

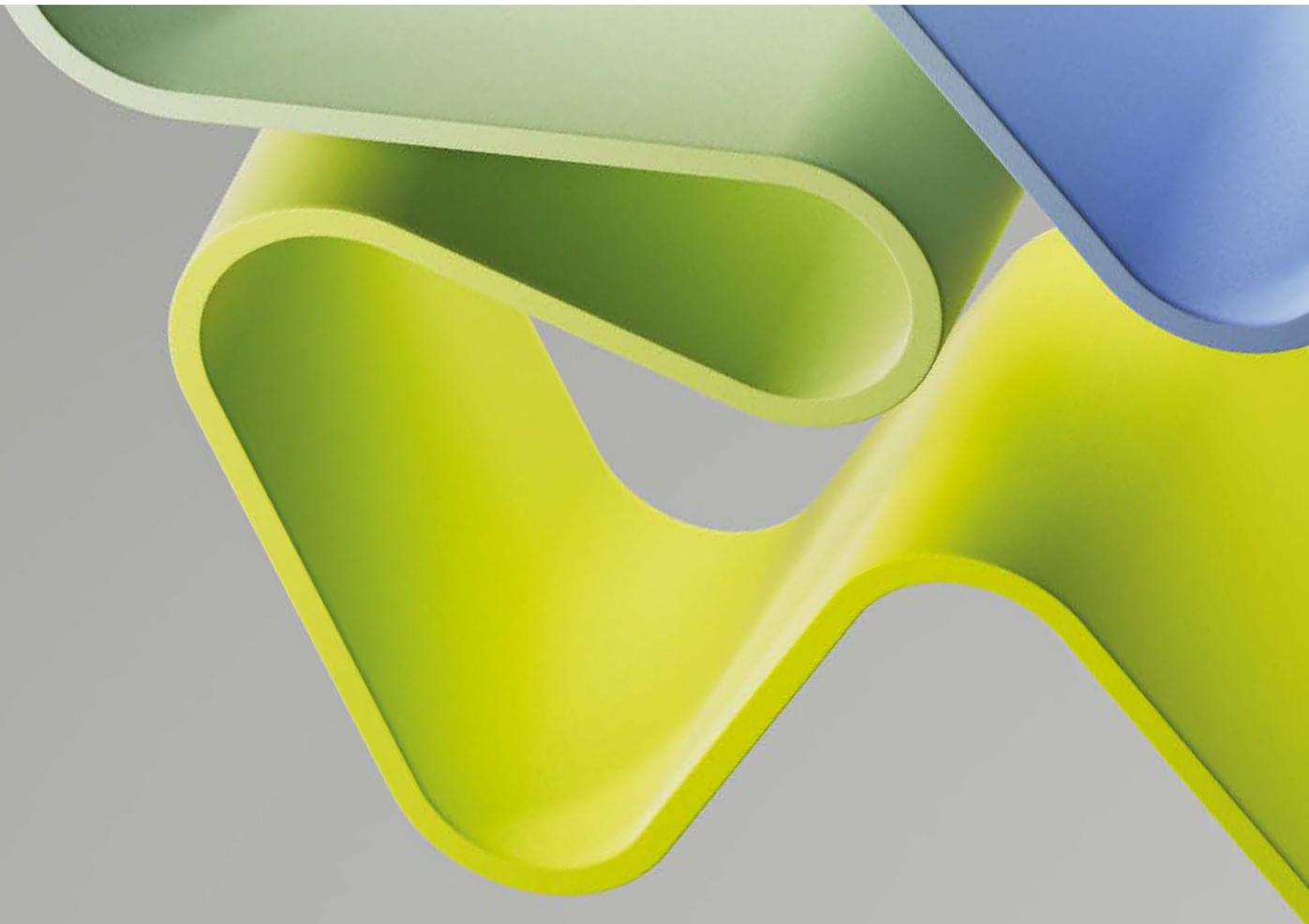
# *Evaluation of Medicine and Health 2023-2024*

