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Recruitment of early career researchers (postdocs):
Summary of practices from selected European universities

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Background and scope

The purpose of this brief is to report on the practices of institutions when they recruit postdocs – a key stage in a researcher's career. This brief reports on differences between countries, identifies similarities and allows readers to consider whether any of the initiatives mentioned could help promote progress in other institutions. We have focused on the perspectives of five different institutions in four European countries: Freie Universität Berlin, Germany; Universiteit Leiden, Netherlands; ETH Zürich, Switzerland; the University of Edinburgh, United Kingdom (UK) and; the University of Cambridge, UK.

Recruitment practices systematically influence which types of individuals are and are not paid to conduct academic research. Even without explicit exclusion, a focus on specific metrics, achievements or characteristics can disadvantage researchers of certain backgrounds, for example, those who cannot work full-time or need to take a leave of absence (including maternity and other forms of parental leave), researchers who do not come from wealthy backgrounds or researchers who have followed a non-traditional career path. Early career researchers (postdocs) are most strongly affected by this because their roles are based on temporary fixed-term contracts.

There has been discussion about how more diverse teams can produce more innovative research (Gewin, 2018; Ruzycki and Ahmed, 2022; Yang *et al.*, 2022), and furthermore, universities also have a legal responsibility to not systematically exclude researchers of certain backgrounds. If recruitment practices only filter candidates based on a narrow notion of academic achievement, it is hard to see how the equity, diversity and inclusion (EDI) of the system can be dramatically improved.

Research is an internationally mobile sector – researchers frequently visit and take up jobs in other countries to collaborate with experts around the world (UKRI, 2022). Countries and institutions that do not adopt inclusive recruitment practices will miss out on being able to attract a diverse range of talented researchers. Furthermore, the global nature of the research labour market means that any innovations instituted in one country to improve how recruitment is handled need to be understandable to researcher applicants around the world if the innovations are to be successful in reaching a diverse pool of applicants.

Each country may have different perspectives on these issues. For example, is widening the types of hireable researchers a key concern for institutional leaders in different countries? What aspects specifically are concerning? Which arguments for addressing recruitment does each country find most compelling?

This information was collected as part of the Action Research on Research Culture (ARRC) project at the University of Cambridge. ARRC is an international collaboration investigating how changing the recruitment, development and retention of researchers could improve research culture. The ARRC project is studying whether the use of narrative CVs in postdoc recruitment could change which candidates are shortlisted, so information is provided on the use of narrative CVs in each institution.

Freie Universität Berlin (FUB) – Germany

Recruitment of postdocs – current situation

At FUB there are three types of postdoc contracts:

- Fixed-term contracts funded by the university.
- Third-party funded projects with a fixed-term contract (the term often corresponds to the duration of the project).
- Permanent positions. These fulfil specific functions in research, for example, lab supervisors or lab-machine-scientists.

In 2022, there were 621 postdocs at FUB on fixed-term contracts, 282 (45%) of whom were female.

Positions are initiated by the principal investigator (PI) and advertised on specialised portals and other media (word of mouth information within relevant research community communities is often more important than traditional media such as newspapers). Sometimes, postdocs are recruited by directly approaching the researcher, for example, for junior positions in larger collaborative projects or in cases when specialised skills/knowledge is required.

In particular research fields such as physics, PIs distribute the advertisement to, or personally approach, their scientific network and peers in the United States, and the application deadline is adjusted to accommodate applicants from the other side of the Atlantic.

The hiring procedure for postdocs is similar to those of postgraduate degree applicants and other employees. The decision on who to hire is made by a selection committee, assembled at the invitation of the PI, who is normally a professor at the university and has the final say. In rare cases, where the postdoc has to fulfil duties for more than one research group, positions are assigned to a department or institute and the decision on who to hire is made by several professors or the director of the institute.

Recruitment issues

FUB sees several advantages of employing researchers on fixed-term contracts: more flexibility for the university to establish new fields of research, needs-based support of collaborative research projects through the tailor-made selection of researchers for the respective funding phase, and flexibility in the acquisition and implementation of third-party funded projects.

The faculties at FUB say, the main issue they face when recruiting postdocs is a lack of qualified applicants for positions in certain fields. For example, for positions requiring certain skills, such as scientific computation, the University is in competition with private companies that can pay better salaries.

