

FIN-CAM tool for researcher assessment

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Introduction

FIN-CAM (Finnish Career Assessment Matrix) is a national assessment tool designed to facilitate a comprehensive, systematic and transparent consideration of the wide range of work areas, merits and competence of an individual researcher in various assessment situations. The purpose of FIN-CAM is to better recognize the diverse range of work that researchers already do, not to add new demands to the requirements that exist.

Researchers are defined as persons who participate in various ways in professional activities aimed at producing new information, applying information in a new way, developing information or making use of it in education. Researchers' work is assessed in contexts such as recruitment situations and when deciding on career advancement, personal performance, rewarding and funding.

FIN-CAM serves as a researcher assessment tool for both the person being assessed and the assessor. The assessor, such as a supervisor, funder or HR management representative, may choose sections and criteria from the tool that are suitable for the assessment situation. Researchers can use the tool for purposes such as preparing a CV or to bring up matters that they consider to be important from the perspective of their career or skills during assessments.

When using FIN-CAM, it must be taken into account that different skills and competencies are valued at different stages of a researcher's career, and researchers are not expected to be successful in all areas of the work of researchers. The necessary skills also depend on factors such as the organisation type, discipline and position. The key criteria may be chosen from the FIN-CAM assessment tool, as suitable for the assessment situation.

This draft version of FIN-CAM now open for comments breaks down and describes skills and competence in six areas of research work. Based on the draft, the objective is to develop a user-friendly online tool that can be integrated to various CV models, information sources and systems (such as the template for researcher's curriculum vitae by The Finnish National Board on Research Integrity, ORCID and Research.fi). The tool contains suggestions on how the different areas can be described qualitatively and quantitatively in a narrative CV, for instance.

FIN-CAM supports the implementation of [the Recommendation for the responsible evaluation of a researcher in Finland](#) as well as use of [the template for the researcher's curriculum vitae](#). The development work made use of various assessment matrices as well as a survey that examined [researchers' views on diverse and responsible assessment of researchers](#). FIN-CAM promotes the international [Agreement on Reforming Research Assessment](#). A working group appointed by [the Steering Group for Responsible Assessment of the Researcher](#) is in charge of the development work.

Structure of FIN-CAM

Area of a researcher's work: The areas included in FIN-CAM are *research, development, innovation and competence activities, education and supervision, societal interaction, contribution to the research community, general skills and competencies, and background information and formal qualifications*. These areas are not presented in the order of priority.

Skills and competence: Examples of activities and merits presented for consideration in the assessment of the researcher. Researchers are not expected to be successful in all areas of the work of researchers or to have mastered all skills and competencies. The skills and competencies taken into account in the assessment and how they are weighted vary depending on the assessment situation, the stage of the researcher's career and the organisation type. Individual skills and competencies may be relevant in more than one area, even though each of them is grouped under a single area in this draft version.

Examples of qualitative and quantitative descriptions: Suggestions on how skills and competencies can be described both qualitatively and quantitatively. In accordance with the national and international guidelines on the responsible assessment of researchers, the assessment must primarily be based on qualitative assessment, while quantitative measures may be used for support.

Verification and data sources: Suggestions on and examples of how skills and competencies can be verified and documented.

Research, development, innovation and competence activities

Skills and competence	Examples of a qualitative description	Examples of a quantitative description
Scientific publications	<ul style="list-style-type: none"> ● Key scientific publications ● Role in creating the publication ● Most important pursued or achieved new openings in research ● Scientific and/or societal impact of the publications ● Open access of publications, early sharing and preregistration of research ● Novelty, originality and risk-taking ● Inter-, trans- and multidisciplinary 	<p>Number of publications per publication type</p> <ul style="list-style-type: none"> ● Peer-reviewed scientific articles: original article in a scientific journal; review article in a scientific journal; contribution to a book or other anthology; article in conference proceedings; other article, such as an editorial, letter, comment ● Non-refereed scientific articles: writing or other article published in a scientific journal written piece or other article published in a scientific journal; data article published in a scientific journal; original article published in a scientific journal; review article published in a scientific journal; contribution to a book or other compilation; article in conference proceedings ● Scientific books (monographs): independent scientific publication; peer-reviewed article, edited book or editorial work for a scientific journal or scientific edited book or scientific conference proceedings <p>Number of citations</p>

