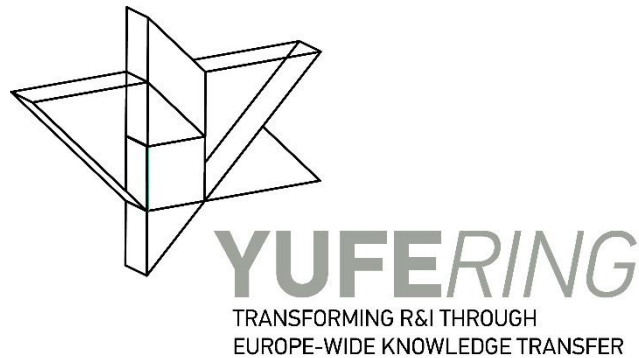# YUFERING Project
YUFE TRANSFORMING R&I THROUGH EUROPE-WIDE KNOWLEDGE TRANSFER

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List of Abbreviations and Definitions

ARRA	Agreement on Reforming Research Assessment
CERI	Community-Engaged Research and Innovation
CoARA	Coalition for Advancing Research Assessment
CV	Curriculum Vitae
DORA	San Francisco Declaration on Research Assessment
EC	the European Commission
ERA	the European Research Area
EU	the European Union
EUA	the European University Association
FKT	Flipped Knowledge Transfer
HR	Human Resources
LERU	the League of European Research Universities
NCU	Nicolaus Copernicus University
NOR-CAM	Norwegian Career Assessment Matrix
OA	Open Access
OS	Open Science
OS-CAM	Open Science Career Assessment Matrix
OTM-R	Open, Transparent, and Merit-Based Recruitment
RRA	Responsible Research Assessment
UAntwerp	University of Antwerp
UBremen	University of Bremen
UEF	University of Eastern Finland
UEssex	University of Essex
UM	Maastricht University
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNIRI	University of Rijeka
WP	Work package
YERUN	Young European Research Universities Network
YUFE	Young Universities for the Future of Europe
YUFERING	YUFE Transforming Research and Innovation through Europe-wide Knowledge Transfer

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REPORT ON THE ACCREDITATION PILOT BASED IN OPEN SCIENCE CRITERIA

1 Introduction

Research assessment reform is a central topic in the European science policy. Research assessment reform, along with research careers, talent circulation and mobility, is a central action in the European Research Area (ERA) Policy Agenda[1]. The promotion of these actions has received broad support from the European Union's (EU) member states.

In line with the above-mentioned Policy Agenda, the European Commission (EC) in collaboration with stakeholders, such as Science Europe and European University Association (EUA) initiated a process which aims at recognizing the diversity of contributions in academic work and careers in research (European Commission 2021; CoARA 2022). In fall 2022, the Coalition for Advancing Research Assessment (CoARA) was formally established to gather organizations that agree to work together on the research assessment reform. In late 2023, the COARA Boost Horizon Europe project was approved by the EC as "a catalyser in enhancing the operational capacity of CoARA"[2].

These reforms hold particular significance for YUFE (Young Universities for the Future of Europe), one of the European university alliances. YUFE universities consider academic and professional service staff as key enablers of the YUFE European University, in accordance with the guidelines outlined in the YUFE Staff Recruitment Policy and the YUFE Staff Development Policy. Within YUFE universities, there is commitment to fostering high-quality research and teaching, alongside the recognition of the importance of supporting diverse career paths and career opportunities for teaching and research staff. YUFE is dedicated to acknowledging and developing the contributions of academics across various domains, encompassing not only research and teaching, but also areas, such as community engagement, leadership, and teamwork[3]. Working together on recognition and rewards is central to safeguard possibilities for increased mobility among the partners, a key objective in YUFE.

The work package four (WP4) of YUFERING (YUFE Transforming Research and Innovation through Europe-wide Knowledge Transfer) has focused on the transformation

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[1] ERA Policy Agenda Action Plan

[2] https://coara.eu/coalition/coara-boost-project/

[3] See also the YUFE Competence Framework for Researchers, the outcome of YUFERING Task 4.2. The framework includes a broad range of competences covering areas such as research skills and techniques, research management, research impact, Open Science and data management, academic teaching, teamwork, and leadership.

of recognition, reward and circulation of talents and teams across Europe. It has aimed at finding solutions for increasing research mobility, identifying the skills for a new generation of researchers, and training researchers on these skills.

Task 4.3, titled 'Novel recognition and reward scheme for researchers', has been dedicated to developing tools for piloting novel recognition and reward schemes for researchers, and to pilot these in the selection of researchers for YUFE postdocs. As outlined in the project proposal, these schemes aim to acknowledge researchers' efforts and performance beyond traditional quantitative criteria and metrics.

Up to date, research funding organizations have been active in piloting new assessment methods (see Curry et al. 2020). There is a call also for universities to pilot such approaches. The EC's Scoping report 'Towards a Reform of the Research Assessment System' (EC 2021, 8) identified European Universities Alliances as important testbeds for reforms and pilot projects. YUFE has taken an active role in creating and piloting new approaches.

Task 4.3 was structured in sub-tasks as follows:

1. Map the existing systems researchers are assessed in different YUFE academic partner institutions, and identify the best practices focusing on the qualitative aspects (e.g., Dutch model),
2. Create a transparent set of tools for accrediting researchers and/or research teams completing activities in line with the YUFE vision (e.g. Open Science practices, research collaboration, mobility actions, staff development, societal impact) and the key competences from tasks in 4.2,
3. Utilize the 4.3 sub-task accreditation a) within joint YUFE actions, especially in the selection of researchers for YUFE postdocs and/or YUFE mobility, and b) support the use of YUFE Rewards to acknowledge the YUFE Rewards competences in recruiting and grant application processes within the YUFE partner universities,
4. Pilot the 4.3 sub-task accreditation within the development in open science (OS). The criteria for OS (metrics from WP5, and aligned with subtask 4.2) will be set in a realistic way so that they are achievable and rewarding, e.g., X % of publications published in Open Access publications, or Y level of data opened, and
5. Dissemination and outreach: Fostering debates on the potential of the YUFE reward and recognition scheme in our institutions to encourage institutional transformation.

The work in Task 4.3 was conducted in close collaboration with Task 5.2 'Testing indicators for Open Science performance/evaluation' of YUFERING. The outcomes re-

lated to researcher assessment and Open Science have been reported in another deliverable, D5.2 'YUFE Open Science Model and guidelines for researchers' evaluation'[4].

The practical outcome of Tasks 4.3 and 5.2, the YUFE Academic Assessment Portfolio, aims to broaden the information base in academic recruitment processes while retaining the autonomy of decision-making in recruitment within each YUFE university. Through the collaborative development of the portfolio, YUFE contributes to the ongoing process of creating practical tools to expand the current practices for assessing the achievements of academics.

2 Process and methodology

The process in Task 4.3 included the following steps outlined in Figure 1.

First, we mapped and reviewed central initiatives on responsible research assessment at the global, European, and national levels, reviewed YUFE universities' main human resource (HR) structures related to recognition and rewards of academic staff via interviews, and reviewed YUFE joints actions, especially related to the selection of researchers for YUFE postdocs and/or YUFE mobility.

Second, based on the mapping and reviewing phase, we designed the novel tool related to recognizing the diversity of skills and achievements of academics for YUFE. This was carried out in cooperation with the international YUFERING team, and by listening to the feedback given.[5]

Third, we did an initial piloting of the created tool, YUFE Academic Assessment Portfolio, in a selected number of academic recruitment processes at one of the YUFE universities, University of Eastern Finland (UEF). In addition, the portfolio was discussed in close detail with some members of staff at the universities of Antwerp, Bremen, and Maastricht. The final and primary piloting took place in the European context of the YUFE4Postdocs selection process.

Fourth, we reported the main insights of the pilot.

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[4] The deliverable D5.2 (Pietilä et al. 2023a) was published open access in November 2023, and can be accessed here.
[5] The contributors are mentioned at the beginning of the report.
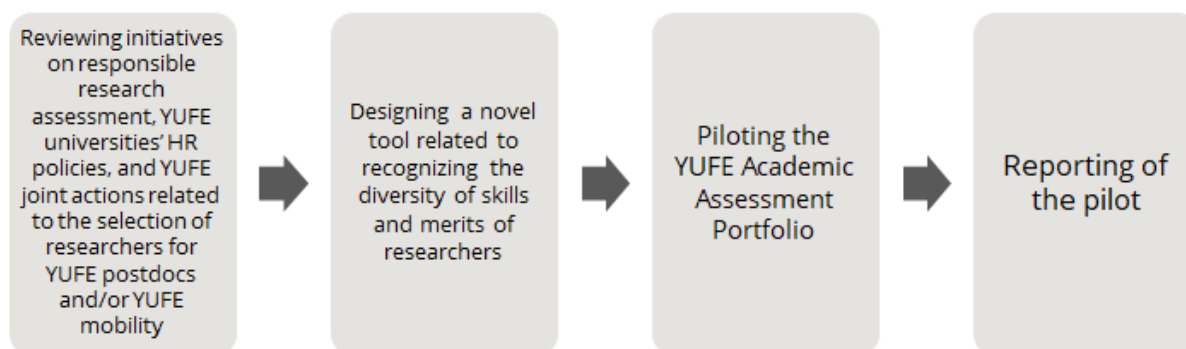
2.1 Existing declarations, policy papers, and initiatives

We started the work by mapping and reviewing central global and national initiatives, policy reports, and practical tools related to responsible research assessment published in the 2010s and the 2020s. Several initiatives at the global, European, and national level have been taken to reform the current systems of research and researcher assessment. These documents included:

- **Declarations on Responsible Research Assessment (RRA)**
  - the DORA Declaration (DORA 2013),
  - the Leiden Manifesto (Hicks et al. 2015),
  - the Metric Tide (Wilsdon et al. 2015), and
  - the Hong Kong Principles for Assessing Researchers (Moher et al. 2020).
- **Policy reports and agreements**
  - LERU's document 'Research universities and research assessment' 2012,
  - YERUN's Position Paper 'Reforming research assessment in Europe: YERUN's take on the issue' 2021,
  - Towards a reform of the research assessment system, scoping report by the EC 2021,
  - UNESCO Recommendation on Open Science 2021,
  - CoARA Agreement on Reforming Research Assessment (ARRA) 2022, and
  - YERUN's Position Paper 'Towards a European Framework for Sustainable and Attractive Careers in Higher Education' 2023.
- **Central reports on Open Science indicators with a connection to career assessment**
  - the Open Science Career Assessment Matrix OS-CAM (EC 2017a),

- o Next-generation metrics: Responsible metrics and evaluation for open science (EC 2017b), and
  - o Indicator frameworks for fostering open knowledge practices in science and scholarship (EC 2019).
- **National initiatives on responsible research assessment and Open Science**
  - o Room for everyone's talent in the Netherlands (VSNU et al. 2019),
  - o Good practice in researcher evaluation. Recommendation for the responsible evaluation of a researcher in Finland (the Committee for Public Information and Federation for Finnish Learned Societies 2020), and
  - o A toolbox for recognition and rewards in academic careers in Norway, NOR-CAM (Universities Norway 2021).
- **Examples of narrative CVs as practical tools for broadening assessment**
  - o ACUMEN Portfolio (ACUMEN Project 2014),
  - o Résumé for Researchers (the Royal Society 2023).

