

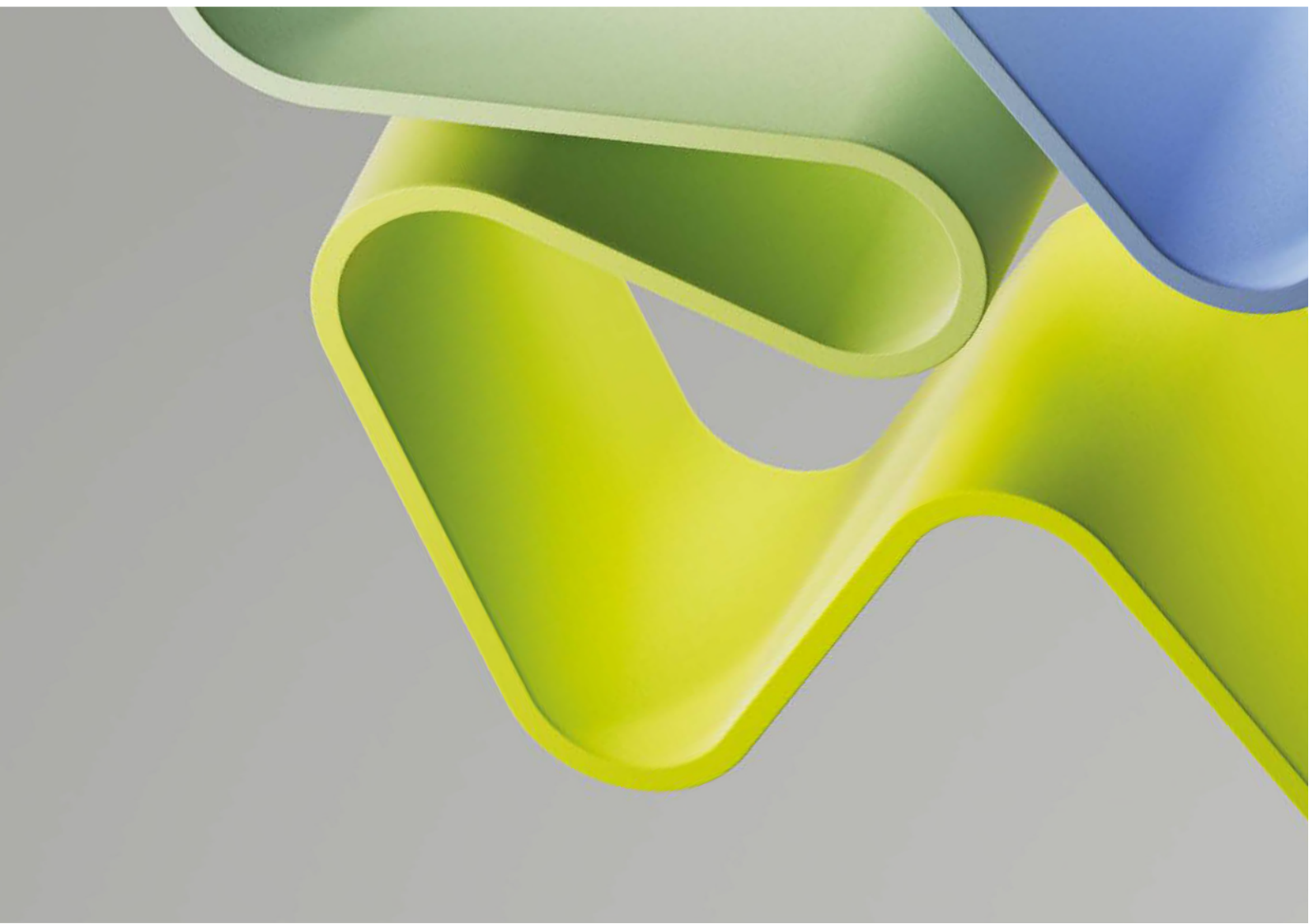
Evaluation of Life Sciences 2022-2024

Evaluation of medicine and health 2023-2024

Evaluation report

ADMIN UNIT: Department of Psychology

INSTITUTION: UiT Arctic University of Norway



Contents

STATEMENT	4
PROFILE OF THE ADMINISTRATIVE UNIT	6
OVERALL EVALUATION	8
RECOMMENDATIONS	10
1. STRATEGY, RESOURCES AND ORGANISATION OF RESEARCH	11
1.1 Research strategy	11
1.2 Organisation of research	13
1.3 Research funding	14
1.5 Use of infrastructures	14
1.6 Collaboration	15
1.7 Research staff	16
1.8 Open Science	17
2. RESEARCH PRODUCTION, QUALITY AND INTEGRITY	17
2.1 Research quality and integrity	18
3. DIVERSITY AND EQUALITY	22
4. RELEVANCE TO INSTITUTIONAL AND SECTORIAL PURPOSES	23
4.1 Higher education institutions	24
5. RELEVANCE TO SOCIETY	25
APPENDICES	26

Statement from Evaluation Committee Higher Education Institutions 2

This report is from Evaluation Committee Higher Education Institutions 2 which evaluated the following administrative units representing the higher education sector in the Evaluation of medicine and health 2023-2024:

- Department of Physical Performance, Norwegian School of Sport Sciences (NIH)
- Department of Sports Medicine, Norwegian School of Sport Sciences (NIH)
- Department of Psychology, Norwegian University of Science and Technology (NTNU)
- Department of Psychology, UiT Arctic University of Norway
- Regional Centre for Child and Youth Mental Health and Child Welfare, UiT Arctic University of Norway
- School of Sport Sciences, UiT Arctic University of Norway
- Faculty of Psychology, University of Bergen (UiB)
- Department of Psychology, University of Oslo (UiO)

The conclusions and recommendations in this report are based on information from the administrative units (self-assessment), digital meetings with representatives from the administrative units, bibliometric analysis and personnel statistics from the Nordic Institute for Studies of Innovation, Research, and Education (NIFU) and Statistics Norway (SSB), and selected data from Studiebarometeret (NOKUT). The digital interviews took place in Autumn 2024.

This report is the consensus view from evaluation committee higher education institutions 2. All members of the committee have agreed with the assessments, conclusions and recommendations presented here.

Evaluation committee higher education institutions 2 consisted of the following members:

Professor Til Wykes (Chair)
King's College London

Professor Mats Børjesson
University of Gothenburg and Sahlgrenska
University Hospital

Docent Lena Hübner
Stockholm University

Professor Louise Mansfield
Brunel University of London

Professor Sven Vanneste
Trinity College Dublin

Dr Anja Wittkowski
University of Manchester

Dr Laura Rennie, Technopolis Group, was the committee secretary.

Oslo, December 2024

Profile of the administrative unit

The Department of Psychology (IPS) at UiT consists of 15,1 professors, 19,6 associate professors, 19,8 PhD students, 10,2 assistant professors, 6 post-doctoral students and 1 researcher. The gender distribution is balanced, with the smallest share of women being professors at 34,44%, and the highest share being post-doctoral students at 83,33%. All research at IPS is initiated, led and carried out by their nine research groups. Most of the groups are of a small to moderate size (between 3 to 12 permanent members), except for the research group for clinical psychology with 22 members plus several part-time positions.

The Department of Psychology at UiT is comprised of eight research groups. Firstly, the Behavioural and Translational Neuroscience group which focus on the neurobiological basis of behaviour. Secondly, the Clinical psychology (ClinPsy) group which focus on public mental health, prevention and intervention. Thirdly, the Cognitive Neuroscience (CogNeuro) group which researches neural mechanisms of cognitive processes. Fourthly, the Behavioural neuroscience, aging and dementia (BNAD) group which focus on neuroscience, aging, mild cognitive impairment and dementia. Fifthly, the Centre for avalanche research and education (CARE) group which studies decision-making in avalanche terrain. Sixthly, the Health psychology (HEalthPsy) group which produce research-based knowledge about how people, selected groups or patients make choices and handle life situations. Seventhly, the Social Psychology (SocialPsy) group which studies intergroup relations, well-being, and work-life balance, integrating social and cognitive perspectives. Eighthly, the EPIC Cognitive Research Group which among other things has worked with metacognition.

According to policies at UiT, IPS is supposed to follow the general strategy prepared by the university. The main strategic goals of the unit, which align with UiT's strategy, are to foster interdisciplinary research, promote internationalisation and strengthen competitiveness for external funding, support basic and applied research in clinical psychology, and encourage and implement Open Science across research fields. To obtain these goals, IPS fosters collaboration and research networks, both internally and externally, provide arenas (e.g. seminars) for promoting Open Science research practices, and prioritises ambitious initiatives with high likelihood of success coming from researchers and reward groups actively seeking out funding opportunities. IPS covers all major fields of psychology. IPS's research groups have cultivated extensive national and international networks, which are integral to the institute's research endeavours. International collaborators play a pivotal role as sources of inspiration and expertise, supporting research projects with specialised knowledge, equipment, and access to expansive networks. IPS places significant emphasis on national collaborations, with extensive partnerships established with academia and the hospital sector. These national partnerships are deemed invaluable for leveraging national resources, sharing expertise on a broader scale, and contributing to the development of cutting-edge research expertise within Norway. Additionally, IPS engages in partnerships with non-academic entities both nationally and internationally, contributing to defining the applied angle of much of the research at IPS, reflecting the institute's commitment to addressing real-world issues and engaging with diverse stakeholders beyond the academic realm.

According to its self-assessment, in the future, the unit can leverage its strong expertise, robust infrastructure, unique location and diverse team for valuable networks. Access to students is considered to aid studies despite limited funding, and a friendly environment to foster collaboration. However, dispersed focus areas may hinder joint funding efforts, and post-2021 funding shifts introduce unpredictability, impacting research. Increased competition with new HEIs and geographical challenges in student and top-tier researcher recruitment add to economic uncertainty. However, positive evaluations from bodies like the Norwegian Research Council and the EU, could aid in securing more international funding, enhancing success rates. If the unit optimises technology, methods, and facilities, along with access to national resources, they could also boost research impact and competitiveness. Leveraging the institute's internal clinic is considered to offer a unique advantage by providing access to a local patient pool for research.

Overall evaluation

The strategic goals of the unit are to promote interdisciplinarity, international collaboration, carry out clinical research and Open Science. These form the strategic goals and some, but not all, are achieved. There is a lack of focus in promoting interdisciplinarity by supporting collaborations between research groups at IPS, with other faculties and external collaborators. International collaboration exists in the unit and has been supported through recruiting those already embedded in international research networks. Support for junior researchers also has influenced international collaboration but there is room for improvement. Clinical research in the university hospital (UNN) is achieved through clinical projects and is an asset. Finally, the contribution to open science has been a great success over the last ten years. Although not a strategic goal, IPS has also made a contribution to the diversity of its workforce and especially with the promotion of women but recognise there is more effort required.

Research is divided into 8 research groups (RGs) that are each responsible for education and have a single leader. The number of RGs is justified by national regulations that require a broad range of research fields to ensure a research-based education for clinical psychologists. Staff recruitment is based on scientific excellence with priority given to research groups with ambitious goals and a realistic path to achieve both competitive funding and excellent research. This strategy is an investment in some areas but a withering of other groups in terms of their contribution to the research agenda. IPS recognised that there is an issue with the size of each research group. The inherent smallness of these groups, both in terms of manpower and resources, hinders their ability to engage with cutting-edge technology, undermining the institute's capacity to make a stronger impact in the global academic arena. Compounding this is the institute's geographically isolated location in the Arctic, which proves to be a significant impediment to recruiting top-tier international researchers. The extreme environment dissuades many from considering relocation, further limiting the diversity and expertise within the institute. This wide distribution of researchers also affects other aspects of workload with the SWOT analysis suggesting that there is insufficient administrative support for research administration activities, so RGs shoulder this burden. The number of groups also complicates efforts to undertake collaborative initiatives. This fragmentation undermines the potential for impactful, joint projects that could attract substantial financial support. The positive evaluations received by several of IPS' RGs from reputable bodies such as the Norwegian Research Council and the EU underscore the institute's potential for international competitiveness. Better use of national infrastructure and the Institute's internal clinic could expand research activities, and they have not been fully explored. Establishing routines for clinical research projects within the clinic not only contributes to advancing scientific knowledge but also enhances the institute's societal impact by contributing to the development of clinical treatment and diagnosis options. Other missing opportunities is the RG on dementia that does not seem to link to those in other countries. Although from the interview it was clear that animal research is carried out it was not described in the self-assessment, and it is unclear how it links to the work of other RGs or faculties.

The strength of IPS is the breadth of the expertise and the focus on clinical research through its internal clinic. The breadth of expertise and the opportunities for collaboration offered through other faculties bodes well for more successful grant capture in the future.

However, this breadth is also a weakness as research seems to be siloed into small research groups that are vulnerable to staff changes and funding priorities. Research groups are responsible for research and education and yet it is the education that seems to lead the organisation of research. The groups are unbalanced in terms of size and that provides less flexibility for supporting research administrative activities which have increased. Larger groups would mean more flexibility to manage resources and faster responses to changes in the funding priorities of national and international research organisations. User involvement is lacking both in setting priorities and the research itself. This is important to research funders and is becoming more important so may affect potential success in funding.

