Forskningsrådet

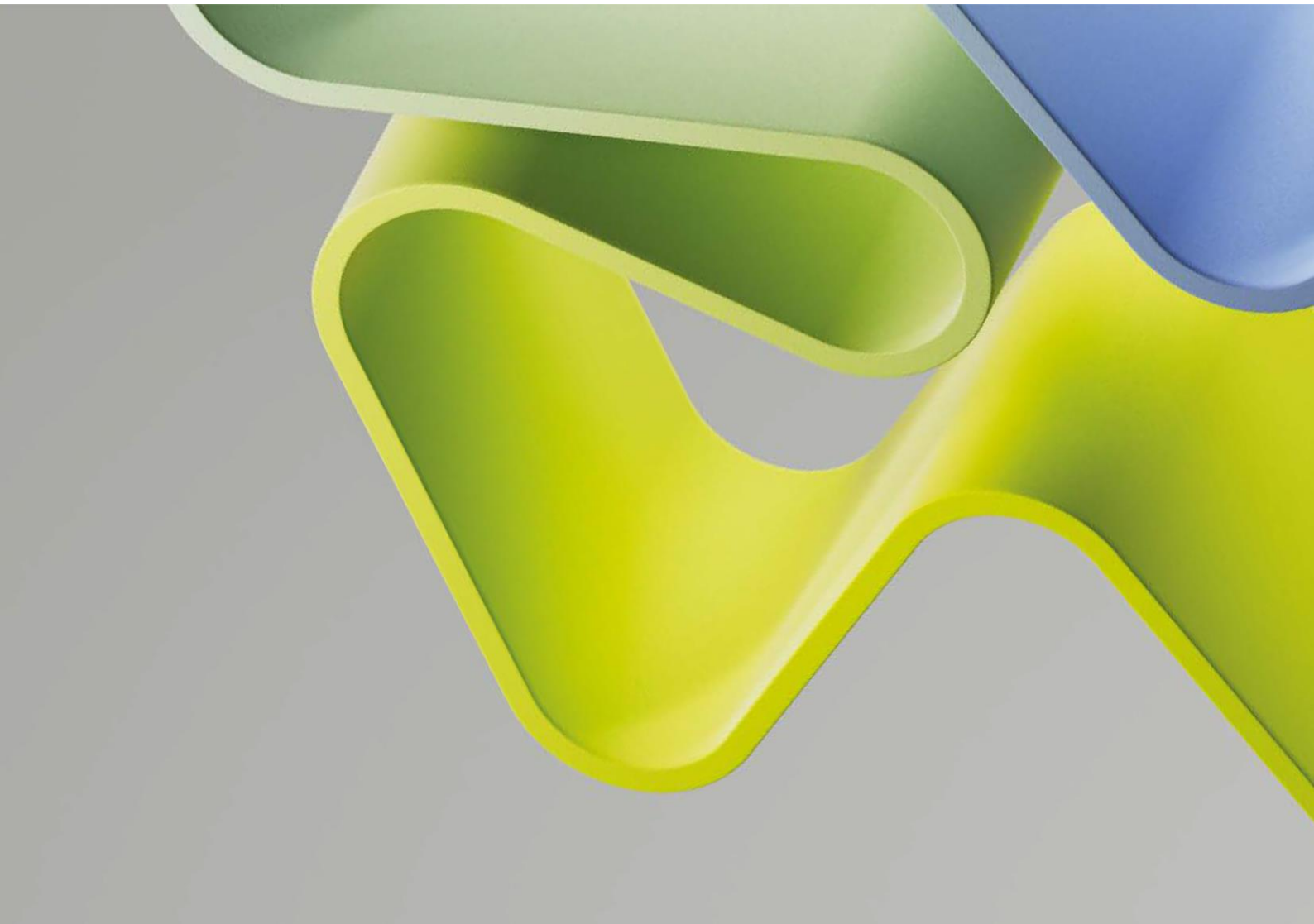
Evaluation of Life Sciences 2022-2024

Evaluation of medicine and health 2023-2024

Evaluation report

ADMIN UNIT: Department of Clinical Dentistry (IKO)
INSTITUTION: UiT Arctic University of Norway

December 2024



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Statement from Evaluation Committee Higer Education Institutions 4

This report is from Evaluation Committee Higher Education Institutions 4 which evaluated the following administrative units representing the higher education sector in the Evaluation of medicine and health 2023-2024:

- Faculty of Health Sciences and Social Care, Molde University College
- Faculty of Medicine and Health Sciences, NTNU
- Faculty of medicine and Health Sciences, NTNU,
- Department of Clinical Dentistry (IKO), UiT Arctic University of Norway
- Department of Community Medicine, UiT Arctic University of Norway
- Department of Medical Biology (IMB), UiT Arctic University of Norway
- Faculty of Health and Sport Sciences, University of Agder (UiA)
- Department of Global Public Health and Primary Care, University of Bergen (UiB)

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 committee Higher Education Institutions 4. All members of the committee have agreed with the assessments, conclusions and recommendations presented here.

