Forskningsrådet

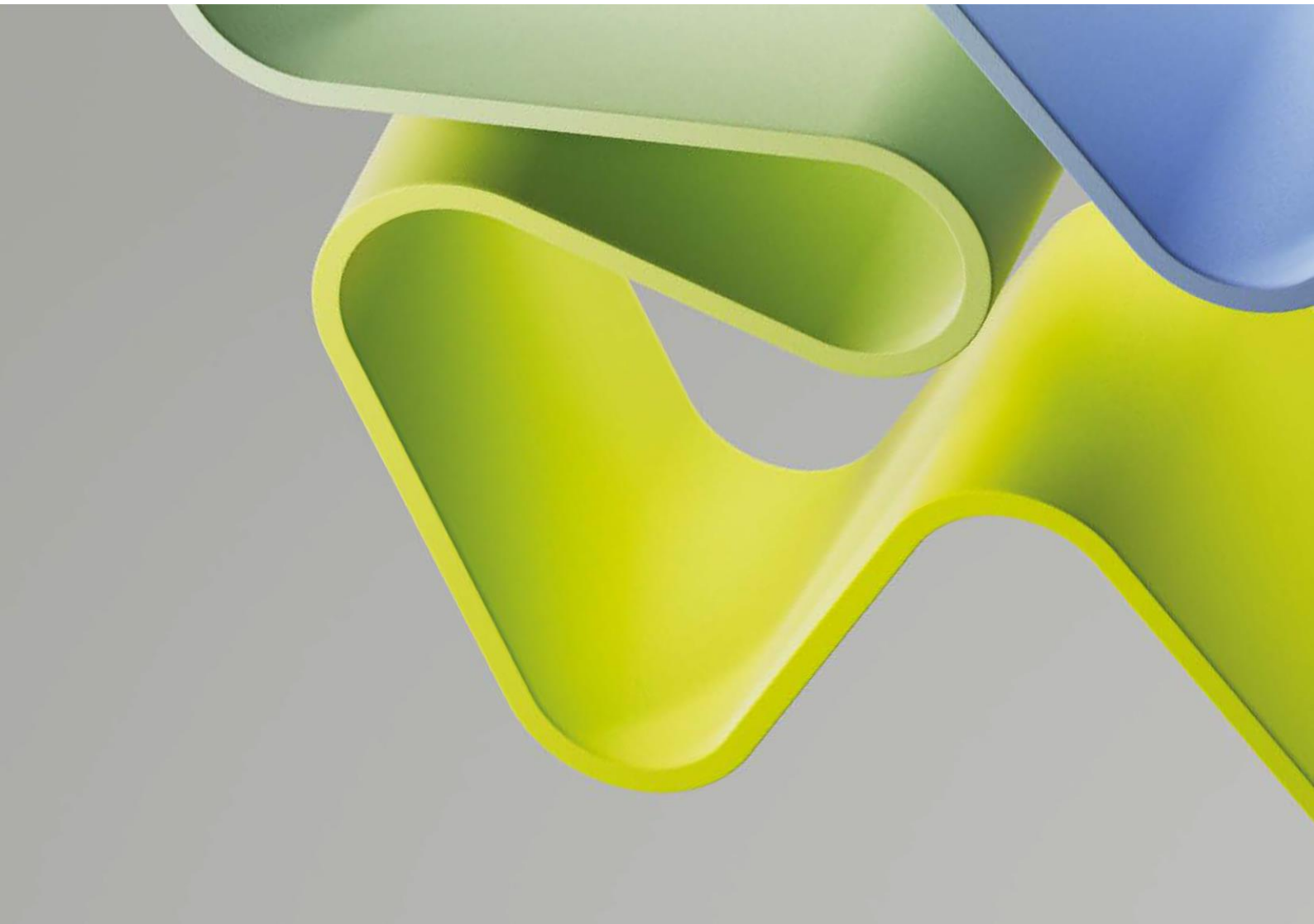
Evaluation of Life Sciences 2022-2024

Evaluation of medicine and health 2023-2024

Evaluation report

ADMIN UNIT: The National Institute of Occupational Health in Norway (STAMI)
INSTITUTION: The National Institute of Occupational Health in Norway (STAMI)

December 2024



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Statement from the Evaluation Committee for the Institute Sector

This report is from the Evaluation Committee for the Institute Sector which evaluated the following administrative units in the Evaluation of Medicine and Health 2023 - 2024:

- Centre for Fertility and Health, Norwegian Institute of Public Health
- Division of Climate and Environmental Health, Norwegian Institute of Public Health
- Division of Health Services, Norwegian Institute of Public Health
- Division of Infection Control, Norwegian Institute of Public Health
- Division of Mental and Physical Health, Norwegian institute of Public Health
- Health and Social Sciences Division, Norwegian Research Centre (NORCE)
- The National Institute of Occupational Health in Norway (STAMI)

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 the Evaluation Committee for the Institute Sector. All members of the committee have agreed with the assessments, conclusions and recommendations presented here.

The Evaluation Committee for the Institute Sector consisted of the following members:

Professor emerita Ingalill Rahm Hallberg (chair)
Lund University

Associate Professor Joachim Boldt
Albert Ludwig University of Freiburg

Professor Walter Bruchhausen
Bonn University

Professor Sarah Purdy
Bristol Medical School

Bregtje Kamphuis, Technopolis Group, was the committee secretary.