Currently IPS has no general strategy for research and relies solely on the four points mentioned by the university. There needs to be an overall plan for research which has goals and targets for any of the revitalised research groups. Horizon scanning would help to identify some overarching research themes that can be contributed to by researchers with different expertise and allow new recruits (both junior and senior) to understand that their research will contribute to wider knowledge that has an impact. This then provides an impact pathway with all contributions being valued e.g. basic mechanism research being focussed on the lab to bedside, translational research from the bedside into the clinic and then more service-based research to impact on general health or mental health. These themes might also then link to other faculties. Horizon scanning would also allow the identification of research priorities that will attract larger scale external funding and may also allow international researchers to use IPS as a hub for their activities. Support for junior researchers will fuel research capacity and successes, even if these are in promotion to other universities is not a failure but is a success as it ensures a healthy pipeline for the whole of Norway and should be celebrated by IPS.

Recommendations

- Conduct horizon scanning to re-organise the research groups and focus them on areas likely to attain grant funding
- Actively involve the end users of research in determining the research strategy (e.g. treatment centres, politicians, patients etc)
- Reduce the number of research groups to provide critical mass and the potential for larger grant funding
- Develop clearer benchmarks to research groups so that they know what they are expected to achieve in a year or 5 years and this should include:
 - support for PhD students
 - career support for early career researchers
- IPS should explore further opportunities to be involved in research as it can be built not just as a principal investigator but also as a co-investigator using the geographic and cultural diversity as an asset in larger trials and studies
- Actively explore further collaborations with dissemination directed towards Norwegian and Arctic communities
- Develop a clearer model for involving end users throughout the research process, not just as research participants
- Foster partnerships with leading institutions & networks nationally and internationally, especially the national Dementia Disease Initiative
- The clinic is an asset, and it should be used more as a centre for translational research.

1. Strategy, resources and organisation of research

1.1 Research strategy

The Institute of Psychology (IPS) at the Arctic University has 15.1 Professors, 19.6 Associate Professors and 10.2 Assistant Professors as well as 6 post docs and 19.8 PhD students. The main grouping in IPS is the clinical psychology section that provides training for clinical psychology, in addition there are several other groups in psychology and applied science. The broad range of topics is described as needed for research-based education to be provided to clinical and other psychologists.

The university (UiT) has a special mandate to research societal and health challenges with a particular emphasis on arctic regions and indigenous people. As part of this mandate, IPS has a focus on addressing challenges related to mental health in the population in Northern Norway. Geography and the length of the education courses are challenging, so IPS has attempted to recruit clinical specialists with research competence to establish functioning research collaborations with regional hospitals and other institutions. IPS also has educational initiatives to strengthen the pool of qualified potential applicants (e.g., combining PhD and clinical specialization in the "dobbelkompetanse" program, although this is now under threat. In the past ten years, IPS has recruited several international researchers with strong research profiles who have established collaborations with international leading teams in their respective fields.

The department states that the unit is not supposed to develop an independent research strategy but to follow the general university strategy that has four high level areas, interpreted by IPS as: 1. **Promote interdisciplinarity** by supporting collaborations between research groups at IPS, with other faculties and external collaborators, 2. **International collaboration** by recruiting individuals who have already well-developed international research networks and supporting early career researchers to attend programs that will foster their careers (e.g., YFL program for young research talents in psychology), 3. For **clinical research** the unit has a close collaboration with the university hospital of Northern Norway (UNN) as well as other hospitals to develop mainly clinical psychology research projects, 4. For **Open Science** the IPS provides a weekly forum for research discussions, has introduced a section to the ethics review on the justification for a specific research design and introduced education on Open Science into their undergraduate teaching. The unit mainly supports basic and applied research in nine research groups (eight are in the research group evaluations) with expertise in: cognitive psychology, clinical psychology, developmental psychology, health psychology, personality psychology, social psychology, educational psychology, and neuroscience. These areas of expertise do not map directly onto the research groups.

IPS conducts basic and applied research from the study of basic neuroscientific principles in animals and humans through mental health and clinical conditions to social dynamics and applications in the workplace, education and recreational activities. This broadly distributed set of research topics and expertise at IPS implies an opportunity to study important topics from an interdisciplinary perspective even within the department that will eventually have societal impact. However, there is no clear evidence of interaction between the research groups to produce societal impact.

IPS prioritises ambitious initiatives with a high likelihood of success by providing researchers with seed funding to develop networks for research or for grants for travel, pilot projects etc. These resources are allocated based on research or researchers showing promise, and this has been successful, especially for junior staff, and has included a major translational neuroscience grant. Research is also supported through the allocation of resources to equipment e.g. for MRI.

It is unclear when decisions are made and by who on priorities for research. There is a plan from each research group presented to the head of research and the IPS Head annually on the development of research within the group. However, there is no clear overall assessment of the types of research that might gain the most traction nor who might be involved in those decisions.

The committee's evaluation:

Despite the difficulties of a university based at a distance from other research centres, IPS has amassed a large group of psychologists and clinical psychologists who are carrying out important research and have a large remit for education. However, there are many research groups and that may not provide the best opportunities for achieving the four strategic objectives at the university level, particularly inter-disciplinarity within the IPS nor with links outside the department. We understand the issue of recruiting staff to this university however, the location also offers potential research benefits in testing interventions or social conditions affecting mental health and links with physical health. The strategy for recruitment is vague and not linked to specific research groupings or questions. This has meant that IPS has grown haphazardly with no clear focus and that has produced multiple disparate research leaders with responsibility for research and education and this may not be the most efficient way of managing either education or research and does not create an environment that is conducive to internal collaboration. IPS also houses the inter-disciplinary Avalanche Research Centre although this does not seem to link into any of the research groups despite potential links in cognitive psychology (decision making, graphical and risk understanding) or translational neuroscience (behavioural economics and risk taking). It does, however, seem to link to other faculties in the university. There is also little involvement of any end users in setting research priorities. This is vital for demonstrating a commitment to societal impact as well as involvement being an expectation for project funding. This is an area that has been overlooked both in IPS and each research group. Our overall evaluation is that the administrative unit is good but that there is a variety of areas where they are excellent, and the administrative unit shows promise is there is a university commitment to these excellent practices.

The committee's recommendations:

Given the personnel available, the number of research groups should be reduced to allow IPS to focus on a few general issues of societal importance in Northern Norway. This would reduce the administrative load of the research leaders and be helpful in building further the reputation of the university. This should then increase the throughput and recruitment of researchers who will be inspired by more global scientific questions. A reduction would also provide critical mass for supporting PhD students, early career researchers and setting a strategic direction. The administrative unit should also consider involving end users (patients, carers and health and metropolitan services) in setting the overall strategy and the priorities for each research group as well as the targets and goals of the research.

1.2 Organisation of research

IPS is a department within UiT and provides education mainly in clinical psychology and has a varied interdisciplinary mix of staff carrying out research in cognitive psychology, clinical psychology, developmental psychology, health psychology, personality psychology, social psychology, educational psychology, and neuroscience. The 8 research groups and most of the eight reported were small or moderate (3 to 12 members) and only one larger at 22 members in clinical psychology. The explanation for the number of groups is that national regulations require covering a broad range of research fields to ensure research-based education for clinical psychologists. The IPS-maintained clinic provides patient access for clinical research and is used for professional training. Research is managed by a departmental lead whose role is to initiate research activities, head the internal ethics committee and oversee the research groups (RGs). Each RG is led by a single leader and the groups are responsible for both research and education supported by three departmental programme leads. An annual developmental plan describing research goals and career development is produced by each RG and is discussed with the Head of Research and the IPS Head. In addition, there are bi-monthly research fora where all research group leaders meet to discuss challenges and opportunities.

Education and research are interlinked within each research group so that there is research-led teaching. Research opportunities are provided to students. IPS maintains an internal clinic that provides opportunities for in-depth clinical training as and research projects and staff also integrate research into their education. IPS has 44.9 FTE (Professors, Associate Professors, Assistant Professors), 6 Post-docs, 19.8 PhD Students and one Researcher. Senior staff lead each research group.

UiT provides training for researchers at different levels and publishes the expected achievements to reach the next level from PhD to Professor and provides management training for junior researchers. Annual assessments at IPS focus on career development. IPS also fosters early career researchers by providing a stipend to extend MSc studies and professional students by a year dedicated to research that shortens PhD periods. For associate professors there is a strategic allocation of PhD students and women at the associate professorial stage can take part in the Prestige project to support career advances. Education courses offer assistant experience in ongoing studies and there are mobility grants to promote the development of networks and research grants. Most staff (professors and associate professors) have 50% of their time allocated to research and the rest for education, 4-year Ph D students have 75%, other PhDs have 100% and assistant professors have 20%. Productive researchers can apply for a sabbatical. This is either for a full year every four years or for one semester every two years

The committee's evaluation:

IPS clearly has expertise in different areas of psychology from basic to clinical research. Their integration of research and education is to be commended especially their applied research within their clinic that will have more immediate impacts on clinical care. A strength is the efforts made both in the university, but also by IPS, to support career development for all its staff. However, their division of research into multiple groups dilutes the potential for cross-disciplinary working especially as the only meetings between the groups are bi-monthly. The committee evaluation is very strong except for the area of research group numbers which show potential for improvement.

The committee's recommendations:

- Consider amalgamating some research groups to produce a critical mass for specific research
- Consider increasing scientific meetings across groups to gain further interdisciplinary research projects

1.3 Research funding**1.4**

Basic funding for IPS through UiT via the Ministry of Education and Research annually was 68.9 MNOK in 2024. About 35 MNOK (approx. 50%) is estimated for R&D, including salary for employees doing research. Much research funding comes nationally through research projects assessed competitively. About 11 MNOK of grants comes from national competitive or commissioned research with less than 5% coming from international sources. Many of the research groups only have national funding and some have very little funding from any source. In addition to this competitive national funding, there has been some from the Northern Norway Regional Health Authority (11.5 MNOK distributed across 10 different research projects with a clinical focus).

The committee's evaluation:

Success in funding from some EU bodies has been achieved recently but given staff expertise and the publication profile of some research groups and the various research international connections, it is surprising that more funding has not been accessed especially for clinical studies. However, the opportunity (and challenge) for IPS lies in its geography and so national and international connections to make comparisons between centres might be the key to further grant success especially in the clinical field. The committee evaluated this area as good but with the potential for improvement given their personnel, clinical focus and geography.

The committee's recommendations:

To increase critical mass by amalgamating research groups to provide more interdisciplinary research that can also share knowledge of networks useful for larger scale research.

1.5 Use of infrastructures

IPS research spans several different areas within its 8 research groups all of which rely on the use of infrastructure from human testing laboratories, animal research facilities through to complex and expensive imaging services. There has been investment locally in MR facilities and an animal lab, but it is not clear how groups access them. There is no reported participation in national and international infrastructures. Researchers at IPS can use core facilities at UiT including the Genomics Support Centre Tromsø, Biobank, Advanced Microscopy Core Facility, Preclinical PET Core Facility and Proteomics and Metabolomics Core Facility. IPS uses UiT services for sensitive data, that include data collection to storage in secure environments. Researchers also use the 7T MR centre and high-performance computing facilities as well as two dedicated computational servers for running larger computations and data-analyses at IPS. There are lab-rooms including an age-

appropriate BabyLab. These are all essential but as pointed out in the research group assessments some facilities are missing including access to MRS and, because of the size of the research groups, resources are limited within any group to produce their own infrastructure. There are animal laboratories, but no reference is made to animal research in the evaluation report.

IPS uses the UiT open data archive to ensure the long-term preservation of archived data with each dataset assigned a DOI for use in publications. By 2022 publications not available as open access had reduced from 61% to 1.1% although gold access hardly increased as a proportion of the papers published.

The committee's evaluation:

Despite IPS having access to different research infrastructures, the ones in use are all within UiT, with no reported use of national or international infrastructure. They also point out that their access to local facilities is limited. This is also mentioned as an issue in the SWOT analysis and in the research group reports. IPS is commended on its implementation of both Fair principles and Open access with a dramatic increase in the number of papers available as open access. The committee's evaluation is that this area is good with excellent use of Fair but there is room for further improvement in the access to networks.

The committee's recommendations:

To expand the use of infrastructures, including MRS as well as considering other national and international infrastructures and data. Reducing the number of research groups would also allow a critical mass and potential for sharing knowledge and access to research facilities and infrastructure.

1.6 Collaboration

IPS has 8 research groups with some staff who were recruited internationally and some of the groups have collaborations with international centres. IPS describes a strength in national and international networks cultivated by all research groups and encourages collaboration between its research groups. These collaborative networks are reported to be integral to the institute's research endeavours, serving as crucial partners in various projects. International collaborators also play a pivotal role as sources of expertise, supporting research projects with specialized knowledge, equipment, and access to expansive networks.

There is evidence of cross-Norway collaboration with universities in Oslo, Bergen, and Trondheim that support basic cognitive and perceptual research. International collaborations are numerous and diverse, including researchers in France, Poland, Japan, UK, Iceland, The Netherlands. Some of these researchers are in close collaboration while others only provide advice, but they could provide funding opportunities that enhance the quality and impact of research projects. There has been an increase in the number of international co-authors included on publications from 2013 when it was nearer 23% to 2022 when it was 58%.

Most national collaborations are local with the University Hospital of Northern Norway and Tromsø municipality which allow the clinical implementation of services as well as supporting the education of clinical psychologists and some research projects within the health sector. The CARE research group also collaborates outside the university sector with the Norwegian Avalanche Warning Service.