<p>Research materials and data</p>	<ul style="list-style-type: none"> ● National or international significance of the materials and data ● Discipline-specific significance of the materials and data ● Research data transferred to long-term storage ● Role in producing the research materials or data ● Ethicality and reliability of the materials and data ● Published and open data and metadata ● Following the FAIR principles with regard to data and methods ● FAIRness level of the data and metadata, such as whether the metadata/data has permanent identifiers, comprehensive metadata, meticulous documentation, high level of machine-readability etc. ● Reuse, reusability, reproducibility or replicability of the research data 	<ul style="list-style-type: none"> ● Sum of published metadata of research data and openly available research data (sets) ● Number of publications based on the materials or data
<p>Publications intended for the professional community</p>	<ul style="list-style-type: none"> ● Context and practical significance of the publications ● Open access to the publications ● Target group, language versions and formats of guides ● Peer review of the publications 	<p>Number of publications per publication type</p> <ul style="list-style-type: none"> ● Article in a professional journal, blog post ● Article in a professional edited book ● Article in professional conference proceedings ● Published development or research report or study ● Professional book ● Edited professional book, editorial work for a professional journal, edited book or conference

		<p>proceedings or scientific journal, edited book or conference proceedings</p> <ul style="list-style-type: none"> ● Development and innovation publications (universities of applied sciences)
Guides	<ul style="list-style-type: none"> ● Target group, language versions and formats of guides 	<ul style="list-style-type: none"> ● Number of guides ● Number of publications per publication type, such as a professional book, textbook or guidebook
Policy recommendations	<ul style="list-style-type: none"> ● Adoption and implementation of the recommendations ● Impacts on the policies ● Target group of the recommendations and the policy level ● Language versions 	<ul style="list-style-type: none"> ● Number of policy recommendations
Patents and inventions	<ul style="list-style-type: none"> ● Contribution to development and innovation ● Patents granted and their patent families ● Utilisation of the inventions and patents for industrial or business purposes 	<p>Number of publications per publication type</p> <ul style="list-style-type: none"> ● Patents and invention disclosures: patent application, granted patent, invention disclosure
Popular publications	<ul style="list-style-type: none"> ● Context and significance of the publications ● Significance of the publications in promoting the researcher's own societal interaction goals ● Target audience 	<p>Number of publications per publication type</p> <ul style="list-style-type: none"> ● Article in a journal ● Article in an edited book ● Blog post ● Monograph

	<ul style="list-style-type: none"> ● Open access 	<ul style="list-style-type: none"> ● Editorial work for a special issue of a popular journal, edited book or conference proceedings
Audiovisual publications and ICT applications	<ul style="list-style-type: none"> ● Context and practical significance ● Target group ● Publication platform ● Open access ● Personal role in the development work 	<ul style="list-style-type: none"> ● Number of works produced per type, such as podcasts, videos, mobile applications ● Audiovisual publication ● ICT application ● Downloads ● Number of users
Conference abstracts and posters	<ul style="list-style-type: none"> ● Scientific, professional or popular conference where the abstract or poster was presented ● Significance of the conference for the researcher's research and discipline ● Societal impact of the conference ● Open access 	<ul style="list-style-type: none"> ● Number of abstracts and posters
Research methods, tools	<ul style="list-style-type: none"> ● Development, significance and use of and open access to the research methods ● Support for colleagues in the form of research methods 	<ul style="list-style-type: none"> ● Number of research methods
Programs, software, codes, hardware, algorithms, simulations and geographic information developed	<ul style="list-style-type: none"> ● Applications of the programs etc. ● Number of publications by using the programs etc. in research ● Open access to and reproducibility of the programs, software, codes, hardware, algorithms and workflows 	<ul style="list-style-type: none"> ● Number of programs, pieces of software, codes, pieces of hardware or algorithms