The declarations on responsible research assessment identified as central included the San Francisco Declaration on Research Assessment (DORA 2013), the Leiden Manifesto (Hicks et al. 2015), the Metric Tide (Wilsdon et al. 2015), and the Hong Kong Principles for Assessing Researchers (Moher et al. 2020). These declarations have gained broad visibility and have globally impacted the discussions around responsible research assessment. For example, the DORA recommends not to use 'journal-based metrics, such as Journal Impact Factors, as a surrogate measure of the quality of individual research articles, to assess an individual scientist's contributions, or in hiring, promotion, or funding decisions.' Instead, research should be assessed 'on its own merits rather than on the basis of the journal in which the research is published'.

The policy reports and agreements identified as relevant included a set of documents both at global and European level. It is relevant to mention that the Young European Research Universities Network (YERUN) has been active in discussions on academic careers and reform of research assessment and was involved in the preparations of CoARA. The Agreement on Reforming Research Assessment (ARRA) of CoARA (2022) includes several core commitments. For example, signers of CoARA should base research assessment primarily on qualitative evaluations for which peer review is central, while qualitative assessment may be supported by the use of responsible metrics.

To support transparency, openness, collaboration, and reusability of research findings and data, researchers' Open Science (OS) achievements should be better acknowledged and rewarded in assessment processes (see the report D5.2 of YUFERING; Pietilä et al. 2023a). One of the central reports on OS indicators with a connection to career assessment is the Open Science Career Assessment Matrix OS-CAM (EC 2017a). The matrix includes a range of OS criteria that can be used in assessment systems in various contexts.

The national initiatives included those launched in the Netherlands (VSNU et al. 2019), Finland (working group on responsible research assessment 2020), and Norway (Universities Norway 2021). For example, the Dutch 'Room for everyone's talent' initiative aims at diversifying and vitalizing career paths, focusing on quality, stimulating Open Science, while attempting to achieve balance between individuals and the collective (VSNU et al. 2019). Universities in the Netherlands have their own policies to promote the program at the institutional level.

The specific narrative CV formats reviewed included the ACUMEN Portfolio by the ACUMEN project and the Résumé for Researchers by the Royal Society in the United Kingdom. For example, the ACUMEN portfolio includes a researcher-driven narrative (incl. the researcher's academic age), expertise sub-portfolio (e.g., one's scholarly and organizational expertise), output sub-portfolio (e.g., the number of outputs in research, teaching, datasets), and influence sub-portfolio (e.g., influence on science and influence on society).

The declarations, policy reports, initiatives, and tools provided us with plenty of principles and examples what to consider when addressing the topic of novel recognition and reward scheme for researchers at YUFE.

2.2 YUFE universities' recognition and reward structures

In order to devise novel approaches to recognition and rewards for researchers, it was crucial to familiarize ourselves with the existing assessment systems utilized at YUFE universities. To achieve this, we conducted interviews with a total of 12 human resources (HR) officials and other personnel possessing expertise on academic recognition and reward structures at YUFE universities. These interviews took place between late spring and early autumn in 2021. In addition, we gathered relevant documents outlining the recognition and reward structures of these universities, including documents on recruitment and promotion processes and criteria. When applicable, we also sought information at the national level.

At Maastricht University, where there is more experience in reforming assessment towards academics' qualitative achievements, we interviewed four individuals with hands-on expertise in the reform process.

The insights acquired from our initial data collection were augmented in the fall of 2022 through institutional visits to four YUFE universities – Universidad Carlos III de Madrid, Maastricht University, University of Antwerp, and University of Bremen – to further enrich the knowledge base. During these visits, we engaged with a large group of interviewees who represented diverse roles and expertise at the four universities. This group included HR leaders, team leaders responsible for faculty HR offices, university library professionals, professors, faculty directors, and early-career researchers.

Based on the analysis of the collected information, it is evident that the recognition and reward structures for researchers at YUFE universities differ considerably (see also the report by EUA 2023). Many of these differences can be attributed to:

- **University Autonomy**: Differences in the degree of autonomy universities have from the state, including the distinction of university teaching and research staff either holding the status of state civil servants or being employees of the university. In some systems, there are significant national regulations and procedures concerning academic careers, recruitment and promotion processes, and recruitment and promotion criteria.
- **Collecting Bargaining Agreements and Labor Legislations**: Disparities in traditions related to collective bargaining and variations in labor legislation play a role in shaping the recognition and reward structures for teaching and research staff.
- **Funding Models**: There are differences in both national and institutional funding models for higher education and research. The funding models influence what kinds of recognition and reward systems universities consider feasible to implement.

In addition to the differences in the regulatory environments and national incentive systems, YUFE universities differ in terms of institutional strategies, organizational traditions, the extent of internationalization (including the proportion of international staff), and entry requirements for staff. Different academic fields also employ different recruitment and promotion criteria.

Thus, the national contexts influencing recognition and rewards as well as the prerequisites for reform vary considerably between YUFE universities. For example, if the governmental funding system of universities emphasizes research outputs in a narrow way, individual universities may encounter challenges in altering their institutional incentive structures for academics. Conversely, in countries like the Netherlands, where a comprehensive national reform process is underway, individual universities are encouraged to contemplate and implement changes.

At the institutional level, there are variations among universities in terms of internal decision-making structures, including how much leeway individual faculties or other units have in key career decisions, the design of salary systems, and the institutional criteria for recruitment and promotion. Decision-making processes in topics related to academic careers often involve multiple actors, such as the University Council, Senate, and labor unions. Thus, it may be difficult and time-consuming to intervene in the universities' academic recognition and reward structures. While this is an inherent characteristic in higher education governance, it sets constraints on piloting novel schemes within the timeframe of fixed-term projects.

Based on the interviews and discussions, for mutual learning, we pinpoint some best practices that emphasize *the qualitative aspects* of researchers' contributions. The examples encompass, but are not restricted to the following:

- **Example from the University of Antwerp**: Emphasizing the most significant publications and their significance as identified by the researcher in academic recruitment, as opposed to employing a quantitative approach,
- **Example from the University of Rijeka**: Employing co-authored publications with students as a performance indicator, stimulating collaboration between seniors and juniors in research work,
- **Example from Maastricht University:** Incorporating narrative CVs in recruitment processes, allowing researchers to highlight their individual strengths and skills while providing context for their academic achievements,
- **Example from the University of Antwerp**: Broadening the scope of achievements in assessments, such as enhancing the importance of societal engagement and leadership experience in the evaluation process,
- **Example from Maastricht University**: Providing guidelines and training on the responsible use of bibliometrics and introducing innovative methods and tools for assessing the impact of scholarly publishing,
- **Example from the University of Eastern Finland**: Using job demand level descriptions and personal performance as the basis for salary assessment system,
- **Example from the University of Bremen**: Using diverse criteria with different emphasis related to research and development, academic teaching, academic self-administration, and extra-academic qualification in tenure track assessments,
- **Example from the University of Essex**: Mandating candidates from assistant professor level to full professor level to complete an education statement and research statement. This process enables researchers to reflect on their strengths and articulate their future visions.

2.3 Interviews at UEF

Researchers play pivotal roles in various assessment processes. In addition to applying for positions and funding, they serve as reviewers in recruitment and promotion committees, participate in committees for funding agencies, and contribute as reviewers for academic manuscripts. Senior-level researchers, particularly those in supervisory positions, also serve as influential role models for junior staff. In both formal and informal settings, they elucidate the types of tasks and achievements they deem valuable in academic work.

It is crucial to involve researchers in the reform of research assessment processes (cf. Susi et al. 2022). This engagement is likely to enhance the knowledge base supporting reforms, streamline implementation, and contribute to the legitimation of processes, among other benefits.

During the planning and drafting phases of the YUFE Academic Assessment Portfolio, we consistently engaged in discussions with researchers at various career stages and across diverse academic fields.

At UEF, we conducted a comprehensive interview round in 2022, engaging with 26 individuals. Of these, 23 people were researchers or academic leaders. The researchers represented different academic fields, career stages, roles in research- and teaching-intensive positions, genders, and Finns and non-Finns. The interviewed academic leaders represented key decision-makers within the university (rector and deans). In addition, we interviewed the director of the university library and two heads of services in the university library concerning the interconnections between researcher assessment and Open Science. The choice of UEF as the interview location was driven by the convenient access to the informants. In addition, a few researcher interviews were conducted at Maastricht University and at the University of Bremen.

This section presents insights from the interviews which were conducted at UEF. It should be emphasized that the insights based on the interviews are not representative of all the YUFE universities.

The interviews focused on gathering perspectives regarding the key components of existing assessment systems and the interviewees' preferences for possible modifications. Some of the interviews were conducted to provide insights for the initial testing and development of the YUFE Academic Assessment Portfolio.[6]

Based on the insights gathered from the interviews with researchers, assessments in recruitment processes at UEF placed significant emphasis on research publications and success in external funding competitions. These are the same core criteria, which were found to be important in the report published by the report of the EUA (Saenen et al. 2019). Other contributions which were interpreted to be significant were teaching experience, team leadership, involvement in academic networks, visibility within one's field, international mobility, and supervision of doctoral and master's students. However, it was not always clear for researchers at R2 level[7] what achievements would be valued, for example, in professorial recruitment.

When asked about the aspects that should carry more weight in assessments, **respondents at R2 and R3 levels** highlighted the significance of giving greater emphasis to the quality of teaching and engagement with societal (non-academic) groups.

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[6] The insights from the interviews regarding Open Science have been reported in D5.2 of YUFERING (Pietilä et al. 2023a).

[7] In the classification of the EU (EURAXESS 2023), R2 corresponds to recognized researchers. These are PhD holders or equivalent who are not yet fully independent. At Finnish universities, R2 researchers are mainly post-doctoral researchers. R3 corresponds to established researchers. These are researchers who have developed a level of independence. At Finnish universities, R3 researchers are typically either university lecturers or university researchers. R4 corresponds to leading researchers, in the Finnish university system typically to professors and research directors.

According to those interviewed, the current assessment systems at the university inadequately consider the quality of supervision, pedagogical approaches to teaching, and the nurturing of the next generation of researchers, including mentoring.

Many interviewees especially at R3 level emphasized the significance of societal engagement in their professional lives. Many actively contributed to committee work, participated in local development programs, published content oriented towards the general public, and engaged with societal stakeholders. Despite their commitment to societal engagement, these efforts were perceived as inadequately acknowledged or rewarded by the university as an employer. There was agreement among interviewees on the need for a comprehensive definition of 'engagement', one that encompasses a range of activities, including science communication, collaboration with businesses and other types of organizations, and participation in citizen science initiatives.