The committee's evaluation:

IPS should be commended on their links with researchers across the globe and with universities in Norway. The evidence from the publications is impressive. Some research groups have natural links with health services by providing clinical care as well as clinical research projects. Research groups have variable links to international collaborators with some having many fewer links even with national collaborators. Although a research group may be strong enough to access funding and produce high quality papers, an impact may be enhanced by taking part in more networks even as Co-I. This can allow access to more funding opportunities and higher impact research. The committee evaluation was that this was an area of excellence.

The committee's recommendations:

IPS should consider its strategy for research groupings to ensure that they all have access to international and national links. This might be a benchmark for a research group.

1.7 Research staff

IPS has 19.6 Associate Professors (68.4% women), 15.1 Professors (34.4% women), 10.2 Assistant Professors (60.8% women). Temporary roles (post-docs) have 83.3% women, and 19.8 PhD Students have 54.5%. Even though the gender distribution is good in general, we note that the representation of women is lowest in the position with highest prestige (Professor). This has been discussed by the administrative unit and reported in the section on diversity and representation of women so will not be repeated here. The issue is that there are similar numbers of FTEs at the Professor and associate level, but fewer at the Assistant level. Across the research groups this is also an issue as one research group, Health Psychology consists only of men, and the CARE group also have many fewer women, this is despite the statistics showing an increase in the number of women at all levels, except PhD students. At least one third at each level have obtained a foreign degree suggesting at least some international staff and/or some previous international experience.

The committee's evaluation:

The increase in women across the staff levels has allowed IPS to achieve a reasonable overall balance of gender. IPS also recognises the difficulty for women in achieving higher staff positions and has highlighted specific areas where women are supported in the university e.g. the Prestige Project. There are only a few more associate professors than assistant professors and few over the age of 62 so there may not be much opportunity for progressing with the promotion of women. The committee's evaluation is that the administrative unit is very strong in this area.

The committee's recommendations:

Further consideration should be given to the role of women both in the whole department and the research groups. The research groups will provide a springboard for women in terms of potential leadership and the department should also consider that in its potential reworking of the research group structure.

1.8 Open Science

Open Science is a strategic goal for the university and for IPS who have integrated it into educational programs and research including a weekly research seminar, a yearly seminar, the bi-monthly research forum and the ethics process. Information on regulation is provided on UiT's web portal for Open Access and the university has adopted Open data guidance including FAIR principles supported by research training as well as a UiT-owned platform for sharing research data (UiT Dataverse). IPS is actively involved in international Open Science initiatives (e.g., the Psychological Science Accelerator, the Peer Reviewers' Openness Initiative and the tACS challenge) to improve psychological scientific practices. IPS researchers are expected to pre-register their research projects, publish in Open Access journals and contribute to Open Peer review initiatives. IPS has implemented training opportunities in Open Science principles for researchers in the institute seminar series. A data-management plan is implemented for research projects from the PhD level.

The committee's evaluation:

The approach to Open Science is comprehensive and clear with training to support its implementation. The increase in open access publications is commendable with an increase from 40% in open access to nearly 99%. The committee agreed that this was an area of excellence.

The committee's recommendations:

To continue training and evaluate where possible the implementation of the guidance especially in the pre-registration of projects.

2. Research production, quality and integrity

IPS has a broad focus on basic and applied research with a variety of psychological and neuroscience disciplines, including a concentration on health prevention, treatment and promotion. The research groups report varying sizes with most concentrating on national impact. Some are very small and due to likely retirements may not be viable, whereas others (clinical psychology) are very large. Only one group has more of an international focus - social psychology.

The scientific focus is distributed over the research groups that also have the remit to provide education. The split of research and education is also very unbalanced in some groups as they contain more junior members of staff. There is some overlap between groups e.g. cognitive and educational psychologists studying the mechanisms of effective learning through memory processes etc., and this also overlaps with the CARE group research, but there is little evidence of sharing this expertise. Groups cover a

developmental trajectory with developmental psychologists studying early communication in different cultural contexts and the ageing group studying cognitive functioning, and motor learning. There is some research that might lead to a societal impact, e.g. Behavioural and translational neuroscience, but other groups appear to struggle with any translation or potential impact. This is surprising as the largest research group focusses on clinical issues, but their publication impact is modest, and they do not seem to involve end users as advisers in their studies. Societal impact might be improved by reducing the number of groups and/or projects within each group, support for more interaction between groups, a focus on external and international funding as well as introducing end users into the research. An unconvincing reason for the plethora of research groups is to support education that provides key income. Larger groups might also provide the critical mass to apply for larger external grants as no group currently has a large enough income to support translational research.

IPS follows the policies and procedures at UiT with respect to good research practice and approved research ethical norms and it is the responsibility of individuals to be familiar with them. UiT also has routines for risk assessment of research projects and to follow up on undesired occurrences happening to research participants during the research. Supervisors provide basic ethical rules of research to guide their students. IPS has a local ethics committee (IPS-REC) that offers advice on research ethics and handling of research data and provides ethical approval. There are also methods for reporting research integrity problems on the UiT website and a procedure for following them up. In terms of outputs, some publications are in higher impact journals (e.g. Nature Human Behaviour) but other journals in the statistical report (e.g. Frontier's journals) are less influential internationally even if they do achieve open access. Highly cited (in top 10%) publications have reduced over time to 7% in 2021. In recent years the higher cited papers were in a variety of journals but several in dementia and stroke. These publications have an increased share of international co-authors from 22.7% in 2013 to 57.5 in 2022.

2.1 Research quality and integrity

This part includes one overall evaluation of each research group that the administrative unit has registered for the evaluation. The overall assessment of the research group has been written by one of the 18 expert panels that have evaluated the registered research groups in EVALMEDHELSE. The expert panels are solely behind the evaluation of the research group(s). The evaluation committee is not responsible for the assessment of the research group(s).

Research group - *Behavioural, aging and dementia*

Overall, the BNAD group is clearly in a transition phase, from previously working mainly on sexual behaviour to aging and dementia research. Due to this transition, the research group is currently not as strong as it could be, and it remains to be determined whether they can establish themselves as a research group in this area within Norway. As a strength, BNAD has still a lot of flexibility to adapt its research strategy, due to its small size. However, currently the weaknesses outweigh the strengths. In particular, it is not clear how well the group is aligned with the institutional priorities of their host institution. Similarly, the alignment with national aging and dementia research is not strong and needs to be improved. All this is reflected in the research output, which is currently not as strong as it could be. Finally, the societal impact of the research, in particular user involvement is

virtually non-existent and should be urgently addressed, in particular for this research area which has significant societal implications.

Research group - *Behavioural and Translational Neuroscience (BTN)*

The BTN group, which was formed as recently as 2018, has interests that span research on brain reward systems and behavior. This is a large area of interest that reaches towards the evolutionary core of the ancestral systems that promote animal and human survival. BTN holds the potential to make future contributions that impact significantly on the field. BTN is relatively small numerically speaking, with only three Principal Investigators one of which is an independent researcher currently on a fixed term contract. One inevitable outcome of a small group size covering a large area of research interest is that strength in depth is restricted, making their respective individual research interests appear less cognate. Nevertheless, this nascent group has been well-funded and productive in terms of publications. BTN engages in several collaborations both nationally and abroad and these collaborations have proven to be a fruitful way to diversify research interests, which will influence future avenues of activity. It is important that BTN nurtures external collaborative links. At present the group members are less well integrated into the national research infrastructure, but they are well equipped to increase participation in the future, including senior management roles, when appropriate opportunities arise. BTN makes valuable contributions to the host institution and absorbs a significant amount of teaching on different levels. In return the group has received grant support from Tromsø, which will need to continue and arguably increase in the future. There is a sense that the BTN group is at a crucial point in its development and that the efforts it makes are arguably spread too thinly across multiple tasks.

Research group - *Clinical Psychology*

The group provides an important research informed service to area of clinical training in Norway by bringing together clinically relevant research into one group to enhance research competence among clinical psychologists and promote clinical research in adults and children. The group is relatively large compared to similar groups (in terms of overall numbers, noting an FTE range between 0.20-100% from Lecturer to Associate Professor). The gender-based profile of the group is to be commended. In relation to the size and diversity of the whole group with 10 projects reported in this self-assessment, the number of PhD candidates is modest, and student research is not otherwise detailed (e.g. the number of master's candidates). The group could enhance and develop its overall research and impact profile by building a more consistent program of externally sourced research funding, developing a more expansive profile of research outputs/publications in international calibre outlets and engaging external input through a purpose/objectives-aligned scientific and societal impact advisory board. Overall, the group has evidenced a competitive profile in terms of research outputs and research funding (mainly regional and nationally sourced). There is an impressive emphasis on postgraduate training with a strong mission to promote research-driven clinical training. Societal impacts are evident and aligned to the core research to clinical practice/training objectives of the group.

Research group - *Cognitive Neuroscience*

Strengths:

Considering the small funds, the scientific output in terms of internationally relevant papers is very good. Their work is relevant to the national and international community of cognitive neuroscience.

Weaknesses:

The key weakness is mostly national collaboration with little evidence of international networks and small projects that receive minimal internal funding and hence do not have a wider impact or translational value. Another weakness is that they conduct very little translational science which they want to foster in the future.

Research group - *Educational Psychology, Inquiry and Cognition*

The strength of the group is the clearly defined focus and that the described ongoing research projects all are in this focus. The group also have a clearly defined strategy to reach the goals. The group has several collaborations, among them several interdisciplinary. Another strength is the societal contribution, mostly nationally.

The weakness is the low amount of external funding. Another weakness is that the group has no postdocs. Overall, the number of young researchers is few. The group members seem to be involved in several external projects which might weaken the groups possibilities to collaborate. Another weakness is that some of the described ongoing projects lacks funding.

Research group - *Health psychology*

Strengths of the Health Psychology research group are that the group appears to be closely integrated with the administrative unit. For example, there are references to the administrative unit's terms of reference in the description of the group's benchmarks. Also, there appears to be a strong focus on supervising PhD students. Weaknesses are that the group faces a transition period with an impending retirement and is likely vulnerable as a result, the RG's very informal leadership style seems to be based on personal trust, which is not without problems during a transition period with instability, and the lack of early career researchers limits opportunities for sustainability.

Research group - *Human factors in high-risk environments CARE*

Strengths of the Human factors in high risk environments research group are regional and applied research projects using innovative data collection methods, strong educational influence on PhD students regarding decision making under uncertainty and innovation and public outreach, clearly articulated research strategy which corresponds well with the UiT's benchmarks, a clear drive for dissemination and education of the public via podcasts and media and growing international collaborations, increased international funding and industry/other private sector sources funding. Weaknesses are the unclear structure and organisation in terms of regular meetings to review their achievement of goals and the integration of all team members (noted the self-assessment refers to this being a 'research network') and the unclear involvement of end users or the public in the development, conduct, analysis and dissemination of their research projects.

Research group - *Social Psychology*

A strength of the Social Psychology RG is that it operates as a strongly engaged unit with good contacts (both nationally and internationally), many publications of societal relevance (applied research), and a focus on disseminating findings to society. Furthermore, the five elected publications are all published in good journals and the majority of the dissemination activities they highlight are not in Norwegian, which suggests international relevance of the research. A weakness is that the group, due to its size, has limited resources, which can make them vulnerable to changes in funding. Their very broad research profile can result in each researcher being "alone" in his/her research. Furthermore, the mentioned challenges between the faculty of health and the basic/applied social psychological oriented research

group need to be addressed and while the senior group is involved in many projects, they are only PI in one project.

3. Diversity and equality

The largest group of researchers are in permanent employment. About one third of the Professors are women (15.1 FTE; 34.4%), and there is a high representation of women at the Associate Professor level (19.6FTE; 68.4% women) like the Assistant Professors (10.2 FTE; 60.8% women). There has been a change from the data provided in 2013 to 2021 as women have been more represented in the associate and professorial levels. This is likely to have been a result of IPS supporting the promotion of women by encouraging them to take part in the PRESTIGE project and the allocation of resources, responsibilities, and PhD students to those aspiring to attain promotion. At the post doc level and the PhD level representation is balanced (6FTE; 83.33% women, 19.8FTE; 54.5% women respectively) and in the statistical report this has increased for post docs but not for PhD positions. About one third at the full professor level have a foreign PhD (proxy for non-Norwegian origin) and this has not changed over 8 years but there is now nearly 50% at the Associate Professor level who have a foreign PhD. IPS is working towards diverse representation in committees, leadership roles, and other significant functions. They also place special emphasis on appointing female researchers and fostering approximately equal gender distribution across research groups. However, they note that this is an aspiration rather than an actuality and it is noticeable that the research group reports also comment on the gender balance. The average age has not changed although there has been a decrease in the number of people over 62 years at the professorial level.

The committee's evaluation:

There are many positive strategies to help with diversity and equality, and these are producing good results, but not really affecting the overall diversity especially in research groups. IPS has also come to that conclusion. Although the average age has not changed as there are fewer people who are over 62 years this must mean that younger people have been promoted showing some turnover. The committee thought this was an excellent contribution.

The committee's recommendations:

Given the lack of diversity at the highest level, IPS should continue with their current support for the promotion of women from the Associate to the full Professor level as well as making diversity a benchmark for research groups.

4. Relevance to institutional and sectorial purposes

The sector-specific goal is to provide both high quality research and education. The Ministry for Research and Education also requests research to improve welfare so clinical projects often focus on increasing psychological welfare in the local population.