Infrastructures	<ul style="list-style-type: none"> ● Context, operation and significance of the research infrastructure ● Role in building, developing and maintaining the infrastructure ● Open access to the infrastructure 	<ul style="list-style-type: none"> ● Number of infrastructures ● Number of users ● Number of research projects and outputs created based on the infrastructure
Public artistic and design activities	<ul style="list-style-type: none"> ● Context and significance of the artistic activities ● Role in the artistic activities 	<p>Number of publications and outputs per publication type</p> <ul style="list-style-type: none"> ● Published independent work of art ● Partial implementation of a work of art ● Artistic part of a non-artistic publication
Applications for and receipt of funding for research, development and innovation	<ul style="list-style-type: none"> ● Context and significance of the funding ● Role in applying for the funding 	<ul style="list-style-type: none"> ● Sought and granted funding
Research and innovation projects	<ul style="list-style-type: none"> ● Context and significance of the RDI projects ● Contribution to and role in the activities 	<ul style="list-style-type: none"> ● Number, scope and duration of the RDI development projects
Participation in collaborative consortiums or organisations	<ul style="list-style-type: none"> ● Context and significance of the collaborative consortium ● Role in the consortium's work ● Description of the activities of consortiums that seek research funding 	<ul style="list-style-type: none"> ● Number of outputs, services, events and other things produced by the consortium ● Amounts applied for and received by the consortium ● Scope and duration of the consortium
Invited lectures and presentations	<ul style="list-style-type: none"> ● Topic and target group of the lecture ● Context and significance of the lecture ● Inviting party 	<ul style="list-style-type: none"> ● Number of invited lectures

Participation in conferences	<ul style="list-style-type: none"> ● Context and significance of the conference ● Role in the conference, such as keynote speaker, presentation, panellist, poster 	<ul style="list-style-type: none"> ● Number of instances of participation in conferences
Organising conferences	<ul style="list-style-type: none"> ● Context and significance of the conferences ● Role in the conference arrangements ● National and international conferences 	<ul style="list-style-type: none"> ● Number of participants ● Number of presentations, workshops, etc.
Proficiency in and promotion of research integrity and responsible conduct of research	<ul style="list-style-type: none"> ● Integrity of the research practices in relation to research topics, data and methods, etc. ● Acting as a research integrity support person ● Teaching courses and/or creating course materials related to integrity and ethics ● Membership in research integrity committees and working groups 	<ul style="list-style-type: none"> ● Length and scope of teaching experience related to research integrity or other relevant experience ● Number of research outputs related to research integrity
Management of research permit application and data protection processes	<ul style="list-style-type: none"> ● Context and significance of research permit applications and data protection processes ● Role in things such as applying for animal testing permits, ethical reviews 	<ul style="list-style-type: none"> ● Number and scope of the different application processes

Data management	<ul style="list-style-type: none"> ● Context and significance of the data management ● Role in the data management 	<ul style="list-style-type: none"> ● Number of data management plans
Promotion of open science and research	<ul style="list-style-type: none"> ● Impact and use of open publications, preprints, machine-readable data, open notebooks, methods or educational resources ● Compliance with the FAIR principles in publishing research outputs and making them openly accessible 	<ul style="list-style-type: none"> ● Number of open research outputs ● Funding received for open science, and projects carried out
Acting as a dissertation supervisor	<ul style="list-style-type: none"> ● Disciplines and subject areas of the supervised doctoral dissertations ● Supervisory role, such as responsible supervisor, member of the monitoring group ● Ability to provide constructive criticism and feedback ● Induction into the research processes, such as publication processes, applying for funding ● Supervision principles 	<ul style="list-style-type: none"> ● Number of doctoral dissertations supervised
Acting as a preliminary examiner of dissertations	<ul style="list-style-type: none"> ● Disciplines and subject areas of the examined doctoral dissertations ● Ability to provide constructive criticism 	<ul style="list-style-type: none"> ● Number of doctoral dissertations examined
Acting as an opponent for doctoral dissertations	<ul style="list-style-type: none"> ● Disciplines and subject areas of the doctoral dissertations examined 	<ul style="list-style-type: none"> ● Number of instances of acting as an opponent

Memberships in dissertation committees or boards	<ul style="list-style-type: none"> ● Description of the committees and boards ● Role in the activities 	<ul style="list-style-type: none"> ● Number of memberships in dissertation committees or boards
Combining research-based knowledge and practical work	<ul style="list-style-type: none"> ● Context and significance of the work and practical skills developed, such as clinical work or similar 	<ul style="list-style-type: none"> ● Length of the work experience
Participation in inter-, multi- or transdisciplinary teams and projects	<ul style="list-style-type: none"> ● Context and significance of the team of project ● Role in the team or project 	<ul style="list-style-type: none"> ● Number of instances of participation ● Size of the teams and projects ● Scope and duration of the projects
National and international mobility within the research community	<ul style="list-style-type: none"> ● Context and significance of the mobility ● Any barriers to mobility periods 	<ul style="list-style-type: none"> ● Number and duration of the mobility periods
Awards and accolades received for scientific, artistic, research or professional merits or based on the academic career	<ul style="list-style-type: none"> ● For example, State Award for Public Information, National Open Science Award ● Merits mentioned in the award justifications ● Awarder ● Significance of the award or accolade, such as an organisation-specific or national award or accolade 	<ul style="list-style-type: none"> ● Number of awards and accolades

Verification and data sources

The factors involved in research, development, innovation and competence activities can be documented and verified in a number of ways. Examples of documentation: list of publications provided by the researcher, CV, narrative CV, teaching portfolio, art portfolio, conference programmes, transcript of studies, research permit decisions, supervision documents, faculty records, mentions of preliminary examiners in a doctoral dissertation, bulletins of an organisation, research funding decisions, websites associated with different infrastructure.