In general, researchers at R2 and R3 level advocated for holistic assessments that would take into consideration the wide range of responsibilities and activities undertaken by academics. Additionally, it was emphasized that the recognition and rewards for academics should be aligned with the specific tasks assigned to each individual, considering factors such as the available time for research. For example, people in teaching-intensive positions should be assessed primarily based on teaching performance. Also, the working conditions of each person should be considered. For example, those with experience in well-performing teams may have benefited in terms of publishing compared to those who have worked more independently. Researchers also highlighted that assessments should consider conditions such as working with new analysis techniques, which might lengthen publication processes.

The academic leaders interviewed highlighted the wide range of societal expectations placed on universities and the challenges posed by limited resources in meeting all these expectations. Some **researchers at R4 level**, many of whom also possessed a role as academic leader, feared that the expansion of roles would further increase the workload of researchers, which was already seen as heavy. Research was seen as the core component of work and as a cornerstone for possible engagement activities. The leaders underscored the pivotal role of the national funding system for universities, expressing concerns about difficulties to diverge from the indicators emphasized in the funding model within the universities' internal governance systems.

In all disciplinary areas studied, academic leaders and professors saw that quality and the content of work count most, but there were different views on how research quality can be best assessed. All professors stressed evidence and outcomes, and saw that numerical data should be at least part of the assessment evidence. There were differences between faculties, reflecting variations and traditions in academic fields. Leaders in faculties representing social sciences, humanities, and educational sciences perceived that qualitative assessment was already prevalent, stating that assessments were comprehensive. Leaders in faculties representing medical sciences and natural sciences underscored the established practice of basing research assessments on

quantitative metrics[8]. These academic leaders saw the quality of research often aligning with the prestige of the publication outlet in their fields, with also peer reviewers frequently incorporating metrics into their expert reports. Additionally, the faculties varied in their positions within the research landscape, necessitating a more pronounced emphasis on research in some faculties compared to other areas, such as teaching and societal outreach.

2.4 Use of the interviews in the creation and development of the portfolio

The interviews at YUFE universities helped in pinpointing areas where the universities aimed to enhance their assessment practices. For instance, the need for better identification of researchers' skills in teamwork and academic leadership was frequently highlighted.

When a draft of the portfolio had been created, the interviews at UEF, Maastricht University, the University of Bremen, and the University of Antwerp conducted in fall 2022 helped in revising the content and the wording of the portfolio.

While the interviews provided valuable insights, the main design of the YUFE Academic Assessment Portfolio took place within the WP4 and WP5 groups of YUFERING, with representation from all the YUFE universities and opportunities for group members to discuss the content and to contribute to the joint work.

3 YUFE Academic Assessment Portfolio

3.1 Diversity of contributions

Recognition and reward schemes for academics encompass a wide range of elements, including fair and transparent recruitment, goal-oriented staff development, and attractive working conditions within the labor market. Within Task 4.3, the primary focus has been on researcher assessment. Researcher assessment is linked to several processes, such as recruitment, promotion, and performance appraisal. Researcher assessment is in the focus in the Coalition for Advancing Research Assessment (CoARA), underscoring the timeliness and relevance of the topic.

For long, there has been notable criticism regarding the disproportionate reliance on specific metrics, particularly the journal impact factor and the H-index, in evaluating individual researchers. There have been calls for placing greater importance on the

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[8] This is probably related to different traditions of using metrics in academic fields (see Reymert 2021). "Measurements are a basic necessity in science", and the priority of measurements and mathematics is established in the scientific outcomes, assessments, traditions, and education (FlexBook 2.0. 2021). Against this background, it may not surprise that academics representing natural sciences, medical and health sciences were more skeptical towards qualitative assessments.

quality and content of researchers' achievements. When employing metrics for assessment purposes, it has been strongly advised to exercise caution and responsibility, considering their constraints and for what purposes the particular metrics have been designed (e.g., Hicks et al. 2015).

It has been stated that universities' assessment systems do not sufficiently acknowledge the diverse contributions of academics to the research community and wider society (Rice et al. 2020). Assessment systems play a crucial role as incentive mechanisms for academics, guiding them towards specific tasks and activities. There is growing need for tighter science-society interaction, more collaborative and transparent working patterns within academia, and enhanced collaboration between academia and other sectors. There is also a need to better acknowledge the contributions in teaching, mentoring, and supervising early-career researchers.

Although many researchers actively engage with societal actors, take leadership roles, contribute to Open Science and collegial academic endeavors, like mentoring and reviewing, the dominant academic incentive structures remain narrow, primarily emphasizing traditional research outputs, such as research publications and acquired research funding[9] (Rice et al. 2020; Saenen et al. 2019). The Agreement on Reforming Research Assessment (ARRA) by CoARA stresses the importance of recognizing the diversity of outputs and activities teaching and research staff contribute to.

Acknowledging the diverse contributions of academics is important in conveying the values that universities uphold; universities have diverse societal objectives, and the assessment systems should align with these objectives. Furthermore, different types of research outputs should be considered. In addition to traditional research publications, outputs such as open datasets, code and software should be acknowledged.

Acknowledging the multitude of contributions made by academics is also crucial for fostering mobility between sectors. Academic careers rarely follow a linear trajectory, progressing from doctoral positions to professorships, but instead involve a range of 'alternative' or 'non-traditional' career paths. Also from this perspective, it becomes important for universities to provide support for a wide range of skills and recognition of diverse achievements. This includes training researchers on so-called transversal skills (general skills), such as leadership and teamwork, and acknowledging them in assessment situations, when applicable.

YUFE universities value a diverse range of skills and achievements. Assessment processes should reflect this comprehensive perspective. Therefore, the YUFE Academic Assessment Portfolio aims at helping universities in conducting holistic evaluations of

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[9] In the traditional approach that prioritizes research outputs, activities associated with teaching and the third mission of universities have been perceived as flowing from the contributions in research.

teaching and research staff. It remains in the autonomy of each university how to design and apply recruitment and promotion processes, including the specific recruitment and promotion criteria in each assessment case.

Table 1 outlines the primary domains of academic work identified as crucial in YUFE along with possible key outputs, examples, and contributions associated with each area. Within this framework, research and teaching stand as the core pillars of academic work. Community engagement and societal outreach represent aspects of researchers' interaction with societal groups and the broader impact of their work. YUFE universities are committed to develop practices that support Community-Engaged Research and Innovation (CERI) and Flipped Knowledge Transfer (FKT) (topics in YUFERING WP2 and WP3). Additionally, teamwork, leadership and management represent contributions to the research group, scholarly community, and the university community.[10] In alignment with the objective of YUFE to promote Open Science, YUFE universities encourage open access or open source outputs and contributions, when possible.

Table 1 Main areas of academic work and possible key outputs, examples, and contributions.

AREAS OF ACADEMIC WORK	Possible key outputs/examples/contributions
Research: *how one has contributed to the generation of knowledge, including the creation of new ideas, hypotheses, methods, concepts, or tools*	
	(OA) research publications
	(OA) presentations at conferences
	(OA) research data
	(Open source) software
	(OA) simulations or code
	(Open source) research methods
	Using open licenses in publications
	Using open licenses in research data
	Pre-registration of studies
Teaching and supervision: *how one has contributed to teaching and supervision, including the development of teaching*	
	(Openly available) courses or teaching events one has developed or taught
	Theses/Dissertations supervised
	(OA) textbooks published, other (openly available) teaching material produced
	Development of (openly available) teaching methods
	Use of open learning materials
	Courses/Lectures in OS

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[10] In the interviews conducted, especially in the Netherlands and in laboratory-based academic fields, a recurring theme was the need for improved and more equitable recognition of team performance and diverse contributions within a team. Cf. the Contributor Roles Taxonomy (CRediT), which acknowledges each contributor's specific contribution, such as conceptualization, formal analysis, software, and methodology, to the scholarly output (see https://credit.niso.org/).

Lectures tailored for the general public

Incorporation of open science principles and methods in the content of teaching

Community engagement and societal outreach: *how one has benefitted the wider society*

Expert tasks in other organizations

Commercialization of research: e.g., spin-off companies or patents based on one's research

New projects with non-academic partners

Utilization of one's research in policy development or recommendations

Citizen science or engagement of stakeholders in one's research

Stakeholder interaction

Organizing events for the wider audience

Popularized publications

Television or radio appearences

Magazine or news articles based on one's research

Exhibitions

Social media activity

Teamwork, leadership, and management: *how one has contributed to teamwork, leadership, and management, including contribution to the academic community*

Academic leadership

Contribution to research teams

Mentoring students or colleagues

Internship supervisions

Editorial work

(Open) peer reviewing

Service to university: administrative tasks and internal committee work

International and national mobility

Work experience outside academia

Organizing or participating in conferences

Promoting academic integrity, gender equality and diversity in academia

Incentivizing OS behavior as a leader or team member

Working as editor in OA scholarly journals

Voluntary work in OA repositories

3.2 Creation of a novel tool

The goal in Task 4.3 was to create a novel tool for recognizing and rewarding researchers' diverse skills and achievements, and to pilot it in YUFE, especially in the context of recruitments. As was stated in section 2.2, YUFE universities possess different levels of institutional autonomy with respect to the state and regional authorities. Also, universities' academic recruitment processes are complex and typically involve several actors (see Pietilä & Pinheiro 2021). This makes it difficult to directly intervene in universities' recruitment and promotion processes, including the recruitment and promotion criteria. While there is space for collaboration and for exchanging best practices,

the recruitment and promotion processes at YUFE universities belong to the decision-making of each university.

These aspects needed to be considered when planning the joint novel tool for recognition and rewards. Members in WP4 found potential space for intervention in new kinds of assessment templates in recruitment situations. The template would leave room for situation-dependent modifications while keeping the authority in decision-making at each university and unit.

Narrative CVs are increasingly piloted and used in various contexts, supplementing or replacing list-based information typical in traditional CVs (see Fritch et al. 2021). The YUFE Academic Assessment Portfolio aims at diversifying the information base in academic recruitment processes, supplementing rather than replacing other documentation. A narrative-oriented portfolio written by the researcher allows a description of one's skills, strengths, and achievements with personal reflection: an opportunity for the researcher to 'tell his/her story', with a connection to the vacant position. This also allows stating the highlights of one's career, motivations, future aims, with room for documenting relevant work experience also in other sectors.

The portfolio aims at helping universities in the alliance to diversify researcher assessment to acknowledge researchers' contributions not only in research, but also in other core domains. One of the objectives in the creation of the tool was to make researchers' broader contributions more visible and to require the researchers to reflect on their contribution to Open Science in different knowledge domains, in alignment with the principles of responsible research and innovation. In the approach adopted, Open Science involves different ways of opening up to the society, including citizen science, collaboration with societal stakeholders, and opening education.

The YUFE Academic Assessment Portfolio is presented below in Table 2.