The clinical research group contributes to strengthening local psycho-social services (PsykHjelpe). These projects contribute to knowledge about effective interventions to increase psychological well-being in general. Educational psychology research includes investigations on how teaching interventions and procedures influence learning success in higher education and some research is locally focussed e.g., teaching to improve learning of anatomy in nurse education). All the MSc courses involve research training and a thesis or course on research together with the Student Research Programme have been successful in producing publications and PhD students.

The university has policies and training for commercialising research for potential entrepreneurs. This is a relatively new initiative that includes grants for innovations for master's and PhD students. So far IPS has not made any attempts at commercialisation and says that although staff are motivated there is little opportunity in a psychology-oriented department. The Case Study does describe a potential commercialisation opportunity. As there have been no activities supporting commercialisation, motivation is low but there is evidence of some innovation and IPS reports that there are few opportunities in psychology. UiT has a programme for Entrepreneurship and Talent with innovation grants for master's and PhD students, UiT also has an innovation fund for with 2-year innovation positions.

The committee's evaluation:

The contribution to educational research and clinical research is to be commended but in the description of this research, impact seems to stop at the publication stage rather than being implemented more widely in Norway. Given that IPS has a large clinical program there is not much evidence of how that research has had an impact on the welfare of the local community. Many projects are run from the supported clinic, and this would provide an opportunity for a comparison of outcomes from a relatively rural community with a mixed ethnic and cultural structure. There is no evidence of commercialisation, and it is assumed that psychology would not provide these opportunities. The committee thought this was a very strong area.

The committee's recommendations:

IPS should consider the impact pathway in terms of how research reaches policy and practice. This would involve researcher education in terms of planning research so that there is a clear path towards implementation in health, employment, education, and social care. This might begin with a consideration of what might be implemented more widely, and that the local population might find appealing e.g. digital therapy provided to the rural community that IPS serves. In the wider commercial field, apps and online approaches have often been commercialised by psychology researchers who also take part in innovating new technologies such as virtual reality. IPS should consider the potential for highlighting the potential of these approaches.

4.1 Higher education institutions

Educational psychology research includes investigations on how teaching interventions and procedures influence learning success in higher education and some research is locally focussed e.g., teaching to improve learning of anatomy in nurse education. All the MSc courses involve research training and a research thesis. The master's thesis forms the core of the program and is supplemented by two mandatory courses and four elective courses. The mandatory introductory course provides details of how the Department offers supervision, and ongoing research programs that students can link to. This course helps to match student interests to research at IPS. The Student Research Programme provides a funded year when the students prepare their first scientific article and become eligible for a shortened PhD program. This course has been successful in producing publications and PhD students but seems under the threat of closure. The research published in internationally recognised peer reviewed journals is also added into the educational programme.

The committee's evaluation:

The educational responsibility to produce excellent researchers is fully covered by the different courses, links to research groups and opportunities for continued study and presentation of research for publication. It is also impressive that educational research has a direct focus on learning and is there programme for matching research interests to students. The committee thought this area was very strong with an excellent master's student project that integrated with the PhD.

The committee's recommendations:

The committee were impressed by the focus on research both within educational psychology but also within the programs themselves. We have no specific recommendations apart from continuing the one-year Student Research Programme.

5. Relevance to society

IPS has a commitment to advancing knowledge in mental health with projects such as ModHap that explores and models human happiness and the clinical research that tackles psychopathologies like Alzheimer's disease, depression, and trauma, thereby contributing to Sustainability Goal 3 Good health and well-being. IPS educational psychology research contributes to Sustainability Goal 4 (Quality education) and research on the causes and consequences of gender inequality aligns with Sustainability Goal 5 (gender equality). Many of the issues studied by the clinical, health, developmental and social groups contribute to building prevention strategies as well as developing interventions to improve mental health. A new student mental health focus should also allow research to be of more immediate benefit in an area that is a current societal challenge. It would be helpful for IPS to understand the potential impact pathways for their research so that it not only fits into areas of importance for the SDGs but also is aimed at a goal that has sustainable impact on the society. The committee judged this to be a very strong area. To further improve, the unit could develop an impact pathway approach that allows the planning of research outputs to feed this pipeline.

Comments on impact case 1 Auto ATES – Automatic classification of avalanche terrain

Snow avalanches lead to about 140 fatal accidents in Europe and Northern America, most related to recreational activity and triggered by victims. So, they are not random but result from less-than-optimal decisions. Strengthening people's ability to make better decisions especially the choice of terrain through education and awareness may reduce their frequency. The Norwegian Avalanche Warning Service and CARE developed an automatic avalanche terrain classification to guide terrain choices and is implemented in avalanche maps and used by most avalanche warning services across the world. The underlying research has included members of IPS and PhD students.

The underlying algorithm has been implemented into different products, maps and safety systems. The ATES classification informs hazard ratings so users know the challenges they will encounter while navigating different types of terrain. It might also be useful for safety management for workers that need to navigate avalanche terrain – like powerline workers, armed forces, reindeer herders, tourists or local skiers. Importantly the AutoATES model is implemented in Norwegian avalanche warning service maps and toolbox. Although the impact is in its early stages there is potential for further research to justify the impact with evidence that people will use or follow the map, the accuracy of the predictions, and the effect of different choices are for individuals.

Appendices

Evaluation of Medicine and health 2023-2024

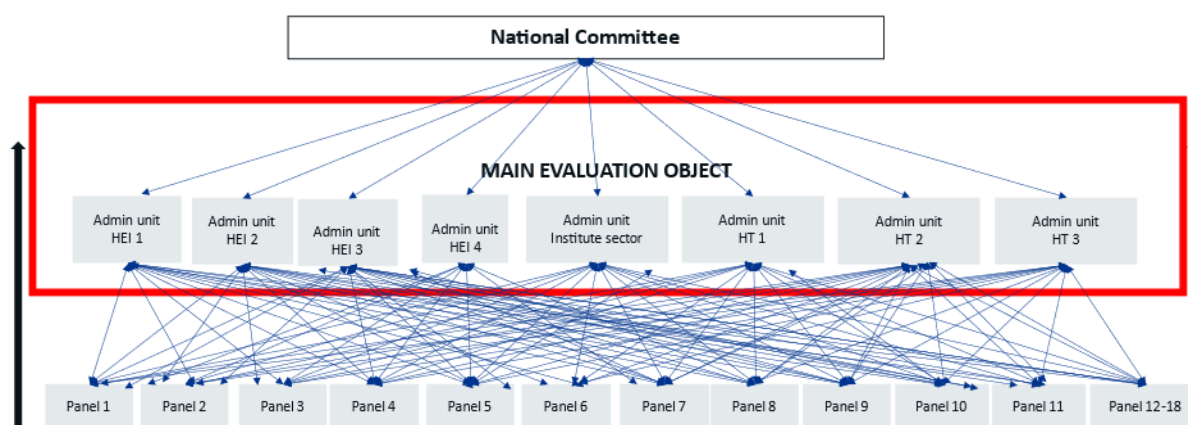
By evaluating Norwegian research and higher education we aim to enhance the quality, relevance, and efficiency. In accordance with the statutes of the Research Council of Norway (RCN), the RCN evaluates Norwegian professional environments to create a solid and up-to-date knowledge base about Norwegian research and higher education in an international perspective.

The evaluation of life sciences is conducted in 2022-2024. The evaluation of medicine takes place in 2023-2024. The evaluation of biosciences was carried out in 2022-2023. The primary aim of the evaluation of life sciences is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), the institute sector and the health trusts. The evaluation shall result in recommendations to the institutions, the RCN and the ministries.

Evaluation of medicine and health (EVALMEDHELSE) 2023-2024

The evaluation of medicine and health includes sixty-eight administrative units (e.g., faculty, department, institution, center, division) which are assessed by evaluation committees according to sectorial affiliation and other relevant similarities between the units. The administrative units enrolled their research groups (315) to eighteen expert panels organised by research subjects or themes and assessed across institutions and sectors.

Organisation of evaluation of medicine and health 2023-2024



The institutions have been allowed to adapt the evaluation mandate (Terms of Reference) to their own strategic goals. This is to ensure that the results of the evaluation will be useful for the institution's own strategic development. The administrative unit together with the research group(s) selects an appropriate benchmark for each of the research group(s).

The Research Council of Norway has commissioned an external evaluation secretariat at Technopolis Group for the implementation of the evaluation process.

Each institution/administrative unit is responsible for following up the recommendations that apply to their own institution/administrative unit. The Research Council will use the results from the evaluation in the development of funding instruments and as a basis for advice to the Government.

The web page for the evaluation of biosciences 2023-2024: [Evaluation of medicine and health sciences \(forskingsradet.no\)](https://forskingsradet.no/en/evaluation-of-medicine-and-health-sciences)

Se vedlagte adresseliste

Vår saksbehandler / tlf.	Vår ref.	Deres ref.	Sted
Hilde G. Nielsen/40922260	23/3056	[Ref.]	Lysaker 28.4.2023

Invitasjon til å delta i fagevaluering av medisin og helsefag (EVALMEDHELSE) 2023-2024

Vi viser til varsel om oppstart av nye evalueringer sendt institusjonenes ledelse 9. november 2021 (vedlegg 2).

Porteføljestyret for livsvitenskap har vedtatt å gjennomføre fagevaluering av livsvitenskap 2022-2024 som to evalueringer:

- Evaluering av biovitenskap (EVALBIOVIT) (2022-2023)
- Evaluering av medisin og helsefag (EVALMEDHELSE) (2023-2024)

Hovedmålet med fagevalueringen av livsvitenskap 2022-2024 er å vurdere kvalitet og rammebetingelser for livsvitenskapelig forskning i Norge, samt forskningens relevans for sentrale samfunnsområder. Evalueringen skal resultere i anbefalinger til institusjonene, til Forskningsrådet og til departementene. Den forrige fagevalueringen av biologi, medisin og helsefag ble gjennomført i 2010/2011 (vedlegg 3).

Fagevaluering av livsvitenskap retter seg mot UH-sektor, helseforetak og instituttsektor (vedlegg 4). Forskningsrådet forventer at aktuelle forskningsmiljøer deltar i evalueringene, selv om beslutning om deltagelse gjøres ved den enkelte institusjon. Videre ber vi om at deltakende institusjoner setter av tilstrekkelig med ressurser til å delta i evalueringsprosessen, og at institusjonen oppnevner minst én representant som kontaktperson for Forskningsrådet.

Invitasjon til å delta i fagevaluering av medisin og helsefag (2023-2024)

Fagevaluering av medisin og helsefag er organisert over to nivåer (vedlegg 4, side 11). Internasjonale ekspertpaneler vil evaluere forskergrupper på tvers av fag, disiplin og forskningssektorer (UH, institutt og helseforetak) etter kriteriene beskrevet i kapittel 2 i evalueringsprotokollen (vedlegg 4).

Panelrapporten(e) for forskergruppene vil inngå i bakgrunnsdokumentasjonen til forskergruppen(e)s administrative enhet (hovedevalueringsobjektet i evaluering), og som vil bli evaluert i internasjonale

sektorspesifikke evalueringskomiteer. Evalueringskriteriene for administrative enheter er beskrevet i kapittel 2 i evalueringsprotokollen (vedlegg 4).

Innmelding av administrative enheter og forskergrupper – frist 6. juni 2023

Administrative enheter (hovedevalueringssubjektet i evalueringen) – skjema 1

Forskningsrådet inviterer institusjonene til å melde inn sine administrative enhet/er ved å fylle ut skjema 1. Definisjonen av en administrativ enhet i denne evalueringen er å finne på side 3 (kap 1.1) i evalueringsprotokollen (vedlegg 4). Ved innmelding av administrativ/e enhet/er anbefaler Forskningsrådet institusjonene til å se innmelding av administrativ enhet/er i sammenheng med tilpasning av mandat for den administrative enheten (Appendix A i evalueringsprotokollen).

Forskergrupper – skjema 2

Forskningsrådet ber de administrative enheter om å melde inn forskergrupper i tråd med forskergruppedefinisjonen (kap 1.1) og minimumskravene beskrevet i kapittel 1.2 i evalueringsprotokollen. Hver administrative enhet melder inn sin/e forskergruppe/r ved å fylle ut Skjema 2. Vi ber også om at forskergruppene innplasseres i den tentative fagpanelinndelingen for EVALMEDHELSE (vedlegg 5).

Forskningsrådet vil ferdigstille panelstruktur og avgjøre den endelige fordelingen av forskergruppene på fagpaneler etter at alle forskergrupper er meldt inn. Mer informasjon vil bli sendt i slutten av juni 2023.

Invitasjon til å foreslå eksperter – skjema 3

Forskningsrådet inviterer administrative enheter og forskergrupper til å spille inn forslag til eksperter som kan inngå i evalueringskomitéene og i ekspertpanelene. Hver evalueringskomité vil bestå av 7-9 komitémedlemmer, mens hvert ekspertpanel vil bestå av 5-7 eksperter.

Obs. Det er to faner i regnearket:

- FANE 1 – forslag til medlemmer til evalueringskomitéene. Medlemmene i evalueringskomitéene skal inneha bred vitenskapelig kompetanse, både faglig kompetanse og andre kvalifikasjoner som erfaring med ledelse, strategi- og evalueringsarbeid og kunnskapsutveksling.
- FANE 2 – forslag til medlemmer til ekspertpanelene. Medlemmene i ekspertpanelene skal være internasjonalt ledende eksperter innen medisin og helsefaglig forskning og innovasjon.