Evaluation report – Panel 4e

Research Group: Department of Chronic Diseases

Administrative Unit: Division of Mental and Physical Health

Institution: Norwegian institute of Public Health





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## **Preface**

The Research Council of Norway (RCN) is given the task by the Ministry of Education and Research to perform subject-specific evaluations. The primary aim of the evaluation of medicine and health (EVALMEDHELSE) 2023-2024 is to reveal and confirm the quality and relevance of research performed at Norwegian Higher Education institutions, research institutions (the institute sector) and the health trusts, in an international perspective. Such knowledge is useful for the institutions that participate in the evaluation, for the Research Council who advise the authorities on how research should be developed further, and for the authorities, who set targets and frameworks for research and higher education. Research groups submitted by their administrative unit will be assessed by 18 expert panels organised by research subjects or themes. The expert panels will assess research groups across institutions and sectors based on research group's self-assessments and examples of scholarly output. These research reports will be part of the evaluation of their belonging administrative units.

## Abstract

The research group was established in 2017 by merging the two former groups chronic diseases and pharmacoepidemiology, respectively. The research group consists of one director, 7 professors, 6 senior researchers, 3 researchers, one postdoc and one PhD candidate. The main goals are to monitor and analyse population trends concerning chronic diseases such as cardiovascular disease, diabetes, lung disease, chronic pain and prescribed drug use. The budget during 2018-22 has been between 18 to 20 million NOK, of which about half consists of basic funding, and half of external funding, whereof about 30 percent from RCN, and less than 10 per cent from international sources. The stated benchmarks of the research group are phrased in general terms and are difficult to evaluate, except the aspiration to increase international funding. The research group has contributed to 27 PhD theses during the last 10 years, mostly through supervision of PhD students in other institutions, and has supervised a dozen theses on master's level, also in other institutions. The host institution has an important role in providing administrative support and support in terms of infrastructure for research.

## Overall assessment

The research group's **organisation and composition** seem **very suitable** for conducting its activities. The research group has **very good strategies** for its research activities but **lacks a clear overarching goal** which could be of great value for its future development. The contribution to teaching on basic and advanced level is rather small, depending on the fact that the host institution is not a higher teaching institution. However, the research group has contributed to a great number of PhD projects in other such institutions. The research group has a **well-developed network** of **national research collaboration**, which is interdisciplinary. The **resources for administration** and **access to infrastructure** for research **is very well-provided** by the host institution. The research group has been very successful in securing external funding from national sources and somewhat successful regarding international contributions. They **seem to perform very well** in their important **role in its host institution**. The work of the research group has made important contributions to the advancement of international knowledge in their field of work. They have contributed significantly to quality of the national and international collaborations behind the published research. The research group **states that they involve representatives of many types** of non-academic stakeholders in their research, but **no explicit description is given regarding the practical implementation of this**.

Grading:

Dimensions	Score
Organisational dimension (How adequate the organisational environment is in supporting the production of excellent research).	3
Quality dimension (Research and publication quality/Research group's contribution)	4/4
Societal impact dimension (Research group's societal contribution/User involvement)	4/1

## Recommendations

- State a **wider** but **clear overarching goal**.
- **Modify the benchmarks**, for further **improving synergy within the host organisation**.

- Increase **collaboration** with **Norwegian higher teaching institutions** to further secure a wide and easy access among those to important infrastructure, e.g. in-house health registries.
- Increase **international** collaboration.
- Develop the **involvement of non-academic stakeholder** further in **all phases of the research cycle**, i.e. problem statement, choice of research strategies and methods, data analysis and interpretation, and dissemination of research findings.

# 1. Strategy, resources and organisation

## 1.1 Research group's organisation and strategy

The research group was established in 2017 by merging the two former groups chronic diseases and pharmacoepidemiology, respectively. This was made to better support the overall goals of the host institution and allow for the recruitment of additional key competences and the development of a national network for facilitating research in its area.

The research group is led by a director who has the overall formal responsibility, but the different more specified research activities are delegated to the senior scientific staff according to their specific competence profiles. The research group consists of one director, 7 professors, 6 senior researchers, 3 researchers, one postdoc and one PhD candidate.