Table 2 YUFE Academic Assessment Portfolio

To the researcher: *you do not have to have merits/achievements/outputs in all the categories. If any of the category is not relevant to you, please skip that category.*

To the recruiter: *If needed, you may add extra custom questions and/or components to the categories.*

You may emphasise specific categories over others according to the position in question.

You may remove a specific category, which is not relevant for the position.

1 Profile as a researcher

1A How did your interest in your research area begin, what kinds of questions have you been particularly interested in, and how have your interests been shaped over the course of your career? (max. 1000 characters)

1B Describe your own strengths and skills as a researcher and/or as a teacher. What do you want to improve? (max. 1000 characters)

1C What is your vision for your career in the coming 5–10 years? (max. 1000 characters)

1D The YUFE universities place great importance to responsible research. This includes the support of the objectives of open science. Describe how you have made research and/or education more open, and what your plans are for the future. (max. 1000 characters)

2 Main merits, achievements, and their significance

2A Research
What are your key merits or achievements in research? Describe concretely 1–3 of your key outputs in research to support your argument. Please mark the open science merits or achievements with the symbol "O". Justify why your merits and outputs are significant. (max. 3000 characters)

2B Teaching and supervision
What are your key merits or achievements in teaching and supervision? Describe concretely 1–3 of your key outputs in teaching and supervision to support your argument. Please mark the open science/education merits or achievements with the symbol "O". Justify why your merits and outputs are significant. (max. 3000 characters)

2C Community engagement and societal outreach
What are your key merits or achievements in community engagement and societal outreach? Describe concretely 1–3 of your key outputs or examples to support your argument. Please tell explicitly how you have promoted the culture of open scholarship. Justify why your contributions are significant. Justify why your merits or achievements are significant. (max. 3000 characters)

2D Teamwork, management, and leadership
What are your key merits or achievements in teamwork, management and/or leadership? Describe concretely 1–3 of your key contributions to support your argument. Please tell explicitly how you have promoted the culture of open scholarship. Justify why your contributions are significant. (max. 3000 characters)

3 Academic age
What is your academic age (please see the guidelines)?

Appendix to the portfolio: Guidelines for filling in the document.

Please use whole sentences when writing.

1 Profile as a researcher
In this section (1A–D), describe your background, strengths, skills, and goals.

2 Main merits, achievements, and their significance
In this section (2A–D), identify your main merits or achievements related to research; teaching and supervision; community engagement and societal outreach; and teamwork, management, and/or leadership. Explain why you think these merits or achievements, and the related concrete outputs or contributions matter.

Mark any merits in open science separately with the symbol "O". These merits may relate to concrete outputs (e.g., open access publications or research data) or to the promotion of an open research culture (e.g., incorporating open science into one's teaching). See examples of possible merits in open science for each subdivision (2A–D).

2A Research
In this section, describe how you have contributed to the generation of knowledge, including the creation of new ideas, hypotheses, methods, concepts, or tools.

When you describe your merits or achievements, please highlight your key outputs. Key outputs in research may include, e.g., research publications; collected data; presentations at conferences; software; simulations or codes; or new research methods.

Please indicate separately any merits or outputs in open science. Examples include open access publications; open access research data; open software/code; open research methods; and pre-registration of studies.

Explain why the merits and outputs matter. Focus on the quality and impact of research rather than the quantity or the publishing arenas. You can support your argument with indicators such as scientific prizes or awards, keynotes/invited talks, competitive research funding received, the number of citations, downloads, mentions, etc. to the most important publications you identify (mark the database you are using – Scopus, Web of Science, Google Scholar, PlumX, Altmetric Explorer).

2B Teaching and supervision
In this section, describe how you have contributed to teaching and supervision, including the development of teaching.

When you describe your merits or achievements, please highlight your key outputs. Key outputs in teaching may be related, for example, to the courses or teaching events you have developed or taught; theses or dissertations supervised, or textbooks published.

Please indicate separately any merits or outputs in open science/education. Examples include open online courses/MOOCs; courses/lectures on open science; lectures tailored for the general public; use of open learning materials; and incorporation of open science principles or methods in the content of teaching.

Explain why the merits and outputs matter. You can support your argument with indicators, such as student feedback, teaching prizes or awards, invited lectures, or the views of open online courses/MOOCs.

2C Community engagement and societal outreach
In this section, describe how you have benefitted the wider society.

Your main merits, achievements, or outputs may be related, e.g., to how your work has contributed to the development of new innovations, policies, or business opportunities; societal discussions or services; engagement with non-academic actors in your research; or organising events for the general audience (e.g., school visits, science festivals).

Explain why the outputs/activities matter. You can support your argument with indicators, such as expert tasks in other organisations; spin-off companies or patents based on your research; new projects with non-academic partners; policy documents citing your research; utilisation of research outputs resulting from private sector collaboration as openly as possible; engaging citizens or stakeholders in one's research process; popularised publications (publications for the wider audience); television or radio appearances; magazine or news articles based on your research; Twitter discussions based on your research; research blogs; encyclopaedia articles produced (e.g., Wikipedia); encyclopaedia articles (e.g. Wikipedia) citing your research.

2D Teamwork, management, and leadership
In this section, describe how you have contributed to teamwork, management, and/or leadership, incl. your contribution to the academic community. Reflect on your contributions as a team member and as an individual.

Your main merits, achievements or outputs may be related, e.g., to projects or research teams you have led; other membership and roles in research teams; mentoring students or colleagues; internship supervisions; editorial work; peer reviewing; memberships and positions of trust in scientific communities; management positions; administrative tasks; committee work; data management or data curation; international and national mobility; organising or participating in conferences; promoting gender equality and/or diversity in academia.

Please indicate separately any merits and outputs in open scholarship. Examples include open peer reviewing (as author or as reviewer); working as editor in open access scholarly journals; voluntary work in open access repositories (e.g., ArXiv, BioRxiv); incentivising open science behaviour (e.g., assessment criteria, acknowledgments, or rewards) as a leader.

Explain why the outputs/activities matter. You can support your argument with indicators, such as creation of new projects; open science or equality/diversity awards received; feedback on teamwork or leadership.

3 Calculating the academic age

Academic age = Total number of person-years worked in research organisations since the start of postgraduate (PhD) studies – person-years during which you have been on a family/parental leave – other academic career breaks in person-years.

If you have worked part-time in any year, take this into account when calculating your academic age (e.g., 50 % of working time for the whole year corresponds to 0.5 person-years). Consider family/parental leaves which you have taken due to the birth/adoption of a child, which you have taken after the start of postgraduate (PhD) studies. Other academic breaks may include, for example, working outside research organisations, military/civil service, and other leaves.

In the YUFE Academic Assessment Portfolio, researchers are asked to reflect on their motivation, skills and strengths, future visions, and main work-related achievements relevant for academic work. For the main achievements, the focus is on the content of a selected number of outputs and activities, and a description of why the researcher thinks these are significant for the scholarly community or the wider society. Thus, the focus in the portfolio is not on the number of publications or other metrics, but rather on a selected number of outputs and activities seen as especially relevant by the researcher. Achievements are listed in four core areas of academic work identified to be crucial for YUFE: research, teaching and supervision, community engagement and societal outreach; and teamwork, leadership, and management.

When the responses within the portfolio are assessed in relation to one another, the assessor should gain a narrative or description that outlines the durability and outcomes of the individual's work motivation. The idea is to develop an understanding of the person's enduring intrinsic motivation for their work. While interviews with candidates can provide a more in-depth perspective, there is a distinct and pressing lack of tools for assessing intrinsic motivation in human resource management (HRM). Intrinsic motivation often serves as a predictor for meaningful cognitive engagement and has been associated with creativity, performance, sustained learning, and perseverance (cf. Fishbach & Woolley 2022). In essence, the motivational foundation is likely to be linked to the individual's identity, reflecting a relatively profound commitment and orientation towards their goals.

From an organizational standpoint, it is relevant to know whether the individual's career-related objectives align with the organizational goals (cf. Fishbach & Woolley 2022). The narrative is also likely to reflect one's values and understanding of relevance in work. Thus, the narrative provides a basis for comparing the alignment between the individual's and the organization's goals.

The portfolio requires the researchers to refer to tangible outputs and activities, as it is important not to rely on a narrative only, but to support it with solid evidence. Whereas the narrative itself can be expected to be somewhat subjective and to focus on everyone's own understanding of one's strengths and skills, each university may specify the available databases to be used to make sure the evidence of the achievements is reliable. In addition, in recruitment, quantitative, responsible metrics may be especially helpful and efficient in the screening stage of applications (cf. Reymert 2021).

In summary, the creation of the YUFE Academic Assessment Portfolio had the following ambitions. It should:

- give researchers more voice and a possibility to bring forward their individual strengths and skills,
- cover diverse aspects of academic work and thus provide a holistic view of researchers' expertise and contributions,
- provide evidence of one's achievements to support the narrative[11],
- primarily emphasize the content and quality of contributions, while when relevant, researchers may support their argument with quantitative indicators, such as the number of citations to the most significant research outputs they identify,
- make researchers' Open Science, including community engagement merits and achievements more visible.

Other aspects that were assessed to be important included:

- **flexibility**: possibility to use the portfolio in different institutional contexts, academic fields, and career stages, and in relation to different positions and tasks,
- **motivational viewpoint:** give tools for assessing intrinsic motivation, values and aims of candidates,
- **considering (academic) career breaks**: considering possible parental leaves, military service, longer sick leaves, and work outside academia,
- **ease of use:** not increasing the workload of researchers, reviewers, and institutional decision-makers,
- **compactness** of the document: limiting the number of words in the answers of researchers.

The YUFE Academic Assessment Portfolio has three sections:

1. open-ended questions about one's background, motivations, strengths and skills, visions, and Open Science contributions,
2. researcher's main merits and achievements, and their significance, and
3. researcher's academic age, along with
4. guidelines.

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[11] The combination of a narrative, outputs, and impact/influence was also one aspect in the ACUMEN narrative CV (2014).

Incorporating 'the academic age' into the portfolio underscores the need to consider researchers' active years of academic work when assessing candidates. This ensures a fairer comparison by placing individuals on a similar timeline for evaluating traditional academic achievements, such as research outputs. Thus, considering the academic age should enhance the objectivity of the assessment process.[12] Considering the academic age is also important for gender equality as especially academic mothers may otherwise suffer disproportionately from career breaks related to the use of parental leaves.

Building on earlier pilots and exercises, such as the one conducted by the Luxembourg National Research Fund in 2022, which highlighted the necessity for comprehensive guidance in the integration of narrative CVs into academic assessment processes (e.g., in research grant applications), the portfolio incorporates an appendix of guidelines. These guidelines are intended to assist researchers in constructing their portfolios by providing examples of possible outputs and activities.

A standard template format was seen as crucial to guide the structure of researchers' narratives and to be able to compare the candidates, a key issue in recruitment. Still, the portfolio can be modified, as positions in different career stages and disciplinary fields require different competences (Mantai & Marrone 2023; Robinson Garcia et al. 2023). Thus, the more specific structure of the portfolio should be dependent on the position the assessment is related to and the needs for certain skills.