Utfylte skjemaer (3 stk):

- innmelding av administrative enhet/er (skjema 1)
- innmelding av forskergruppe/er (skjema 2)
- forslag til eksperter (skjema 3)

sendes på epost til evalmedhelse@forskningsradet.no **innen 6. juni 2023.**

Tilpasning av mandat – frist 30. september 2023

Forskningsrådet ber med dette administrative enheter om å tilpasse mandatet (vedlegg 4) ved å opplyse om egne strategiske mål og andre lokale forhold som er relevant for evalueringen.

Tilpasningen gjøres ved å fylle inn de åpne punktene i malen (Appendix A). Utfylt skjema sendes på epost til evalmedhelse@forskningsradet.no innen 30. september 2023.

Digitalt informasjonsmøte 15. mai 2023, kl. 14.00-15.00.

Forskningsrådet arrangerer et digitalt informasjonsmøte for alle som ønsker å delta i EVALMEDHELSE.

Påmelding til informasjonsmøtet gjøres her: [Fagevaluering av medisin og helsefag \(EVALMEDHELSE\) - Digitalt informasjonsmøte \(pameldingssystem.no\)](#) .

Nettsider

Forskningsrådet vil opprette en nettside på www.forskningsradet.no for EVALMEDHELSE hvor informasjon vil bli publisert fortløpende. [Her](#) kan dere lese om Fagevaluering av biovitenskap (EVALBIOVIT) 2022-2023. Fagevaluering av medisin og helsefag vil bli gjennomført etter samme modell.

Spørsmål vedrørende fagevaluering av medisin og helsefag kan rettes til Hilde G. Nielsen, hgn@forskningsradet.no eller mobil 40 92 22 60.

Med vennlig hilsen
Norges forskningsråd

Ole Johan Borge
avdelingsdirektør
Helse

Hilde G. Nielsen
spesialrådgiver
Helse

Dokumentet er elektronisk godkjent og signert og har derfor ikke håndskrevne signaturer.

Kopi

Helse- og omsorgsdepartementet
Kunnskapsdepartementet

Vedlegg

1. Adresseliste
2. Nye fagevalueringer – varsel om oppstart november 2021
3. Erfaringer med oppfølging av fagevaluering av biologi, medisin og helsefag 2010/2011
4. Fagevaluering av livsvitenskap 2022-2024 – Evalueringsprotokoll
5. Tentativ panelinndeling EVALMEDHELSE mai 2023
6. Skjema 1 – Innmeldingsskjema Administrative enheter
7. Skjema 2 – Innmeldingsskjema Forskergrupper
8. Skjema 3 – Forslag til internasjonale eksperter til evalueringskomiteene og ekspertpanelene
9. Appendix A – word format

Evaluation of life sciences in Norway 2022-2023

LIVSEVAL protocol version 1.0

By decision of the Portfolio board for life sciences April 5., 2022

© The Research Council of Norway 2022

The Research Council of Norway
Visiting address: Drammensveien 288
P.O. Box 564
NO-1327 Lysaker

Telephone: +47 22 03 70 00

Telefax: +47 22 03 70 01

post@rcn.no

www.rcn.no

The report can be downloaded at
www.forskningsradet.no/publikasjoner

Oslo, 5 April 2022

ISBN 978-82-12-Klikk her for å fylle ut (xxxxx-x). (pdf)

1 Introduction

Research assessments based on this protocol serve different aims and have different target groups. The primary aim of the evaluation of life sciences is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), and by the institute sector and regional health authorities and health trusts. These institutions will hereafter be collectively referred to as Research Performing Organisations (RPOs). The assessments should serve a formative purpose by contributing to the development of research quality and relevance at these institutions and at the national level.

1.1 Evaluation units

The assessment will comprise a number of *administrative units* submitted for evaluation by the host institution. By assessing these administrative units in light of the goals and strategies set for them by their host institution, it will be possible to learn more about how public funding is used at the institution(s) to facilitate high-quality research and how this research contributes to society. The administrative units will be assessed by evaluation committees according to sectoral affiliation and/or other relevant similarities between the units.

The administrative units will be invited to submit data on their *research groups* to be assessed by expert panels organised by research subject or theme. See Chapter 3 for details on organisation.

<i>Administrative unit</i>	An administrative unit is any part of an RPO that is recognised as a formal (administrative) unit of that RPO, with a designated budget, strategic goals and dedicated management. It may, for instance, be a university faculty or department, a department of an independent research institute or a hospital.
<i>Research group</i>	Designates groups of researchers within the administrative units that fulfil the minimum requirements set out in section 1.2. Research groups are identified and submitted for evaluation by the administrative unit, which may decide to consider itself a single research group.

1.2 Minimum requirements for research groups

- 1) The research group must be sufficiently large in size, i.e. at least five persons in full-time positions with research obligations. This merely indicates the minimum number, and larger units are preferable. In exceptional cases, the minimum number may include PhD students, postdoctoral fellows and/or non-tenured researchers. *In all cases, a research group must include at least three full-time tenured staff.* Adjunct professors, technical staff and other relevant personnel may be listed as group members but may not be included in the minimum number.

- 2) The research group subject to assessment must have been established for at least three years. Groups of more recent date may be accepted if they have come into existence as a consequence of major organisational changes within their host institution.
- 3) The research group should be known as such both within and outside the institution (e.g. have a separate website). It should be able to document common activities and results in the form of co-publications, research databases and infrastructure, software, or shared responsibilities for delivering education, health services or research-based solutions to designated markets.
- 4) In its self-assessment, the administrative unit should propose a suitable benchmark for the research group. The benchmark will be considered by the expert panels as a reference in their assessment of the performance of the group. The benchmark can be grounded in both academic and extra-academic standards and targets, depending on the purpose of the group and its host institution.

1.3 The evaluation in a nutshell

The assessment concerns:

- research that the administrative unit and its research groups have conducted in the previous 10 years
- the research strategy that the administrative units under evaluation intend to pursue going forward
- the capacity and quality of research in life sciences at the national level

The Research Council of Norway (RCN) will:

- provide a template for the Terms of Reference¹ for the assessment of RPOs and a national-level assessment in life sciences
- appoint members to evaluation committees and expert panels
- provide secretarial services
- commission reports on research personnel and publications based on data in national registries
- take responsibility for following up assessments and recommendations at the national level.

RPOs conducting research in life sciences are expected to take part in the evaluation. The board of each RPO under evaluation is responsible for tailoring the assessment to its own strategies and specific needs and for following them up within their own institution. Each participating RPO will carry out the following steps:

- 1) Identify the administrative unit(s) to be included as the main unit(s) of assessment
- 2) Specify the Terms of Reference by including information on specific tasks and/or strategic goals of relevance to the administrative unit(s)

¹ The terms of reference (ToR) document defines all aspects of how the evaluation committees and expert panels will conduct the [research area] evaluation. It defines the objectives and the scope of the evaluation, outlines the responsibilities of the involved parties, and provides a description of the resources available to carry out the evaluation.

- 3) The administrative unit will, in turn, be invited to register a set of research groups that fulfil the minimum criteria specified above (see section 1.2). The administrative unit may decide to consider itself a single research group.
- 4) For each research group, the administrative unit should select an appropriate benchmark in consultation with the group in question. This benchmark can be a reference to an academic level of performance or to the group's contributions to other institutional or sectoral purposes (see section 2.4). The benchmark will be used as a reference in the assessment of the unit by the expert panel.
- 5) The administrative units subject to assessment must provide information about each of their research groups, and about the administrative unit as a whole, by preparing self-assessments and by providing additional documentation in support of the self-assessment.

1.4 Target groups

- Administrative units represented by institutional management and boards
- Research groups represented by researchers and research group leaders
- Research funders
- Government

The evaluation will result in recommendations to the institutions, the RCN and the ministries. The results of the evaluation will also be disseminated for the benefit of potential students, users of research and society at large.

This protocol is intended for all participants in the evaluation. It provides the information required to organise and carry out the research assessments. Questions about the interpretation or implementation of the protocol should be addressed to the RCN.

2 Assessment criteria

The administrative units are to be assessed on the basis of five assessment criteria. The five criteria are applied in accordance with international standards. Finally, the evaluation committee passes judgement on the administrative units as a whole in qualitative terms. In this overall assessment, the committee should relate the assessment of the specific tasks to the strategic goals that the administrative unit has set for itself in the Terms of Reference.

When assessing administrative units, the committees will build on a separate assessment by expert panels of the research groups within the administrative units. See Chapter 3 'Evaluation process and organisation' for a description of the division of tasks.

2.1 Strategy, resources and organisation

The evaluation committee assesses the framework conditions for research in terms of funding, personnel, recruitment and research infrastructure in relation to the strategic aims set for the administrative unit. The administrative unit should address at least the following five specific aspects in its self-assessment: 1) funding sources, 2) national and international cooperation, 3) cross-sector and interdisciplinary cooperation, 4) research careers and mobility, and 5) Open Science. These five aspects relate to how the unit organises and actually performs its research, its composition in terms of leadership and personnel, and how the unit is run on a day-to-day basis.

To contribute to understanding what the administrative unit can or should change to improve its ability to perform, the evaluation committee is invited to focus on factors that may affect performance.

Further, the evaluation committee assesses the extent to which the administrative unit's goals for the future remain scientifically and societally relevant. It is also assessed whether its aims and strategy, as well as the foresight of its leadership and its overall management, are optimal in relation to attaining these goals. Finally, it is assessed whether the plans and resources are adequate to implement this strategy.

2.2 Research production, quality and integrity

The evaluation committee assesses the profile and quality of the administrative unit's research and the contribution the research makes to the body of scholarly knowledge and the knowledge base for other relevant sectors of society. The committee also assesses the scale of the unit's research results (scholarly publications, research infrastructure developed by the unit, and other contributions to the field) and its contribution to Open Science (early knowledge and sharing of data and other relevant digital objects, as well as science communication and collaboration with societal partners, where appropriate).

The evaluation committee considers the administrative unit's policy for research integrity and how violations of such integrity are prevented. It is interested in how the unit deals with research data, data management, confidentiality (GDPR) and integrity, and the extent to which independent and critical pursuit of research is made possible within the unit. Research integrity relates to both the scientific integrity of conducted research and the professional integrity of researchers.

2.3 Diversity and equality

The evaluation committee considers the diversity of the administrative unit, including gender equality. The presence of differences can be a powerful incentive for creativity and talent development in a diverse administrative unit. Diversity is not an end in itself in that regard, but a tool for bringing together different perspectives and opinions.

The evaluation committee considers the strategy and practices of the administrative unit to prevent discrimination on the grounds of gender, age, disability, ethnicity, religion, sexual orientation or other personal characteristics.

2.4 Relevance to institutional and sectoral purposes

The evaluation committee compares the relevance of the administrative unit's activities and results to the specific aspects detailed in the Terms of Reference for each institution and to the relevant sectoral goals (see below).

Higher Education Institutions

There are 36 Higher Education Institutions in Norway that receive public funding from the Ministry for Education and Research. Twenty-one of the 36 institutions are owned by the ministry, whereas the last 15 are privately owned. The HEIs are regulated under the Act relating to universities and university colleges of 1 August 2005.

The purposes of Norwegian HEIs are defined as follows in the Act relating to universities and university colleges²

- provide higher education at a high international level;
- conduct research and academic and artistic development work at a high international level;
- disseminate knowledge of the institution's activities and promote an understanding of the principle of academic freedom and application of scientific and artistic methods and results in the teaching of students, in the institution's own general activity as well as in public administration, in cultural life and in business and industry.

In line with these purposes, the Ministry for Research and Education has defined four overall goals for HEIs that receive public funding. These goals have been applied since 2015:

- 1) High quality in research and education
- 2) Research and education for welfare, value creation and innovation
- 3) Access to education (esp. capacity in health and teacher education)
- 4) Efficiency, diversity and solidity of the higher education sector and research system

The committee is invited to assess to what extent the research activities and results of each administrative unit have contributed to sectoral purposes as defined above. In particular, the committee is invited to take the share of resources spent on education at the administrative units into account and to assess the relevance and contributions of research to education, focusing on the master's and PhD levels. This assessment should be distinguished from an

² <https://lovdata.no/dokument/NLE/lov/2005-04-01-15?q=universities>

assessment of the quality of education in itself, and it is limited to the role of research in fostering high-quality education.

Research institutes (the institute sector)

Norway's large institute sector reflects a practical orientation of state R&D funding that has long historical roots. The Government's strategy for the institute sector³ applies to the 33 independent research institutes that receive public basic funding through the RCN, in addition to 12 institutes outside the public basic funding system.

The institute sector plays an important and specific role in attaining the overall goal of the national research system, i.e. to increase competitiveness and innovation power to address major societal challenges. The research institutes' contributions to achieving these objectives should therefore form the basis for the evaluation. The main purpose of the sector is to conduct independent applied research for present and future use in the private and public sector. However, some institutes primarily focus on developing a research platform for public policy decisions, others on fulfilling their public responsibilities.

The institutes should:

- maintain a sound academic level, documented through scientific publications in recognised journals
- obtain competitive national and/or international research funding grants
- conduct contract research for private and/or public clients
- demonstrate robustness by having a reasonable number of researchers allocated to each research field

The committee is invited to assess the extent to which the research activities and results of each administrative unit contribute to sectoral purposes and overall goals as defined above. In particular, the committee is invited to assess the level of collaboration between the administrative unit(s) and partners in their own or other sectors.