The main goals are to monitor and analyse population trends concerning chronic diseases such as cardiovascular disease, diabetes, lung disease, chronic pain and prescribed drug use. The group recruits needed staff with strategic competence and skills, utilizes their access to in-house and other health registers, develops improved research routines and methodologies and engages in national and international research collaboration.

The stated benchmarks of the research group are phrased in general terms and are difficult to evaluate, except the aspiration to increase international funding.

The research group has contributed to 27 PhD theses during the last 10 years, mostly through supervision of PhD students in other institutions, and has supervised a dozen theses on master level, also in other institutions since their own host institution is not a higher education institution.

The host institution has an important role in providing administrative support and support in terms of infrastructure for research. Moreover, the host institution also provides specific support for international research collaboration.

The research group's organisation and composition seem very suitable for conducting its research activities and for fulfilling its stated goals. The research group has very good strategies for its research activities but lacks a clear overarching goal which could be of great value for its future development. Some of the benchmarks are not phrased so that evaluation whether progress has been made, is not easy. The contribution to teaching on basic and advanced level is rather small, depending on the fact that the host institution is not a higher teaching institution. However, the research group has contributed to a great number of PhD projects in other such institutions. The group's international collaboration is comparatively small, but there is an ambition to increase this. The research group has a well-developed network of national research collaboration, which is interdisciplinary. The resources for administration and access to infrastructure for research is very well-provided by the host institution.

### **Recommendations**

- State a wider but clear overarching goal.
- Develop benchmarks which permits a more quantified evaluation.
- Increase collaboration with Norwegian higher teaching institutions to further secure access to important infrastructure, e.g. in-house health registries. Increase international collaboration.

## **1.2 Research group's resources**

The research group consists of one director, 7 professors, 6 senior researchers, 3 researchers, one postdoc and one PhD candidate. The budget during 2018-22 has been between 18 to 20 million NOK, of which about half consists of basic funding, about 30 percent funding from RCN, and less than 10 percent from international funds. The research group was established in its present form in 2017 and has developed well in recruiting key staff, building national and international collaborations and obtaining external funding. The overall decisions are taken at the level of the appointed director, but much of the research process is delegated to the senior research staff. The research group plays an important role in research training, foremost in other organisations than its own host organisation, depending on not being member of a higher teaching institution. Opportunities for national mobility seem good, considering the well-developed national collaborative network, less so in an international perspective. The proportion between core and external funding seems comparable to similar research environments, however the share of international external funding is low.

The research group has been very successful in securing external funding from national sources and somewhat successful regarding international contributions. The funding has been very well used for achieving its goals.

### ***Recommendations***

- Consolidate collaboration with Norwegian higher teaching institutions.
- Increase international collaboration in order to get access to a broader spectrum of skills and competences, which could be applied on existing unique infrastructure, e.g. national health registries.

### **1.3 Relevance to the institution**

The research group plays an **important role for its host organisation**, since it utilizes important infrastructure for research, and it produces research **results** which are **very important** for supporting **evidence-based policy and interventions** by the host organisation and other actors in the public health arena. The way the benchmarks currently are stated, makes it difficult to evaluate whether progress is made over time.

The research group seems to perform very well in their important role in its host institution.

#### ***Recommendation***

- Develop the **overarching goal** and **modifying the benchmarks**, this could be valuable for further improving synergy within the host organisation.

## 2. Research quality

### 2.1 Research group's scientific quality

The research group's main goals are to monitor and analyse population trends concerning chronic diseases such as cardiovascular disease, diabetes, lung disease, chronic pain and prescribed drug use. To achieve this, the group recruits needed staff with strategic competence and skills, utilizes their access to in-house and other health registers, develops improved research routines and methodologies and engages in national and international research collaboration. The list of projects in the self-assessment mirrors the stated research priorities in chronic disease, pharmacovigilance, and drug safety. They cover, chronic pain conditions, **mental health issues**, cardiovascular disease, autoimmune conditions and the linkages between those types of disease in terms of **potential common causes**. The level of originality should be considered high regarding most of the listed projects. The research group has published 441 scientific papers during the period 2018-22, of which 41 per cent are in the top journals in the respective area. The list of publications contains several articles in top journals, concerning causal mechanisms of chronic disease and risk of death, and in pharmacovigilance and drug and vaccine safety where cutting-edge epidemiological methodology has been utilized on large Norwegian or Nordic data sets. Many of the publications represent research on a high international level. Only one monograph publication is listed, which concerns risk for type-1 diabetes.