Evaluation committee Higher Education Institutions 4 consisted of the following members:

Professor Anja Krumeich (Chair)
Maastricht University

Professor John de Wit
Utrecht University

Professor Paul Hatton
University of Sheffield

Professor Marialuisa Lavitrano
Milano-Bicocca University

Professor Patrik Midlöv
Lund University

Professor Louise Torp Dalgaar
Roskilde University

Rebecca Babb, Technopolis Group, was the committee secretary.

Oslo, December 2024

Profile of the administrative unit

At the Department of Clinical Dentistry at UiT, the Head of the Department (HoD), supported by a deputy head of department and two study programme leaders, serves as the research group leader. Moreover, the department consists of one head of department, 3,2 work-year professors, 9,6 work-year associate professors, 6,3 work-year assistant professors, one postdoc, four PhD students, one senior engineer, and five administration personnel. Women represent a majority in all categories except among head of department, and professors in which they represent, 0,33 and 26 percent respectively.

The Department of Clinical Dentistry is comprised of one research group, the Oral health research group.

The department aligns its research strategy with UiT's, focusing on developing knowledge, methods, and tools to address major societal challenges. The main goals of the department are to increase evidence-based knowledge concerning oral health status and behaviour, strengthen initiatives in North Norway regarding oral health promotion and preventive oral health, and track the development of the Norwegian dental healthcare services. To reach the goals, the department has activities and projects spanning many topics related to experimental dentistry, basic oral sciences, dental public health and behavioural dentistry. Topics include population dental health, oral health service models, oral health literacy, dental fear and anxiety, stress and pain perception, antibiotic resistance in oral bacteria, antibiotic prescriptions by Norwegian dentists, dental biomaterials, and studies on vulnerable groups like the elderly, at-risk children, and trauma survivors.

As a substantially small department compared to other dental schools in Norway, collaborative culture is an integral part of department of clinical dentistry research policy. Internal collaborations with other departments in the Faculty of Health Sciences and externally with others like the Public Dental Health Service Competence Centre of Northern Norway help them solve interdisciplinary challenges. Collaboration with international and national research and educational institutions is also considered important to increase the quality and robustness of the education and research. Internally funded PhD-positions are encouraged to appoint multiple supervisors as a strategic measure to facilitate internal collaboration across staff members. Nationally and internationally, the administrative unit has extensive collaborations with other universities in Norway, especially the Universities of Oslo and University of Bergen and abroad.

According to its self-assessment, in the future, the administrative unit may take advantage of a variety of internal strengths, such as its qualified staff, key focus areas, and local networking. Meanwhile, there are several intricacies the administrative unit will need to address. The isolated location introduces a number of challenges for international collaborations, recruitment, and establishment of centres that are strong enough to compete for external funding. Continuous cuts in the basic income, reduced budget appropriation from the Ministry of Education and Research, and failure to attract external funds will likely lead to lower research activity and make the administrative unit less attractive to young and promising researchers as well as collaboration partners. To enhance its prospects, the administrative unit may leverage the strong and diverse

expertise at other departments within the Faculty of Health sciences, and research department at the Public Dental Service Competence Centre North-Norway, in combination with geographic proximity, which provides good opportunities for continued and new local interdisciplinary and transdisciplinary collaboration.

Overall evaluation

The Department of Clinical Dentistry (IKO) has a detailed research strategy that is aligned with the UiT's strategy "Developing the High North". Specific to the IKO scientific field, is to increase the awareness of oral health as an integral part of general health and well-being.

Research activities are mostly financed by internal funds allocated by the Head of Department to different researchers. Departmental staff applied only for small sum of external funding from national agencies.

IKO is a small environment and has not yet reached a critical mass of employees in order to reach their ambitions. The department has one main person in each clinical discipline and basic oral sciences that makes IKO vulnerable with difficulty to maintain continuity in research activities.

IKO does not seem to have a strategy or incentives to support innovation and a specific policy and practice to promote working with FAIR principles because of resource limitations. It is also of concern that the department finds it particularly challenging to recruit young and talented researchers and PhD students. The number of PhD students is modest (N=3), and researchers and postdoc positions are rare (N=1). This is due to the location of IKO, which is about 264 kilometre above the Arctic Circle. In fact the small number of graduated dentists that decided to go for academic life are attracted by large institute like Oslo or Bergen. In addition, researchers earn less than those who work in the market (clinics).

The Committee positively value the extensive network of national and especially international collaborations. Open access publishing is enabled but other pillars of open science do not seem to be addressed. IKO has a very good policy against discrimination characterised by an equality-diversity-inclusive work culture that makes the administrative unit an attractive workplace. Of a positive note is that the implementation of the mentorship program for women has led to a notable improvement in the gender balance at higher positions.

IKO contributes to the sector specific objectives and goals for higher education institutions and prioritizes research that contributes to understanding and meeting major societal challenges related to oral health and quality of life.