The hospital sector

There are four regional health authorities (RHF) in Norway. They are responsible for the specialist health service in their respective regions. The RHF are regulated through the Health Enterprises Act of 15 June 2001 and are bound by requirements that apply to specialist and other health services, the Health Personnel Act and the Patient Rights Act. Under each of the regional health authorities, there are several health trusts (HF), which can consist of one or more hospitals. A health trust (HF) is wholly owned by an RHF.

Research is one of the four main tasks of hospital trusts.⁴ The three other main tasks are to ensure good treatment, education and training of patients and relatives. Research is important if the health service is to keep abreast of stay up-to-date with medical developments and carry out critical assessments of established and new diagnostic methods,

³ [Strategy for a holistic institute policy \(Kunnskapsdepartementet 2020\)](#)

⁴ Cf. the Specialist Health Services Act § 3-8 and the Health Enterprises Act §§ 1 and 2

treatment options and technology, and work on quality development and patient safety while caring for and guiding patients.

The committee is invited to assess the extent to which the research activities and results of each administrative unit have contributed to sectoral purposes as described above. The assessment does not include an evaluation of the health services performed by the services.

2.5 Relevance to society

The committee assesses the quality, scale and relevance of contributions targeting specific economic, social or cultural target groups, of advisory reports on policy, of contributions to public debates, and so on. The documentation provided as the basis for the assessment of societal relevance should make it possible to assess relevance to various sectors of society (i.e. business, the public sector, non-governmental organisations and civil society).

When relevant, the administrative units will be asked to link their contributions to national and international goals set for research, including the Norwegian Long-term Plan for Research and Higher Education and the UN Sustainable Development Goals. Sector-specific objectives, e.g. those described in the Development Agreements for the HEIs and other national guidelines for the different sectors, will be assessed as part of criterion 2.4.

The committee is also invited to assess the societal impact of research based on case studies submitted by the administrative units and/or other relevant data presented to the committee. Academic impact will be assessed as part of criterion 2.2.

3 Evaluation process and organisation

The RCN will organise the assessment process as follows:

- Commission a professional secretariat to support the assessment process in the committees and panels, as well as the production of self-assessments within each RPO
- Commission reports on research personnel and publications within life sciences based on data in national registries
- Appoint one or more evaluation committees for the assessment of administrative units.
- Divide the administrative units between the appointed evaluation committees according to sectoral affiliation and/or other relevant similarities between the units.
- Appoint a number of expert panels for the assessment of research groups submitted by the administrative units.
- Divide research groups between expert panels according to similarity of research subjects or themes.
- Task the chairs of the evaluation committees with producing a national-level report building on the assessments of administrative units and a national-level assessments produced by the expert panels.

Committee members and members of the expert panels will be international, have sufficient competence and be able, as a body, to pass judgement based on all relevant assessment criteria. The RCN will facilitate the connection between the assessment levels of panels and committees by appointing committee members as panel chairs.

3.1 Division of tasks between the committee and panel levels

The expert panels will assess research groups across institutions and sectors, focusing on the first two criteria specified in Chapter 2: 'Strategy, resources and organisation' and 'Research production and quality' The assessments from the expert panels will also be used as part of the evidence base for a report on Norwegian research within life sciences (see section 3.3).

The evaluation committees will assess the administrative units based on all the criteria specified in Chapter 2. The assessment of research groups delivered by the expert panels will be a part of the evidence base for the committees' assessments of administrative units. See figure 1 below.

The evaluation committee has sole responsibility for the assessments and any recommendations in the report. The evaluation committee reaches a judgement on the research based on the administrative units and research groups' self-assessments provided by the RPOs, any additional documents provided by the RCN, and interviews with representatives of the administrative units. The additional documents will include a standardised analysis of research personnel and publications provided by the RCN.

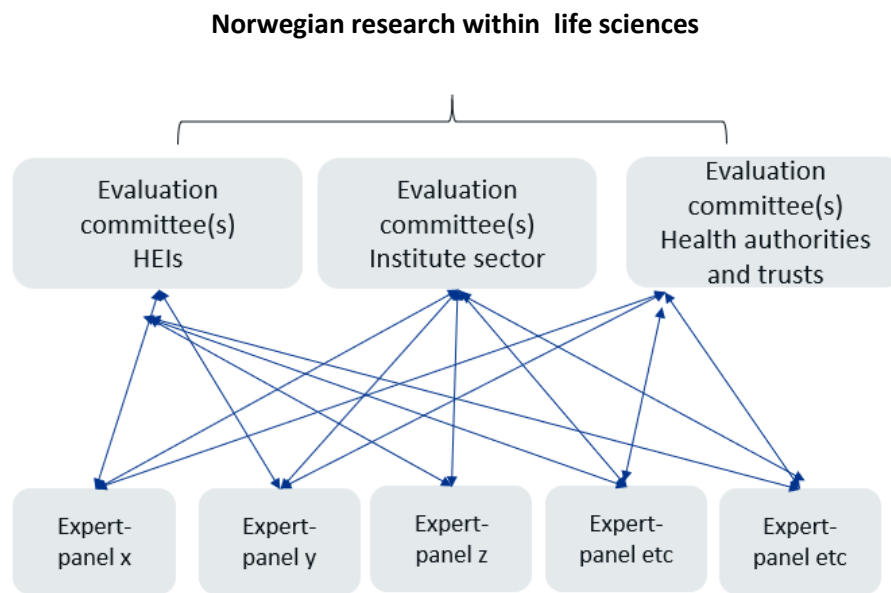


Figure 1. Evaluation committees and expert panels

The evaluation committee takes international trends and developments in science and society into account when forming its judgement. When judging the quality and relevance of the research, the committees shall bear in mind the specific tasks and/or strategic goals that the administrative unit has set for itself including sectoral purposes (see section 2.4 above).

3.2 Accuracy of factual information

The administrative unit under evaluation should be consulted to check the factual information before the final report is delivered to the RCN and the board of the institution hosting the administrative unit.

3.3 National level report

Finally, the RCN will ask the chairs of the evaluation committees to produce a national-level report that builds on the assessments of administrative units and the national-level assessments produced by the expert panels. The committee chairs will present their assessment of Norwegian research in life sciences at the national level in a separate report that pays specific attention to:

- Strengths and weaknesses of the research area in the international context
- The general resource situation regarding funding, personnel and infrastructure
- PhD training, recruitment, mobility and diversity
- Research cooperation nationally and internationally
- Societal impact and the role of research in society, including Open Science

This national-level assessment should be presented to the RCN.

Appendix A: Terms of References (ToR)

[Text in red to be filled in by the Research-performing organisations (RPOs)]

The board of [RPO] mandates the evaluation committee appointed by the Research Council of Norway (RCN) to assess [administrative unit] based on the following Terms of Reference.

Assessment

You are asked to assess the organisation, quality and diversity of research conducted by [administrative unit] as well as its relevance to institutional and sectoral purposes, and to society at large. You should do so by judging the unit's performance based on the following five assessment criteria (a. to e.). Be sure to take current international trends and developments in science and society into account in your analysis.

- a) Strategy, resources and organisation
- b) Research production, quality and integrity
- c) Diversity and equality
- d) Relevance to institutional and sectoral purposes
- e) Relevance to society

For a description of these criteria, see Chapter 2 of the life sciences evaluation protocol. Please provide a written assessment for each of the five criteria. Please also provide recommendations for improvement. We ask you to pay special attention to the following [n] aspects in your assessment:

- 1. ...
- 2. ...
- 3. ...
- 4. ...
- ...

[To be completed by the board: specific aspects that the evaluation committee should focus on – they may be related to a) strategic issues, or b) an administrative unit's specific tasks.]

In addition, we would like your report to provide a qualitative assessment of [administrative unit] as a whole in relation to its strategic targets. The committee assesses the strategy that the administrative unit intends to pursue in the years ahead and the extent to which it will be capable of meeting its targets for research and society during this period based on available resources and competence. The committee is also invited to make recommendations concerning these two subjects.

Documentation

The necessary documentation will be made available by the **life sciences** secretariat at Technopolis Group.

The documents will include the following:

- a report on research personnel and publications within life sciences commissioned by RCN
- a self-assessment based on a template provided by the life sciences secretariat
- **[to be completed by the board]**

Interviews with representatives from the evaluated units

Interviews with the **[administrative unit]** will be organised by the evaluation secretariat. Such interviews can be organised as a site visit, in another specified location in Norway or as a video conference.

Statement on impartiality and confidence

The assessment should be carried out in accordance with the *Regulations on Impartiality and Confidence in the Research Council of Norway*. A statement on the impartiality of the committee members has been recorded by the RCN as a part of the appointment process. The impartiality and confidence of committee and panel members should be confirmed when evaluation data from **[the administrative unit]** are made available to the committee and the panels, and before any assessments are made based on these data. The RCN should be notified if questions concerning impartiality and confidence are raised by committee members during the evaluation process.

Assessment report

We ask you to report your findings in an assessment report drawn up in accordance with a format specified by the life sciences secretariat. The committee may suggest adjustments to this format at its first meeting. A draft report should be sent to the **[administrative unit]** and RCN by [date]. The **[administrative unit]** should be allowed to check the report for factual inaccuracies; if such inaccuracies are found, they should be reported to the life sciences secretariat no later than two weeks after receipt of the draft report. After the committee has made the amendments judged necessary, a corrected version of the assessment report should be sent to the board of **[the RPO]** and the RCN no later than two weeks after all feedback on inaccuracies has been received from **[administrative unit]**.

Appendix B: Data sources

The lists below shows the most relevant data providers and types of data to be included in the evaluation. Data are categorised in two broad categories according to the data source: National registers and self-assessments prepared by the RFOs. The RCN will commission an analysis of data in national registers (R&D-expenditure, personnel, publications etc.) to be used as support for the committees' assessment of administrative units. The analysis will include a set of indicators related to research personnel and publications.

- **National directorates and data providers**
- Norwegian Directorate for Higher Education and Skills (HK-dir)
- Norwegian Agency for Quality Assurance in Education (NOKUT)
- Norwegian Agency for Shared Services in Education and Research (SIKT)
- Research Council of Norway (RCN)
- Statistics Norway (SSB)

National registers

- 1) R&D-expenditure
 - a. SSB: R&D statistics
 - b. SSB: Key figures for research institutes
 - c. HK-dir: Database for Statistics on Higher Education (DBH)
 - d. RCN: Project funding database (DVH)
 - e. EU-funding: eCorda
- 2) Research personnel
 - a. SSB: The Register of Research personnel
 - b. SSB: The Doctoral Degree Register
 - c. RCN: Key figures for research institutes
 - d. HK-dir: Database for Statistics on Higher Education (DBH)
- 3) Research publications
 - a. SIKT: Cristin - Current research information system in Norway
 - b. SIKT: Norwegian Infrastructure for Bibliometrics
(full bibliometric data incl. citations and co-authors)
- 4) Education
 - a. HK-dir/DBH: Students and study points
 - b. NOKUT: Study barometer
 - c. NOKUT: National Teacher Survey
- 5) Sector-oriented research
 - a. RCN: Key figures for research institutes
- 6) Patient treatments and health care services
 - a. Research & Innovation expenditure in the health trusts
 - b. Measurement of research and innovation activity in the health trusts
 - c. Collaboration between health trusts and HEIs
 - d. Funding of research and innovation in the health trusts
 - e. Classification of medical and health research using HRCS (HO21 monitor)

Self-assessments

1) Administrative units

- a. *Self-assessment covering all assessment criteria*
- b. Administrative data on funding sources
- c. Administrative data on personnel
- d. Administrative data on the division of staff resources between research and other activities (teaching, dissemination etc.)
- e. Administrative data on research infrastructure and other support structures
- f. SWOT analysis
- g. Any supplementary data needed to assess performance related to the strategic goals and specific tasks of the unit

2) Research groups

- a. *Self-assessment covering the first two assessment criteria (see Table 1)*
- b. Administrative data on funding sources
- c. Administrative data on personnel
- d. Administrative data on contribution to sectoral purposes: teaching, commissioned work, clinical work [will be assessed at committee level]
- e. Publication profiles
- f. Example publications and other research results (databases, software etc.)
The examples should be accompanied by an explanation of the groups' specific contributions to the result
- g. Any supplementary data needed to assess performance related to the benchmark defined by the administrative unit

The table below shows how different types of evaluation data may be relevant to different evaluation criteria. Please note that the self-assessment produced by the administrative units in the form of a written account of management, activities, results etc. should cover all criteria. A template for the self-assessment of research groups and administrative units will be commissioned by the RCN from the life sciences secretariat for the evaluation.