Thus, the portfolio serves as a generic tool that considers different national and organizational contexts and allows for flexibility, local adaptations, and tailoring for individual assessment cases. The modifications include possible weighing of different sections of the portfolio, removal of non-relevant sections, and tailoring the examples and activities. For example, when recruiting someone to a teaching-intensive position, criteria related to teaching may be further specified.

When used in recruitment or promotion, in line with the YUFE recruitment policy, the expected skills and competences should be openly and transparently communicated. European universities are committed to the principles of open, transparent, and merit-based recruitment (OTM-R) (Esposito et al. 2015). The key aspects in OTM-R policy include (Esposito et al. 2015, 11):

- providing clear and transparent information on the whole selection process, including selection criteria and an indicative timetable;
- posting a clear and concise job advertisement with links to detailed information on, for example, required competencies and duties, working conditions,

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[12] It should be mentioned that working in the industrial sector or in other sectors may involve research or teaching, and contributions related to teamwork, leadership, and community engagement, which are beneficial for YUFE universities. Contributions while working in other sectors are relevant for consideration in the sections of YUFE Academic Assessment Portfolio.

entitlements, training opportunities, career development, gender equality policies, etc.;

- ensuring that the levels of qualifications and competencies required are in line with the needs of the position and not set as a barrier to entry, e.g., too restrictive and/or requiring unnecessary qualifications;
- considering the inclusion of explicit pro-active elements for underrepresented groups;
- keeping the administrative burden for the candidate (proof of qualifications, translations, number of copies required, etc.) to a minimum;
- reviewing, where appropriate, the institutional policy on languages.

Adhering to the principles of OTM-R, the criteria for assessment should be based on the explicit requirements and explicit criteria of the position, which are made public before the recruitment process. This way, researcher assessment is closely aligned with personnel planning and the criteria stipulated in funding schemes.

Especially when used in recruitment, the portfolio requires supplementation with additional documentation, and potentially the incorporation of responsible metric usage to mitigate adverse subjectivity in the recruitment process.

One application context for the portfolio is within recruitment processes, when both the individual seeking a position and the recruiter managing the selection process prepare for the interview phase. In this phase, the researcher can take the opportunity to reflect on their strengths relevant to the position, while the recruiter can concentrate on evaluating the alignment between the candidate and the organization.

4 Piloting the YUFE Academic Assessment Portfolio

It is important to pilot new assessment tools in real-life settings to identify areas that require further refinement. Testing is essential to reveal the intended and unintended effects of introducing new formats in recruitment. For instance, we need information on how reviewers and committee members interpret additional information, and whether any newly provided insights regarding teamwork and leadership, for example, are considered as something worthy.

We also highlight the need for systematic empirical research on the topic. For example, the adoption of narrative CVs may have gender effects or effects that favor researchers with certain backgrounds. Narrative CVs place importance to how a researcher presents one's background and achievements, placing a spotlight on writing skills.

4.1 Preliminary piloting in academic recruitment processes at UEF

The initial, preliminary piloting of the portfolio took place at UEF in spring 2022. The use of the portfolio was incorporated into nine academic recruitment processes. Filling out the portfolio was voluntary for individuals applying for the positions. All the individuals who applied for the nine positions were provided with a link to an electronic survey

containing the portfolio sections, along with guidelines on how to complete them. The information gathered in the survey was not utilized as part of the selection process.[13]

A total of nine recruitment processes were conducted, attracting altogether 38 applicants. Of these 38 people, five individuals chose to complete the portfolio. These individuals applied for a post-doctoral position or a professor position. In addition, two professors who participated in the recruitment as recruiters were interviewed after the formal conclusion of the selection process.

Due to the limited number of responses and the voluntary nature of portfolio submissions, coupled with the decision to exclude this information from the recruitment process, we cannot draw definitive conclusions regarding the functionality or utility of the portfolio from the pilot-testing. However, some general-level observations were made:

- Early-career researchers encountered some challenges in responding to the questions. This difficulty may be associated with their limited work experience in academia, which is also why fewer outputs and activities may be available for presentation. Additionally, challenges in communication and articulating one's achievements in a broader context were observed. This includes demonstrating the wider significance of one's work in relation to the scholarly community and broader society, as well as establishing connections between one's work and overarching research topics, societal discussions or challenges.

- Researchers applying for more senior-level positions, in this case professorships, found it relatively easier to address the questions. This may be attributed to their longer experience in writing grant applications and their proficiency in reflective thinking. They demonstrated more ability to assess their strengths and consider how their research and teaching topics align with the department's research and teaching strategies, as well as broader topics relevant to the scholarly community and society. Moreover, having more time in their careers to accumulate merits might have contributed to the ease in responding to the questions.

- While the intention behind creating a narrative portfolio is to showcase a broader spectrum of researchers' contributions and to adopt a more holistic assessment approach, candidates may be still be inclined to present their achievements 'in a traditional way', emphasizing outputs, such as peer-reviewed publications and competitive external research funding. Motivating researchers to share information about their broader achievements poses a challenge.

- When researchers fill in a portfolio, there is a pressure to craft the best narrative of themselves. To enhance the credibility of the information presented, it is im-

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[13] This was due to the fact that the procedure was not part of UEF's official recruitment procedures and the approch was not announced beforehand for the applicants according to the OTM-R principles.

perative to supplement it with evidence of one's achievements. This underscores the necessity of describing achievements in concrete terms, such as providing links to specific outputs or activities. The development of databases for diverse academic outputs and activities beyond research publications is crucial to facilitate this process.

- In detailing one's achievements, clarity should be maintained regarding the specific contribution of the researcher, such as delineating their role in designing a teaching course or outlining their contribution to a research paper.
- It is important to acknowledge that some researchers excel in expressing themselves in written form. Some individuals may be more proficient than others in expressing themselves in English.

Professors engaged in the recruitment of researchers suggested the possibility of having a slightly modified version of the portfolio tailored to different academic fields. This could involve incorporating varied examples of outputs and activities that align specifically with the field's requirements and expectations.

Initial experiences underscored the significance of argumentation and other communication skills when filling in the portfolio. These observations point to the importance of providing clear guidelines and offering training in science communication and career development services. This would make it more likely that individuals are equipped to effectively identify and express their strengths.

4.2 Piloting in the YUFE4Postdocs selection process

For the piloting in YUFE, we mapped the existing YUFE actions, especially related to the selection of researchers for YUFE postdocs and/or YUFE mobility, as outlined in the YUFERING proposal. We identified and reviewed the following YUFE actions, and the steps taken within these programs:

- YUFE post docs program (two rounds of applications completed)[14],
- YUFE mobility program[15],
- YUFE4Postdocs program.

In 2022, the YUFE consortium submitted a Marie Curie COFUND application aimed at funding a training program for post-doctoral researchers. The funding was awarded to the consortium, which was led by the University of Antwerp. Given that the program is specifically designed to select new YUFE postdocs, it served as the most fruitful environment for piloting the YUFE Academic Assessment Portfolio.[16]

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[14] WP4.3 team provided feedback on the updates of the application material of YUFE post docs program in 2021.

[15] At the time of reviewing the YUFE joint actions, the global covid-19 pandemic had complicated the implementation of mobility programs.

[16] The Council Recommendation and the new Charter for Researchers also put a special focus on early-career researchers, highlighting the importance of attracting talented graduates to

Thus, the second piloting of the YUFE Academic Assessment Portfolio took place in the context of selecting new post-doctoral researchers into YUFE4Postdocs training program, a joint program of YUFE[17].

In 2023, YUFE announced two calls for post-doctoral research positions, which were opened in all disciplines. These calls were within YUFE focus areas: sustainability (first call), digital society (first call), citizens' wellbeing (second call), and European identity (second call). In these calls, 51 positions were offered across nine universities. The piloting took place within the first round of selections.

Part of the YUFE Academic Assessment Portfolio was integrated into the Structured Curriculum Vitae (CV) Template, a mandatory document to fill in by applicants seeking a position in the YUFE4Postdocs program. The Structured CV Template constituted part of the comprehensive documentation required for submission within the selection process.[18] The questions from the YUFE Academic Assessment Portfolio were incorporated into Section B, Main Achievements, of the Structured CV Template. Some questions of the original portfolio needed to be modified to fit the call, while others deemed less relevant were excluded. Table 3 illustrates Section B in the Structured CV Template, highlighting the integration of questions from the portfolio.

Table 3 Section B in the Structured CV Template in the YUFE4Postdocs selection process

B. Main achievements

In this section (B1-B3), please identify your main merits related to research; teamwork and leadership; teaching and supervision, as well as community engagement and societal outreach.

B.1 Research
In this section, please explain why your merits and outputs matter by focusing on the quality and impact of research rather than quantity or publishing arena. You can support your argument with indicators such as the number of citations (to the most important publications you identify; mark the database you are using- Scopus, Web of Science, Google Scholar...); scientific prizes or awards; keynotes/invited talks; competitive research funding received; the number of downloads on research portals (e.g. ResearchGate, Academia.edu, etc.).

Please respond to the following questions:
Describe your own strengths and skills as a researcher. What is your vision for your career in the coming 5–10 years?
(2000 characters maximum, including blanks)

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academic careers, see https://research-and-innovation.ec.europa.eu/news/all-research-and-innovation-news/eu-countries-agree-steps-attract-and-retain-research-talent-2023-12-08_en.

[17] For more information of the program, see www.yufe4postdocs.eu/.

[18] The other documentation included a description of one's research training project, the supervisor's commitment letter, the co-supervisor's commitment letter, and ethics self-assessment.

Text

What are your key merits or achievements in **research**? Describe concretely 1–3 of your key outputs to support your argument. Justify why your merits and outputs are significant.
(3000 characters maximum, including blanks)

Text

B.2 Teamwork and Leadership

In this section, describe how you have contributed to teamwork and/or leadership, including your involvement in the academic community (e.g. academic positions of trust), and your key merits in teaching, mentoring and supervision. Please highlight your main achievements and reflect on your contributions as a team member and as an individual.

Your main merits and outputs may be related to, e.g. projects or research teams you have led; projects or research teams in which you have been a member; management positions; administrative tasks; committee work; data management or data curation experience; mentoring students or colleagues; or internship supervisions. You can support your argument with indicators, such as scientific reviewer tasks; scientific editorial tasks (e.g. acting as editor or as member of the editorial board), conference/committee memberships, or the creation of new research projects

Furthermore, key outputs in teaching may be related, for example, to the courses or teaching events you have developed or taught (e.g. lecture, seminar, workshop, summer school); theses supervised (including dissertation supervision); teaching methods developed; online courses/open MOOCs developed; educational resources opened; or textbooks published. You can support your argument with indicators, such as student feedback, teaching prizes or awards, invited lectures, views of online courses/open MOOCs, or the number of open learning material downloads.

