SECURE Research Career Framework will support this.

Although some schemes offer professional and career development there seems to be an underutilized opportunity to shape the future research culture of the organisation. Whilst these Researchers will have shown academic excellence in order to achieve the tenured position. It should not be assumed that they are research leaders at this point. Researchers on the tenure track will be the institution leaders of the future and helping to create a cohort and thinking about how they might affect systemic change, achieve long term objectives and what should be done to support them in this leadership journey offers a real opportunity to shape the future of an institution.

The SECURE principles provide a framework for tenure track that acknowledges differences across Europe. We hope that further work can be done around each principle with further case studies and consideration of each one. Many are of course much wider than tenure track which does not operate in isolation but as part of a wider institution culture, however, we have tried in this deliverable to show how they are reflected in a tenure track model wherever possible. We hope that all tenure track-like models can be successfully mapped to these principles and that they will provoke institutions to consider their models and ensure that they are a positive, fair and supportive programme for the individual researchers who are successfully appointed to them which allows researchers to thrive and contribute innovatively to the knowledge base and enable societal benefit.

Figure 2 SECURE TTLM overview



14 Recommendations on Tenure Track-Like Models

14.1 Recommendations for Institutions implementing Tenure Track-Like Models

- Institutions should apply the SECURE principles on TTLMs
- Institutions should have a long-term financial plan for developing tenure-track positions from fixed-term into a permanent position if candidates fulfil the criteria
- Institutions should consider developing TTLMs that are flexible and offer a variety of pathways with a balance of research and teaching, including professorial and non-professorial positions.
- Institutions should clearly define and communicate the criteria for positive tenure decisions; these should consider candidates' individual research goals and conditions, and be communicated to candidates for tenure track positions before their appointment.
- Institutions should develop a range of criteria for TTLMs that have both compulsory and optional elements to be tailored to individuals and their departments.
- Institutions should establish criteria for success for tenure track that encompasses a range of assessment methods.
- Institutions should commit to a programme of professional and career development for researchers on TTLMs that supports their leadership journey and considers their role in shaping future research culture.
- Institutions should map TTLMs and connect to wider European initiatives eg. COARA, HR Excellence in Research, EURAXESS and ReSaver.
- Institutions should ensure there is full support for researchers on TTLMs including a trained line manager and established cohort.
- Institutions should support international applicants in understanding and handling laws, regulations and practices specific to their country, region or institute through EURAXESS and other means.
- Institutions should adopt and support the goal of equal opportunities for all on tenure track positions, as well as further goals related to diversity, equity and inclusion on tenure track like career paths (i.e., in academia and at research institutions).
- Institutions should involve all relevant stakeholders when implementing TTLMs and individualized personal development of postdocs.

14.2 Recommendations for Researchers Seeking Tenure Track-Like Positions

- Researchers should be aware of the SECURE principles and understand that researchers on TTL positions are expected to be ambitious and set high standards of research excellence.
- Researchers should know long-term financial plans and career paths on TTL positions in both countries and institutions in which they wish to work.
- Researchers should inform themselves in how far line management encourages and supports regular appraisals and performance reviews of researchers on tenure track positions, in how far line management provides honest and constructive feedback, acknowledges and mitigates the effects of career breaks, disruptions, and inequalities. They should be expected to seek help where it is required and ensure they are clear on institution expectations.
- Researchers should be aware that they should expect to meet formal evaluation processes at set checkpoints and against clear criteria, with these criteria and timelines being available to them

before or at the time of appointment. The evaluation criteria should include other elements beyond research quality, e.g., behavioural competences and contributions to the department and institution.
- Researchers should ensure that they have all the relevant information about recruitment processes, selection criteria such as expected skills and competencies, and on the working conditions on tenure track positions at the research institution of their interest,
- Researchers should be aware that recruitment and selection processes on tenure track positions should be inclusive and accessible to all, and that institutions have to support equal opportunities and applications from under-represented groups,
- Researchers should be aware that research institutions shall be open and transparent about their pay and benefits, considering existing employment legislation and collective bargaining agreements,
- Researchers should inform themselves about the elements of their pay and endowments that are negotiable before their appointment,
- Researchers should know how their research institution supports ongoing professional and career development of researchers on tenure track positions, e.g., which access to training and development opportunities are provided, and how upskilling and reskilling are encouraged
- Researchers should be aware that research institutions should foster collegiality and belonging among all researchers to support good mental health and wellbeing among their members, that research institutions should present balanced, flexible, and achievable workloads, and that research institutions should have implemented clear mechanisms for dealing with bullying, harassment, and poor research integrity,