It is recommended that the researcher use an ORCID researcher identifier and actively maintain an ORCID account. The researcher can also make their ORCID data visible in the Research.fi service by authorizing [data transfer](#). It is key for the presenting and accessibility of published research outputs that they have a permanent identifier, such as a DOI, URN, ISSN or ISBN number.

Below are examples of databases and data sources that compile information on the various outputs of research, development, innovation and competence (RDIC) activities:

- Free databases and information sources: ORCID; Research.fi; CRIS systems; Finna; OpenAIRE; OpenAlex; Lens.org; Google Scholar; OpenCitations; Unpaywall; publication, data and software archives; Library of Open Educational Resources (aoe.fi); Espacenet; Open Editors
- Databases and information sources subject to a charge: Scopus (Elsevier), Web of Science (Clarivate), Publons (Clarivate), Dimensions (Digital Science), Altmetric.com (Digital Science), Overton, Data Citation Index (Clarivate), Data Monitor (Elsevier), patent databases e.g. Derwent Patents Citation Index (Clarivate)

Education and supervision

Skills and competence	Examples of a qualitative description	Examples of a quantitative description
Teaching experience	<ul style="list-style-type: none"> ● Diversity of teaching experience, such as at different levels of education and in different educational institutions ● Role as a teacher, such as responsible teacher or teaching assistant ● Courses planned and implemented independently or as teamwork 	<ul style="list-style-type: none"> ● Length of teaching experience in years ● Number of courses taught
Teaching skills	<ul style="list-style-type: none"> ● Student performance ● Mastery of various teaching methods ● Teaching demonstrations ● Feedback from students 	<ul style="list-style-type: none"> ● Grade earned for a teaching demonstration
Pedagogical competence	<ul style="list-style-type: none"> ● Pedagogical education, development of pedagogical skills and other demonstrated pedagogical competence, subject didactic competence ● Description of pedagogical thinking 	<ul style="list-style-type: none"> ● Amount and scope of pedagogical or other relevant studies, such as study credits
Supervision of bachelor's and master's degree students	<ul style="list-style-type: none"> ● Diversity of supervision experience, such as theses supervised at the different degree levels ● Supervisory role ● Diversity of disciplines and research topics ● Teaching of thesis seminars and courses 	<ul style="list-style-type: none"> ● Number of theses supervised
Mentoring and supervision	<ul style="list-style-type: none"> ● Context and significance of the mentoring and supervision of students, doctorate students or post doc researchers ● Mentoring and supervision principles 	<ul style="list-style-type: none"> ● Number of persons mentored or supervised

Supervision of work placements and cooperation with working life	<ul style="list-style-type: none"> ● Participation in the development of work placement models ● Building work placement partnerships and working life networks ● Acting as a work placement supervisor ● Supporting career planning 	<ul style="list-style-type: none"> ● Number of supervised students undertaking a work placement
Development and production of educational resources	<ul style="list-style-type: none"> ● Diversity and timeliness of the educational resources ● Educational resources for different levels of education and target groups ● Utilisation of feedback or evaluations received about the educational resources in development ● Formats of the educational resources ● Open education and educational resources, accessibility and compliance with the FAIR principles ● Use of the created educational resources in other courses ● Peer-reviewed educational resources 	<ul style="list-style-type: none"> ● Amount of educational resources created ● Number of downloads and users of the educational resources ● Amount of work spent on creating the educational resources
Development of learning methods and tools	<ul style="list-style-type: none"> ● Participation in working groups related to the development of teaching ● Communal development of teaching methods ● Participation in teaching development projects ● Practices developed and their significance for learning and teaching 	<ul style="list-style-type: none"> ● Amount of work spent on developing learning methods and tools ● Amount of relevant studies, such as scope of courses or number of study credits ● Articles published about the teaching methods applied and the experiences gained about them
Development of teaching	<ul style="list-style-type: none"> ● Objectives and significance of the development work ● Research-based development of teaching ● Role in working groups related to the development of teaching ● Practices and methods developed 	<ul style="list-style-type: none"> ● Amount of work spent on developing teaching ● Number of publications and reports related to teaching

