

Evaluation of Life Sciences 2022-2024

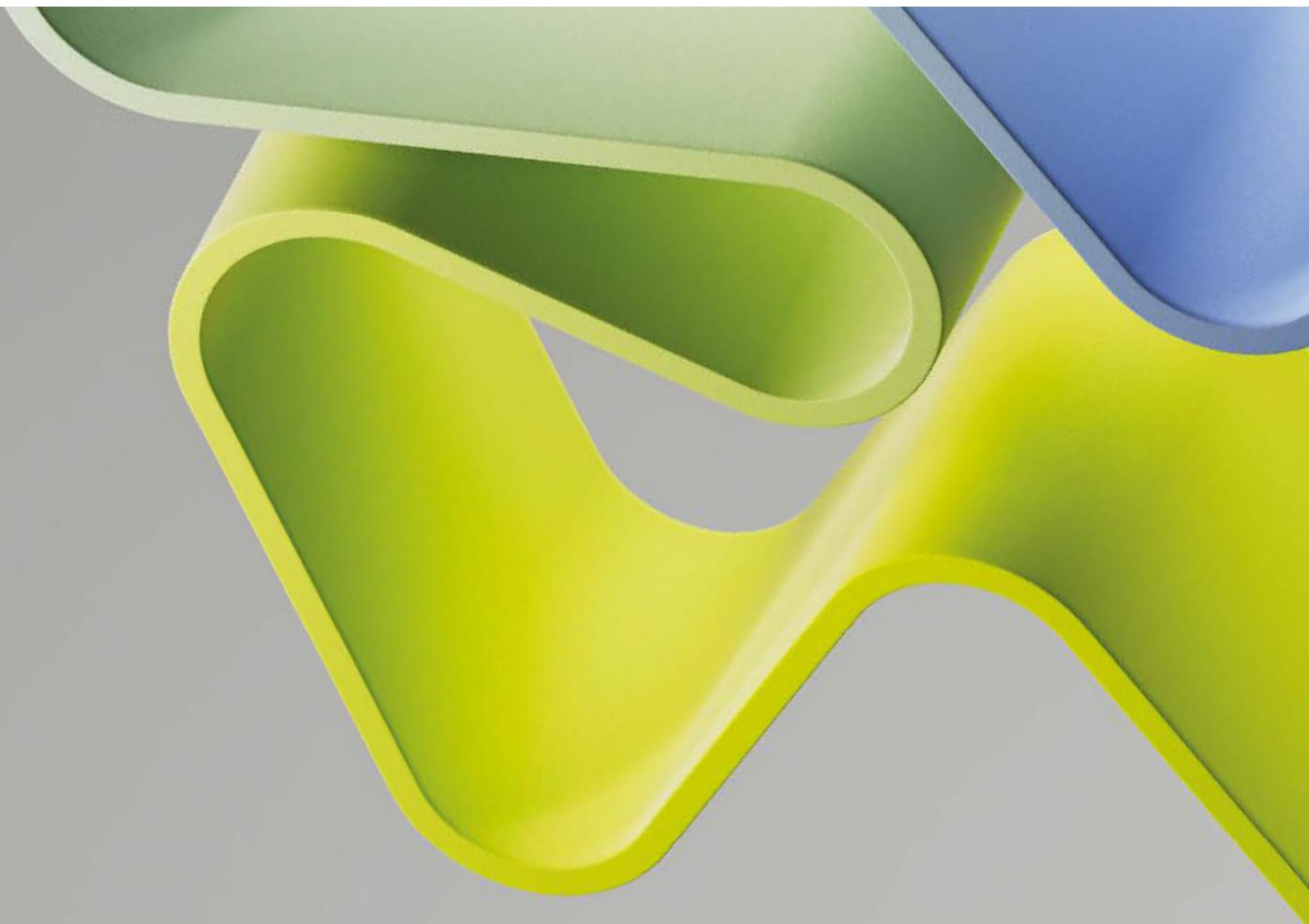
Evaluation of Biosciences 2022-2023

Evaluation report

**Department of Chemistry, Bioscience and
Environmental Engineering**

University of Stavanger (UiS)