Oslo, December 2024

Profile of the administrative unit

The Norwegian Institute of Occupational Health (STAMI) is directed by a General Director appointed by the Ministry of Labour and Social Inclusion. The advisory council, which offers guidance on strategic decisions and research priorities, is composed of senior representatives from Norway's eight social partners, the labour inspectorates and the ministry. STAMI has a total of 134 employees, which equals 127,8 full-time equivalent employees. Of these, 50,6 full-time equivalent employees are research staff. Sixty one percent of staff are women.
STAMI, the National Institute of Occupational Health in Norway is comprised of one research group.

The overall goal of STAMI is to create and retrieve scientific knowledge on occupational health and work environment to motivate and facilitate knowledge-based prioritisation to benefit Norwegian working life. STAMIs research supports the overall strategic goal, defined in STAMI's strategy 2016-2025, and ensure a solid scientific foundation for STAMIs additional activities including: i) national surveillance for work environment and occupational health, ii) work life support, iii) authority support and iv) education and research dissemination. To achieve STAMIs overall goal the strategy is followed-up and supported by allocating appropriate resources, infrastructure or recruiting personnel, to the prioritised activities within research, work life support, surveillance, authority support and education.
STAMI's mission involves developing, processing, and sharing knowledge about occupational health and work environments. The institute conducts research aimed at both current and future needs of Norwegian companies and informs public policy decisions. Through high-quality, internationally recognised research, STAMI contributes to scientific knowledge and publishes in top peer-reviewed journals. Through its "National Surveillance System for Work Environment and Occupational Health", STAMI moreover provides authorities and stakeholders with a shared, objective understanding of the status and trends in occupational health and working environments. This information supports the tripartite dialogue and influences preventive policies and actions at both the national level and individual workplaces. It also informs the priorities of authorities and the working sector, such as shaping the Norwegian Labour Inspection Authority's knowledge-based inspection priorities. STAMI's contribution to its sector can also be seen through its collaborations. STAMI's collaboration with national stakeholders beyond research, is put into practice through their involvement in the strategies and future priorities within STAMI's advisory board. Internationally, STAMI participate in the Nordic Collaboration together with, among others, the Nordic Council of Ministers. Through the Nordic Collaboration, which has long-standing tradition in occupational safety, health, and work environment, STAMI gets the possibility to help to strengthen a relatively small scientific field across the individual Nordic countries. It is primarily organised through the Nordic Council of Ministers and its sub-organisations.
According to its self-assessment, in the future, STAMI might take advantage of its strong position as the main knowledge provider and advisor within the working environment and occupational health field for the national work-life authorities and society. This position builds on STAMI's interdisciplinary scientific expertise in relevant subject areas and its ability to integrate multidisciplinary knowledge, something which might be an advantage in the future. In the future, STAMI might also take advantage of its unique degree of access to the Norwegian working life and Norwegian workplaces for carrying out scientific studies on exposure and health. STAMI also have good relations to stakeholders such as the

authorities and the employer and employee organisations which ensures and contributes to relevant knowledge of current issues in the field. STAMI lost a large proportion of scientific expertise due to retirement in the years 2012 - 2020, with a peak in 2016. However, this period is now over, and STAMI has rebuilt its expertise through recruitment of new personnel and training of its own personnel. STAMI is now well equipped with the right competence to face the future as the national institute of occupational environment and health.

Overall evaluation

The evaluation committee found that the National Institute of Occupational Health in Norway (STAMI) was well organised to support interdisciplinary research without losing sight of the core of occupational health and the multi-dimensional perspectives of health risks related to work environment. The processes to make strategic and managerial decisions and support development seemed appropriate. Having said this, the core activity of STAMI is research which today only constitutes about 40 percent of the total activities of the institute. The reasons for this require analysis and future action.

Research within STAMI is well organised with an existing 10-year strategy plan, with a 5-year evaluation point. The strategy drives prioritisation with regards to the research undertaken and the allocation of resources including staff. The strategy is currently due for renewal. The research field of occupational health and work environment is potentially very broad, covering a wide range of disciplines and topics. This presents challenges in terms of breadth. However, a change in the way in which research is organised at STAMI has resulted in increased collaboration, leveraging the multidisciplinary nature of the research group.

There are challenges with the current funding mode for STAMI. Although central government (ministerial) funding provides some long-term security the fact that ministry resources are agreed on an annual basis for one year only makes budgeting a challenge. Political changes can also challenge the financial model (one year budget). The amounts of grant funding are relatively small compared with the overall budget. There is participation in some EU grants and also RCN funded research but to achieve the research objectives of STAMI, pro-active leadership in seeking additional external funding and international collaborations are required.

Given that almost all diseases are related to issues with the environment some strong collaboration with e.g. Oslo university or internationally would perhaps be helpful in trying to be more successful with external grant funding and building collaborations. There are a relatively limited number of staff with international collaborations so this should be broadened across a wider range of staff and research areas. There are also a large number of collaborations which may not be sufficiently ‘deep’ to leverage the full benefits.

The staffing situation at STAMI has stabilised over recent years, following a large number of natural retirements. The focus going forward should be on recruiting and retaining the best staff with promotion, career planning, development programmes and support for the best young researchers to develop and get funding for research projects.

Research conducted at STAMI has very positive scientific and societal impact given resources received, especially on the Norwegian occupational environment and health. this is reflected in the research groups assessment and scoring. There are examples of research that has impacted directly on working life and regulations. In terms of scientific impact staff are encouraged to publish in high impact journals but the representation of international journals beyond Scandinavia could be better. There needs to be further work to develop and deliver on Gold OA publishing targets.