	<ul style="list-style-type: none"> ● Sharing teaching practices in relation to things such as the planning, implementation or evaluation of teaching 	<ul style="list-style-type: none"> ● Number of keynote lectures or presentations ● Number of projects related to the piloting of teaching methods
Funding applied for and granted for the development of teaching	<ul style="list-style-type: none"> ● Objectives and achievements of the project 	<ul style="list-style-type: none"> ● Sought and granted amounts
Training activities outside the higher education community	<ul style="list-style-type: none"> ● Objectives and significance of the training activities ● Target groups of the training activities 	<ul style="list-style-type: none"> ● Number of training modules, such as lectures or courses ● Number of participants ● Amount of work spent on the training activities and planning them
Work related to entrance examinations	<ul style="list-style-type: none"> ● Participation in entrance examination boards ● Preparation and review of entrance examinations 	<ul style="list-style-type: none"> ● Scope of experience related to entrance examinations and time spent on such work
Management roles related to teaching	<ul style="list-style-type: none"> ● Leadership of an education programme ● Membership in a management team related to education or teaching 	<ul style="list-style-type: none"> ● Length of experience in education management positions
International or multilingual teaching experience	<ul style="list-style-type: none"> ● Diversity of the international teaching experience, such as in different countries, educational institutions, levels of education and subjects ● International guest teaching ● Languages of instruction used 	<ul style="list-style-type: none"> ● Number and scope of teaching visits and courses taught in foreign languages, such as study credits
Accolades awarded for teaching	<ul style="list-style-type: none"> ● For example, Teacher of the Year awards of individual organisations, the Finnish Open Education Influencer Award of the Secretariat for the National Open Science and Research Coordination (AVOTT) 	<ul style="list-style-type: none"> ● Number of accolades awarded for teaching

	<ul style="list-style-type: none"> ● Merits mentioned in the award justifications ● Awarding body ● Significance of the award or accolade, such as an organisation-specific or national award or accolade 	
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Verification and information sources

Teaching and supervision activities can be documented and verified in a number of ways. Examples of documentation: CV, narrative CV, certificates of employment, teaching portfolio, teaching demonstrations, certificates for courses and training modules. Documentation of teaching and supervision activities also covers examples of entrance examination questions and links to educational resources available online. Among information sources, a Library of Open Educational Resources (AOE.fi) is a key resource.

Outputs and information on teaching and supervision activities can be found in the databases and information sources mentioned in the RDIC section.

Societal interaction

Skills and competence	Examples of a qualitative description	Examples of a quantitative description
Popularisation of research	<ul style="list-style-type: none"> ● Popularisation of research in various forums, for various audiences and in various formats, such as blog posts, exhibitions, interviews, journal articles or non-fiction books ● Grants and awards for non-fiction literature 	<ul style="list-style-type: none"> ● Reach of the publications ● Number of visitors to the exhibitions or events ● Number of sales and loans of non-fiction books ● Number of interviews
Multilingual science communication	<ul style="list-style-type: none"> ● Content production and communications in different or multiple languages ● Development of scientific terminology in different languages ● Translations 	<ul style="list-style-type: none"> ● Number of publications in different languages ● Number of translations
Acting as an expert in the media	<ul style="list-style-type: none"> ● Context and significance of the expertise ● Role as a science communicator and expert for different audiences ● Insightfulness, new and original perspectives ● Integrity and responsibility ● Active participation in public debates related to the researcher's areas of expertise ● Opinion pieces, initiatives, petitions, declarations 	<ul style="list-style-type: none"> ● Number of interviews and media appearances ● Reach
Activities on social media	<ul style="list-style-type: none"> ● Context, objectives and significance of the activities ● Active participation in discussions related to the researcher's areas of expertise 	<ul style="list-style-type: none"> ● Number of reactions, instances of sharing, views, followers and comments