FUB believes there is still the need for improvement with regards to diversity and gender equality among its postdocs. The family background of applicants is skewed towards an academic rather than working class background and, in certain disciplines, there is a larger drop-out rate of female researchers. For example, in the faculty of Veterinary Medicine, women represent up to 90% of graduates. However, the faculty runs animal clinics, some of which are open to the public seven days per week, 24 hours a day. Working the night shift is unattractive for candidates looking to start a family. However, researchers are expected to work in these clinics to progress in their career. This causes more women to leave the field than men resulting in a higher proportion of men in more senior roles.

Issues for postdocs when seeking a position at FUB include the length of the selection and employment process, which is a minimum of three months and can be six to eight months, the lack of availability of affordable accommodation in the area, and residential status, work permits and language barriers for international applicants.

Freie Universität Berlin (FUB) – Germany

Narrative CV format

The German Research Foundation (DFG) – the main German public research funding body –mandated the use of its new narrative CV template from 1 March 2023 for all funding proposals (DFG, 2023). There are no rules at the national, regional or university level requiring the use of a particular CV format. The format used depends on the culture of the research discipline involved and individual choice.

The use of narrative CVs is growing slowly in appointment procedures for professorships at FUB but not at the postdoc level.

Initiatives to address recruitment issues

To encourage stronger candidates to apply for positions, FUB is considering the feasibility and impact of implementing a policy where postdocs will be offered a permanent position if they have completed their first fixed-term position. The revised national employment law (WissZeitVG) going through the legislature in summer 2024, will have – in essence – the same effect. Fixed-term positions are limited to four years after the completion of a PhD. Beyond that, a fixed-term contract must lead to a permanent position after a qualification phase of a maximum of two years. The law will only come into effect if agreed by parliament, and not until after January 2025.

FUB has been raising the profile of research projects/departments by means of reporting their work to a wider audience at conferences and on websites to attract particular postdoc profiles in individual disciplines. Certain departments also offer scholarship programmes to foster young talent, but this is not a university-wide approach.

Leiden University – Netherlands

Recruitment of postdocs – current situation

Postdocs in the Netherlands are not registered as such; the Dutch universities' job classification system (Universities of the Netherlands, 2023) only recognises the job title 'researcher' of which approximately 80% could be classified as postdocs, due to the temporary nature of their contracts.

In 2022, at Leiden University, 361 postdocs were employed, 233 (65%) of whom came from abroad.

Most postdocs start with a fixed contract for one year; after that it can be extended to a maximum of four years. Sometimes contracts are fixed for two years. Due to the collective labour agreement (Universities of the Netherlands, 2023), Dutch law prohibits more than three temporary contracts (of one year) or one four year contract.

Postdocs are recruited via an open procedure. Vacancies are posted online in the same way as they are for other academic and support staff. The PI of the hiring research group decides which candidate to hire.

Recruitment issues

Anecdotally, certain faculties/institutes (e.g. law, computer science) at Leiden have difficulty in finding postdocs due to competition from the private sector.

Due to the uncertainty in financing (postdocs at Leiden are almost exclusively funded from grant money) permanent contracts are almost never given to postdocs. A frequently used argument is that these researchers cannot get a permanent position because they are financed with temporary resources. The collective labour agreement includes a separate appendix for junior lecturers and postdocs, with the aim of improving the career prospects for these groups. In subsequent labour agreements, permanent contracts were guaranteed for postdocs who succeeded in getting a Horizon or Dutch Research Council (NWO) Talent grant (European Commission, 2024; NWO, 2024).

The main issue for postdocs seeking a position is the insecure, short-term nature of contracts, as exemplified in an article in the Leiden weekly magazine: *"Ideally, I would love to stay in academia like many of my colleagues but I am not willing to spend the next decade as an academic nomad. Furthermore, if I am being honest with myself such a plan is unrealistic as I like many other recent PhDs have a spouse with a job and school-age children. Mobility is certainly on the table but not for a two-year contract with no prospect of a permanent position afterwards."* (Goldstein-Sabbah, S., 2019).

Narrative CV format

A coalition of Dutch public knowledge institutions and funders of research runs a Recognition and Rewards (R&R) programme. R&R seeks to mitigate the negative effect traditional, bibliometric measures of academic success have on the outputs that are valued and the diversity of representation and career paths in academia.