Recommendations

The recommendations below are an overview of the recommendations presented in the sections below. The evaluation committee recommends STAMI:

- Reviews and renews the strategy for 2025 taking into account the available resources and the research priorities for the institute and with a more focused set of research areas. The reduction in budget allocated to research needs to be reviewed and actively addressed.
- Secures further research contributions from national sources like the Research Council of Norway (RCN).
- Secures lead applicant funding from international sources such as the EU framework programmes as an important strategic step.
- Looks at the breadth of research and research topics with a view to considering more focus to increase attractiveness to funders.
- Builds deeper collaborations (e.g. with HEIs and industry) to allow stakeholders from a range of organisations to be involved in research applications and in the data collection, ensuring high participation and societal impact of the research. This may facilitate funding from various Norwegian or Nordic research funds dedicated to occupational research as well as international funding. STAMI should also consider building and formalising PPIE networks.
- The leadership team at STAMI are focused on the importance of integrity and independence in their research and its reporting. This emphasis on objectivity, relevance and independence should be leveraged to build STAMI’s international reputation, including leading large external funding applications.

1. Strategy, resources and organisation of research

We reflect on the seven points of context and specific requests provided to us in the ToR throughout this, and the following, sections. These points are referred to as ToR# in the order they appear in.

1.1 Research strategy

The National Institute of Occupational Health in Norway (STAMI) is the national research institute on occupational health and work environment, and is an independent research institute, under the Ministry of Labour and Social Inclusion. STAMI's vision is to ensure a healthy, productive, and inclusive working life capable of preventing occupational illness and injury and promoting occupational health. It is important to note that STAMI is an administrative body with several other commitments in addition to research (ToR 1).

STAMI's current strategy covers the period 2016 to 2025 and was revised in 2021. The overall strategic goal is to create and retrieve scientific knowledge on occupational health and work environment to motivate and facilitate knowledge-based prioritisation to benefit Norwegian working life.

In order to support its wider work and impact, the research priorities at STAMI are based on several criteria such as: the knowledge needs and relevance for the working life, the potential for prevention, the prevalence and severity of disease, as well as the scientific potential and significance. These criteria are set to ensure the relevance and scientific quality of the knowledge created and therefore to create impact and benefit for authorities, policy makers, the social partners, businesses and workers in all sectors and industries in Norwegian working life.

To achieve STAMI's overall goal, the strategy is followed up and supported by allocating appropriate resources, infrastructure or recruiting personnel, to the prioritised activities within research, work life support, surveillance, authority support and education (ToR 3). The strategy aims at being aligned with the needs and changes in Norwegian working life. As scientific research is time-consuming activities and needs long-term planning, STAMIs strategy has a 10-year horizon, with a 5-year revision. The strategy also contains flexibility to deal with new occupational exposures that emerge. For example, post-covid questions arising regarding new office solutions and remote work increasing in 2020. This resulted in new research at STAMI with respect to the impact on employee's occupational health.

As the national institute for knowledge in the field of working environment and health STAMI has several roles including research, work environment surveillance, support to authority bodies, advising and supporting working life, education, and communication (ToR 1).

The core activity of STAMI is described as research and this includes research in a wide range of areas including organisational, psychosocial, chemical, and biological work environment, physical and mechanical work exposures, occupational medicine, toxicology, and occupational hygiene. However, research constitutes only about 40 percent of the total activities of the institute.

Other activities constitute the remaining 60 percent of the total (ToR 1,2). Some of these are research related including:

- National Occupational Health Surveillance (NOA) - monitoring trends and risk factors in the working environment (10% of total resources).

- Communication and dissemination activities, as well as research-based education (10% of total resources).
- Contribution to the working-environment initiative under the “Inclusive Working life-umbrella” (IA) (15% of total resources).

The committee’s evaluation

As the national institute for knowledge in the field of working environment and health, STAMI has several roles including research, work environment surveillance, support to authority bodies, and advice and support to working life, education, and communication. Overall, the impression is that STAMI has a clear purpose and a positive impact given the resources it receives, this is especially evident in its impact on Norwegian working life, which is its primary purpose (ToR 4).

The research field of occupational health and work environment is potentially very broad, covering a wide range of disciplines and topics. However, research constitutes only about 40 percent of the total activities of the institute and this proportion has decreased from 50% in 2016. It is unclear from the documentation provided why this is the case and how this issue is being addressed. The spread of research activity prioritised by the strategy is very broad, especially given the other tasks of the institute. It is a challenge to cover the entire field of working environment and occupational health with limited resources (compared with other institutes in Europe). During the interview, STAMI staff describe how research activities are shaped by the overall aims, strategy, budget, workforce availability and skills and importance of the possible areas of work. Final decisions on research projects are made by a process involving the Director of Research and the Director of the Research Area.

STAMI’s strategy should therefore provide more focus (). Currently it gives priority to creating scientific knowledge on work-related exposures and health outcomes from the following strategic thematic research areas: i) psychosocial and organisational exposures, ii) physical and mechanical exposures and iii) chemical and biological exposures. It is possible that more systematic reviews could help STAMI manage the broadness of OHS and avoid repetition of work already completed by other institutions.

It is unclear what progress has been made against the current strategy – no key performance indicators or anticipated outcomes have been included in the reports. Neither are there descriptive accounts of achievement against objectives. KPIs were developed during 2018 - 2020 and include assessment against strategic goals. Strategic goals are divided into five areas with operationalisation of how to reach these goals. There is a long list of KPIs. Most are reported every year in the annual report, but some are only for internal use. The KPIs contribute to measuring societal impact.

The current strategy for STAMI will require an update over the next 12 months. However, it was reviewed in 2021 and seems to allow some flexibility to develop new work in response to secular changes. A strategy that provides more focus and prioritisation may aid the development of research excellence in a smaller number of high priority areas.