Positions of trust and expert roles outside the research community	<ul style="list-style-type: none"> ● Context and significance of the positions ● Description of the positions of trust and expert roles or commissions 	<ul style="list-style-type: none"> ● Number of positions
Interaction with decision-makers	<ul style="list-style-type: none"> ● Objectives and significance of the interaction ● Interaction with relevant stakeholders and networks ● Science sparring ● Pursued or proven impact of the interaction on decision-making 	<ul style="list-style-type: none"> ● Policy citations garnered by publications ● Reach on social media, such as posts on X, mentions in blogs, etc. ● Number of publications targeted at decision-makers
Citizen science and collaborative research	<ul style="list-style-type: none"> ● Role in projects or events involving citizen science or collaborative research ● Engagement of stakeholders and citizens ● Crowdsourced science, participatory monitoring ● Diversity of collaboration partners 	<ul style="list-style-type: none"> ● Number of projects or events related to citizen science or other similar things ● Number of stakeholders, partners or participants
Activities in different sectors	<ul style="list-style-type: none"> ● Activities and experience in different sectors, such as higher education, public administration, the private sector or organisations ● Context and significance of the activities ● Networks built 	<ul style="list-style-type: none"> ● Number of co-publications ● Length of work experience in different sectors ● Joint projects ● Guest lectures in education
Applying research in different sectors	<ul style="list-style-type: none"> ● Context of the application of research in different sectors, such as public administration, the private sector or the third sector ● Significance of applying research ● The researcher's role in developing the application 	<ul style="list-style-type: none"> ● References in policy citations or other relevant publications

Research-based teaching or training outside the higher education community	<ul style="list-style-type: none"> ● Context and significance of the teaching and training ● Science education projects ● Visits to educational institutions or science events 	<ul style="list-style-type: none"> ● Number of students or participants ● Scope and duration of the teaching ● Number of training modules
Integration of research or education and RDI activities	<ul style="list-style-type: none"> ● Activities in RDI learning environments, such as digital learning environments, visits to companies, workshops ● Engaging students in the projects ● Building networks and partnerships ● Representativeness of different sectors among the collaboration partners ● International partnerships 	<ul style="list-style-type: none"> ● Estimated impacts on employment ● Number of projects and funding received for them ● Number of collaboration partners
Entrepreneurship and innovation activities	<ul style="list-style-type: none"> ● Context and significance of the entrepreneurship and innovation activities ● Startup business activities ● Spin-off business activities ● Participation in business incubator activities 	<ul style="list-style-type: none"> ● Funding received ● Consolidation of business activities
Commercialisation of research	<ul style="list-style-type: none"> ● Context and significance of the utilisation of patents and inventions ● Context and significance of development and innovation publications, such as emerging and developing technologies 	<ul style="list-style-type: none"> ● Number of innovations that ended up in industrial production
Collaborations with businesses	<ul style="list-style-type: none"> ● Objectives, context and significance of the collaborations and partnerships ● Economic networks ● Role in the collaborations and networks 	<ul style="list-style-type: none"> ● Joint projects ● Guest lectures in education ● Duration of the partnerships and scope of the networks ● Research or development funding received from businesses ● Commissioned research

Science-art collaborations	<ul style="list-style-type: none"> ● Objectives, context and significance of the collaborations ● Role in collaboration projects, exhibitions, presentations or projects in which science plays the key role ● Creativity and originality 	<ul style="list-style-type: none"> ● Number of collaboration projects or outputs created through them ● Reach of the projects, such as the number of visitors ● Revenue, such as entrance tickets, fees and other sales
Development collaborations	<ul style="list-style-type: none"> ● Objectives and significance of the development collaboration projects as well as a description of these activities and the researcher's role in them 	<ul style="list-style-type: none"> ● Number of development collaboration projects
UN's Sustainable Development Goals (UN SDG)	<ul style="list-style-type: none"> ● Significance of the work or research for the promotion of the SDGs 	<ul style="list-style-type: none"> ● Number of publications linked to the SDGs in different databases or services

Verification and information sources

Societal interaction can be verified and documented in a number of ways. Examples of documentation: list of publications provided by the researcher, CV, narrative CV, links to reports and websites.

Among services subject to a charge, the most common way to track the attention garnered by a study on social media is DOI. Depending on the publisher, a permanent address leading to the publication's website may allow the attention garnered by the publication to be examined to some extent.

Outputs and information on societal interaction can be found in the databases and information sources mentioned in the RDIC section.