Recommendations

The evaluation committee wishes to extend the following recommendations to the administrative unit.

- Promote long-term a research program that addresses pressing and enduring global challenges in dentistry, targets for external funding, and milestones for achieving research excellence.
- Involve local communities and stakeholders in research planning and implementation, ensuring that research projects are aligned with community needs and have strong local support.
- Focus on high-impact areas of research, such as reducing disparities in oral health access and outcomes, especially in Arctic and other marginalized communities.
- Explore the use of digital tools and tele-health in promoting oral health behaviours and improving public health outcomes.
- Invest in research on innovative dental materials and emphasize translational research that bridges the gap between laboratory findings and clinical application, ensuring that research outcomes directly benefit patient care.
- Host and participate in international conferences focused on key research areas, bringing together leading experts and positioning UiT as a hub for dental research, increasing the department's visibility and network.
- Establish or strengthen a dedicated research office to assist faculty and students in identifying funding opportunities (i.e. from national and international government agencies, non-profit organizations, and private industry) preparing grant applications, and managing research projects that align with the department's strengths.
- Introduce internal seed funding programs to support preliminary research that can lead to larger, externally funded projects.
- Build strong partnerships with the dental industry for collaborative research projects, in areas like dental materials, technology development, and oral health products. Engage in public-private partnerships that can provide stable funding streams and reduce dependency on government grants alone.
- Invest in capacity building implementing programs to expand PhD and postdoctoral opportunities in these areas, attracting top talent to foster the next generation of leaders.
- Participate in national infrastructures since they provide access to cutting-edge technology and facilitate collaboration with other institutions leading to joint research projects and funding opportunities from national and international sources, elevating the profile of the department, and facilitating the attraction of top talent, collaborators, and students.
- Continue efforts to recruit junior research staff and perhaps to focus on increasing the local competence and then recruiting people locally.
- Develop and implement policies and strategies and make available resources to enable researchers to engage with all pillars of open science.
- Support students to get their education/training finished on time, because the market and population of the north of Norway is waiting for them to provide the services.

1. Strategy, resources and organisation of research

1.1 Research strategy

The research strategy of the Department of Clinical Dentistry is linked to UiT's strategy "Developing the High North: UiT's strategy towards 2030".

The main goals are:

- Increase evidence-based knowledge concerning oral health status and oral health behaviour
- Strengthen initiatives in North Norway regarding oral health promotion and preventive oral health
- Track the development of the Norwegian dental healthcare services, with particular focus on North Norway and the Barents region, and in comparison with other European countries.

In the Terms of Reference, IKO indicated the development of knowledge and methods that contribute to solving major societal challenges as research priority. Specific to the IKO scientific field, one of the major societal challenges is to increase the awareness of oral health as an integral part of general health and well-being. The department aims to map the status of oral health and oral health illiteracy via research and dissemination of research and to promote positive attitude and behaviour toward a better oral health, especially in the north of Norway.

The research activities at IKO focuses on oral health communication, behavioural dentistry, preclinical and clinical research, especially in domains related to the knowledge and practices of dentists on the prevention and management of oral diseases, including oral infections.

The main field of research at IKO are:

- experimental dentistry
- basic oral sciences (antibiotic resistance in oral bacteria and prescription of antibiotics)
- dental public health (studies of dental health status in the population and on different oral health service models)
- behavioural dentistry (dental fear and anxiety)

IKO prioritizes research that contributes to understanding and meeting major societal challenges related to oral health and quality of life. The research activities at the department focuses on oral health communication, behavioural dentistry, preclinical and clinical research, and are well connected to the two long-term priorities "Good health and well-being" and "High quality education". A substantial part of research activities has investigated the phenomenon of dental anxiety.

Researchers at IKO collaborate closely with several actors such as the public dental services to implement findings into practice. They also collaborate with other departments in order to educate students, utilising a lot of public dental clinic or public dental services where the students get their training on clinical work.

The department has one main person in each clinical discipline and basic oral sciences that makes the department vulnerable and creates challenges in maintaining continuity in research activities.

The committee's evaluation

The research strategy acknowledges the need to contribute to solving major societal challenges, the scientific focus of the research groups is aligned with the focus and aim of the research of the administrative unit. Activities are clinically relevant with a strong societal impact.

High research quality is confirmed by the number of publications at Cristin level 2. The group participates in several networks and collaborations (partners also outside Scandinavia). The group stresses challenges related to the geographical location of UiT. Boosting international collaboration and positioning IKO as a leader in behavioural dentistry and dental public health requires a strategic approach.