The work of the research group has made important contributions to the advancement of international knowledge in their field of work. Many of the listed projects are at the forefront of science and maintain a high scientific quality. The same is true for the listed publications, and it is clear from the list of authors, where representatives of the research most often are first or last author, that they have made very important contributions to the research. The research group have contributed significantly to quality of the national and international collaborations behind the published research.

#### **Recommendations**

- Increase the involvement with researchers at Norwegian higher teaching institutions and leading international research environments in order to benefit more from access to excellent in-house research infrastructure, e.g. national health registries.

### 2.2 Research group's societal contribution

The research group has contributed to a societal impact nationally and internationally, in terms of new knowledge that support policymaking and implementation of effective interventions as well as behaviour change in individuals. This has the potential to improve health on a population and individual level.

The research group states that they involve representatives of many types of non-academic stakeholders in their research, but no explicit description is given regarding the practical implementation of this.

#### **Recommendation**

- Further develop the involvement of non-academic stakeholder in all phases of the research cycle, i.e. problem statement, choice of research strategies and methods, data analysis and interpretation, and dissemination of research findings.

## Appendices

## Evaluation of Life Sciences in Norway 2022-2024

### Evaluation of Medicine and Health 2023-2024

#### Mandate Expert panels

The Research Council of Norway (RCN) is given the task by the Ministry of Education and Research to perform subject-specific evaluations. The Portfolio board for Life Sciences in the Research Council of Norway has decided to carry out an evaluation of medicine and health in 2023-2024 as the second of two evaluations within Life Sciences. The evaluation of biosciences takes place in 2022-2023.

#### 1. The objective of the evaluation

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), by the institute sector and by health trusts.

The results of the evaluation will be used as recommendations to the institutions, the Research Council, and the ministries.

#### 2. Tasks of the expert panels

The panels are requested to:

- evaluate the strategy, resources and organisation of/for the research groups.
- evaluate research production and quality of the research groups.
- grade and write a short evaluation text to the evaluated research groups.

Each of the expert panels will write a brief report with evaluations of the different research groups as well as specific recommendations.

#### 3. Time schedule

Digital panel meetings will take place in the period March 15. - June 15. 2024.

Deadline for submitting panel report to the Research Council: June 15. 2024.

#### 4. Miscellaneous

Other important aspects of Norwegian life sciences research that ought to be given consideration.

## EVALMEDHELSE 2023-2024 – Panel group description – January 2024

Panel group	Description	Panel no.
<b>Group 1 PHYSIOLOGY</b>  Physiology-related disciplines (human physiology), including corresponding translational research	Anatomy, physiology, embryology, nutritional physiology, pathology, basic odontological research, exercise physiology, neurobiology, toxicology, pharmacology, medicinal chemistry, chemistry, biology, pathology.	Panel 1a  Panel 1b
<b>Group 2 MOLECULAR BIOLOGY</b>  Molecular Biology, including corresponding translational research	Microbiology, bacteriology, inflammation and infection disease research, forensic medicine, genetics, immunology, vaccine development, microbiological diagnostics, pharmaceutical microbiology, cell biology, molecular medicine and -biophysics, medical biochemistry, omics, organoids, imaging, toxicology, pathology, drug development, cancer research, translational research, systems biology, personalized medicine, biomarkers, oncology, genetics, genomics, epigenetics, proteomics, bioinformatics-/statistics, computational science, AI, biology, virology, radiology, ionisation, molecular biology, microbiology, pharmacology, pharmacogenomics, regenerative medicine and related subjects.	Panel 2a  Panel 2b  Panel 2c
<b>Group 3a CLINICAL RESEARCH</b>	Clinical Research, including surgery and translational research within: paediatrics, women's health, gynaecology, otorhinolaryngology, head and neck surgery, oncology, haematology, radiology and medical imaging.	Panel 3a_1  Panel 3b_2
<b>Group 3b CLINICAL RESEARCH</b>	Clinical Research, including surgery and translational research within: general medicine, emergency medicine, anaesthesiology, neurology, geriatric medicine, rehabilitation medicine, cardiology, nephrology/urology, endocrinology, pulmonary medicine, orthopaedics, rheumatology, Infection, gastroenterology.	Panel 3b_1  Panel 3b_2  Panel 3b_3
<b>Group 4 PUBLIC HEALTH</b>  Public Health and Health-related Research	Public health, community research, epidemiology, preventive medicine, mental health, behavioural research and ethics, medical statistics, environment, nutrition, preventive medicine, physiotherapy, sports medicine, implementation research, public health, health care services research, global health, nursing	Panel 4a  Panel 4b  Panel 4c