Please respond to the following questions:

What are your key merits or achievements in **teaching, mentoring and supervision**? Describe concretely 1–3 of your key outputs to support your argument. Justify why your merits and outputs are significant.
(2000 characters maximum, including blanks)

Text

Teaching activity

Enter the type of teaching activity: subject, lecture, seminar, talk, etc., which is relevant, as well as the other information requested: institution, period, number of hours and language in which it was given.

Activity	Subject taught	Institution	Period	No. of hours (Total or per week)	Language

What are your key merits or achievements in **teamwork, management and/or leadership**? Describe concretely 1–3 of your key achievements or outputs to support your argument. Justify why your achievements and outputs are significant.
(2000 characters maximum, including blanks)
Text

B.3 Community engagement and societal outreach (via dissemination and engagement with stakeholders or broader public)
In this section, please describe how you have contributed to the wider society.

Your main merits and outputs may be related to, e.g. how your work has contributed to the development of new (economic/environmental/medical/social/technological etc.) innovations, policies, or business opportunities; societal discussions or services; engagement with non-academic actors (e.g. schools, citizens, stakeholders) in your research; or organising events for the general audience (e.g. school visits, science festivals).

You can support your argument with indicators, such as the number of popularised publications (publications intended for a wider audience than academia); encyclopedia articles (e.g. Wikipedia articles); Twitter discussions based on your research/teaching; policy documents citing your research; expert, consultancy or advisory tasks in companies, public or third sector organisations; papers co-authored with non-academics; television or radio appearances; magazine or news articles based on your research/teaching; number of mentions related to your research/teaching in blogs; patents or spin-off companies based on your research; new projects with non-academic partners.

Please respond to the following questions:

What are your key merits or achievements in terms of **societal impact and/or societal outreach**, e.g. dissemination and engagement with stakeholders or broader public? Describe concretely 1–3 of your key outputs to support your argument. Justify why your merits or achievements are significant.
(2000 characters maximum, including blanks)
Text

Feedback on the Structured CV Template was gathered as part of the comprehensive feedback collection process for the overall YUFE4Postdocs selection procedure. The feedback process was overseen by the research services at the University of Antwerp, which managed the entire YUFE4Postdocs call.

Feedback was collected from the committee members, who participated in the first call of YUFE4Postdocs: the thematic topics of 'Sustainability' and 'Digital Societies'. This call was open for applications from the 1st of March until the 7th of May, 2023. The

selection process took place in the fall of 2023. The selection committees met after the applications had gone through the external peer review process. Both committees had eleven members, including five YUFE academics, three non-YUFE academics, and three societal members.

The call for feedback was open for circa three weeks in October–November 2023. We focused on questions regarding the Structured CV.[19] Of the 22 selection committee members, 18 members responded to the survey. Ten participated in the call related to the topic 'Sustainability', and eight in the call related to the topic 'Digital societies'. Of the respondents, eleven committee members served in the role of 'YUFE academic members', one as a 'non-YUFE academic member', and six as 'societal members'.

Four questions in the feedback survey were specially focused on the Structured CV. These were:

- How useful was the narrative profile in your evaluation of the research training project, compared to an application with a traditional CV?
  - *Very useful,*
  - *Useful,*
  - *Neutral,*
  - *Not so useful,*
  - *Not useful at all*

- Which part(s) of Section B, 'Main achievements,' did you find relevant in the evaluation of the research training project? Please choose all that apply.
  - *Strengths and skills as a researcher, and future vision for one's career*
  - *Key merits or achievements in research,*
  - *Key merits or achievements in teaching, mentoring, and supervision,*
  - *Key merits or achievements in teamwork, management, and/or leadership,*
  - *Key merits or achievements in terms of societal impact and/or societal outreach.*

- Compared to an application with a traditional CV, the narrative profile is…
  - *easier to assess,*
  - *just as easy or difficult to assess,*
  - *more difficult to assess.*

- Do you have any suggestions or ideas for further improving the Structured CV Template? *open ended response*

In general, committee members found the narrative profile to be beneficial in their evaluation of the research training project when compared to an application with a traditional CV. About 70 % of respondents assessed the narrative profile as either useful

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[19] The responses from the questions regarding the general procedures are reported separately by the University of Antwerp team as part of the reporting of the overall YUFE4Postdocs selection process.

(41 %) or very useful (29 %). Three respondents (18 %) assessed its usefulness as neutral, while two respondents (12 %) considered it not so useful.
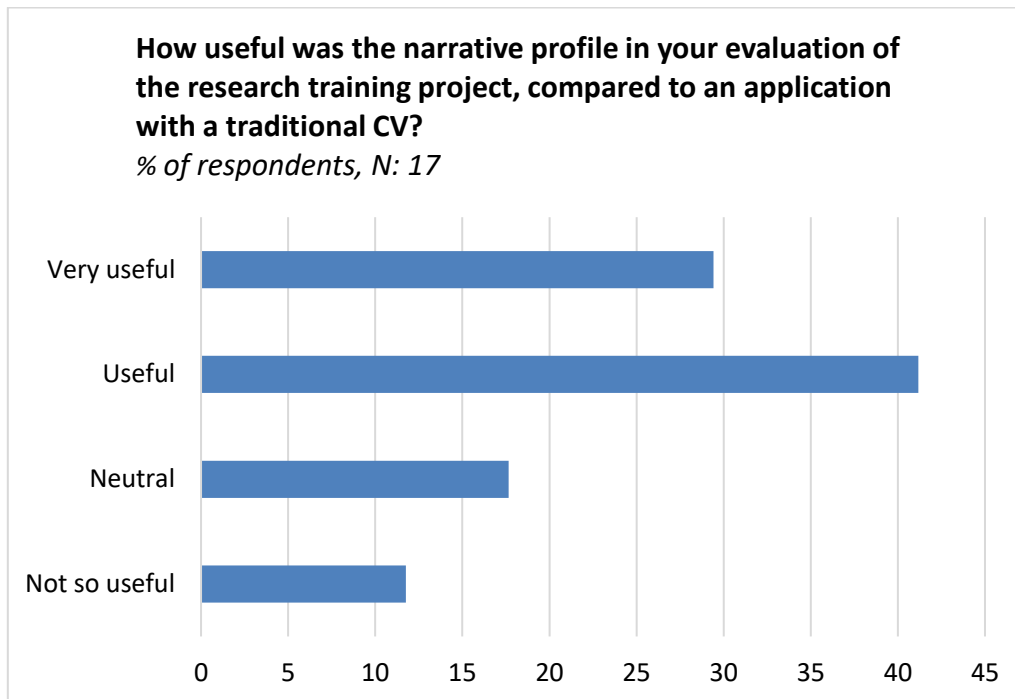
How useful was the narrative profile in your evaluation of the research training project, compared to an application with a traditional CV?
% of respondents, N: 17

Of the YUFE and non-YUFE academic members (12 in total), 42 % (five respondents) found the profile to be useful. 25 % assessed it as either very useful or neutral (three respondents each), and 8 % (one respondent) deemed it not so useful. Of the five societal members who responded to the question, two stated it was very useful and two stated it was useful. One societal member expressed that it was not so useful.

Among the different components of Section B, 'Main achievements', committee members found especially the part regarding the strengths and skills as a researcher, and future visions for one's career as relevant in the evaluation of the research training project. 94 % of respondents (15 persons) considered this section relevant. 75 % of respondents (12 persons) found the key merits or achievements in terms of societal impact and/or societal outreach to be relevant. This can be interpreted as support for placing emphasis on engaging with the broader society in assessments. For key merits or achievements in research, 63 % or respondents (10 persons) found it relevant. Regarding key merits or achievements in teamwork, management, and/or leadership, half of the respondents (8 persons) perceived it as relevant, while 31 % (5 persons) found

the key merits or achievements in teaching, mentoring, and supervision to be relevant.[20] Overall, it seems that the committee members appreciated a holistic perspective in the assessment.

Which part(s) of Section B, 'Main achievements,' did you find relevant in the evaluation of the research training project?
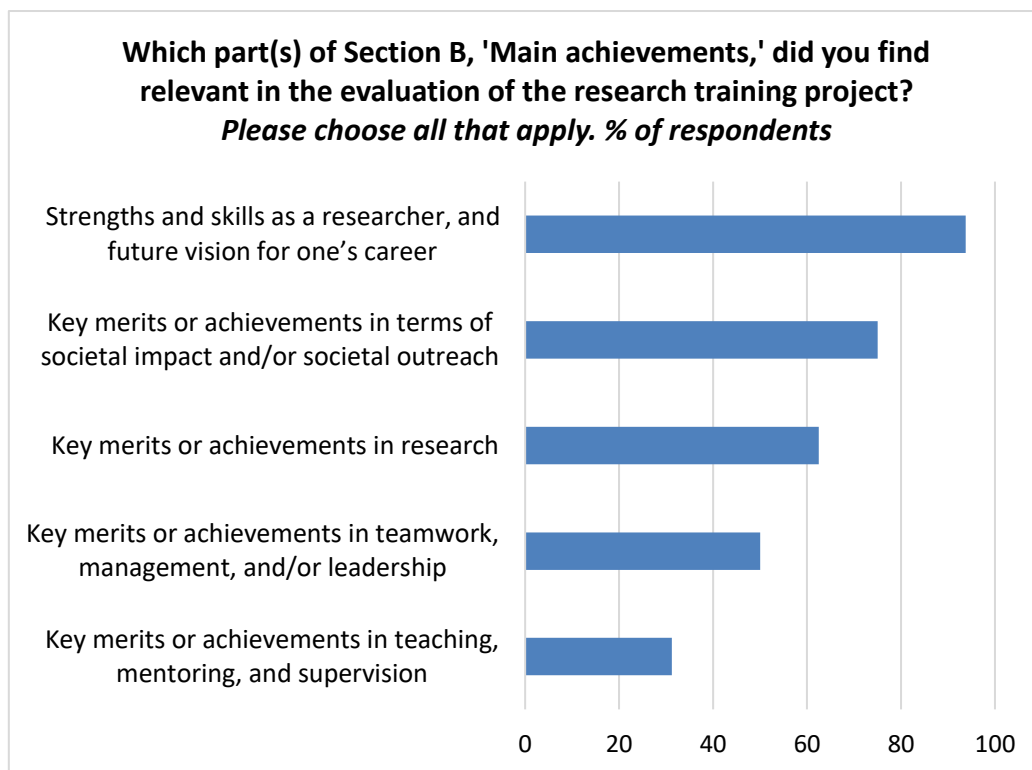*Please choose all that apply. % of respondents*

Figure 3 Parts committee members saw as relevant in assessment

The responses differed to some extent between academic committee members and societal members. A higher percentage of academic members found strengths and skills as a researcher, and future vision for one's career to be relevant, compared to societal members (100 % of academic members; 75 % of societal members). A greater proportion of academic members also perceived key merits or achievements in research as relevant, compared to societal members (67 % of academic members; 50 % of societal members). While all societal members considered key merits or achievements in terms of societal impact and/or societal outreach relevant, 67 % of academic members shared this view. For teamwork, management and/or leadership, both groups had an equal percentage (50 %). A slightly higher percentage of academic members deemed key merits in teaching, mentoring and supervision relevant, compared to societal members (33 % of academic members; 25 % of societal members).