December 2023



Contents

Statement from Evaluation Committee 2	2
Overall assessment	5
Recommendations	6
1.Strategy, resources and organisation of research	7
1.1 Research Strategy	7
1.2 Organisation of research	7
1.3 Research funding	8
1.4 Use of infrastructures	8
1.5 National and international collaboration	9
1.6 Research staff	9
2. Research production, quality and integrity	9
2.1 Research quality and integrity	10
2.2. Open Science	11
3. Diversity and equality	11
4. Relevance to institutional and sectorial purposes	11
5. Relevance to society	12
Appendices	14

Statement from Evaluation Committee 2

This report is from Evaluation Committee 2 which evaluated the following administrative units representing the higher education sector in the Evaluation of Biosciences 2022-2023:

- Faculty of Bioscience (BIOVIT), Norwegian University of Life Sciences (NMBU)
- Faculty of Chemistry, Biotechnology and Food Science (KBM), NMBU
- Faculty of Biosciences and Aquaculture (FBA), Nord University (Nord)
- Department of Biotechnology and Food Science (IBT), Norwegian University of Science and Technology (NTNU)
- Computational Biology Unit (CBU), University of Bergen (UiB)
- Department of Biological Sciences (BIO), UiB
- Department of Biosciences (IBV), University of Oslo (UiO)
- Department of Chemistry, Bioscience and Environmental Engineering, University of Stavanger (UiS)
- Faculty of Biosciences, Fisheries and Economics (BFE), University of Tromsø – The Arctic University of Norway (UiT)

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 and the National Teacher Survey (Norwegian Agency for Quality Assurance in Education [NOKUT]). The digital interviews took place in Autumn 2023.

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

Evaluation committee 2 consisted of the following members:

Professor/Dean
Ivo Sbalzarini (chair),
TUD Dresden University of Technology
& Max Planck Institute of Molecular
Cell Biology and Genetics

Professor
Caroline Austin,
Newcastle University

Professor/Pro-Dean
Ade Whitehouse,
University of Leeds

Professor/Deputy Dean
Lena Mäler,
Stockholm University

EM. Professor/Director
Nico P.E. Vermeulen,
Vrije Universiteit Amsterdam

EM. Professor/Director
Lene Lange,
Technical University Denmark

Adjunct Professor, dr.
Pikka Jokelainen,
Statens Serum Institut

Dr Anoushka Davé, Principal Consultant, Technopolis Group, was the committee secretary.

Oslo, December 2023

Profile of the administrative unit

As of 2021, the Department of Chemistry, Bioscience and Environmental Engineering had a total of 75 employees, out of which 11 were professors, 16 “*Førsteamanuensis*”, two researchers, nine postdocs, 16 PhD students and 21 others. Female representation was 50% or below across the categories with representation being lowest among professors (18%).

The Department is comprised of two research groups: one on One Health and one on Circular Economy and Sustainability. The Circular Economy and Sustainability research group was evaluated in the parallel EVALNAT evaluation of natural sciences. It is important to note that those working more with environmental technology (not directly with life sciences or chemistry) were not included in the evaluation. Therefore, the total number of employees in the unit is not directly in harmony with the total number of employees included in the evaluation.

The Faculty of Science and Technology’s research fields and focus are aligned with the institutional strategies and support, furthering the university’s thematic priorities within the natural sciences and technology. The main fields of research and innovation at the Faculty that are relevant for the department include: (a) Energy: carbon capture and storage, hydrogen, biohydrogen etc., as well as effective and environmentally friendly chemicals for the energy sector; (b) Marine technology: aquaculture, wastewater treatment and deep sea mining; (c) Health and technology: medicinal technology, biotechnology, biomedicine and biomaterials; and (d) Digital technology: modelling and bioinformatics. The Department indicates a desire to maximise synergies at the administrative unit, with all employees feeling ownership of the strategy, to ensure that it works towards the same objectives. Regular meetings and seminars are important for the identification of opportunities for collaboration and cooperation. The recent reorganisation of the research groups, where one person has group leader responsibility for each of the strategic areas, introduces more team-based thinking at department-level about the strategic work needed to improve the quality of research, quality of PhD education, size of projects relevant to the strategic objectives and research culture.

As a higher education institution (HEI), the administrative unit strives to follow the four overall goals for HEIs that receive public funding: high quality in research and education; research and education for welfare, value creation and innovation; access to education; and efficiency, diversity, and solidity of the higher education sector and research system. As such, the Department mentions in its self-assessment that the green transition is central to UiS's strategy. By defining circular economy and sustainability as a strategic area for the administrative unit, the aim is to have a large proportion of sector-specific objectives that contribute to the green shift. More specifically, this will include activities related to the transformation/synthesis of waste products into new resources (extraction of metal from used batteries), work with new materials and sustainable processes within the chemical industry, aquaculture and energy. The administrative unit also conducts a lot of research linked to health, with specific objectives e.g., the development of new methods based on electricity to inhibit the growth of cancer cells. Fundamental research is also pursued with the intention to contribute to a larger knowledge base.