	sciences, rehabilitation sciences, public health systems, digital health care services, ICT, HTA, health competence, genetic and epigenetic epidemiology, non-communicable diseases, pharmacology, nursing research, professional research, occupational medicine.	Panel 4d Panel 4e Panel 4f
<b>Group 5 PSYCHOLOGY</b> Psychology and Psychiatry	Clinical psychology, personality psychology, developmental psychology, cognitive psychology, biological psychology and forensic psychology, psychiatry, including geriatric psychiatry, child and adolescent psychiatry and biological psychiatry, social-, community- and workplace psychology, organizational psychology, developmental psychology, behavioural and health psychology, health promotion and well-being.	Panel 5a Panel 5b

## Panel group 4 PUBLIC HEALTH

### Expert panel 4e

Name	Title	Institution
Per-Olof Östergren (chair)	Professor	Lund University
Henrik Toft Sørensen*	Clinical professor	Aarhus University
Tarani Chandola	Professor	University of Hong Kong / Manchester University
Eva Morris	Professor	Big Data Institute, Oxford University

Henrik Toft-Sørensen had a conflict of interest with the evaluation of multiple research groups, see the table below. This meant that for those evaluations he did not have access to the self assessments or survey data and he did not participate in the discussion of the research group, nor did he participate in the preparation and completion of the evaluation report.

Institution	Administrative unit	Name of research group
Cancer Registry	Cancer Registry of Norway	Cancer Registry
FHI	Division of Mental and Physical Health	Physical Health and Aging
FHI	Division of Mental and Physical Health	Department of Chronic Diseases
FHI	Division of Mental and Physical Health	Centre for Disease Burden
FHI	Centre for Fertility and Health	Centre for Fertility and Health
UiB	Dept of Global Public Health and Primary Care	Section for epidemiology and medical statistics
UiT	Department of Community Medicine	Epidemiology of Chronic disease



# Evaluation of Medicine and Health (EVALMEDHELSE) 2023-2024

## Self-assessment for research groups

Date of dispatch: **15. September 2023**

Deadline for submission: **31. January 2024**

Updated: **13. October 2023**

Institution (name and short name): \_\_\_\_\_

Administrative unit (name and short name): \_\_\_\_\_

Research group (name and short name): \_\_\_\_\_

Date: \_\_\_\_\_

Contact person: \_\_\_\_\_

Contact details (email): \_\_\_\_\_

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Short version

## 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 a research group. The self-assessment contains questions regarding the group's research- and innovation related activities and developments over the years 2012-2022. All submitted data will be evaluated by expert panels.

### **Deadline for submitting the self- assessment to your administrative unit – 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 submit completed self- assessment to the administrative unit no later than 26 January 2024.

Please use the following format when naming your document: [short name of the institution]\_[short name of the administrative unit]\_[short name of the research group], e.g. *UiT\_DepPsy\_Short name of the research group*.