However, it should be acknowledged that the number of respondents is small. The responses may also reflect the extent to which different committee members felt competent in assessing various areas of academic work. For example, societal members

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[20] It should be mentioned that the open positions were research-oriented (and not teaching-oriented).

were expected to evaluate the potential societal impact of research projects, explaining why all of them found merits in this area to be relevant. Conversely, societal members were not expected to assess the candidates' merits in research, which may partly explain why some of them did not consider these merits to be relevant in the evaluation.

Regarding the difficulty to assess the narrative profile compared to an application with a traditional CV, most respondents (nine respondents; 53 %) indicated that the narrative profile was just as easy or difficult to assess. Thirty-five percent of respondents (six respondents) found the narrative template easier to assess, while 12 % (two respondents) found it more difficult to assess.

Of YUFE- and non-YUFE academic members (12 in total, who responded to the question), 67 % stated that the narrative profile was just as easy or difficult to assess compared to an application with a traditional CV. One-fourth (three respondents) stated it was easier to assess, and 8 % (one respondent) expressed it was more difficult to assess.
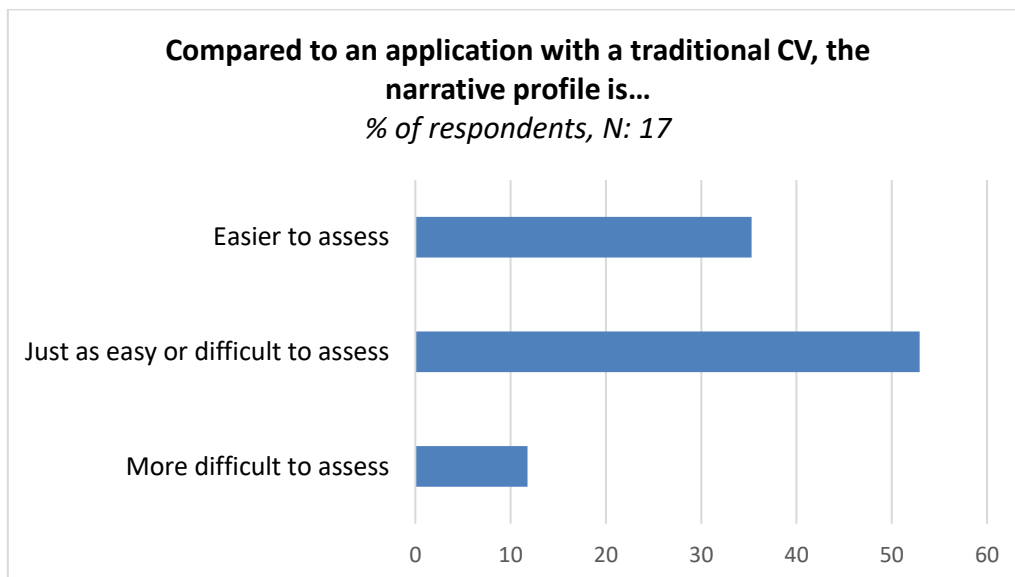

Figure 4 Easiness or difficulty to assess the narrative profile

Of the five societal members who responded to the question, three stated it was easier to assess than a traditional CV. One respondent mentioned it was just as easy to assess, while another respondent expressed that it was more difficult to assess.

Regarding the open-ended question soliciting suggestions or ideas for further improving the Structured CV Template, the following feedback was received:

- At the end of the day, I checked the narrative with the information provided in terms of education, publication, etc. So the narrative is a bit of a duplication. I would find it much more interesting to just ask the candidate about the way in which they are fit for the specific project, the relevance of the specific project and what previous experiences are important for the specific project.

- Each type of CV template has its advantages, a combination of both is probably the best.
- Limit the page numbers. For me it was too much literature. Force them to be specific. I did not answer the previous question because I was only assesing the societal impact.
- I do feel that it lacks detailed information.

5 Conclusions

Based on our own evaluation of the work undertaken in Task 4.3, there are positive outcomes, identified limitations, and avenues for enhancement. On a positive note, the successful creation of a functional tool, presenting a novel methodology for researcher assessments, stands out as a tangible achievement. The collaborative effort in WP4 resulted in the YUFE Academic Assessment Portfolio, demonstrating its practicality through a real-life YUFE-wide pilot within the YUFE4Postdocs selection process. The flexibility and possibilities for adapting the portfolio model into different assessment cases was a prerequisite for piloting and makes it possible to use it in further assessment cases. This emphasizes the importance of retaining flexibility in diverse assessment scenarios, as ready-made tools are not likely to fit in specific recruitment cases with a demand for certain types of skills. Especially in a context of European collaboration, there is a fundamental need for flexibility.

Furthermore, the capacity of the portfolio approach to provide recruiters with additional information about the candidates' motivations, strengths, and orientations, can be seen as a positive aspect. Positive feedback from the committee members affirmed the tool's effectiveness, ease of use, and overall utility. While it is fruitful to pilot with novel assessment approaches, we acknowledge the need for complementing the information base in academic recruitment by other sources of documentation and information, such as lists of publications and interviews. The use of narrative approaches does not prevent employing responsible metrics, either.

There are also limitations that should be mentioned. Primarily, the inability to gather feedback from the candidates during the pilot phase should be acknowledged. Collecting feedback from researchers that apply for positions would be needed to grasp the usefulness of the portfolio from the researchers' point of view: whether such an approach enables them to present strengths and merits in a new way, for example. Collecting feedback from researchers would also enable identifying possible needs for new kinds of staff development offers that would equip researchers to new forms of assessment. An interesting perspective of using a portfolio model relates to using it in internal development of early-career researchers, a topic brought up by colleagues at the University of Bremen.

Another limitation pertains to the narrative approach, which drew skepticism among some academics in top academic leadership positions at UEF, due to perceived subjectivity. To address this concern, while the focus is on the candidates' self-descriptions of their key achievements, subjective in principle, the narratives should be supported by empirical evidence, pointing to key outputs or activities. It is essential to balance narrative descriptions with factual evidence.

During the work of Task 4.3, suggestions were made to better acknowledge teamwork and team-based merits. This may be particularly relevant in fields, which require large research groups and support staff. While our primary objective was individual recruitment, the YUFE Academic Assessment Portfolio encompasses team efforts and merits.

In terms of future improvement, ongoing testing and development of narrative approaches are important. When piloting and implementing new approaches in assessment, we should carefully track possible biases that such approaches may create.

The dissemination of the work in WP4.3 has been extensive, reaching diverse audiences through various channels, including communication within different European, national, and institutional working groups (for the list of presentations, please see Annex 4).[21]

6 Discussion

The implications of any assessment approaches and methods, including narrative portfolios, depend largely on how academic gatekeepers, such as academic leaders and recruitment committee members, interpret and use the information. The current ambition to change research cultures, as exemplified by CoARA, see the assessment of researchers and research as crucial. The portfolio model presents a potential avenue for diversifying the assessment of researchers within university settings. According to the feedback received from the YUFE4Postdocs selection process, the committee members appreciated a holistic approach in the evaluation. It is important to note, however, that altering documentation practices does not automatically translate into changes in the valuations of universities. This includes perceptions of what activities and outputs are seen as valuable in each field.

The assessment systems within universities are connected to incentive structures at the national level. Based on the interviews conducted in Task 4.3, the assessment systems within many YUFE universities are dependent on national or regional level steering. When planning reforms, it is essential to consider the extent to which universities within diverse national-level systems can modify their internal assessment framework. This consideration is particularly pertinent in instances where universities are compelled to adhere to assessment criteria established at the national level or in cases

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[21] The open access conference papers and publications include Pietilä et al. (2022a), Pietilä et al. 2022b) and Pietilä et al. (2023b).

where they operate within a national context characterized by a metrics-oriented, performance-based funding model.

In the ongoing process of refining academic assessment systems, universities need to carefully consider how to preserve the principles of Open, Transparent, and Merit-based recruitment (OTM-R), particularly in scenarios where assessments shift towards a more qualitative orientation and involve the use of more subjective forms of documentations, such as narrative CVs. Drawing on insights from mainstream management consultancy, exemplified by figures like Peter Drucker, it is acknowledged that it is easier to manage quantitative objectives. This applies to verifying how effectively quantitative objectives have been achieved.

When working on the reliability of the knowledge base in recruitment and promotion, YUFE universities should give attention to the data requirements for the development of researcher assessments. Existing databases at national and institutional level are often incomplete. Relying solely on researchers' own descriptions would weaken the comparability and reliability of the information. Therefore, it is important to consider how to generate comparable and reliable data on researchers' diverse merits.

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Appendixes

Appendix 1. Interviews on YUFE universities' reward structures for researchers

Date, University

1. Could you first briefly describe what national/federal regulation (*e.g., legislation, accreditation systems, collective systems*) **is there related to rewards and recognition for researchers in country X?**

> 1a. In your estimation, how much leeway does this regulation leave for universities in designing reward structures for researchers?
>
> 1b. What is the funding system like?

2. What kind of an internal decision-making system does your university have related to the rewards and recognition for researchers (*e.g., a centralized system or a decentralized system with leeway at faculties or other units*)**?** Is it mostly a centralized system, are there a lot of differences between different faculties, etc.?

> 2a. Who are the key actors related to the design of rewards and recognition for researchers at your university?

3. Could you please briefly describe the reward structures for researchers, which are currently used at your university (*e.g., in recruitment, salary assessment, career development or promotion, including evaluation)***?**

> 3a. What kind of career models or incentive structures do you currently use?
>
> 3b. How are they implemented?
>
> 3c. How much do the career models and incentive structures differ between researchers in different career stages and between researchers in different disciplinary fields?
>
> 3d. What circumstances might necessitate differences in the published reward structures (*e.g., when recruiting for special or temporary positions*)?

4. What quantitative and qualitative indicators or outputs do you currently use or take into consideration when assessing research and teaching performance (*e.g., in recruitment, salary assessment, career development, promotion, including evaluation*) **at your university?**

In your estimation, what are the most important indicators or outputs when assessing research and teaching performance of academics (research publications, teaching performance, external research funding, etc.)?

> 4a. In addition to research and teaching, what other indicators or outputs are used in recruitment, salary assessment and promotion decisions at your university (*e.g., leadership experience, societal engagement, international experience, mobility*)?
>
> 4b. In academic recruitment, salary assessment, and promotion decisions, what methods do you use when assessing research and teaching performance (*e.g., bibliometrics, incl. altmetrics, peer evaluations, portfolios*)?
>
> 4c. To what extent are the indicators in recruitment, salary assessment, promotion and career development standardized?

4d. To what extent is it transparent for researchers which indicators or outputs are used in recruitment, salary assessment and promotion decisions at your university (*i.e. to what extent are the criteria and procedures openly accessible for researchers*)?