Based on the self-assessment, in the future the Department might take advantage of the high expertise in different disciplines, thereby supporting interdisciplinary research and ensuring that the administrative unit’s programmes fit well with large EU programmes.

Overall assessment

The Department of Chemistry, Bioscience and Environmental Engineering of the University of Stavanger is a small unit that is also relatively new after a reorganisation of the University in 2018. The administrative unit is also currently in a state of reorganisation due to upcoming retirements and recruitment of new academic staff. This provides the administrative unit with an excellent opportunity to reorganise and refocus its research. The overall assessment considering the Terms of Reference provided by the Unit is therefore that the administrative unit should focus its efforts and consolidate its research into a more cohesive structure. The diversity in interests, as indicated both by the unit itself in the self-assessment and the research group assessments by the Expert Panels, has a consequence of spreading too thin and the performance of the unit can be improved in this respect. The administrative unit is the process of developing its own research strategy, which should be aligned with the overall strategy of the University of Stavanger.

The administrative unit has relatively few junior academic staff (PhD candidates and postdocs) as compared to professors and associate professors. The recent recruitment of new professors may be good for improving this situation, but the unit needs to actively aim for increasing the number of PhD candidates and postdocs. Part of the problem may be related to lack of external funding and a strategy to increase funding is required, especially from the EU. The University of Stavanger and the administrative unit have well-functioning systems in place for helping academic staff at all levels, and the administrative unit has indicated that it is able to make strategic decisions in a collegial way. These are strengths that can be used for attracting and recruiting talent in the future.

The administrative unit does not participate in national or international infrastructures to a significant extent. Moreover, even if the administrative unit does have several international and national collaborations, there is most likely room for more. These factors would benefit the administrative unit's visibility, internationally and nationally. The reorganisation of the administrative unit and new international recruitments may be helpful in this respect. There should also be ample opportunity to interact with industry, other academic institutions and institutes.

The administrative unit does have potential to make a strong and important impact on society as many of the research questions that are addressed at the unit are important for the green transition in society as well as for contributing to and developing local and national industry. They are in the process of hiring new academic staff and are working towards a new strategy. They could take this opportunity to capitalise on their expertise to take on a leading role within the new green development.

Recommendations

The evaluation committee wishes to extend the following recommendations to the administrative unit, which are constructive suggestions from an outside view on the basis of the information available to the committee and considering the aspects on which recommendations were requested in the terms of reference.

- The administrative unit appears to be going through a reorganisation. As many of the academic staff are in the process of retiring and new academic staff are being hired, there is an opportunity to strategically develop into a more cohesive unit that allows for cross-disciplinary interactions.
- The administrative unit reports that it has a collegial way of making decisions, for example concerning recruitments. Seize this opportunity to recruit academic staff within strategic focus areas, such as those related to sustainable development.
- Make use of the ongoing reorganisation to develop a strategy for making the research environment more cohesive and consolidate the research efforts under a few themes.
- Ensure that the administrative unit's strategy is in line with the strategies of UiS and the Faculty.
- Work towards helping researchers apply for external grants. Work actively with the faculty at all levels to facilitate applications to, for example, the European Research Council (ERC). There appears to be a good process in place to do this in terms of in-kind support. Strongly encourage researchers at all levels to apply for such grants, and make sure that appropriate support is given. Encourage interactions with local industry and other stakeholders.
- Ensure that there are well-functioning mentoring and career support programmes in place to attract researchers, both junior and senior.
- Increase the level of support for PhD candidates. This appears to be a weak spot as the number of PhD candidates is much lower than what would be expected given the number of tenured faculty. Make use of Master's programmes to educate future PhD candidates locally.
- In order to make the administrative unit more visible internationally and nationally, researchers should be encouraged to take part in international and national research programmes and infrastructures.
- Seize the opportunity to work towards being a leader in research for the green transition. Make use of any success stories related to industrial and societal use to market research and to attract both funding and talent.
- Create an advisory board, or an equivalent function, to aid the administrative unit's work on the vision and strategy for the future.