Narrative statements reflect one common application of R&R principles. In the case of funders, this amounts to an emphasis on the narrative CV (sometimes referred to as the evidence-based CV). The NWO format depends on a researcher's career stage. Applicants to the 'Vici' scheme (NWO, 2024) – a fellowship scheme for the most senior academics at Dutch universities – must include an account of

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their leadership expertise and are forbidden from discussing journal impact factors, h-indexes and the numbers of grants or prizes awarded. As a result, the NWO believes researchers on a dynamic career path (those who have spent time outside academia or focused on teaching and outreach within academia rather than research) will be given an equal opportunity to compete for funding.

Leiden has not yet implemented an evidence-based CV format but is planning to do so in the future.

Initiatives to address recruitment issues

Leiden has launched initiatives aimed at improving equality, diversity and inclusion (EDI), for example an inclusive recruitment toolkit with guidelines on preparing job advertisements, the composition of hiring committees and interview questions. These initiatives are directed at hiring all research staff, rather than being specifically aimed at postdocs (Universiteit Leiden, 2021).

ETH Zürich – Switzerland

Recruitment of postdocs – current situation

In 2023, there were about 1,300 postdocs employed at ETH Zürich, 36% of whom were women and 92% of whom were from abroad.

There are no fixed procedures for postdoc recruitment at ETH Zürich. Most postdocs are directly recruited by their PIs. In some cases, a group of PIs or group members of a PI are involved in the recruitment process. Postdocs are financed by various sources, for example, inclusion in the funding of a professorship, project funding, or via a fellowship.

A typical fixed-term contract is for one year, and these contracts are frequently renewed. A researcher can be employed as a postdoc on fixed-term contracts for a maximum of six years, after that, promotion to the 'established researcher' role is necessary. The average stay of a postdoc at ETH Zürich is about two and a half years.

Recruitment issues

In general, the perception at ETH Zürich is that there are few issues with attracting suitable candidates for postdoc positions and that international scholars are keen to come to ETH Zürich, because of its good reputation, high salaries and high standard of living. Some internal doctoral students also stay on for a postdoc without going through the formal recruitment process. Some departments at ETH Zürich experience recruitment challenges because of competition from large, high-paying companies in the Zürich area, such as Google.

The University sees mobility as a criterion for success in an academic career because it enables early career researchers to experience diverse research cultures and develop their professional network. An internal career path is thus not the goal and is not supported. ETH Zürich highly values the principle of rotating appointments in academia, and this is one of the reasons it applies fixed-term appointments for scientific functions.

ETH Zürich does not view this turnover of researchers as causing any issues for the University. Researchers with specific essential expertise can be offered permanent contracts. In 2023, ETH Zurich employed around 300 permanent scientific staff, called senior scientists. The high turnover is seen as positive for researchers because they have the chance to develop skills and benefit from the research environment. The University benefits from the constant influx of talented researchers who bring in new ideas and expertise before they move on to more senior positions.

ETH Zürich does, however, acknowledge that short-term contracts can have a negative impact on postdocs due to a lack of secure employment and tries to mitigate this with, for example, automatic extension of contracts after maternity leave.

ETH Zürich monitors gender diversity closely. At the postdoc level, gender diversity is not so much of a concern because the gender breakdown among postdocs is roughly the same as for undergraduate and postgraduate students. It is however, concerned that the percentage of women in more senior positions is lower (ETH Zürich, 2022).

Narrative CV format

The Swiss National Science Foundation (SNSF) – Switzerland's main public research funding body – has developed a narrative CV format to be used in grant applications (SNSF, 2022). The SNSF CV contains the applicant's net academic age, which considers how career disruptions limit the amount of

time a researcher has truly had to progress their own research. Academic age is important for evaluators as it relates to eligibility criteria for funding schemes aimed at researchers at specific career stages. Evaluators also use academic age to determine how productive a researcher has been since their PhD was awarded.

ETH Zürich has not yet implemented the narrative CV format in their recruitment process but has included narrative elements in the application process for certain fellowships and awards. For example, applicants for postdoctoral fellowships require a career statement and a statement of the added value of their planned work to the host group and to the University.