For questions concerning the self-assessment or EVALMEDHELSE in general, please contact RCN at [evalmedhelse@forskningsradet.no](mailto: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 link to websites/documents in the self-assessment where relevant.
- Please be sure that all documents linked to in the self- assessment are written 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 the two evaluation criteria described in the evaluation protocol, the research group must answer all questions.
  - ⇒ Provide information – provide documents and other relevant data or figures about the research group, for example strategy and other planning documents, as well as data on R&D expenditure, sources of income and results and outcomes of research
  - ⇒ Describe – explain and present using contextual information about the research group and inform the reader about the research group.
  - ⇒ Reflect – comment in a reflective and evaluative manner how the research group operates.
- Data on personnel should refer to data reported to DBH on 1 October 2022 for HEIs and to the yearly reporting for 2022 for the institute sector and the health authorities. Other data should refer to 31 December 2022 if not specified otherwise.
- It is possible to extend the textboxes when filling in the form. **NB!** A completed self- assessment form cannot exceed 25 pages (pdf file). Expert panels are not requested to read more than the maximum of 25 pages. Pages exceeding maximum limit of 25 pages **might not** be evaluated.
- Submit the self- assessment as a pdf (max 25 pages) to the administrative unit within **26 January 2024**. Before submission, please be sure that all text are readable after the conversion of the document to pdf. The self- assessment should be sent from the administrative unit to [evalmedhelse@forskningsradet.no](mailto:evalmedhelse@forskningsradet.no) within **31 January 2024**.

***Please note that information you write in the self assessment and the links to documents/websites in the self-assessment are the only available information for the expert panel.***

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

# 1. Organisation and strategy

## 1.1 Research group's organisation

Describe the establishment and the development of the research group, including its leadership (e.g. centralised or distributed etc.), researcher roles (e.g. technical staff, PhD, post docs, junior positions, senior positions or other researcher positions), the group's role in researcher training, mobility and how research is organised (e.g. core funding organisation versus project based organisation etc.).

**Table 1. List of number of personnel by categories**

**Instructions:** Please provide number of your personnel by categories.

For institutions in the higher education sector, please use the categories used in DBH, <https://dbh.hkdir.no/datainnhold/kodeverk/stillingskoder>. Please add new lines or delete lines which are not in use.

	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
<b>No. of Personnel by position</b>	Position A (Fill in)				
	Position B (Fill in)				
	Position C (Fill in)				
	Position D (Fill in)				

## 1.2 Research group's strategy

a) Describe the research group's main goals, objectives and strategies to obtain these (e.g. funding, plans for recruitment, internationalization etc.) within the period 2012-2022.

b) Please describe the benchmark of the research group. The benchmark for the research group should be written by the administrative unit in collaboration with the research group. The benchmark can be a reference to an academic level of performance (national or international) or to the group's contributions to other institutional or sectoral purposes.

Example: A benchmark for a research group is related to the research groups' aim which again is included in the strategy for the administrative unit. A guidance for the administrative unit to set a benchmark for the research group(s) can e.g. be: What do the administrative unit expect from the research group(s)?

c) Describe the research group's contribution to education (master's degree and/or PhD).

d) Describe the support the host institution provides to the research group (i.e., research infrastructure, access to databases, administrative support etc.).

### **1.3 Relevance to the institutions**

Describe the role of the research group within the administrative unit. Consider the research group's contribution towards the institutional strategies and objectives, and relate the research group's benchmark to these.

### **1.4 Research group's resources**

Describe the funding portfolio of the research group for the last five years (2018-2022).

**Table 2.** Describe the sources of R&D funding for the research group in the period 2018-2022.

	2018 (NOK)	2019 (NOK)	2020 (NOK)	2021 (NOK)	2022 (NOK)
<b>Basic funding</b>					
<b>Funding from industry and other private sector sources</b>					
<b>Commissioned research for public sector</b>					
<b>Research Council of Norway</b>					
<b>Grant funding from other national sources</b>					
<b>International funding e.g. NIH, NSF, EU framework programmes</b>					
<b>Other</b>					

## 1.5 Research group's infrastructures

Research infrastructures are facilities that provide resources and services for the research communities to conduct research and foster innovation in their fields. [These](#) include major equipment or sets of instruments, knowledge-related facilities such as collections, archives or scientific data infrastructures, computing systems communication networks. Include both internal and external infrastructures.