Contributions to the research community

Skills and competence	Examples of a qualitative description	Examples of a quantitative description
Editorial work	<ul style="list-style-type: none"> ● Context and significance of the editorial work ● Role in scientific, professional or popular editorial work 	<ul style="list-style-type: none"> ● Number of editorial boards ● Length of the editorial experience ● Number of manuscripts processed ● Circulation of the publications
Peer review of scientific manuscripts	<ul style="list-style-type: none"> ● Context and significance of the peer review work ● Making peer review statements openly accessible ● Certificates granted by publications 	<ul style="list-style-type: none"> ● Number of peer-reviewed manuscripts and other review assignments ● Number of peer reviews relative to the number of publications published by the researcher
Acting as an expert evaluator in filling open positions	<ul style="list-style-type: none"> ● Context and significance of the evaluation work ● Description of the activities ● Evaluation principles applied 	<ul style="list-style-type: none"> ● Number of expert or evaluation assignments
Peer review of funding applications	<ul style="list-style-type: none"> ● Context and significance of the reviewed funding applications ● Role in reviewing the applications ● Making peer review statements openly accessible if possible 	<ul style="list-style-type: none"> ● Number of review assignments
Participation in expert, review and steering groups	<ul style="list-style-type: none"> ● Context and significance of the expert work ● Role and responsibilities in the group 	<ul style="list-style-type: none"> ● Number of memberships and positions of trust ● Duration of the activities
Positions in the management teams or working groups of higher education institutions and research organisations	<ul style="list-style-type: none"> ● Context and significance of the positions 	<ul style="list-style-type: none"> ● Number of working groups ● Number of new operating models, policies etc.

	<ul style="list-style-type: none"> ● Role in management work and working groups ● Outputs created as a result of the activities, as well as their adoption and/or implementation 	<ul style="list-style-type: none"> ● Duration of the work
National and international positions of trust in science and research administration	<ul style="list-style-type: none"> ● Context and significance of the positions of trust ● Role in the positions of trust 	<ul style="list-style-type: none"> ● Number of positions
Participation in associations related to a particular discipline and in learned societies	<ul style="list-style-type: none"> ● Context and significance of the association or society ● Role in the association or society, such as chair, secretary, treasurer ● Contributions to the association or society's activities 	<ul style="list-style-type: none"> ● Number associations or societies ● Number of members in the associations or societies ● Duration of the activities
Participation in research, development and innovation networks	<ul style="list-style-type: none"> ● Context and significance of the network ● Role in the network's activities, such as chair or member of the board of directors ● Contribution to the network's activities 	<ul style="list-style-type: none"> ● Number of networks ● Number of members in the networks ● Duration of the activities
Participation in the activities of open science communities	<ul style="list-style-type: none"> ● Role and activities in communities such as open science communities, peer review communities, reproducibility networks 	<ul style="list-style-type: none"> ● Duration of the activities
Experience in leading a research group	<ul style="list-style-type: none"> ● Context and significance of the research group ● Description of the leadership style 	<ul style="list-style-type: none"> ● Size of the group ● Length of the experience

	<ul style="list-style-type: none"> ● Diversity and interdisciplinarity of the research group 	
Experience in leading a research project	<ul style="list-style-type: none"> ● The researcher's role in different phases of the project ● Project performance, such as continuation after the interim evaluation, achievement of objectives ● Description of the scope of the project, such as national or international ● Significance of the project for a discipline, for example ● Multidisciplinarity and interdisciplinarity ● Diversity of project partners 	<ul style="list-style-type: none"> ● Number of projects ● Number of project partners ● Project duration ● Funding received for the project
Leadership experience in research administration	<ul style="list-style-type: none"> ● Context and significance of the leadership experience, such as acting as a dean or member of the faculty administration 	<ul style="list-style-type: none"> ● Length of the work experience
Leadership experience in different sectors	<ul style="list-style-type: none"> ● Context and significance of the leadership experience, such as the private or public sector, third sector ● Role in the management activities ● Financial management 	<ul style="list-style-type: none"> ● Length of the work experience
Administrative work	<ul style="list-style-type: none"> ● Context and significance of the work 	<ul style="list-style-type: none"> ● Length of the experience

	<ul style="list-style-type: none"> ● Role in the administrative work, such as the preparation of projects and recruitments ● Project expertise in different phases of the project, such as in project administration 	
Experience in supervisory work	<ul style="list-style-type: none"> ● Supporting wellbeing at work ● Developing the work culture ● Developing supervisory skills ● Leading international teams 	<ul style="list-style-type: none"> ● Supervisory experience in years ● Number of subordinates
Leadership skills	<ul style="list-style-type: none"> ● Leadership style, values, goals and innovations ● Utilising feedback in developing leadership ● Courses and training related to leadership 	<ul style="list-style-type: none"> ● Amount and scope of relevant studies, courses and training modules

Verification and information sources

Activities in the research community can be verified and documented in a number of ways, such as with a list of publications, CV and narrative CV provided by the researcher, the websites, records and management reports of associations, the websites of projects and expert panels, various certificates and decisions, feedback surveys and survey results, and open referee statements.