The committee’s recommendations

- Consider a review of whether the goals of the 10-year strategy have been achieved.
- Review and renew strategy for 2025 taking into account the available resources and the research priorities for the institute and with a more focused set of research areas.

- Develop a core set of KPIs to measure effectiveness of the new strategy, with a focus on impact.
- Review and actively address the reduction in budget allocated to research needs.
- Leverage this emphasis placed on objectivity, relevance, integrity, and independence by the STAMI leadership team to build STAMI's international reputation, including leading large external funding applications.

1.2 Organisation of research

Research at STAMI is organised into one research group. This has been the case since 2019; there were previously four groups. The research group is organised in four research fields divided according to their methodological and scientific expertise: 1) occupational medicine and epidemiology, 2) occupational toxicology, 3) occupational psychology, and 4) physiology and chemical work environment. The research group's goal is identical to STAMI's main goal: to prevent occupational illness, injury, and work-related health problems related to Norwegian working life. To achieve this goal, the research group's objectives are to: (i) create new and relevant scientific knowledge through research projects, (ii) interpret and monitor the international scientific knowledge front on occupational health. A Research Director overseas all activities. The research group has corporate governance support. There are two digital systems that aid researchers: a project assessment system and a Goal Management system. Other activities of STAMI build on the work of the research group, like certain sector specific tasks build on research including work life support activities e.g. an advisory service for pregnancy and authority support activities e.g. advice on regulatory toxicology. The evaluation report on this STAMI research group rated it 4 out of 5 on organisation ('How adequate the organisational environment is in supporting the production of excellent research').

Researcher development is in place for post-doctoral staff. This includes professional guidance in research work, sharing and developing national and international networks, systematic training and ensuring participation at relevant courses and international conferences, and offering research leaves for shorter or longer periods abroad at sister institutes or universities.

The committee's evaluation

The formation of one larger research group with four areas of focus appears to have been a very positive step (ToR 3). The intention was to optimise research opportunities, maximise impact, collaboration and networking across the areas of occupational health whilst keeping specialist areas. There is also some benefit in terms of managing resource allocation and using infrastructures. The leadership team instigated measures to increase collaborative working including initial full day seminars to encourage knowledge exchange and ongoing regular meetings to discuss new ideas/projects across all areas. Examples demonstrate the success of this approach include increased numbers of EU grants since 2019 and a new holistic approach to multidisciplinary studies in industry spanning different exposures and outcomes e.g. mental health, chemical exposure and musculoskeletal in ship building. This combination of exposures reflects the reality of working life, and it is very important to see the impact of interaction between exposures. There have also been methodological benefits, both in terms of investment in new technologies (e.g. proteomics) and collaborative working on using data sources. Research questions are generated 'bottom up' by researchers, by intelligence from stakeholders and by surveillance and awareness of issues in the workforce. Prioritisation of research to be undertaken is managed in a robust

process with consideration of knowledge needs for the workforce (with a focus on Norway), potential for prevention, prevalence of exposures and outcomes, severity of outcomes and scientific potential.

The committee's recommendations

- Continue to focus on building multidisciplinary strength across occupational health research.
- Continue to build expertise in evaluating exposures and mechanisms in occupational health research.

1.3 Research funding

STAMI relies mainly on funding from the relevant Norwegian ministries. The average amount of research funding per year from 2018-2022 was 77.8 million NOK. The majority of this comprises research funding direct from ministries at 56.3 million NOK (72% of total). Competitive grant funding from national grants was on average 10.1 million NOK a year (13% of total) and 2.7 million NOK (3% of total) from international grants. The research group has been more successful recently in attracting external research funding and increased external funding from 10 million NOK in 2018 to 16.6 million NOK (21%) in 2022. This is despite changes in public research funding and a reduction in focus on research in occupational environment and health which reduces possibilities for external research funding. STAMI responds to invitations to participate in research but does not commonly initiate and take the lead in, for instance EU grant applications or Nordic collaborations.

The committee's evaluation

There are challenges with the current funding model (ToR 2). Although central government (ministerial) funding provides some long-term security the fact that ministry resources are agreed on an annual basis for one year only makes budgeting a challenge. Political changes can also challenge the financial model (one year budget). Government agencies are represented on STAMI's advisory board. However, STAMI does not, in the majority of cases, receive direction from the ministry as to the research to be undertaken. This is an important feature, ensuring the objectivity and independence of its work. The Ministry can also ask specific questions as part of open tenders/funding opportunities (STAMI does then not become involved).

Within Norway, medical and health sciences was the second smallest field of current expenditure on R&D in 2021, only humanities and the arts were smaller. In current prices, R&D expenditure amounted to 950 million NOK (830 in fixed prices) among all the research institutes.

The amounts of grant funding are small compared with the overall budget. To achieve the research objectives of STAMI, additional financing and international collaborations are required. EU funding is particularly important for the internationalisation of STAMI. STAMI currently has five EU projects (as a participating institute). EU projects require considerable infrastructure both during the application and delivery phases. STAMI provides support to researchers to apply for such grants. Researchers need to be invited via networks (PEROS network) then research administration supports budgets, reporting etc, staff get time to write applications, and the communication department helps with dissemination plans. However, STAMI has not yet led an EU funded project. STAMI does not generally undertake

commissioned research, but this should not be a barrier if the commissioner cannot influence the outcome.

The committee's recommendations

- Consider discussions with government departments about funding cycles beyond one year
- Secure further research contributions from national sources like the Research Council of Norway (RCN).
- Secure lead applicant funding from international sources such as the EU framework programmes, would be an important strategic step.
- Consider undertaking objective, impartial commissioned research.
- Look at breadth of research and research topics with a view to considering more focus to increase attractiveness to funders.