The committee´s recommendations

- Identify and focus on high-impact areas of research, such as oral health disparities in Arctic populations, innovative dental materials, digital dentistry, and oral health promotion.
- Emphasize translational research that bridges the gap between laboratory findings and clinical application, ensuring that research outcomes directly benefit patient care and public health
- Lead research on reducing disparities in oral health access and outcomes, especially in Arctic and other marginalized communities.
- Invest in research exploring the use of digital tools and tele-health in promoting oral health behaviours and improving public health outcomes.
- Invest in capacity building, for instance, by implementing programs to enhance IKO's expertise in behavioural dentistry and dental public health, including sabbaticals at leading international institutions.
- Expand PhD and postdoctoral opportunities in these areas, attracting top talent globally and fostering the next generation of leaders in the field.

1.2 Organisation of research

In the past there were two research groups: the oral Ecology Research group and the dental public health and behaviour group; but from January 2024 IKO decided to have one research group in the department the Oral Health Research Group. The Head of the Department at IKO ensures that activities are managed and conducted within the framework and decisions are made at higher level.

The department's strategy, annual and long-term action plans, strategic recruitment, internal budget, research priorities and profiles, and internal organization are regularly discussed with the employees. The Department has also appointed an advisory board.

Large research projects are conducted in close collaboration with other departments and with the Public Dental Health Service Competence Centre of Northern Norway. Data are accessible to local, regional, national, and international researchers.

The department's study programs require cooperation between academic staff and public dental services. Clinical training follows standards set by the department and the specialty training program is run in close collaboration with the Public Dental Health Service Competence Centre of Northern Norway.

IKO is a small department with a research staff of 23.3 FTE/year (2022) where approximately 16 FTE/year are only involved in research activities. Out of 40 research staff, 30 are assistant or associate professors, and only 5 are young researchers. Administration

is limited to 5 persons. There is a good gender balance. Efforts for career and expertise development, including description of the different levels and expected achievements to reach next the stage of career trajectory from PhD to Professor, and templates for performance and development reviews are well defined by UiT. UiT also has a talent development program supporting selected young researchers develop as international scientific leaders in their fields. The department of clinical dentistry is allocating a substantial fund for scientific networking of young PIs and early career staff members.

Regarding research time distribution among staff, associate professors and professors generally use approximately 45% of working hours on research. Postdocs and researchers spend 80-100% of their time on research. Sabbatical leaves are funded by the faculty and provide Associate Professors and Professors with nearly 100% research time. UiT also provides mobility grants for PhD students, postdocs and faculty members.

The committee's evaluation

The organization of research is well structured. The department finds it particularly challenging to recruit junior researchers and PhD students.

The committee´s recommendations

- Increase collaborative and interdisciplinary research: Encourage collaborations with other departments at UiT (e.g., Public Health, Psychology, Biology) and external institutions to conduct interdisciplinary research, leading to more comprehensive and innovative studies. Actively participate in international research networks and consortia, facilitating co-authorships, joint projects, and cross-institutional studies.
- Promote long-term research agendas: Focus on developing long-term research programs that address pressing and enduring global challenges in dentistry, ensuring sustained relevance and funding. Involve local communities and stakeholders in research planning and implementation, ensuring that research projects are aligned with community needs and have strong local support.
- Enhance research capacity and output: Introduce incentives for faculty and students to publish in high-impact journals, such as research awards, recognition programs, and bonuses linked to publication success. Ensure that faculty members have protected time specifically allocated for research activities, reducing teaching and administrative burdens where possible.

1.3 Research funding

Over the last five-year (2018-2022), IKO has an average total basic income of approximately 66 million NOK (5,6 M EURO) per year. 25% is allocated to research activities. 100 000 NOK (8.5000 Euro) are from National funding.

The committee's evaluation

Departmental staff only applied for a small sum of external funding form national agencies. Research activities are mostly financed by internal funds allocated by the Head of Department to different researchers.

The committee´s recommendations

- Position the department for external research funding: Create a strategic research plan that outlines the department’s research priorities, targets for external funding, and milestones for achieving research excellence. Identify and target specific funding initiatives that align with the department’s strengths, such as EU Horizon 2020, NIH grants, and foundations focused on oral health.
- Diversify funding sources: Encourage researchers to seek funding from a diverse range of sources, including national and international government agencies, non-profit

organizations, and private industry. Develop contingency plans to ensure research continuity in case of funding disruptions, including reserve funds and alternative funding strategies.

- Expand access to research funding: Establish or strengthen a dedicated research office within the department to assist faculty and students in identifying funding opportunities, preparing grant applications, and managing research projects. Introduce internal seed funding programs to support preliminary research that can lead to larger, externally funded projects.
- Enhance grant writing support: Regularly conduct grant writing workshops to equip researchers with the skills to prepare competitive proposals, particularly for large, multidisciplinary projects. Establish internal proposal review committees to provide feedback and improve the quality of grant submissions before they are sent to funding agencies.
- Strengthen institutional support: Ensure that the department has strong administrative support for managing large research grants, including financial management, compliance, and reporting.

1.4 Use of infrastructures

IKO is currently not participating in any national infrastructure but has access to two national platforms hosted by the department of medical biology at Faculty of Health Sciences: the core facility for Advanced bioimaging and flow cytometry. The department hosts two core facilities for proteomics and metabolomics which are part of the National Network of Advanced Proteomics Infrastructure.