Initiatives to address recruitment issues

ETH Zürich runs several fellowship programmes to attract incoming postdocs based on fixed-term funding (ETH Zürich, 2024).

University of Edinburgh – United Kingdom

Recruitment of postdocs – current situation

There are three types of academic researcher contract (grades UE07–UE08) at Edinburgh:

- Fixed-term (currently 1128 staff members)
- Open-ended with a review date (currently 329 staff members)
- Open-ended (currently 59 staff members)

Precise definitions of these terms are being considered internally, but in general terms 'open-ended with a review date' refers to posts that are externally funded, whereas 'open-ended' refers to core funded posts. There is not a single role name for these posts, but they are generally identified as 'postdocs' at the university and the term is used for all communications and access to support (such as researcher development).

Unless a certain researcher is named on a grant, posts are advertised according to the local strategies for the field they will work in. PIs also check the redeployment register (a redeployment register is a record of employees whose jobs are at risk or whose contracts are coming to an end so that they can be considered for other vacant roles at the same university) and provided there are no matches on the register, external routes are then considered. Informal networks play a part, but all applications must come through the University's recruitment process.

The recruitment process is tailored according to the role, but the hiring decision is made by a formal recruitment panel with no fewer than three people. The panel chair (usually the PI, or the named recruiter) decides who to hire against the criteria in the job description and based on the panel's collective view.

This approach is consistent with wider university recruitment strategy. However, the devolved nature of the recruitment process makes it harder to track the impact of different recruitment approaches and patterns, but this is wrapped up in the need for specialised skills during recruitment.

Another challenge is that the demographics that exist in some disciplines make it challenging to have diverse recruitment panels which can place an additional burden on people of colour or women.

Recruitment issues

Anecdotal evidence at Edinburgh suggests that the degree of specialism required for a post has an impact on the numbers applying and the ease with which suitably qualified applicants are attracted. Brexit has generally made it more difficult to fill certain posts, but this isn't especially striking for postdocs compared to other job types.

Some advertised posts are very popular and for these it's physically impossible to provide tailored feedback (there were 900 applications for a recent round of internal fellowships), which is acknowledged to be a challenge for candidates.

Narrative CV format

The Résumé for Research and Innovation (R4RI), a narrative CV developed by the Royal Society and UK Research and Innovation (UKRI) – the UK public body responsible for distributing funding – will allow activities beyond publication record and grants won to be recorded and recognised. This will provide a more rounded picture of an individual's career, their achievements and overall contribution to research. UKRI use R4RI in all their funding opportunities and support its use by organisations across the research sector. It is hoped this will encourage researchers to move from academia to industry and vice versa (UKRI, 2021).

University of Edinburgh – United Kingdom

Edinburgh does not currently use the narrative CV format and the possibility of future adoption is still under consideration. It notes that the availability of compelling evidence that it leads to better hiring decisions would be very useful.

Initiatives to address recruitment issues

The only research posts at Edinburgh with a whole university approach to recruitment are the Chancellor's Fellowship schemes. The latest adverts for these fellowships were explicit about equality, diversity and inclusion (EDI) targets (50% women and 20% from ethnic minority groups) which had an immediate positive impact on the diversity of the applicants and resulted in the successful achievement of the targets.

The initiative was partly a response to COVID-19 and the recognition that certain groups (especially women with children) were particularly impacted by the disruption, so the University wanted to create career development-centred posts to support these groups.

Although Edinburgh is proud of its progress on gender, it is still keen to address ongoing issues with engagement of candidates from other under-represented groups, especially around disability.

The lower proportion of non-white ethnic groups in Scotland means that much of Edinburgh's ethnic diversity comes from international recruitment and the University is concerned that international candidates may struggle to represent their research visions as they are less familiar with the UK funding ecosystem.

Edinburgh is planning to implement a support programme for ethnic minority groups looking to apply to the University, to complement the Women of Colour leadership programme for current staff.

University of Cambridge – United Kingdom

Recruitment of postdocs – current situation

There are over 4,000 postdocs at Cambridge, making it the University's largest staff group. Typically, about 1,000 of these are starting a new post each year.