1.4 Use of infrastructures

STAMI does not participate in the national infrastructures listed in the Norwegian roadmap for research infrastructures. Internationally, STAMI collaborates with the European Foundation for the Improvement of Living and Working Conditions (Eurofound), the European Agency for Health and Safety at Work (EU-OSHA) and the International Agency for Research on Cancer (IARC). STAMI has no participation in European (ESFRI) infrastructures (Norske medlemskap i infrastrukturer i ESFRI roadmap).

Researchers at STAMI have access to an advanced scientific equipment park and laboratory infrastructure. However, some research projects require specialised and advanced instrumentation and expertise beyond the existing instrumentation and expertise available at STAMI. The use of and access to these infrastructures has been through collaboration for each individual project as needed. Therefore, building national and international networks is of vital importance.

The committee's evaluation

STAMI hosts databases on working life which are not primarily intended for research and works via linkage with other national Norwegian databases e.g. cancer registry to conduct exposure studies. Other health and patient-related registries are also accessed as appropriate. STAMI also hosts a very large working life related cohort study with 6 million participants. Access to registry data is slow, due to the period of time it takes to obtain the relevant permissions. Permission is required from regional ethics committees to do research. This has become a little bit easier than 4-5 years ago and has been improved since the formation of the data treatment centre at the University of Oslo.

STAMI works to fulfil the FAIR principles while also adhering to the GDPR legislation by, for example, informing research-staff about the FAIR principles to ensure good data handling and to eliminate technical limitations when developing databases.

The committee's recommendations

There are challenges with accessing national registry databases which require attention at a national level. Possibilities include a solution similar to Statistics Norway or that used Denmark (handling comprehensive registry information without compromising personal data).

1.5 Collaboration

STAMI has national collaborations with relevant government departments, labour organisations, business, HEIs and occupational health clinics. National collaboration shares in 2022 were 47.6% (3-year share 45.9%). The most frequent collaborations cited are with the University of Oslo and the Norwegian Institute for Public Health (NIPH).

STAMI describes wide networks internationally, listing 478 collaborating institutions from 53 countries in 2022. This number has grown from 180 institutions in 2012. International collaboration shares in 2022 were 51.2% (3-year share 55.8%). International collaborators cited most frequently are Scandinavian universities and the International Agency for Research on Cancer. In terms of publications and collaboration with top ranked international institutions, 19 papers are cited with author shares of 3.0 and percentage of author shares 1.8%.

The committee's evaluation

The majority of national collaborators are government, policy or other public institutions. There is less evidence of collaboration with HEIs, or other research intensive bodes which might strengthen research excellence. Reference is made to the NIPH and connections to this organisation have increased since the cancer registry was moved to NIPH. Given overlapping areas of research interest strengthening this collaboration seems important, although the application to working life may limit the potential in some areas. Internationally, an impressive number of research collaborations are listed, and number has grown since 2012. However, many are with institutions in other Scandinavian countries, limiting the generalisability of research findings and international impact.

The nature of collaboration with other institutions is not clear from the self-assessment report. However, during the follow-up interview it was explained that there are collaborations with HEIs both nationally, in Nordic countries and in Europe on methods. Internationally collaborations include networking, data sharing and funding applications for large international projects.

There are challenges with building and maintaining collaborations, especially internationally. There are lot of collaborations to maintain which requires resource and there is a risk with having a lot of collaborations which are insufficiently 'deep' to leverage the full benefits. International collaboration and networking is limited to a minority of key researchers which is a risk if staff leave or retire.

The role of patient and public involvement, engagement and participation (PPIE) in the research of STAMI is conducted in a number of ways including through the national surveillance system which provides three yearly updates on the status and trends of occupational health and also work environment for the working force in Norway. During this process a representative sample of the working environment answers questions in terms of different indicators in occupational health, but also the work environment. This is not PPIE in the traditional sense but seems important given the focus of the research. Other influences include the representation of labour organisations, but these do not represent the views of individuals or the public.

The committee's recommendations

- Build deeper collaborations including with HEIs and industry will allow stakeholders from a range of organisations to be involved in research applications as well as in

the data collection, ensuring high participation and societal impact of the research. This may facilitate funding from various Norwegian or Nordic research funds dedicated to occupational research as well as international funding.

- Increase international collaboration across a wider range of staff and research areas to further broaden the scope of research.
- Consider a review of collaborations to see what the value in each for STAMI is, e.g. only 'ticking a box' or providing excellent knowledge they can use in their development.
- Consider building and formalising PPIE networks.

1.6 Research staff

In terms of research staff, STAMI has 51 scientific fulltime equivalents (FTEs) research related staff (40% of total of 128 FTE). The research group has 20 professors, 18 assistant professors, 5 postdoctoral fellows, 27 lecturers (advisors), 20 doctoral research fellows and 8 research assistants. Most of the scientist researchers are reported to be permanent, full-time employees. The number of FTEs has been relatively stable over the last years, but the relative percentage of personnel working on scientific tasks has decreased from about 50 percent in 2016 to about 40 percent by the end of 2022.

There are more female staff at junior levels (especially doctoral students), with a dominant female share except at professorial and postdoctoral fellow level. The breakdown of FTE staff is: 24 FTE scientist researchers (with PhD), five are professorial level, 44% female; 27 FTE technical and admin staff, 55% female; 17 PhD/doctoral students, 88% female.