IKO has not participated in the international infrastructures, but researchers at IKO have access to ELIXIR Norway, the national node of ELIXIR, which is a pan-European infrastructure for biological information, supporting life science research and its translation to medicine, environment, the bioindustries and society. Researchers at IKO also have access to various state-of-the-art infrastructures at other departments (e.g. PETcore, Genomics Support Center, core facility for Biobank).

Researchers at IKO receive assistance to store their data in compliance with the FAIR principles. UiT maintain a certified open data archive known as “UiT Open Research Data”, which is dedicated to the long-term preservation of research data. Additionally, UiT offers an educational site at UiT Research Data Portal, which covers essential topics related to FAIR data storage, including policies, ethics, data management planning, processing, storage as well as archiving and publishing. UiT also provides regular training courses and has a support team to assist researchers in adhering to FAIR data principles. Data management plans are a compulsory element of all PhD project proposal.

The committee's evaluation

IKO currently is not participating in any national or international infrastructure, but it hosts two core facilities for proteomics and metabolomics which are part of the National Network of Advanced Proteomics Infrastructure. The researchers have access to and make use of various state-of-the-art infrastructures at other departments.

UiT has policies for data storage according to FAIR principles, however, the application of FAIR data storage practices varies across different research disciplines and is influenced by the extent of available resources, with limited manpower being a significant challenge for full implementation in some areas.

The committee´s recommendations

- The Committee recommend the participation in national infrastructures since they provide access to cutting-edge technology, large-scale computational resources, and specialized equipment that may be beyond the reach of individual departments.

Participation can facilitate collaboration with other institutions, leading to shared knowledge, joint research projects, and a broader network of experts. Being part of a national infrastructure can make a department eligible for specific grants and funding opportunities from national and international sources. In addition, being associated with a national infrastructure can elevate the department's profile, attracting top talent, collaborators, and students.

- The Committee also encourages the exploration of opportunities for IKO researchers to make use of international and European research infrastructure.
- Finally, the Committee suggest to consistently monitor working with FAIR-principles.

1.5 Collaboration

IKO values and encourages interdisciplinary collaboration and collaboration with international and national research and educational institutions which are also important to increase the quality and robustness of education and research.

IKO has established extensive national and international collaborations with other universities in Norway, especially the Universities of Oslo and University of Bergen, and abroad (Vilnius University, Northern State Medical University, University of Gothenburg, University of Liverpool, University of Oulu, among others).

IKO collaborate mostly with the public sector; universities and clinical research centres. In the years 2020-2022, IKO co-authoring with 116 institutions in Norway and 43 co-authoring institutions outside Norway.

The committee's evaluation

The Committee positively value the extensive network of national and especially international collaborators. Since 2020, the share of national co-authors is around 30% (from 30% to 33%) while the share of international co-authors is around 60%. To be noted that in the years 2020-2022, international co-authors had a decrease (from 67% to 54%). At departmental level, currently there is only one research group and researchers collaborate on individual basis.

The committee´s recommendations

- Develop measures to boost international collaboration in externally funded projects.
- Host and participate in international conferences: Host international conferences and symposiums focused on key research areas, bringing together leading experts and positioning UiT as a hub for dental research. Encourage and financially support faculty and students to present their research at major international conferences, increasing the department’s visibility and network.
- Build collaborative networks: Strengthen collaborative networks with regional institutions, particularly those in the Arctic and Nordic regions, as well as global research institutions to share resources, expertise, and risk. Engage in public-private partnerships that can provide stable funding streams and reduce dependency on government grants alone.

1.6 Research staff

Out of 40 research staff, 3 are professors, 30 are assistant or associate professors, and only 5 are young researchers. Administration is limited to 5 persons. The share of women full professors, associate or assistant professors is 33%, 56% and 64% respectively.

IKO is a small department. The department self-assessment counts approximately 23.3 man/year (2022) where approximately 16 man/year are only involved in research activities.

The committee's evaluation

It is of concern that the department finds it particularly challenging to recruit young and talented researchers and PhD students because of its location, about 264 kilometre above the Arctic Circle. The number of PhD students is modest (N=3), and researchers and postdoc positions are rare (N=1). During the interview, it was discussed that only a small number of graduated dentists decided to go for more academic studies. Moreover, if they then decided to go for academic life, they are typically attracted by large institutes like Oslo or Bergen. In addition, of course the department cannot offer a salary to a person in academia equivalent to what they can get when working in the clinic; researchers earn less than those who work in the market and this is a challenge. The share of female staff is high in all positions.

The committee´s recommendations

- The Committee recommend continuing efforts to recruit junior research staff and perhaps to focus on increasing the local competence and then recruiting people locally. Another recommendation is to plan some incentives for people coming to IKO to encourage them to join and to continue to put effort in the Research Student Programme.
- The Committee suggest recruiting internationally recognized researchers with strong publication records in key areas of dentistry, particularly those that align with global research priorities and to provide opportunities for faculty to engage in continuous professional development, including workshops on grant writing, advanced research methodologies, and emerging trends in dentistry.