5. What are the main topics for discussion and drivers for change at your university regarding the renewal of the reward structures for researchers?

6. Does your university currently reward for researchers' activity in open science (*e.g., in recruitment, salary assessment, promotion and career development, including evaluation*)**?**

6a. If "yes", for what kind of activity does it reward *(e.g., open access publications, publishing open educational resources, opening data, impact, citizen science)* and how *(e.g., with financial rewards, symbolic recognition, career development)*?

6b. If "yes", since when has your university rewarded researchers' activity in open science?

6c. If "yes", do the rewards differ in different career stages and in different disciplinary fields?

6d. If "no", has this been discussed or considered, and if so, how?

7. Has your university signed the Declaration on Research Assessment (DORA)?

7a. If "yes", in which year?

7b. If "yes", has this resulted in any new activity or practices at your university?

7c. If "no", have you considered signing soon (*e.g., in the coming semester*)?

8. What kind of support, if any, does your university currently offer for researchers in open science (*e.g., infrastructure and support, such as training in open publishing and opening data; paying APCs; supporting parallel publishing in the university's/national open publishing archives; supporting opening data in the university's/national/international data archives*)**?**

9. What kind of obstacles are there related to the inclusion of open science and qualitative criteria as part of the reward structures of researchers at your university?

9a. Are the views within the research community and among academic and administrative leaders at your university polarized on the topic?

10. The YUFERING project includes a pilot initiative related to promotion of open science as part of researchers' reward systems and recognition. We aim to design the pilots in a way that they would be well aligned with the institutional needs of each university. **In which areas do you think the piloting of open science reward structures should focus on so that it would bring benefits for your university?**

Appendix 2. Panel outline 'Research assessment under scrutiny – towards more holistic and qualitative-oriented systems?' at the 34th Annual CHER Conference, 2022

34th Annual CHER Conference
Sustainable and Responsive Higher Education
Organised online 1st to 2nd September 2022 by the Consortium of Higher Education Researchers and the Finnish Institute for Educational Research, University of Jyväskylä

Title: Research assessment under scrutiny – towards more holistic and qualitative-oriented systems?
Keywords: research assessment, reforms, quality, metrics
Panel coordinator: Chief Senior Specialist Jouni Kekäle, University of Eastern Finland (UEF); post-doctoral researcher Maria Pietilä (UEF)
Panelists: Ingvild Reymert (Institute for Social Research, OsloMet), Alex Rushforth (Leiden University), Malcolm Tight (Lancaster University)

Panelists' short bios:
Malcolm Tight is Professor of Higher Education at Lancaster University, UK. He is Editor of the journal Assessment and Evaluation in Higher Education and of the book series International Perspectives on Higher Education Research and Theory and Method in Higher Education Research. His research interests are in mapping the state of higher education research worldwide and in the history of higher education.

Ingvild Reymert is head of studies and associate professor at Oslo Metropolitan University, and researcher at the Nordic Institute for Studies of Innovation, Research and Education (NIFU). She has longstanding interest in academic career and has analyzed how bibliometric indicators are used in the evaluation of academics in professorial recruitments.

Alex Rushforth is a researcher at CWTS. His work is located in social studies of science, with particular focus on research evaluation. He has longstanding interests in the uses of indicators in research and evaluation settings. Current research interests focus on research assessment reform initiatives and challenges of scaling-up and sustaining novel evaluation practices across university research settings.

The panel is connected to the YUFERING project, funded by the Horizon 2020. The project pilots a novel recognition and reward scheme for researchers. The scheme aims to acknowledge researchers' efforts and performance beyond the traditional quantitative criteria and metrics, including achievements in open science.

PANEL OUTLINE
Introduction by the organisers
Introduction by the panelists

First discussion topic: European process on research assessment as a context; key problems in research assessment at individual level
Critics have pointed out that the dominant research assessment systems are biased towards certain quantitative metrics in research (esp. publications in high impact journals), and that they do not sufficiently take the wide variety of academic activities into account (for example, engagement with non-academic actors or academic leadership). Many academic tasks, which are central to the academic community, such as mentoring junior colleagues or academic peer-reviewing work, go largely unnoticed when universities make recruitment and promotion decisions. There have been several initiatives to reform existing research assessment systems. These include the San Francisco Declaration of Research Assessment (DORA), the Leiden Manifesto, and the Hong Kong Principles for assessing researchers. In 2021, several prominent European science policy organisations, including the European Commission, Science Europe and the European Universities Association, launched a co-creation process to move from recommendations to implementation. The consortium published an agreement in July 2022 that includes the central directions for research assessment reforms in Europe. The European process seems to offer a momentum for reforming research assessment.

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1. Based on your expertise and knowledge, why have the reform processes been recently accelerated? What are the key drivers for change?
2. Do academic recruitment and individual-level research/academic assessment require substantial changes? If so, in what way?
3. What do you see as the biggest challenge in promoting a research assessment reform?

Second discussion topic: Assessment methods in academic recruitment and promotion processes
A common target for criticism in the dominant research assessment systems has been the (over)reliance on some ill-fitting quantitative indicators, such as the journal impact factor and the H-index. For example, the European agreement on reforming research assessment states that assessment should primarily be based on qualitative judgment, for which peer review is central. In the agreement, it says that the qualitative judgment may be supported by responsible use of quantitative indicators. However, as we know, qualitative judgment, for example when making career or funding decisions, is much more laborious than using quantitative indicators. Also, the (heavy) use of qualitative indicators is likely to make institutions and decision-makers prone to criticism of subjectivity, arbitrary decisions, and so on.

4. Based on research (and/or experience), do you see imbalance in the current assessment methods (e.g., the use of bibliometrics, peer review and other qualitative evaluation) in academic recruitment and promotion decisions?

5. Do you have any good examples of the responsible use of quantitative indicators (e.g., journal metrics) in academic recruitment processes or assessments?

6. If the assessment systems should rely more on qualitative achievements, what kind of assessment processes and criteria should universities use to identify quality and excellence in different fields?

Third discussion topic: Sustainable and responsive higher education

The topic of the conference 'sustainable and responsive higher education' stresses the embeddedness of universities and other higher education institutions in the wider society. It has been discussed to what extent researchers' societal engagement activity (e.g., engagement with non-academic actors or research communication) is acknowledged in research assessment systems. The answer has often been 'not much'.

7. How could the assessment systems better take researchers' societal engagement and outreach activity into account?

8. Do you have any good examples of possible indicators and tools to measure engagement?

Fourth discussion topic: National and institutional differences

We know from research that despite the European Union's harmonisation attempts and pressures towards homogenisation of structures, there are still large differences between different countries and institutions in the assessment systems in Europe. Differences might be considered a good thing as it guarantees a diversity of options for researchers and teachers to pursue an academic career. However, large differences might also be considered problematic in terms of the goals towards more mobility of researchers or when building a common European Research Area (ERA).

9. What are your insights, what are the pros and cons of having different assessment systems in place in the context of the European higher education (and if these are reformed in a different pace)?

Conclusion/wrap-up

Appendix 3. List of dissemination activities

No.	Event	Type of activity	Presenter(s)	Title	Date	Place	Type of audience
1	the 43rd Annual EAIR Forum (European Higher Education Society)	Presentation	Jouni Kekäle, Maria Pietilä	High-level ambitions meet institutional reality: Promoting open data at selected European universities	9–11 September, 2021	Berlin, Germany (online)	Scholarly community, policy-makers
2	the 34th Annual Conference of the Consortium for Higher Education Researchers (CHER)	Organising and chairing a panel. Panelists: Ingvild Reymert (Institute for Social Research, OsloMet, Norway), Alex Rushforth (CWTS, Leiden University, the Netherlands), Malcolm Tight (Lancaster University, the United Kingdom)	Jouni Kekäle, Maria Pietilä, Katri Rintamäki (desginers and chairs)	Panel 'Research assessment under scrutiny – towards more holistic and qualitative-oriented systems?'	1–2 September, 2022	Jyväskylä, Finland (online)	Scholarly community

3	the 26th International Conference on Science, Technology and Innovation Indicators (STI Conference)	Presentation[22]	Maria Pietilä, Katri Rintamäki (contributors included also Raúl Aguilera, Belén Fernández del Pino, Eva Méndez, Núria Bautista-Puig)	Open Science Assessment and Incentives at the YUFE Alliance	7–9 September, 2022	Granada, Spain	Scholarly community
4	Nordic Workshop on Bibliometrics and Research Policy (NWB 2023)	Presentation[23]	Maria Pietilä, Jouni Kekäle, Katri Rintamäki	High hopes and unmet expectations: adding open science elements in individual-level research assessment	21–23 September, 2022	Turku, Finland	Scholarly community
5	2nd TORCH Annual Forum	Presentation	Jouni Kekäle, Maria Pietilä	YUFERING Portfolio in researcher assessment	8 March, 2023	Dublin, Ireland	Higher education community
6	the Finnish higher education institutions' quality network meeting	Presentation	Maria Pietilä	YUFERING Project, YUFE Transforming R&I Through Europe-wide knowledge transfer	20 June, 2023	Kuopio, Finland	Higher education community

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[22] The short paper (Pietilä et al. 2022a) can be accessed here.
[23] The presentation can be accessed here.

7	the XV Symposium of the Consortium of Higher Education Researchers	Presentation	Maria Pietilä, Katri Rintamäki	Tutkimusmetriikasta laajempiin ansioihin: YUFERING-portfolio yksilötason tutkijanarvioinnissa [From research metrics to broader achievements: YUFERING portfolio in individual level researcher assessment]	15–16 August, 2023	Jyväskylä, Finland	Scholarly community
8	the 35th Annual Conference of the Consortium for Higher Education Researchers (CHER Conference)	Presentation	Jouni Kekäle	Broadening the conception of 'what counts' – researcher assessment reform as a reflection of universities' societal expectations	30 August–1 September, 2023	Vienna, Austria	Scholarly community
9	Research Service Days 2023	Presentation	Maria Pietilä, Katri Rintamäki	YUFERING portfolio in individual-level researcher assessment	21–23 August, 2023	Espoo, Finland	Higher education community
10	KOTA seminar	Presentation[24]	Maria Pietilä	YUFERING – Transforming Research and Innovation through Europe-wide Knowledge Transfer	28 August, 2023	Tampere, Finland	Policy-makers, higher education community

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[24] The presentation (in Finnish) can be accessed here.

11	the 27th International Conference on Science, Technology and Innovation Indicators (STI 2023)	Poster presentation[25]	Maria Pietilä, Katri Rintamäki	Broadening the conception of 'what counts' – example of a narrative CV in a university alliance	27–29 September, 2023	Leiden, the Netherlands	Scholarly community
12	Nordic Workshop on Bibliometrics and Research Policy (NWB 2023)	Poster presentation	Katri Rintamäki	Broadening the conception of 'what counts' – example of a narrative CV in a university alliance	11–13 October, 2023	Gothenburg, Sweden	Scholarly community

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[25] The short paper (Pietilä et al. 2023b) can be accessed [here](#).