

AUDIT OF THE UNIVERSITY OF TURKU

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2.2 Research, development and innovation activities as well as artistic activities with impact

- Högskolans självvärdering

The Research Council of UTU monitors the implementation of the research development presented in the Strategy and contributes in the quality management work related to research. The Research Council has members from each faculty, and it is led by the Vice Rector for research.

The quality of research is based on peer-review processes, e.g. in publications, external funding and recruiting. A comprehensive peer-review process of research, i.e. the research assessment exercise (RAE), was executed in UTU during 2021–2022. The results of RAE are now implemented in the faculties and departments.

Members of UTU personnel are active in the national and international development actions in Open Science (OS). The research council monitors and steers the OS proceedings at UTU. UTU is committed to the <u>Finnish national Open Science policies</u> and is currently updating its <u>Open</u> <u>Science policies</u> regarding publications, research data, and research process. In 2022, UTU was placed on the highest level in the OS evaluation by the Federation of Finnish Learned Societies. UTU's support services for OS are multi-professional including expertise from research development, library, communications, IT, legal, and innovation services. The services and development actions are self-evaluated and also assessed by a panel of researchers. Based on the steering and evaluations, OS activities are enhanced both traditionally and through novel initiatives such as the <u>Open Science Accelerator</u>.

Responsible research involves producing, publishing, and assessing research results as well as the transparency, presence, and utilisation of science in society. Research ethics is at the core of responsible research. <u>UTU promotes ethically conducted research</u> that complies with the principles accepted by the scientific community. The national guidelines for research ethics and handling the suspected misconduct are listed in the *Responsible conduct of research and procedures for handling allegations of misconduct in Finland* issued by the Finnish Advisory Board on Research Integrity (TENK). UTU provides ethical review statements for research in human sciences and for medical research in order to help the researchers to conduct their research process ethically. UTU collaborates with the Ethics Committee of the Hospital District of Southwest Finland, as some of the medical research designs need to be review according to the Medical Research Act. Also, UTU has appointed research integrity advisors who offer confidential and impartial guidance for the University staff on different kinds of problematic situations related to research integrity.

UTU is a signatory in <u>the international Agreement on Reforming Research Assessment</u> and is also committed to the <u>Recommendation for Responsible Evaluation of Researcher in Finland</u>. UTU has drafted its own policy on responsible research and researcher evaluation and is in the process of implementing it by following the SCOPE model (Figure 10).

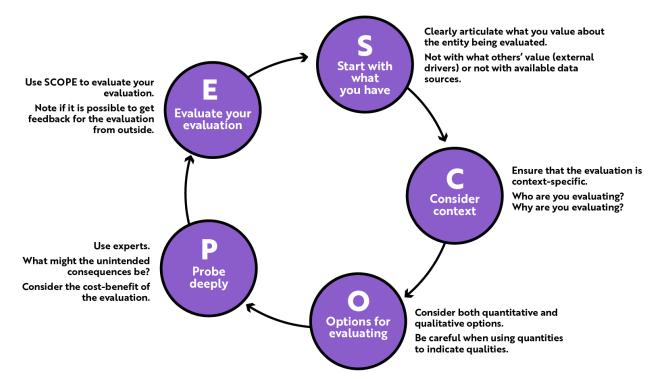


Figure 10. Scope model in responsible research assessment at UTU

There are support services for promoting the societal impact of research at UTU. The Research Affairs unit and the Library mapped the services and tools that help researchers to promote the impact of their research throughout the research process (Figure 11). By mapping the existing services, the gaps were identified and the services can now be developed further.

Research Affairs and Library are developing support services in order to promote the impact of research in: > Visibility of researchers and open access to research > Responsible and Open Science > High-quality and renewable research and research environments > Societal, economical and commercial utilisation of research > Research collaboration, co-creation and networking Impact-related services offered by the Research Affairs and Library throughout the research process commencing conducting completing > Research-to-Business (R2B) support Support for developing and protecting > Support for popularisation of science and Business Collaboration inventions and innovations science communication (blogs, social media, marketing) Support for enhancing the visibility of a > Support for writing the impact in researcher and research > Open Science accelerator and Vau mikä **ERC-PoC** applications vaikutus! -podcast > Support for open access publishing Support for Marie Curie summer schools, Support for commercialisation of ERC funding applications and international funding applications inventions and innovations > Science and HEI policy statements Impact workshops and support for drafting impact plans

Figure 11. Services and tools to promote the impact of research

UTU has *innovation scouts* in the faculties who enhance the flow of ideas, experiences and information between the research community and Innovation Services (UTU Technology Transfer Office TTO). TTO screens and pre-evaluates research results that have commercial potential. It also supports the invention disclosure and patenting process and manages UTU's patent and IPR portfolio. TTO gives guidance on protecting, developing and financing inventions and research-based businesses as well as on the protection and commercialisation of the research results. UTU also actively collaborates with the regional ecosystem providing support for the entrepreneurial activities in the research community. UTU has multiple ways of transferring technology and IP to existing companies or established start-ups or spin offs. UTU manages all its ownerships, shares and company equity through its holding company UTU Holding Oy established in 2014. Furthermore, TTO helps the faculties in global educational services.

The impact of research often arises after a long period of time and it can be difficult to identify which research/project was the origin of the impact. Still, there are many ways to monitor the indications of the impact. Some key indicators such as the idea/innovation propositions, invention disclosures, new priority patent applications, new granted patents, number of patent families, sale and licensing agreements, and start-up/spin-off companies, are followed and reported annually, for example, in the reports delivered to the Ministry of Culture and Education. As UTU is committed to the responsible evaluation, the University is also developing new ways of reporting impact and impact pathways of research. UTU has two research flagships funded by the Academy of Finland: INVEST and InFLAMES. The flagships develop new ways to enhance, monitor and

report the impact of research and these methods will be adapted to other activities in the University as well.

UTU collects information on publications, other research activities, and researcher profiles to the <u>CRIS-system</u>. The researcher profiles and publication lists are displayed on the University's website. The information is also transferred to the <u>national research information portal</u>. In addition, UTU has active and systematic newsfeeds and social media accounts highlighting the research achievements. UTU participates in various partnering events to promote knowledge/technology transfer from academia to industry/society. The website has a brief description of the technologies available for sale or licensing. UTU is currently acquiring and introducing digital tools to improve the accessibility of technologies and IP. UTU has the <u>OpenIris</u> database for booking times and services for using different research equipment. Furthermore, UTU's researchers are active in citizen science projects, such as <u>Punkkilive</u> and there are places where the public and scientist can meet, e.g. the Botanic Garden or Natural History Museum.

Strengths	Enhancement areas
Responsible research is strengthened with research ethics processes and by renewing the assessment processes of research and researchers	Committing resources to reforming research and researcher assessment, and implementing the renewed processes of responsible assessment of research and researchers that enable the recognition of the broad diversity in contributions to and careers in research
Open Science structures and support services have reinforced the open science culture in the research processes at UTU	Further developing the support services that accelerate, stimulate and facilitate researchers to put open science into practice. Focusing also on developing FAIR data services in order to increase the amount of open and reusable datasets and creating processes to support opening educational materials
Innovation Services /Tech Transfer office supports the protection and commercialisation of research results in all of the disciplines	Development of impact related services that accelerate researchers to better establish and represent the impact pathways and also the short-, mid- and long-term impacts of their research. Also, systematisation of the impact indicators and their follow-up
The research results and researchers of UTU are presented in contemporary ways. UTU's researchers are actively participating in current discussions, for example, in parliamentary hearings and tv-debates	Developing the support services and processes of collecting researchers' merits and research outputs