1.7 Open Science

IKO follows UiT's policy for Open Science. UiT ensures open access to research results through institutional repositories or Open Access publishing and Open Access to data for reuse where this is feasible. The amount of open access publications has increased significantly during the last five years, and currently more than 95% of all publications are open access.

IKO contribution to open science is mostly related to open access publications and availability of data sets and scripts/code. For most of IKO publications the underlying data sets and scripts/code for bioinformatic and statistical analyses are made available through storage in public repositories such as GenBank. This facilitates transparency and reproducibility of analyses and enables re-use of data.

The department implements the principles and guidelines for research data management at UiT. As a general rule, UiT owns all research data produced by employees at UiT. All projects that involve research data must have a data management plan. Research data should be stored and archived at UiT-approved facilities/repositories. Furthermore, research data should be made openly available for further use provided that there are no legal, ethical, security or commercial reasons for not doing so. The rights to use and/or publish research data must not be transferred to commercial entities unless UiT retains the ability to make the data openly available for reuse.

The committee's evaluation

The Committee is pleased that UiT/IKO favours open access publications and supports availability of data sets and scripts/code. Engagement with open science focuses mostly on open access publishing. The committee wonders how it is ensured that all researchers are

aware of other pillars (FAIR Data, Research Integrity, Next Generation Metrics, Future of Scholarly Communication, Citizen Science, Education and Skills, Rewards and Incentives, and the European Open Science Cloud)

The committee´s recommendations

- The Committee recommends to continue to: support open access publications to increase the visibility and accessibility of research findings globally and to provide regular training courses for producing fair data and to develop and implement policies and strategies and make available resources to enable researchers to engage with all pillars of open science, as well as develop policies to monitor that all researchers are aware of and adhere to Principles and guidelines for research data management at UiT.
- The Committee recommends developing a robust research communication strategy, including regular press releases, social media engagement, and newsletters highlighting key research outcomes and their implications.
- The Committee recommends implementing robust data management systems, including secure data storage and analytics platforms, to facilitate large-scale studies and collaborative research projects.

2. Research production, quality and integrity

Introduction

The Department of Clinical Dentistry (IKO) is one of the departments under the Faculty of Health Sciences. IKO was established in 2004, this year celebrate 20 years of dental education and is youngest and the smallest dental school in Norway. At the moment, IKO delivers 3 programmes, which are a master in dentistry, a bachelor's in dental hygiene and a specialist education. A PhD programme is run by the Faculty of Health Sciences. IKO contributes with research that increases knowledge of oral health and its determinants that are important for human health and diseases, from basic oral sciences to clinical surveys and epidemiological studies with a strong tradition in population-based studies in the north of Norway. Research includes studies of antimicrobial resistance, oral health literacy; oral health communication; oral health psychology and behavioural dentistry. Regarding policy for research integrity, the ethical norms are set out in guidelines made by the Norwegian National Research Ethics Committees. UiT has its own ethical guidelines for supervision, which applies to supervision at bachelor, master and PhD-level. The scientific quality of the research performed at IKO is confirmed by the high number of publications, 10% of which are among the 10% most cited publications worldwide.

2.1 Research quality and integrity

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

Research group: Oral health research group

The group has formulated specific and focused list of activities, which are not only clinically relevant but have the potential to achieve societal impact. The structure provides a good basis for maintaining and further developing the research activities and at the same time increase quality. The in-house research lab is an important building stone in this process. The group participates in several networks and collaborations (partners also outside Scandinavia). It should be considered promote further collaboration with groups in "traditional" (i.e. medical) healthcare as there is an ongoing process (although slow) to integrate dental care with healthcare. The expertise of the group would certainly be of interest to groups outside oral health. The group stresses challenges related to the geographical location of UiT. However, the group should rather identify its "unique selling point" – access to a highly interesting ethnic population, access to extensive epidemiological data, digital access to the entire world in the post-pandemic era, etc. – and build on this. The group has a great potential! Results have a definite societal impact but there are no convincing examples or documentation of the group's efforts related to user involvement in the research process.

The committee´s comment to the assessment of the research group

The expert panel assessment of the research group highlights the main strengths and weaknesses that the Committee also agrees on. The main strength is the high-quality and

clinically relevant research activities with a strong social impact and the well-structured research organization. The main weakness is the funding and that the department finds it particularly challenging to recruit young and talented researchers.

3. Diversity and equality

Gender equality, diversity and inclusivity policies are present at University level, but also faculty and department level. UiT has a “personal policy” that reflects that equality, inclusion and diversity are strengths. The “personal policy” is specified in all announcements of available positions that are published. UiT has a specific project for “career development of women to top positions”.