During the evaluation period from 2012 to 2022, 37 candidates employed at STAMI received their PhD. During the evaluation period STAMI lost a significant part of its key personnel as 58 permanently employed scientists with a PhD, equalling approximately half of the scientific personnel being employed from 2012, having left their positions, mainly due to retirement. The occupational health research field is a small and highly specialised area, resulting in recruitment challenges. There is no formal education in Norwegian HEIs for occupational safety and health, so STAMI contributes by training research staff and practitioners in occupational health.

The committee's evaluation

The staffing situation has stabilised over recent years, following a large number of natural retirements. The focus is now on retaining the best staff with promotion, career planning, talent programmes and support for the best young researchers to develop and get funding for research projects (ToR 3). As well as retention strategies there is a focus on developing staff with the intention of building internal recruitment. When hiring replacement staff the strategy and needs of the organisation are considered rather than hiring 'like for like'. Staff with required skills in mathematically orientated subjects are harder to recruit due to a skills shortage nationally. International applicants must speak Norwegian to be eligible for employment due to the industry facing elements of the work.

The interdisciplinarity score for STAMI is high at 135. Staff come from a variety of backgrounds including Health and Medicine; History, Philosophy, and Culture Studies; Mathematics, Natural Science, and Technology and Social Sciences and Psychology.

The committee's recommendations

- Strengthen collaboration with universities to ensure talented researchers for the future, especially those with mathematically based skills and to aid in the development and retention of staff.
- Consider research methods development as a core in competence development e.g. in complex methods. This could this aid recruitment, retention of researchers and grant success.
- Consider recruiting visiting or guest professors from top universities internationally to complement their generous mobility terms.
- Facilitate the development of future researchers by ensuring that the professional development courses for OHS staff are recognised by academic institutions, thereby allowing people to build their careers towards study for higher degrees.

1.7 Open Science

STAMI has a published Open Science Policy which includes the following areas: 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.

It describes its most important contributions to be in 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, and skills and training for Open Science.

The STAMI Open Science Policy includes ownership of research data, data management, and confidentiality.

The committee's evaluation

These policies seem adequate, but implementation still requires work. In 2022 32.1% of publications were Gold open access (OA) (the other main categories being 23.8% archived and 44% not OA). Gold OA publishing fell from previous years and is well below average for other institutes.

The committee's recommendations

- Implement further work and action to develop and deliver on Gold OA publishing.

2. Research production, quality and integrity

Introduction

The activity of STAMI includes research in a wide range of areas including organisational, psychosocial, chemical, and biological work environment, physical and mechanical work exposures, occupational medicine, toxicology, and occupational hygiene.

Preventive measures are implemented for securing integrity and good ethical behaviour, include annual risk assessments, both at task level, during projects, and overall, for the institute; and evaluations of integrity prior to accepting new projects. Issues relating to independence and party neutrality are included in the risk assessments. All results shall and must be made publicly available. STAMI also participates in an external “Integrity committee”, where cases relating to possible breaches or violations of research ethical guidelines can be raised. “The Norwegian Agency for Shared Services in Education and Research” (SIKT) has an important role as adviser in complicated ethical issues and assessments of privacy. STAMI has implemented guidelines for ethical behaviour, including a description of preventative measures for when there is a suspicion of integrity being at risk or being violated.

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).

Occupational Health and Work Environment

The group is strong both in number of personnel and projects that have been supported by successful external funding. They produced good quality research and a high societal contribution with high user involvement. However, as such institute does not provide degrees, the steady flow of PhD- and even master students should be ascertained for the future of the research group.

3. Diversity and equality

The institute has guidelines which includes reporting of bullying, harassment, intolerable sexual behaviour, discrimination based on religious, ethnic or sexual orientation. STAMI also has a separate agreement with an occupational health service company who can be approached and reported to if an employee does not want to report internally.

STAMI has policies and practice regarding salary advancement and competence development to ensure equality between sexes, professions, fulltime and part time employees. The institute also meets the goal set by the Norwegian government of recruiting at least five percent of personnel who have either disabilities or have been out of work and education for at least two of the last five years.

In 2021, STAMI had the lowest share of female employees of the Norwegian Research Institutes with 54% (total of all institutes being 63%). STAMI reports its current data as the percentage of women to men being 60/40. In 2021, 15% of employees were 62 years or older (total all institutes 10%). However, this picture has changed more recently.

About 1/5 of the employees are of foreign origin, this is evenly distributed with around half being from western countries and the other half from Asia, Africa and South America.

The committee's evaluation

As noted in the staffing section, there are more women in the lower job groups. Data on race and ethnicity are not available by job/role but care needs to be taken to ensure that all positions, including the most senior reflect the composition of the workforce and wider population. Given its focus on working life, STAMI endeavours to provide good working conditions for all staff.

The committee's recommendations

- Ensure that all positions, including the most senior, reflect the composition of the workforce and wider population.

4. Relevance to institutional and sectorial purposes

STAMI has an impact on both a scientific and political level. STAMI has academic impact through its scientific contribution to build and strengthen the international research front on occupational health. Secondly, STAMI's research impacts policy, particularly in Norway, as the research is used as a knowledge platform in decisions regarding policy and regulations, performed by the ministry and labour authorities.

STAMI's research safeguards the authorities' need for capacity or preparedness to cope with new and unexpected knowledge needs in the field. By allocating and prioritising researchers that cover the whole range of occupational health, STAMI can contribute with expertise in advisory bodies and various committees set up by the government and ministry when needed. The outputs from STAMI seem to have a very good national societal impact. Some efforts are done in collaboration with other Nordic countries, which broadens the impact.

The group regularly involves non-academic partners in its research processes.