Almost 3,000 of the postdocs at Cambridge are employed directly by the University. In addition, there are an estimated 200 postdocs employed by the Colleges, around 600 postdocs employed by the University Partner Institutions, and approximately 200 postdocs at Cambridge on visiting researcher arrangements.

Cambridge postdocs currently represent 96 different nationalities, although over a third (36%) are from the UK. Of the current postdocs, 57% identify as male and 43% as female. 57% identify as white, 30% identify as ethnic minority and 13% are undeclared.

At Cambridge, the PI ultimately has final say in who is hired, but applications are reviewed by a panel (typically the PI, plus up to three additional academics). The panel decides which candidates to invite for interview and the whole panel attends interviews.

Most postdocs are hired to work on grant funded projects awarded to faculty academics. These projects typically last about three years. However, projects can be extended, and candidates can leave posts early, so positions may need to be backfilled for less than a full three to five year 'term'. These projects are mostly in science, technology, engineering and mathematics (STEM) and clinical medicine disciplines. A smaller proportion of postdocs are in arts, humanities and social sciences (AHSS) disciplines. These postdocs are generally independent fellows, typically hired for a fixed term of three years.

There are also postdoc positions – generally referred to as Junior Research Fellows – within each of Cambridge's 31 Colleges, which each provide teaching and community services to students and Fellows from all disciplines. Postdocs can have sole or joint posts within one of the colleges.

Postdocs at Cambridge rarely have teaching requirements stipulated in their contract, but there are often a wide range of opportunities for hourly-paid and/or part-time teaching and pastoral roles which an individual postdoc may pick up. The type and volume of such opportunities varies significantly by discipline.

Recruitment issues

The recruitment issues at Cambridge align with those in the national landscape. The UK government outlines these in their *R&D people and culture strategy* where they acknowledge a lack of diversity in candidates and the difficulty of returning to academia for those working in the commercial sector, other professions or taking a career break (UK Government, 2021). There can be a belief that there is 'no way back' once a researcher has left the university. This hinders the circulation of people and the exchange of knowledge and good practice that goes with it.

Narrative CV format

As UKRI aims for narrative CVs to be used more widely in funding applications (see Edinburgh section), universities such as Cambridge are considering the merits of using narrative CVs for job applications.

The ARRC project is conducting a controlled trial to understand how CV type influences shortlisting order for applicants for postdoc positions at the university. In participating vacancies, postdocs are asked to submit both a traditional and narrative CV. Each member of the assessment panel is randomly

assigned one CV type in the first instance and is asked to rank candidates based on this one CV and their covering letter. Then, each panel member receives all of the applicant's materials and ranks candidates again. The research team analyses how the rank order of candidates changes and interviews applicants and panel members once the recruitment has finished to understand more about the experience of preparing and assessing narrative CVs. This research will help ARRC understand the scope of narrative CVs for broadening the array of candidates that are invited to interview, and potentially selected for the role.

Initiatives to address recruitment issues

A diverse recruiting framework has been developed to support the university to deliver on its commitment to EDI (University of Cambridge, 2019). The framework *"has been developed as a source of ideas, information and resources to assist institutions in embedding the principles of diverse recruitment into all selection phases from constructing the advert, through advertising, shortlisting and interviewing. Institutions are encouraged to use the framework to support a more diverse approach to recruitment processes."*

The University is also consulting on proposals for a new Academic Career Pathways scheme for researchers, with the aim of providing greater, and more transparent, reward and progression opportunities for research-only staff.

Similarities

- The vast majority of postdoc contracts at the five universities consulted are temporary, fixed-term contracts.
- The importance of informal networks in identifying potential candidates for recruitment, in addition to more formal channels, is widely acknowledged.
- In general, the PI on a research project makes the final hiring decision for postdoc roles, whether individually or as part of a panel.
- Despite being supported by national funding bodies, the universities have not yet widely adopted the narrative CV format, although they are considering whether to do so or have adopted narrative elements for certain roles.
- Several recruitment initiatives at the participating universities are based on improving EDI, although for Leiden and Cambridge this is for all appointments, whereas Edinburgh have focused on postdoc fellowships.