The committee's evaluation

IKO has very good policy against discrimination characterised by an equality-diversity-inclusive work culture that makes the administrative unit an attractive workplace. Notably, the implementation of the mentorship program for women has led to a significant improvement in the gender balance at higher positions. The Department has also tried to narrow the salary gap that exists between men and women in the same position at the department.

The committee´s recommendations

- The Committee recommends continuing to run an employee survey and to follow up, and to develop preventive measures.

4. Relevance to institutional and sectorial purposes

UiT ensures academic growth and facilitates the development of specialized expertise in the Northern part of Norway. The department of clinical dentistry is committed to meet both the sector-specific aims through its research activities as well as to contribute to the knowledge base in general , and supports high-quality basic research on oral sciences as well as clinically related research activities with a more immediate impact to improve prevention or treatment of oral diseases.

The academic staff continuously strive to provide the highest quality research-focused education to its students. One sector-specific goal is to ensure access to education for local students but also national and international students.

IKO has limited effort when it comes to innovation and commercialization. Motivation for innovation and commercialization varies across staff members, with it being less for researchers without previous experience.

UiT has an Action Plan for Innovation and Entrepreneurship and will facilitate priorities and activities that contribute to fulfilling UiTs social mission. The instruments under UiT Talent innovation are part of the action plan for innovation and entrepreneurship, and from 2023 include innovation grants for master's and PhD students.

The committee's evaluation

The Committee verified during the interview that IKO does not have a strategy or incentives to support innovation because of limited resources.

The committee´s recommendations

- To increase awareness and motivation across the department staff and generate a culture of innovation. A regular forum for exchange between the academic staff ,the technology transfer offices and industry would be beneficial.
- The Committee recommends to build strong partnerships with the dental industry for collaborative research projects, particularly in areas like dental materials, technology development, and oral health products. The Committee also recommends focussing on innovation and innovation projects that would also help IKO in the educational programs.

4.1 Higher education institutions

The focus of IKO in education is directed towards bachelor of dental hygiene, professional master in dentistry, education of dental specialists and at the PhD level by providing relevant research-based knowledge. Research at IKO contributes towards master and PhD-level education. Many of the research results generated by researchers at the department are integrated in teaching.

At IKO, teaching is researched-based and highly connected to research activities. All master students in dentistry are involved in research as an integrated part of their study program and are a valuable source for the recruitment of talented researchers to our PhD positions.

The committee's evaluation

IKO contributes to achieving the sector specific objectives and goals for higher education institutions. Research conducted within IKO directly informs the curriculum. Graduate

students benefit from the latest findings and innovations, which are incorporated into their coursework and clinical training. By engaging with cutting-edge research, students learn to apply evidence-based practices in their clinical work, a crucial skill at the graduate level. Master's and PhD students typically undertake original research as a core component of their degree. The department's research projects provide a rich source of topics and data for these projects. Students may have the opportunity to work in departmental labs, gaining hands-on experience with experimental techniques, data collection, and analysis. Students that work closely with faculty members on research projects, benefit from their expertise and mentorship. This relationship is crucial for the development of the students' research skills and professional growth. Research in clinical dentistry involves collaboration with other departments and disciplines, providing students with a broader perspective and additional expertise.

The committee´s recommendations

- Focus on the unique strengths of the department and its contributions to the higher education sector goals and the healthcare sector.
- Support students to get their education/training finished on time, because the market and population of the north of Norway is waiting for them to provide the services.
- Ensure all students have an opportunity and are encouraged to join a research group, and that any criteria and procedures to join are clear and transparent. Additionally, ensure that students who do not join a research group benefit from equal support and resources.
- Collaborate with other Departments for interdisciplinary approach to teaching.

5. Relevance to society

Introduction

The department of clinical dentistry prioritizes research that contributes to understanding and meeting major societal challenges related to oral health and quality of life. The research activities at the department focuses on oral health communication, behavioural dentistry, preclinical and clinical research, and are well connected to the two long-term priorities “Good health and well-being” and “High quality education”. A substantial part of research activities has investigated the phenomenon of dental anxiety.

The committee`s comments on impact case 1 - Oral health psychology

The research has highlighted the importance of psychological knowledge and theory with oral health practice and research. A substantial part of this activity has investigated the phenomenon of dental anxiety. Also, the research has pinpointed that psychological phenomena among dental health professionals are related to their clinical practice and life in general, for instance how psychological capacities/tendencies of dentists and dental students impact their perception of clinical encounters and their quality of life and how dental professionals are regarded in society more in general. Such findings make it relevant to implement psychological theory into training and teaching of oral health professionals, and to provide tools to improve challenging patient encounters, e.g., emotional competence training (research item II) and awareness of how emotional states and arousal could impact clinical practice, both for students and oral health practitioners. Six publications are listed. The application of basic and overarching psychological concepts into the field of oral health are included in two text-books aimed at students within oral health, as well as oral health practitioners.