The committee's evaluation

STAMI has published 80 international scientific publications per year on average during the past 5 years, influencing working practices worldwide. It promotes research and research evidence in occupational health both nationally and internationally. In terms of publications the grade of author share is good. There were a reduced number of publications in 2020 (which was due to the impacts of the pandemic both on industry, affecting participation in research and the transfer of resources to covid related projects). Researchers are encouraged to publish in the highest impact journals in their field, noting that impact factors vary across fields. International co-author share is increasing.

The balance of primary/secondary research is that the majority (approximately 80%) is primary research with only 4 of 74 papers published in the past year focusing on the analysis and synthesis of existing research. It is possible that more systematic reviews could help STAMI manage the broadness of OHS and avoid repetition of work already completed by other institutions.

The committee's recommendations

- Continue to aim to publish in more high impact international journals.
- Continue to increase the societal impact further via more inclusive interaction with workplaces, stakeholders, and decision-makers both in Norway and internationally.
- Consider how to prioritise research projects in the light of collaboration with stakeholders such as University of Oslo and NIPH to maximise impact.
- Increase the number of systematic reviews to ensure research is not duplicating existing findings.

4.1 Research Institutes

According to a publication from the Norwegian department of knowledge (F-4456 B, "Strategi for helhetlig instituttspolitik") the governmental ambition is that the institutes sector should develop knowledge to inform policy development and contribute to sustainable development and transformation through high quality and relevance.

Through around 60 ongoing research projects annually, and through the execution of various sector-specific tasks, the research group contributes to increase the understanding of occupational health and working environment conditions for society at large. The development of knowledge in the field of occupational health is international, and through an average of 80 international high-quality scientific publications per year the last five years, STAMI contributes towards a more sustainable and healthy work life for workers nationally and internationally.

STAMI also monitors, interprets, and disseminates science-based knowledge from international quality-assured literature of special national relevance in the international interchange. The new knowledge accrues to authorities, organisations and industries through dissemination and research-based teaching.

The committee's evaluation

The case studies are discussed below but some general reflections are that the strength of the evidence base is at times unclear. Many studies are descriptive in nature. However, the evidence presented shows that the cases do seem to lead to a change in practice. This is further evidence that the institute contributes to the monitoring of working life in Norway and has contributed to policy changes to improve working life in Norway. However, intervention studies would be a more robust way of demonstrating this impact.

The committee's recommendations

- Consider using intervention studies as a robust way to demonstrate effectiveness.
- Consider capturing and reporting data on impact in a formalised way.

5. Relevance to society

STAMI has an impact on society at large, as it provides knowledge and awareness of challenges regarding occupational health, enabling businesses, workers and social partners of working life, to implement knowledge-based preventive activities to prevent occupational illness and injury and promote occupational health.

The activities of STAMI contribute particularly towards achieving and improving UN Sustainable Development Goal number 8- (to promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all). In addition the work of STAMI has contributed to a number of pieces of legislation in Norway.

Another important societal impact STAMI's research group has, is to build, secure and develop research competence within the field of occupational health in Norway. During the evaluation period, STAMI has had 37 doctoral candidates employed while completing their PhD.

Comments on impact case 1: The New Workplace

This case covers the period 2012-2022 and involved developing and testing a model to deepen the knowledge about psychosocial components contributing to a healthy work environment. It questioned the prevailing models like the 'Demands-Control model' in terms of the many variables that may contradict each other regarding whether work is a healthy environment or producing health problems like musculoskeletal problems. In particular the exploration of psychosocial factors has added to knowledge in this area. Several studies have been done and reported applying advance statistics to develop a model sensitive to identify factors likely to play a role in health problems. Testing the model in intervention studies may be needed to determine its stability and ability to predict health problems related to psychosocial factors. However, the survey-feed-back model introduced by the case, may be a significant way to assess impact to the workplace environment. The impact has been educational due to STAMIs role as educator, its contribution to policy documents, inclusion in the labour inspections authorities work as well as enhancing the psychosocial surveillance system and applying it in Norwegian workplaces.

Comments on impact case 2: Occupational cancer

Research in this area is ongoing continuously at STAMI. However, this impact case reports on a 10-year period, disseminating knowledge about prevalence in cancer incidence and possibly caused by toxicological exposure in workplaces. On the one-hand monitoring the cancer frequency, exposure to toxicological agencies and exploring their relationship to cancer development, carcinogenesis and on the other hand disseminating the discoveries and suggesting safe occupational limit values as well as tools for exposure assessment. Over the years more than 180 scientific papers have been published and those reported in the case description are in journals with modest impact factor. The variation of toxicological risk exposure represents a wide range including chemicals, dust, nano particles, benzene, diesel, silicon carbide etc but also factors like work organisation that may have an impact on the circadian rhythm. Toxicological analyses relate to older known cancer risks and new substances that may carry cancer risk. The examples of impact on policy and regulations, deeper understanding of risk assessment, surveillance of cancer risks and monitor workplace for substances that may cause cancer is impressive and so is the national and international participation to ensure safe workplaces.

Comments on impact case 3: Prevention potential for the working environment in Norway

Again, this is an area of ongoing research to feedback information to Norwegian authorities, workplaces, labour inspectorates and unions. The case relates to 2012-2022. Data is collected in national surveillance every third year from a representative sample of about 11,200 employees by statistics Norway, where STAMI has contributed to the content of the survey. The third wave was conducted and made public in 2021. Publications over the years is good and in international scientific journals with modest impact. Dissemination in a Norwegian context is digital and for instance through the fact book on occupational health and work environment along with a web-based surveillance system to be used and regularly updated. The information as well as the tool is available for work organisations and the Labour Inspection Authority to identify branches or industries with higher risks of health problems and injuries related to work. It also provides a common view of what to regard as a healthy workplace. This is further developed in a tripartite agreement for preventing sick leave and withdrawal from work life. It would be interesting to know more about the impact of using the tool to improve the work conditions at individual workplaces. The dissemination may provide a more common view of what constitutes a good workplace, and the longitudinal approach provides information about trends in occupational health and work climate. Perhaps some research about implementation would provide information about how to speed up the knowledge translation in practice.