14.3 Recommendations for Funders of Tenure Track-Like Models

- Funders should be aware of the SECURE principles and consider whether projects they fund area aligned to them.
- Funders should understand the legal framework of the country or countries in which they wish to operate and adapt to what is possible when lobbying for TTLMs.
- Funders should consider and address long term funding of researchers once they achieve tenure.
- Funders should promote professional and career development for researchers in order to support long term culture change and have strategy to support this.
- Funders should adopt and promote the goal of equal opportunities for all on tenure track like career paths, as well as further goals enhancing diversity, equity and inclusion in tenure track like models (i.e., in academia and at research institutions).
- Funders should consider evaluation of the implementation of tenure track like models, as well as continuous monitoring of individual career paths within tenure track like schemes.

15 Appendix

15.1 Sources for case studies by country

Belgium

- Interviews with University management and Assistant Professors who have recently completed the tenure track (December 2023 – January 2024).
- **Higher Education Code:** https://data-onderwijs.vlaanderen.be/edulex/document.aspx?docid=14650#1
- **Resourcing Higher Education in the Flemish Community of Belgium**
  - https://doi.org/10.1787/3f0248ad-en or
  - 6. Human resources in Flemish higher education | Resourcing Higher Education in the Flemish Community of Belgium | OECD iLibrary (oecd-ilibrary.org)
- **Eurydice Website**
  - https://eurydice.eacea.ec.europa.eu/national-education-systems/belgium-flemish-community/conditions-service-academic-staff-working
- **OECD Data Explorer**
  - https://data-explorer.oecd.org/vis?df[ds]=dsDisseminateFinalDMZ&df[id]=DSD_MSTI%40DF_MSTI&df[ag]=OECD.STI.STP&vw=tb&dq=BEL.A.G..._Z&pd=2022%2C2022&to[TIME_PERIOD]=false
- **ERA Country Report Belgium 2023**
  - https://european-research-area.ec.europa.eu/country-report-belgium#:~:text=Era%20Country%20Report%202023:%20Belgium%20Key%20takeaways:%20Belgium%20is%20an
- **Precarious Careers in Research – Analysis and Policy Options**
  - https://www.wifo.ac.at/wp-content/uploads/upload-9160/s_2022_precarious_careers_options_70473_.pdf
- **The Research Foundation - Flanders**
  - https://www.fwo.be/en/
- **EURAXESS Belgium**
  - https://www.euraxess.be/
- **Ghent University Career Hub**
  - https://www.ugent.be/en/careerhub
- **OECD, Reducing the precarity of academic research careers**
  - https://www.oecd-ilibrary.org/docserver/0f8bd468-en.pdf?expires=1726054868&id=id&accname=guest&checksum=90575AF68BCB30D254EDCE75A335F766

Croatia

- Interviews with Assistant Professors who have achieved tenure and University management (December 2023 – January 2024)
- Act on Higher Education in Science (October 2022)
- Collective Contract for Science and Higher Education (currently being updated)
- Bibliometric conditions appointment to scientific grade defined by the National Council for Science, Higher Education and Technological Development (Established 2017)
- Conditions for the appointment to scientific teaching grade (defined by the Croatian rectors conference).
- https://eurydice.eacea.ec.europa.eu/national-education-systems/croatia/higher-education
- https://mzom.gov.hr/
- https://hrzz.hr/
- https://dashboard.tech.ec.europa.eu/qs_digit_dashboard_mt/public/sense/app/1213b8cd-3ebe-4730-b0f5-fa4e326df2e2/sheet/d1435e56-cdee-4f5f-8b0d-f49d41ffbd6c/state/analysis
- https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-dashboard
- OECD, Reducing the precarity of academic research careers:
- https://www.oecd-ilibrary.org/docserver/0f8bd468-en.pdf?expires=1726054868&id=id&accname=guest&checksum=90575AF68BCB30D254EDCE75A335F766
- ERA Country Report 2023 Croatia:
- https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-04/ERA%20Country%20Report%202023%20Croatia_FINAL.pdf