Table 1. Types of evaluation data per criterion

Criteria \ Evaluation units	Research groups	Administrative units
Strategy, resources and organisation	Self-assessment Administrative data	Self-assessment National registers Administrative data SWOT analysis
Research production and quality	Self-assessment Example publications (and other research results)	Self-assessment National registers
Diversity, equality and integrity		Self-assessment National registers Administrative data
Relevance to institutional and sectoral purposes		Self-assessment Administrative data
Relevance to society		Self-assessment National registers Impact cases
Overall assessment	<i>Data related to: Benchmark defined by administrative unit</i>	<i>Data related to: Strategic goals and specific tasks of the admin. unit</i>



Evaluation of Medicine and Health (EVALMEDHELSE) 2023-2024

Self- assessment for administrative units

Date of dispatch: **15 September 2023**
Deadline for submission: **31 January 2024**

Institution (name and short name): _____

Administrative unit (name and short name): _____

Date: _____

Contact person: _____

Contact details (email): _____

Content

Introduction.....	3
Guidelines for completing the self-assessment	4
1. Strategy, resources and organisation.....	5
1.1 Research strategy	5
1.2 Organisation of research	7
1.3 Research staff	7
1.4 Researcher careers opportunities	8
1.5 Research funding.....	8
1.6 Collaboration	9
1.7 Open science policies	11
1.8 SWOT analysis for administrative units.....	11
2. Research production, quality and integrity.....	12
2.1 Research quality and integrity.....	12
2.2 Research infrastructures	12
3. Diversity and equality	13
4. Relevance to institutional and sectorial purposes	14
4.1 Sector specific impact.....	14
4.2 Research innovation and commercialisation	14
4.3 Higher education institutions.....	15
4.4 Research institutes	15
4.5 Health trusts	15
5. Relevance to society	16
5.1 Impact cases	16

Introduction

The primary aim of the evaluation is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), the institute sector and the health trusts. These institutions will henceforth be collectively referred to as research performing organisations (RPOs). The evaluation report(s) will provide a set of recommendations to the RPOs, the Research Council of Norway (RCN) and the responsible and concerned ministries. The results of the evaluation will also be disseminated for the benefit of potential students, users of research and society at large.

You have been invited to complete this self-assessment as an administrative unit. The self-assessment contains questions regarding the unit's research- and innovation related activities and developments over years 2012-2022. All submitted data will be evaluated by international evaluation committees. The administrative unit's research groups will be assessed by international expert panels who report their assessment to the relevant evaluation committee.

Deadline for submitting self- assessments to the Research Council of Norway – 31 January 2024

As an administrative unit you are responsible for collecting completed self-assessments for each of the research groups that belong to the administrative unit. The research groups need to submit their completed self-assessment to the administrative unit no later than 26 January 2024. The administrative unit will submit the research groups' completed self-assessments and the administrative unit's own completed self-assessment to the Research Council within 31 January 2024.

Please use the following format when naming your document: name of the institution and short name of the administrative unit, e.g. *NTNU_FacMedHealthSci* and send it to evalmedhelse@forskningsradet.no within 31 January 2024.

For questions concerning the self-assessment or EVALMEDHELSE in general, please contact RCN at evalmedhelse@forskningsradet.no.

Thank you!

Guidelines for completing the self-assessment

- Please read the entire self-assessment document before answering.
- The evaluation language is English.
- Please be sure that all documents which are linked to in the self- assessment are in English and are accessible.
- The page format must be A4 with 2 cm margins, single spacing and Calibri and 11-point font.
- The self-assessment follows the same structure as the [evaluation protocol](#). In order to be evaluated on all criteria, the administrative unit must answer all questions.
- Information should be provided by link to webpages i.e. strategy and other planning documents.
 - Provide information – provide documents and other relevant data or figures about the administrative unit, for example strategy and other planning documents.
 - Describe – explain and present using contextual information about the administrative unit and inform the reader about the administrative unit.
 - Reflect – comment in a reflective and evaluative manner how the administrative unit operates.
- Data on personnel should refer to reporting to DBH on 1 October 2022 for HEIs and to the yearly reporting for 2022 for the institute sector and the health trusts. Other data should refer to 31 December 2022, if not specified otherwise.
- Questions in 4.3c should **ONLY** be answered by administrative units responsible for the Cand.med. degree programme, cf. [Evaluation of the Professional programme in Medicine \(NOKUT\)](#).
- It is possible to extend the textboxes when filling in the form. **NB!** A completed self- assessment cannot exceed 50 pages (pdf file) excluding question 4.3.c. The evaluation committees are not requested to read more than the maximum of 50 pages. Pages exceeding maximum limit of 50 pages **might not** be evaluated.
- Submit the self- assessment as a pdf (max 50 pages). Before submission, please be sure that all text are readable after the conversion of the document to pdf. The administrative unit is responsible for submitting the self-assessment of the administrative unit together with the self-assessments of the belonging research group(s) to evalmedhelse@forskningsradet.no within **31 January 2024**.

Please note that information you write in the self- assessment and the links to documents/webpages in the self- assessment are the only available information (data material) for the evaluation committee.

In exceptional cases, documents/publications that are not openly available must be submitted as attachment(s) to the self- assessment (pdf file(s)).

1.Strategy, resources and organisation

1.1 Research strategy

Describe the main strategic goals for research and innovation of the administrative unit. You may include the following:

- How are these goals related to institutional strategies and scientific priorities?
- Describe how the administrative unit's strategies and scientific priorities are related to the "specific aspects that the evaluation committee should focus on" indicated in your Terms of Reference (ToR)
- Describe the main fields and focus of research and innovation in the administrative unit
- Describe the planned research-field impact; planned policy impact and planned societal impact
- Describe how the strategy is followed-up in the allocation of resources and other measures
- Describe the most important occasions where priorities are made (i.e., announcement of new positions, applying for external funding, following up on evaluations)
- If there is no research strategy – please explain why

Table 1. Administrative unit's strategies

For each category present up to 5 documents which are most relevant for the administrative unit. Please delete lines which are not in use.

Research strategy		
No.	Title	Link
1		
2		
3		
4		
5		
Outreach strategies		
No.	Title	Link
1		
2		
3		
4		
5		
Open science policy		
No.	Title	Link
1		
2		
3		
4		
5		

1.2 Organisation of research

a) Describe the organisation of research and innovation activities/projects at the administrative unit, including how responsibilities for research and other purposes (education, knowledge exchange, patient treatment, researcher training, outreach activities etc.) are distributed and delegated.

b) Describe how you work to maximise synergies between the different purposes of the administrative unit (education, knowledge exchange, patient treatment, researcher training, outreach activities etc.).

1.3 Research staff

Describe the profile of research personnel at the administrative unit in terms of position and gender. Institutions in the higher education sector should use the categories used in DBH, <https://dbh.hkdir.no/datainnhold/kodeverk/stillingskoder>.

RCN has commissioned reports from Statistics Norway (SSB) on personnel for the administrative units included in the evaluation. These reports will be made available to the units early November 2023.

Only a subset of the administrative units submitted to the evaluation is directly identifiable in the national statistics. Therefore, we ask all administrative units to provide data on their R&D personnel. Institutions that are directly identifiable in the national statistics (mainly higher education) are invited to use the figures provided in the report delivered by Statistics Norway. Please delete lines which are not in use.

Table 2. Research staff

	Position by category	No. of researcher per category	Share of women per category (%)	No. of researchers who are part of multiple (other) research groups at the admin unit	No. of temporary positions
No. of Personell by position	Position A (Fill in)				
	Position B (Fill in)				
	Position C (Fill in)				
	Position D (Fill in)				

1.4 Researcher careers opportunities

- a) Describe the structures and practices to support researcher careers and help early-career researchers to make their way into the profession.
- b) Describe how research time is distributed among staff including criteria for research leave/sabbaticals (forskningstermin/undervisningsfri).
- c) Describe research mobility options.

1.5 Research funding

- a) Describe the funding sources of the administrative unit. Indicate the administrative unit's total yearly budget and the share of the unit's budget dedicated to research.
- b) Give an overview of the administrative unit's competitive national and/or international grants last five years (2018-2022).

Table 3. R&D funding sources

Please indicate R&D funding sources for the administrative unit for the period 2018-2022 (average NOK per year, last five years).

For Higher Education Institutions: Share of basic grant (grunnbevilgning) used for R&D ¹ For Research Institutes and Health Trusts: Direct R&D funding from Ministries (per ministry)	
Name of ministry	NOK

National grants (bidragsinntekter) (NOK)	
From the ministries and underlying directorates	
From industry	
From public sector	
Other national grants	
Total National grants	
National contract research (oppdragsinntekter) ² (NOK)	
From the ministries and underlying directorates	
From industry	

¹ Shares may be calculated based on full time equivalents (FTE) allocated to research compared to total FTE in administrative unit

² For research institutes only research activities should be included from section 1.3 in the yearly reporting

From public sector	
Other national contract research	
Total contract research	
International grants (NOK)	
From the European Union	
From industry	
Other international grants	
Total international grants	
Funding related to public management (forvaltningsoppgaver) or (if applicable) funding related to special hospital tasks, if any	
Total funding related to public management/special hospital tasks	
Total all R&D budget items (except basic grant)	

1.6 Collaboration

Describe the administrative unit's policy towards national and international collaboration partners, the type of the collaborations the administrative unit have with the partners, how the collaboration is put to practice as well as cross-sectorial and interdisciplinary collaborations.

- Reflect of how successful the administrative unit has been in meeting its aspirations for collaborations
- Reflect on the importance of different types of collaboration for the administrative unit: National and international collaborations. Collaborations with different sectors, including public, private and third sector
- Reflect on the added value of these collaborations to the administrative unit and Norwegian research system

Table 4a. The main national collaborative constellations with the administrative unit

Please categorise the collaboration according to the most important national partner(s): 5-10 institutions in the period 2012-2022. Please delete lines which are not in use.

National collaborations

Collaboration with national institutions – 1 -10	
Name of main collaboration or collaborative project with the admin unit	
Name of partner institution(s)	
Sector of partner/institution(s)/sectors involved	
Impacts and relevance of the collaboration	

Table 4b. The main international collaborative constellations with the administrative unit

Please categorise the collaboration according to the most important international partner(s): 5-10 international institutions in the period 2012-2022. Please delete lines which are not in use.

International collaborations

Collaboration with international institutions – 1-10	
Name of main collaboration or collaborative project with the admin unit	
Name of partner institution(s)	
Sector of partner/institution(s)/sectors involved	

Impacts and relevance of the collaboration	
--	--

1.7 Open science policies

a) Describe the institutional policies, approaches, and activities to the Open Science areas which may include the following:

- Open access to publications
- Open access to research data and implementation of FAIR data principles
- Open-source software/tools
- Open access to educational resources
- Open peer review
- Citizen science and/or involvement of stakeholders / user groups
- Skills and training for Open Science

b) Describe the most important contributions and impact of the administrative unit's researchers towards the different Open Science areas cf. 1.7a above.

c) Describe the institutional policy regarding ownership of research data, data management, and confidentiality. Is the use of data management plans implemented at the administrative unit?

1.8 SWOT analysis for administrative units

Instructions: Please complete a SWOT analysis for your administrative unit. Reflect on what are the major internal Strengths and Weaknesses as well as external Threats and Opportunities for your research and innovation activities/projects and research environment. Assess what the present Strengths enable in the future and what kinds of Threats are related to the Weaknesses. Consider your scientific expertise and achievements, funding, facilities, organisation and management.

Internal	Strengths	Weaknesses
External	Opportunities	Threats

2. Research production, quality and integrity

2.1 Research quality and integrity

Please see the bibliometric analysis for the administrative unit developed by NIFU (available by the end of October, 2023).

a) Describe the scientific focus areas of the research conducted at the administrative unit, including the unit's contribution to these areas.

b) Describe the administrative unit's policy for research integrity, including preventative measures when integrity is at risk, or violated.

2.2 Research infrastructures

a) Participation in national infrastructure

Describe the most important participation in the national infrastructures listed in the Norwegian roadmap for research infrastructures (Norsk veikart for forskningsinfrastruktur) including as host institution(s).

Table 5. Participation in national infrastructure

Please present up to 5 participations in the national infrastructures listed in the Norwegian roadmap for research infrastructures (Norsk veikart for forskningsinfrastruktur) for each area that were the most important to your administrative unit.

Areas in roadmap	Name of research infrastructure	Period (from year to year)	Description	Link to website

b) Participation in international infrastructures

Describe the most important participation in the international infrastructures funded by the ministries (Norsk deltakelse i internasjonale forskningsorganisasjoner finansiert av departementene).

Table 6. Participation in international infrastructure

Please describe up to 5 participations in international infrastructures for each area that have been most important to your administrative unit.

Project	Name	Period (from year to year)	Description	Link to infrastructure

c) Participation in European (ESFRI) infrastructures

Describe the most important participation in European (ESFRI) infrastructures (Norske medlemskap i infrastrukturer i ESFRI roadmap) including as host institution(s).

Table 7. Participation in infrastructures on the ESFRI Roadmap

Please give a description of up to 5 participations that have been most important to your administrative unit.

Social sciences and the humanities				
Name	ESFRI-project	Summary of participation	Period (from year to year)	Link

d) Access to research infrastructures

Describe access to relevant national and/or international research infrastructures for your researchers. Considering both physical and digital infrastructure.

e) FAIR- principles

Describe what is done at the unit to fulfil the FAIR-principles.

3. Diversity and equality

Describe the policy and practices to protect against any form of discrimination and to promote diversity in the administrative unit.

Table 8. Administrative unit policy against discrimination

Give a description of up to 5 documents that are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then these documents should be referred to. Please delete lines which are not in use.

No.	Name	Valid period	Link
1			

4.Relevance to institutional and sectorial purposes

4.1 Sector specific impact

Describe whether the administrative unit has activities aimed at achieving sector-specific objectives or focusing on contributing to the knowledge base in general. Describe activities connected to sector-specific objectives, the rationale for participation and achieved and/or expected impacts. Please refer to chapter 2.4 in the [evaluation protocol](#).