- a) Describe which national infrastructures the research group manages or co-manages.
- b) Describe the most important research infrastructures used by the research group.

## 1.6 Research group´s cooperations

**Table 3.** Reflect on the current interactions of the research group with other disciplines, non-academic stakeholders and the potential importance of these for the research (e.g. informing research questions, access to competence, data and infrastructure, broadening the perspectives, short/long-term relations).

<p><b>Interdisciplinary (within and beyond the group)</b></p>	<p>About 1/3 page</p>
<p><b>Collaboration with other research sectors e.g. higher education, research institutes, health trusts and industry.</b></p>	<p>About 1/3 page</p>
<p><b><u>Transdisciplinary</u> (including non academic stakeholders)</b></p> <p><i>Transdisciplinary research involves the integration of knowledge from different science disciplines and (non-academic) stakeholder communities with the aim to help address complex societal challenges.</i></p>	<p>About 1/3 page</p>

## 2. Research quality

### 2.1 Research group's scientific quality

Describe the research profile of the research group and the activities that contribute to the research group's scientific quality. Consider how the research group's work contributes to the wider research within the research group's field nationally and internationally.

Please add a link to the research group's website:

Short version

**Table 4. List of projects**

**Instructions:** Please select 5-10 projects you consider to be representative/the best of the work in the period 1 January 2012 – 31 December 2022. The list may include projects lead by other institutions nationally or internationally. Please delete tables that are not used.

<b>Project 1 -10:</b>  <i>Project title/Project period (year from – year to)</i>	<b>Project owner(s)</b> (project leaders organisation)	
	<b>Total budget and share allocated to research group</b>	
	<b>Objectives and outcomes</b> (planned or actual) <b>and link to website</b>	

**Table 5. Research group's contribution to publications**

**Instructions:** Please select 5-15 publications from the last 5 years (2018-2022) with emphasis on recent publications where group members have a significant role. **If the publication is not openly available, it should be submitted as a pdf file attached to the self-assessment.** We invite you to refer to the Contributor Roles Taxonomy in your description: <https://credit.niso.org/>.

*Cf. Table 1. List of personell by categories:* Research groups up to 15 group members: 5 publications. Research groups up to 30 group members: 10 publications. Research groups above 30 group members: 15 publications.

Please delete tables that are not used.

<b>Publication 1 -15:</b>  <i>Project title/Journal/Year/DOI/URL</i>	<b>Authors</b> (Please highlight group members)	
	<b>Short description</b>	
	<b>Research group's contribution</b>	

**Table 6. Please add a list with the research group's monographs/scientific books.**

Please delete lines which are not used.

1	Title - Authors (Please highlight group members)- link to webpage (if possible)
2	

## 2.2 Research group's societal contribution

Describe the societal impact of the research group's research. Consider contribution to education, economic, societal and cultural development in Norway and internationally.

**Table 7. The research group's societal contribution, including user-oriented publications, products (including patents, software or process innovations**

**Instructions:** Please select 5–10 of your most important user-oriented publications or other products from the last 5–10 years with emphasis on recent publications/products. For each item, please use the following formatting. Please delete lines which are not used.

### **3. Challenges and opportunities**

Information about the strengths and weaknesses of the research group is obtained through the questions above. In this chapter, please reflect on what might be the challenges and opportunities for developing and strengthening the research and the position of the research group.

Short version



## Scales for research group assessment

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### 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

Score	Research and publication quality	Score	Research group's contribution Groups were invited to refer to the Contributor Roles Taxonomy in their description <a href="https://credit.niso.org/">https://credit.niso.org/</a>
5	Quality that is outstanding in terms of originality, significance and rigour.	5	The group has played an outstanding role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
4	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence.	4	The group has played a very considerable role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
3	Quality that is recognised internationally in terms of originality, significance and rigour.	3	The group has a considerable role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
2	Quality that meets the published definition of research for the purposes of this assessment.	2	The group has modest contributions to the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
1	Quality that falls below the published definition of research for the purposes of this assessment.	1	The group or a group member is credited in the publication, but there is little or no evidence of contributions to the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.

### Societal impact dimension

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.

**Norges forskningsråd**

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