Information on activities in the research community is also available in the databases and information sources mentioned in the RDIC section.

General skills and competencies

Information	Examples of a qualitative description	Examples of a quantitative description
Self-management and organisation of work	<ul style="list-style-type: none"> ● Organisation and scheduling of the researcher's work and prioritisation of responsibilities ● Ability to work under pressure ● Ability to work in challenging and uncertain situations ● Lifelong learning ● Ability to identify room for improvement and do career planning ● Efficient use of resources 	
Cognitive skills	<ul style="list-style-type: none"> ● Abstract, critical and analytical thinking ● Strategic thinking and ability to anticipate things ● Problem-solving skills ● Creativity 	
Communication and interaction skills	<ul style="list-style-type: none"> ● General communication skills ● Negotiation skills ● Mediation skills and conflict resolution ● Networking skills ● Ability to inspire and motivate others ● Ability to give and accept constructive feedback 	

Cooperation skills	<ul style="list-style-type: none"> ● Social skills ● Ability to take part in collaboration projects as well as various teams and groups ● Collegiality and participation in developing the work community's wellbeing ● Ability to build supervisory relationships 	
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Verification and information sources

General skills and competencies can be documented and verified e.g. with CV, narrative CV and certificates of employment. Information on general skills and competencies can also be found in the databases and information sources mentioned in the RDIC section.

Background information and formal qualifications

Information	Examples of a qualitative description	Examples of a quantitative description
Researcher identifiers	Researcher identifier and link, such as: <ul style="list-style-type: none"> ● ORCID ● Research.fi ● CRIS profile 	-
Degrees	<ul style="list-style-type: none"> ● Major, degree programme, provider and date of completion of the degree, with the most recent degree presented first ● What essential competence the degree demonstrates ● Grades and the strengths and competencies highlighted in the referee statements 	<ul style="list-style-type: none"> ● Number of degrees completed ● Number of study credits completed
Titles of docent	<ul style="list-style-type: none"> ● Date of issue of the title of docent, the associated discipline and university ● Strengths and competencies highlighted in statements 	<ul style="list-style-type: none"> ● Number of titles of docent

Continuing education and other training	<ul style="list-style-type: none"> Name, scope and provider of the education programme as well as its significance for the assessment 	<ul style="list-style-type: none"> Duration of the education programme and the number of study credits completed
Vocational qualifications	<ul style="list-style-type: none"> Name, scope and provider of the education programme as well as its significance for the assessment 	<ul style="list-style-type: none"> Duration of the education programme or the number of study credits completed
Employment relationships	<ul style="list-style-type: none"> Start and end date of the employment relationship and secondary occupation Current job title Employer and place of business Stage of career, such as the stage of academic career in accordance with the four-stage (I–IV) research career model, adapted if necessary 	<ul style="list-style-type: none"> Duration of the employment relationships
Grant periods	<ul style="list-style-type: none"> Purpose and objective of working under the grant 	<ul style="list-style-type: none"> Duration of the grant periods
Leaves of absence during career	<p>Optional verbal description:</p> <ul style="list-style-type: none"> Family leaves Military service Non-military service Other leave of absence 	<ul style="list-style-type: none"> Duration of the leaves of absence

Language proficiency	<ul style="list-style-type: none"> ● First language ● Proficiency level reached in other languages and issue date of certificates ● Personal assessment of proficiency, including reasons ● Listening comprehension, speaking, reading comprehension, writing ● Beginner, intermediate, advanced, proficient 	
IT skills	<ul style="list-style-type: none"> ● MS Office ● Programming skills 	

Verification and information sources

Background information and formal qualifications can be documented and verified in a number of ways. Examples of documentation: certificates of completed education, studies and degrees, diplomas, certificates of employment, language proficiency certificates, funding decisions

Below are examples of databases and information sources where background information and qualifications may be found:

- Free databases and data sources: ORCID, Research.fi, organisations' CRIS systems, Google Scholar researcher profile, Lens.org, Mendeley, Academia.edu, ResearchGate
- Databases and information sources subject to a charge: Scopus (Elsevier), Web of Science (Clarivate)