Comments on impact case 4: Health effects, mechanisms and regulation of occupational exposure to engineered nanomaterials

This case, again covering the period 2012-2022, demonstrates excellent research to investigate health risks with different nanomaterials, develop research methodologies to research their potential health threats and share the knowledge with authorities responsible for regulations. The case also describes disseminating information on how to handle the risks as well as sharing the knowledge with the international research community and international authorities responsible for occupational health risks, including in WHO guidelines. The research is published in international scientific journals with a good impact factor. The descriptors of the research undertaken, methodologies and laboratories developed, dissemination and impact appear to place STAMI as an international centre of excellence in the field.

Appendices

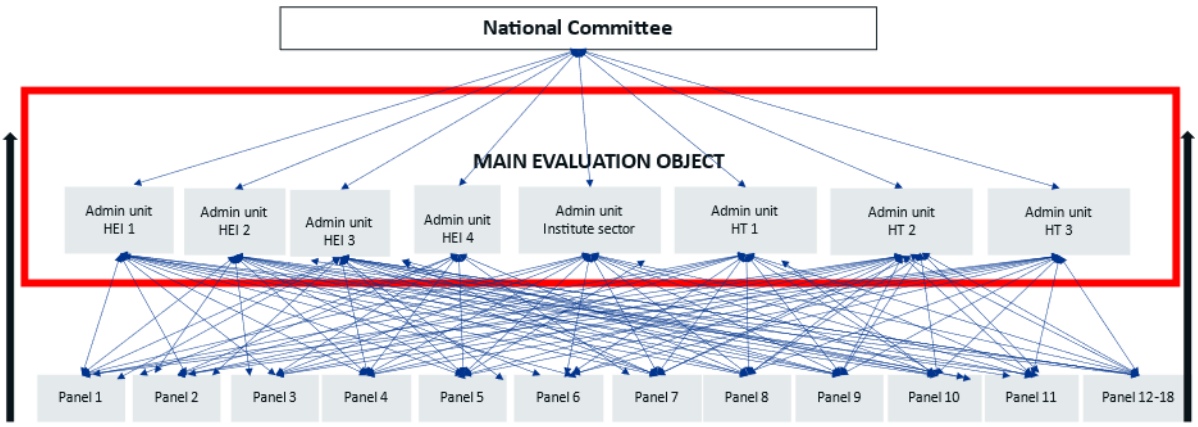
Evaluation of Medicine and health 2023-2024

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 medicine and health 2023-2024: [Evaluation of medicine and health sciences (forskningsradet.no)]

Forskningsrådet

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 (hovedevalueringsobjektet 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.

Forskningsrådet

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	Hilde G. Nielsen
avdelingsdirektør	spesialrådgiver
Helse	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

The Research Council of Norway

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
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Oslo, 5 April 2022

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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.

Administrative unit	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.
Research group	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 Reference[1] 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 colleges[2]

- 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 sector[3] 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 (RHFs) in Norway. They are responsible for the specialist health service in their respective regions. The RHFs 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 (HFs), 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 mains 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.

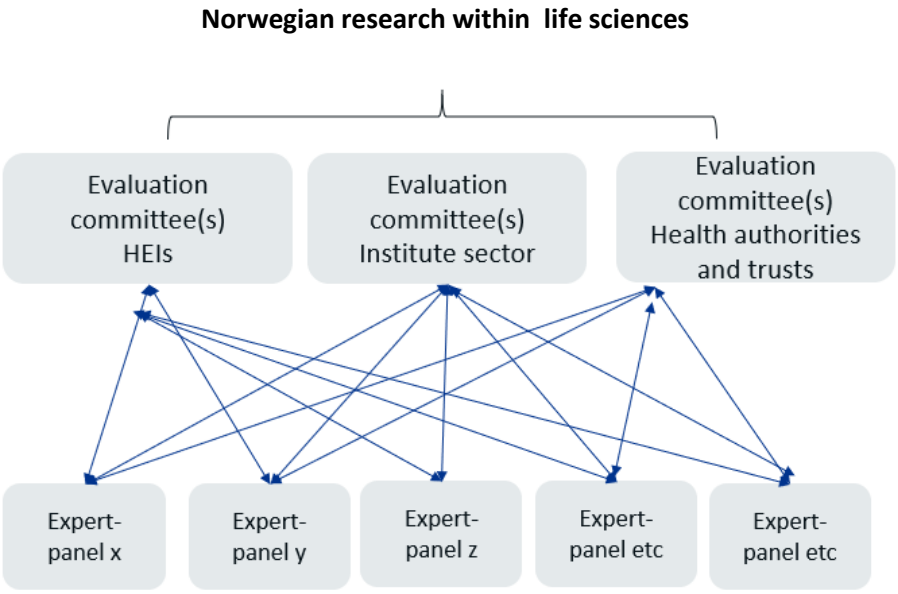

Figure 1. Evaluation committees and expert panels

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

Evaluation units / Criteria	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	*Data related to:* *Benchmark defined by administrative unit*	*Data related to:* *Strategic goals and specific tasks of the admin. unit*

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

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 from. **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
The National Institute of Occupational Health in Norway (STAMI)	The National Institute of Occupational Health in Norway (STAMI)	Occupational Health and Work Environment	Panel 4f

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 leadin**g 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.

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