The committee`s comments on impact case 2 - Oral ecology/oral microbiology

The research has contributed towards the field of antibiotic resistance research, the importance of monitoring antibiotic consumption by dental health professionals and advocating for rational use of antibiotic when they are needed. The research work is still ongoing to investigate the emergence of antibiotic resistance among oral bacteria and the role of dental health professional to halt the problem form two aspects: attitude, knowledge, and tendencies to antibiotic prescription, and resistance determinants in oral bacterial. The frequency of antimicrobial drug resistance in the community is raising and many scientific reports informed of the increasing in resistance profile of oral bacteria. Not so clear is the level of resistance among oral bacteria in different communities with different prescription practices in dentistry. The research conducted at department of clinical dentistry seek to investigate the emergence of antibiotic resistance among oral bacteria and the role of dental health professional to halt the problem form two aspects. The first aspect is attitude, knowledge, and tendencies to antibiotic prescription and actual contribution of dental prescription to the total antibiotic prescription in the community. The second aspect is about resistance determinants in oral bacterial and the role of horizontal gene transfer in dissemination of resistance among bacterial population. The research work in this field is still ongoing. Research findings are implemented in the teaching curriculum for dental students as well as findings has been used as a material to inform the public and advocate for the rational use of antimicrobials. Six publications are listed.

Appendices

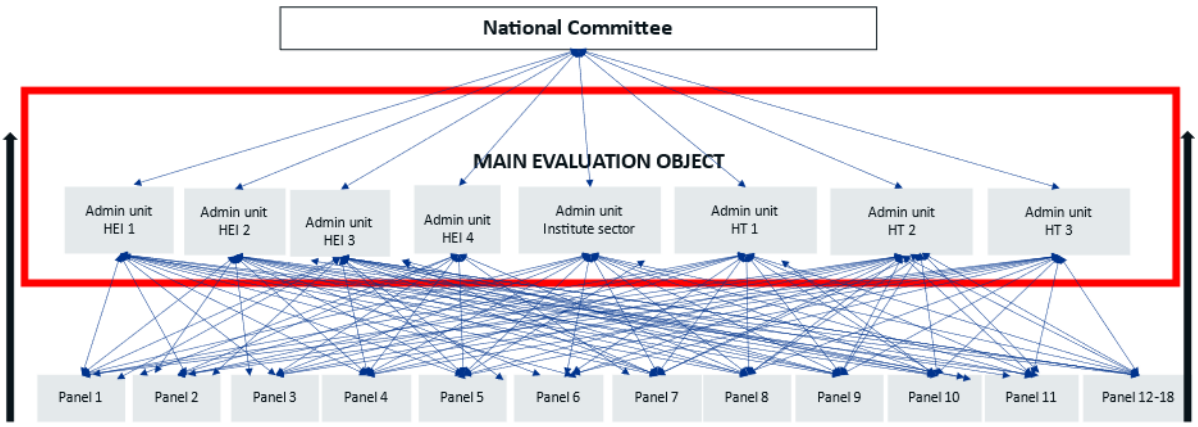
Evaluation of Medicine and health 2023-2024

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

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.

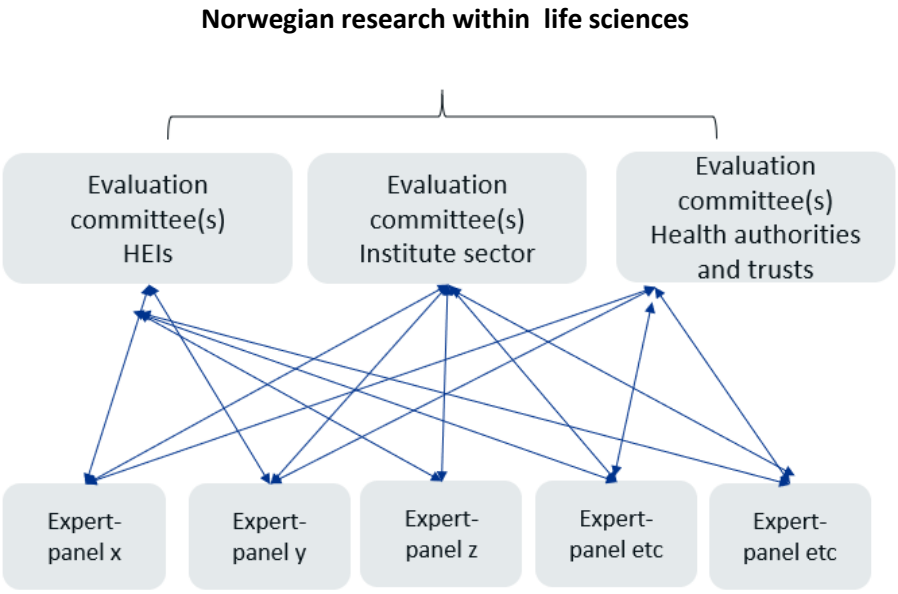

Figure 1. Evaluation committees and expert panels

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
UiT	Department of Clinical Dentistry	Department of Clinical Dentistry	Panel 3a-1

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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