Differences

- ETH Zürich and FUB see the mobility of researchers as a positive aspect of the current system.
- ETH Zürich does not find it difficult to secure good quality candidates for most positions.
- FUB, Leiden and Edinburgh agree on the difficulty of finding sufficient, good quality candidates but this varies between disciplines. Certain disciplines have to compete for candidates against the private sector where pay and conditions can be more favourable.
- Cambridge is conducting research on the effectiveness of narrative CVs in broadening the array of candidates for research positions.

Conclusion

The recruitment practices at the selected universities are broadly similar. Where they differ is their view on how easy it is for them to find enough good quality candidates for postdoc positions. This also varies between disciplines within universities. Initiatives to attract good quality candidates include activities aimed at increasing the diversity of applicants (Cambridge, Edinburgh and Leiden) or offering fellowship programmes (ETH Zürich and FUB).

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Timeline

	Germany	Netherlands	Switzerland	United Kingdom
2002				The UK government publishes the "SET for success" report (Roberts, 2002), containing the first set of recommendations on career development opportunities for researchers in science, engineering and technology (SET). The UK government publishes the Greenfield report: "SET Fair" (Greenfield, S., 2002); the first of its kind on women in SET.
2005				The Athena Swan Charter established to support and transform gender equality in Higher Education and research.
2007	The WissZeitVG (academic contract law) introduced (BMBF, 2023).			
2008				Universities UK publishes "Concordat to Support Career Development of Researchers" (Universities UK, 2008).
2010				Vitae launches its "Researcher Development Framework" (Vitae, 2010a) and "Researcher Development Statement" (Vitae, 2010b).
2012			Vision 2020 position paper submitted to the Swiss Parliament by a group of young academics (Fink, A., Hirschi, C., Hirt, M., Paszkowski, U., Mayer, I. and Maeder, P., 2012; Amrhein, V., 2014).	
2014			As a result of Vision 2020, SERI conducted research on the current state of affairs in the higher education sector including understanding working conditions and statistics on gender, nationality and hierarchical level of the workforce (SERI, 2014).	
2016	Tenure-track pilot programme introduced (Federal Ministry of Education and Research, 2016). 1000 permanent junior professor positions across 86 universities will be introduced supported by federal government funds, with additional contributions provided by state governments and universities. The programme will run for 15 years.			

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Timeline

	Germany	Netherlands	Switzerland	United Kingdom
2019		Knowledge institutions and science funding bodies publish the position paper "Room for everyone's talent" (VSNU *et al.*, 2019): "to create more balance in the way we recognise and reward researchers." The proposals are being implemented in the Recognition and Rewards (R&R) programme.		Universities UK publishes its "Researcher Development Concordat"; an updated version of the 2008 Concordat. The University of Cambridge publishes its "Diverse Recruitment Framework" (University of Cambridge, 2019).
2020	The #ichbinhanna debate goes viral on German social media (Brasch and Temmen, 2021). The debate is a backlash to a video produced by the BMBF following a young biologist named Hanna and explains how her fixed-term contract is good for the science sector. It portrays the WissZeitVG as a positive restriction with no negative consequences.		Two petitions are submitted to the Federal Assembly calling for more stable working conditions and longer-term contracts for postdoctoral researchers (Petition Academia, 2022). SNSF pilots its narrative CV format for biology and medicine funding applications.	Wellcome publishes its report: "What researchers think about the culture they work in" (Wellcome, 2020).
2021	The state government of Berlin issues legislation to try and limit the use of fixed-term contracts but does not offer additional funds to underwrite more permanent contracts.			The Russell Group publish: "Realising our potential: backing talent and strengthening UK research culture and environment" (The Russell Group, 2021). The UK government publishes its "Research and development (R&D) people and culture strategy" policy paper (UK Government, 2021). UKRI introduces Résumé for Research and Innovation (R4RI).
2022	BMBF hosts a conference discussing the results of an evaluation of the WissZeitVG: "Good working conditions in science - on the way to a reform of the WissZeitVG".		The National Council votes in favour of the demands of the 2020 petitions. SNSF begins using the new SciCV format in its project funding scheme.	
2023	BMBF propose an amendment to the WissZeitVG , suggesting shorter time restrictions on fixed-term contracts. After outrage from professors and researchers the amendment is withdrawn three days later. DFG mandate the use of their narrative CV format for funding applications.	Roadmap for Recognition and Rewards is published; a more concrete action plan following the position paper (UNL *et al*. 2023)		

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