- Alternatively, describe whether the activities of the administrative unit are aimed at contribution to the knowledge base in general. Describe the rationale for this approach and the impacts of the unit's work to the knowledge base.

4.2 Research innovation and commercialisation

- a) Describe the administrative unit's practices for innovation and commercialisation.
- b) Describe the motivation among the research staff in doing innovation and commercialisation activities.
- c) Describe how innovation and commercialisation is supported at the administrative unit.

Table 9. Policies for innovation including IP policies, new patents, licenses, start-up/spin-off guidelines

Describe up to 5 documents of the administrative unit's policies for innovation, including IP policies, new patents, licenses, start-up/spin-off guidelines, etc., that are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then present these documents. Please delete lines which are not in use.

No.	Name	Valid period	Link
1			

Table 10. Administrative description of successful innovation and commercialisation results

Please describe up to 10 successful innovation and commercialisation results at your administrative unit in the period 2012-2022. Please delete lines which are not in use.

No.	Name of innovation and commercial results	Link	Description of successful innovation and commercialisation result.
1			

4.3 Higher education institutions

a) Reflect how research at the administrative unit contributes towards master and PhD-level education provision, at your institutions and beyond.

b) Describe the opportunities for master students to become involved in research activities at the administrative unit.

c) **ONLY** for administrative units responsible for the Cand.med. degree programme, cf. [Evaluation of the Professional programme in Medicine \(NOKUT\)](#).

- Reflect on how research at the administrative unit contributes towards the quality of the Cand.med. degree programme at your institutions and beyond.
- Describe the different opportunities for students on the Cand.med. degree programme to become involved in research activities at the administrative unit, and the extent to which students use those opportunities.

4.4 Research institutes

a) Describe how the research and innovation activities/projects at the administrative unit contribute to the knowledge base for policy development, sustainable development, and societal and industrial transformations more generally.

b) Describe the most important research activities with partners outside of research organisations.

4.5 Health trusts

a) Reflect on how the administrative unit's clinical research, innovation and commercialisation contribute towards development, assessment and implementation of new diagnostic methods, treatment, and healthcare technologies.

b) Reflect on how research at the unit contributes towards the quality of relevant education programme at your institutions or beyond.

c) Describe the different opportunities for students on relevant educational programmes to become involved in research activities at the administrative unit, and the extent to which students use those opportunities.

5.Relevance to society

Reflect on the administrative unit's contribution towards the Norwegian Long-term plan for research and higher education, societal challenges more widely, and the UN Sustainable Development Goals.

5.1 Impact cases

Please use the attached template for impact cases. Each impact case should be submitted as an attachment (pdf) to the self-assessment.

Impact case guidelines

Each case study should include sufficiently clear and detailed information to enable the evaluation committee to make judgements based on the information it contains, without making inferences, gathering additional material, following up references or relying on members' prior knowledge. References to other sources of information will be used for verification purposes only, not as a means for the evaluation committee to gather further information to inform judgements.

In this evaluation, impact is defined as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia.

Timeframes

- The impact must have occurred between 2012 and 2022
- Some of the underpinning research should have been published in 2012 or later
- The administrative units are encouraged to prioritise recent cases

Page limit

Each completed case study template will be limited to **five pages** in length. Within the annotated template below, indicative guidance is provided about the expected maximum length limit of each section, but institutions will have flexibility to exceed these so long as the case study as a whole remains no longer than **five pages** (font Calibri, font size 11). Please write the text into the framed template under the sections 1–5 below. The guiding text that stands there now, can be deleted.

Maximum number of cases permitted per administrative unit

For up to 10 researchers: one case; for 10 to 30 researchers: two cases; for 30-50 researchers: three cases; for 50-100 researchers: four cases, and up to five cases for units exceeding 100 researchers.

Naming and numbering of cases

Please use the standardised short name for the administrative unit, and the case number for the unit (1,2,3, etc) in the headline of the case. Each case should be stored as a separate PDF-document with the file name: [Name of the institution and name of the administrative unit] [case number]

Publication of cases

RCN plans to publish all impact cases in a separate evaluation report. By submitting the case the head of the administrative units consents to the publication of the case. Please indicate below if a case may not be made public for reasons of confidentiality.

If relevant, describe any reason to keep this case confidential:

Please write the text here

[Name of the institution and name of the administrative unit] [case number]

Institution:
Administrative unit:
Title of case study:
Period when the underpinning research was undertaken:
Period when staff involved in the underpinning research were employed by the submitting institution:
Period when the impact occurred:

1. Summary of the impact (indicative maximum 100 words)

This section should briefly state what specific impact is being described in the case study.

2. Underpinning research (indicative maximum 500 words)

This section should outline the key research insights or findings that underpinned the impact, and provide details of what research was undertaken, when, and by whom. This research may be a body of work produced over a number of years or may be the output(s) of a particular project. References to specific research outputs that embody the research described in this section, and evidence of its quality, should be provided in the next section. Details of the following should be provided in this section:

- The nature of the research insights or findings which relate to the impact claimed in the case study.
- An outline of what the underpinning research produced by the submitted unit was (this may relate to one or more research outputs, projects or programmes).
- Dates of when it was carried out.
- Names of the key researchers and what positions they held at the administrative unit at the time of the research (where researchers joined or left the administrative unit during this time, these dates must also be stated).
- Any relevant key contextual information about this area of research.

3. References to the research (indicative maximum of six references)

This section should provide references to key outputs from the research described in the previous section, and evidence about the quality of the research. All forms of output cited as underpinning research will be considered equitably, with no distinction being made between the types of output referenced. Include the following details for each cited output:

- Author(s)
 - Title
 - Year of publication
 - Type of output and other relevant details required to identify the output (for example, DOI, journal title and issue)
 - Details to enable the panel to gain access to the output, if required (for example, a DOI or URL).
- All outputs cited in this section must be capable of being made available to panels. If they are not available in the public domain, the administrative unit must be able to provide them if requested by RCN or the evaluation secretariate.

4. Details of the impact (indicative maximum 750 words)

This section should provide a narrative, with supporting evidence, to explain:

- How the research underpinned (made a distinct and material contribution to) the impact;
- The nature and extent of the impact.

The following should be provided:

- A clear explanation of the process or means through which the research led to, underpinned or made a contribution to the impact (for example, how it was disseminated, how it came to influence users or beneficiaries, or how it came to be exploited, taken up or applied).

- Where the submitted administrative unit's research was part of a wider body of research that contributed to the impact (for example, where there has been research collaboration with other institutions), the case study should specify the particular contribution of the submitted administrative unit's research and acknowledge other key research contributions.
- Details of the beneficiaries – who or what community, constituency or organisation has benefitted, been affected or impacted on.
- Details of the nature of the impact – how they have benefitted, been affected or impacted on.
- Evidence or indicators of the extent of the impact described, as appropriate to the case being made.
- Dates of when these impacts occurred.

5. Sources to corroborate the impact (indicative maximum of ten references)

Institution	Administrative unit	Name of research group	Expert panel
UiT	Department of Psychology	Behavioral and Translational Neuroscience	Panel 1b
UiT	Department of Psychology	Clinical Psychology	Panel 5a
UiT	Department of Psychology	Cognitive Neuroscience	Panel 5a
UiT	Department of Psychology	Behavioral, aging and dementia	Panel 5a
UiT	Department of Psychology	Human factors in high-risk environments (CARE)	Panel 5b
UiT	Department of Psychology	Health Psychology	Panel 5b
UiT	Department of Psychology	Social Psychology	Panel 5b
UiT	Department of Psychology	Educational Psychology, Inquiry and Cognition (EPIC)	Panel 5b

Scales for research group assessment

Use whole integers only – no fractions!

Organisational dimension

Score	Organisational environment
5	An organisational environment that is outstanding for supporting the production of excellent research.
4	An organisational environment that is very strong for supporting the production of excellent research.
3	An organisational environment that is adequate for supporting the production of excellent research.
2	An organisational environment that is modest for supporting the production of excellent research.
1	An organisational environment that is not supportive for the production of excellent research.

Quality dimension

The quality dimension consists of two judgements: 1) Research and publication quality, and 2) Research group's contribution. The first judgement is defined as follows:

Score	Research and publication quality	Supporting explanation
5	Quality that is outstanding in terms of originality, significance, and rigour.	The quality of the research is world leading in terms of quality, and is comparable to the best work internationally in the same area of research. The publications submitted provide evidence that the work of the group meets the highest international standards in terms of originality, significance, and rigour. Work at this level should be a key international reference in its area.
4	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence.	The quality of the research is internationally excellent. The research is clearly of an international standard, with a very good level of quality in terms of originality, significance, and rigour. Work at this level can arouse significant interest in the international academic community, and international journals with the most rigorous standards of publication (irrespective of the place or language of publication) could publish work of this level.
3	Quality that is recognised internationally in terms of originality, significance and rigour.	The quality of the research is sufficient to achieve some international recognition. It would be perceived nationally as strong and may occasionally reach an internationally recognised level in terms of originality, significance and rigour. Internationally recognised journals could publish some work of this level.
2	Quality that meets the published definition of research for the purposes of this assessment.	The international academic community would deem the research to be nationally acceptable, but below world standards. Legitimate nationally recognised peer-reviewed journals could publish work of this level.
1	Quality that falls below the published definition of research for the purposes of this assessment ¹ .	The quality of the research is well below international level, and is unpublishable in legitimate peer-reviewed research journals.

¹ A publication has to meet all of the criteria below:

Societal impact dimension

The societal impact dimension is also composed of two judgements, defined as presented in the table below.

Score	Research group's societal contribution, taking into consideration the resources available to the group	Score	User involvement
5	The group has contributed extensively to economic, societal and/or cultural development in Norway and/or internationally.	5	Societal partner involvement is outstanding – partners have had an important role in all parts of the research process, from problem formulation to the publication and/or process or product innovation.
4	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is very considerable given what is expected from groups in the same research field.	4	Societal partners have very considerable involvement in all parts of the research process, from problem formulation to the publication and/or process or product innovation.
3	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is on par with what is expected from groups in the same research field.	3	Societal partners have considerable involvement in the research process, from problem formulation to the publication and/or process or product innovation.
2	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is modest given what is expected from groups in the same research field.	2	Societal partners have a modest part in the research process, from problem formulation to the publication and/or process or product innovation.
1	There is little documentation of contributions from the group to economic, societal and/or cultural development in Norway and/or internationally.	1	There is little documentation of societal partners' participation in the research process, from problem formulation to the publication and/or process or product innovation.

Methods and limitations

Methods

The evaluation is based on documentary evidence and online interviews with the representatives of Administrative Unit.

The documentary inputs to the evaluation were:

- Evaluation Protocol Evaluation of life sciences in Norway 2022-2023
- Administrative Unit's Terms of Reference
- Administrative Unit's self-assessment report
- Administrative Unit's impact cases
- Administrative Unit's research groups evaluation reports
- Panel reports from the Expert panels
- Bibliometric data (*NIFU Nordic Institute for Studies of innovation, research and education*)
- Personnel data (*Statistics Norway (SSB)*)
- Funding data – The Research Council's contribution to biosciences research (*RCN*)
- Extract from the Survey for academic staff and the Student Survey (*Norwegian Agency for Quality Assurance in Education (NOKUT)*)

After the documentary review, the Committee held a meeting and discussed an initial assessment against the assessment criteria and defined questions for the interview with the Administrative Unit. The Committee shared the interview questions with the Administrative Unit two weeks before the interview.

Following the documentary review, the Committee interviewed the Administrative Unit in an hour-long virtual meeting to fact-check the Committee's understanding and refine perceptions. The Administrative Unit presented answers to the Committee's questions and addressed other follow-up questions.

After the online interview, the Committee attended the final meeting to review the initial assessment in light of the interview and make any final adjustments.

A one-page summary of the Administrative Unit was developed based on the information from the self-assessment, the research group assessment, and the interview. The Administrative Unit had the opportunity to fact-check this summary. The Administrative Unit approved the summary without adjustments. ***(Adjust the text if the AU asked for corrections. Include the AU request and explain what adjustments were made).***

Limitations

(Choose one of the three options below and delete the others. Feel free to elaborate slightly if necessary. For example, if you choose option 3, explain the missing information. Note that the Committee can provide detailed feedback and suggestions on improving the evaluation in the Memorandum to the RCN. This section has to remain concise and only summarise whether the information was or was not sufficient.)

- (1) The Committee judged the information received through documentary inputs and the interview with the Administrative Unit sufficient to complete the evaluation.

- (2) The Committee judged that the Administrative Unit self-assessment report was insufficient to assess all evaluation criteria fully. However, the interview with the Administrative Unit filled gaps in the Committee's understanding, and the information was sufficient to complete the evaluation.
- (3) The Committee judged that the Administrative Unit's self-assessment report was insufficient to assess all evaluation criteria fully, and some information gaps remained after the interview with the Administrative Unit.

Norges forskningsråd

Besøksadresse: Drammensveien 288
Postboks 564
1327 Lysaker

Telefon: 22 03 70 00
Telefaks: 22 03 70 01

post@forskningsradet.no
www.forskningsradet.no

Publikasjonen kan lastes ned fra
www.forskningsradet.no/publikasjoner

Design: [design]
Foto/ill. omslagsside: [fotokreditt]

ISBN 978-82-12-04096-0 (pdf)