Finland

- Interviews conducted November - December 2023
- University of Helsinki website
- League of European Research Universities, *Tenure and Tenure Track at LERU Universities: Models for Attractive Research Careers in Europe*, Advice Paper No. 17 (September 2014)
- Maria Pietilä, 'Incentivising academics: experiences and expectations of the tenure track in Finland,' *Studies in Higher Education* 44(6) (2019), pp. 932-45
- ERA Country Report 2023 Finland:
- https://european-research-area.ec.europa.eu/sites/default/files/documents/2024-05/ERA%20Country%20Report%202023%20Finland.pdf
- OECD, Reducing the precarity of academic research careers:

- https://www.oecd-ilibrary.org/docserver/0f8bd468-en.pdf?expires=1726054868&id=id&accname=guest&checksum=90575AF68BCB30D254EDCE75A335F766
- Academic career structures in Europe, Perspectives from Norway, Denmark, Sweden, Finland,

  the Netherlands, Austria and the UK:
- https://nifu.brage.unit.no/nifu-xmlui/bitstream/handle/11250/2487666/NIFUreport2018-4.pdf?sequence=1%26isAllowed=y
- Unifi, The Council of Rectors of Finnish Universities: https://unifi.fi/en/about-us/
- Research Council of Finland: https://www.aka.fi/en/
- https://www.aka.fi/en/research-funding/apply-for-funding/calls-for-applications/apply-now2/academy-research-fellowships-2022-all-research-fields/
- University of Oulu: https://www.oulu.fi/en/university/careers/diverse-career-pathways
- Eurydice: https://eurydice.eacea.ec.europa.eu/news/finland-new-practices-doctoral-education
- https://www.uef.fi/en/open-positions
- https://www.tuni.fi/en/research/research-tampere-university/msca-postdoctoral-fellowships
- https://fulbrightscholars.org/award/mid-career-professional-development-award-1
- https://valtioneuvosto.fi/en/-/1410877/strategy-lifelong-guidance-to-support-people-on-educational-and-career-paths
- **Precarious Careers in Research – Analysis and Policy Options**
  - https://www.wifo.ac.at/wp-content/uploads/upload-9160/s_2022_precarious_careers_options_70473_.pdf

Germany

- Interview with the University President and the head of HR (December 2023)
- Link to the principles: https://www.uni-frankfurt.de/132320338/Principles_Career_Paths.pdf
- Bylaws with regulations on appointment of professorships with and without tenure track: https://www.unifrankfurt.de/137215258/Satzung_zur_Durchf%C3%BChrung_von_Berufungsverfahren_und_Tenure_Track_Verfahren_von_Professuren_an_der_Goethe_Universit%C3%A4t.pdf
- The implementation of the Goethe University principles is subject to and situated within the framework of legal requirements.
- Target Agreement for the increase of permanent positions between Land Hesse and Goethe University: https://wissenschaft.hessen.de/sites/wissenschaft.hessen.de/files/2022-03/zielvereinbarungen_2021-2025_goethe-universitaet_frankfurt.pdf
- Goethe University offers for personal development: https://www.uni-frankfurt.de/73275043/Personal-und-Organisationsentwicklung

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15.2 Additional interview questions for revised case studies

Transparency

- How are *TTL positions* [to be specified for each case study] advertised?
- What information do advertisements entail (e.g. about expected skills, selection criteria or the recruitment process)?

Competitive and Inclusive Recruitment

- What are the selection criteria for applicants?
- How do you ensure inclusiveness, gender balance and support for under-represented groups?

Fair Pay and Benefits

- What is the renumeration scheme for the TTL positions

Recognition through Career Pathways

- Within the TTL Model, how do you acknowledge the variation within academic careers and non-linear, multi career and hybrid career paths?

Professional Development

- How do you ensure ongoing professional and career development within and outside the academic system?

Inclusive and Healthy Working Environments

- What measures are in place at your institution to support a healthy career-family –balance and equal opportunities?
- What mechanisms are in place for dealing with bullying and harassment and poor research integrity?

Supportive Management

- How is the line management for TTL positions structured, ensuring counselling, feedback and career development?

Responsible Evaluation

- Is there a formal evaluation process for TTL positions?
- What evaluation criteria have been defined?

Sustainable Careers for Researcher Empowerment

WP3

Development of Tenure Track-Like Models

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