1. Strategy, resources and organisation of research

The administrative unit consists of two research environments, Circular Economy and Sustainability, and One Health. It is a relatively new administrative unit that has undergone reorganisation, both at the administrative unit level and also at the university level. The administrative unit is very small, and in addition has very diverse in research interests. The small size has been identified as a strength as it provides a way to easily take strategic decisions in a collegial way. The size is however also a challenge, as the administrative unit has research that is very diverse. The administrative unit would therefore benefit from taking actions to consolidate its research interests and to strengthen interdisciplinary research between groups in order to reach critical mass in a topic and become known for it. To our understanding, these initiatives are already taking place.

The administrative unit has relatively little external funding, and a research strategy should take measures to improve the situation. The administrative unit has relatively few PhD candidates (as compared to tenured faculty), something that may also be related to a lack of funding. The administrative unit could take advantage of participating in national infrastructures, also to increase its visibility. The administrative unit may also be able to use the fact that the majority of the faculty comes from outside Norway to increase its international network and visibility.

1.1 Research Strategy

The administrative unit's strategies are at present defined in relation to the overarching strategy of the faculty. The research strategy at the faculty level is defined in terms of thematic research areas, which in some cases are adequately matched with research interests at the administrative unit. *Our recommendation is that the administrative unit should define its own strategy instead, using its strengths as the basis for this.*

The self-assessment identifies the small size of the administrative unit as both a strength and a weakness, the strength being related to being able to make strategic decisions easily. However, in combination with diverse research interests, it can also become a weakness, as also identified by the administrative unit. *The administrative unit should aim for a more cohesive research strategy with a clear mission, in which research efforts can be more focussed rather than spread too thin across many research interests, especially because it is small.* Given the administrative unit's research interests and the ongoing reorganisation there are good opportunities to form a cohesive strategy at this point in time. This strategy should connect to the overall strategies of UiS and the Faculty.

1.2 Organisation of research

The administrative unit is organised as two research groups, One Health and Circular Economy and Sustainability, under one Department. As indicated in the Expert Panel reports, as well as in the description of research in the self-assessment, the two research groups appear to be somewhat isolated from each other. The administrative unit is evolving with ongoing retirements and many new academic staff being hired. This provides a good opportunity to reorganise the administrative unit to allow for more inter-group activities. It may be beneficial to organise research in a way that simplifies collaborations and cross-disciplinary work. If the current structure of having two groups hinders such efforts, either forming smaller groups or shutting them down should be considered. *Either way, the administrative unit would benefit from an organisational structure that strongly encourages and fosters cross-disciplinary research, e.g. within and between what is today Circular Economy and Sustainability and One Health. The administrative unit should define a strategy to unify the research environment to make it stronger and more synergistic.* The administrative unit has potential to develop

its research by identifying topics on renewable and sustainable resources within the administrative unit and capitalising on that.

1.3 Research funding

The administrative unit perceives the current situation with less funding for basic research as a threat, a concern shared by many bioscience institutions in this evaluation. The self-assessment did not provide a total budget turnover for the administrative unit, but at the interview this was reported to be around 45 million NOK per annum. The administrative unit reports around 12 million NOK in external national funding, mainly from the Research Council of Norway (RCN, 7.4 million NOK) in 2021. No international grants, including from the EU were reported. Moreover, the administrative unit has been able to attract only a few international grants in the past five years. For example, there have been only two EU grants, none of which it was the main applicant for. It is unclear if this is because few researchers apply or if the applications are unsuccessful. The committee's recommendation is to encourage researchers at all levels to apply and to provide adequate support during the application process, including providing advice on what is specifically needed for a successful EU or ERC application, if this is not already available. Such actions can include seeking advice from previous successful applicants. *The administrative unit should develop a strategy for how to attract more external funding and for a system in which successful young researchers can be tenured or be able to apply for excellence grants.*

Given the administrative unit's work in topics that are of interest to local industry, for example the oil industry and the health sector, it may be a good idea to focus on establishing more contacts with other actors and stakeholders outside academia. *There should be good opportunities to tap into subject areas related to the ongoing green transition in collaboration with other actors in society, including industry. The administrative unit could consider setting up an advisory board that could help them with such contacts.*

1.4 Use of infrastructures

The administrative unit appears to be well-equipped with local infrastructure for daily work. The administrative unit expresses concern about how to continue to fund such infrastructure in the future, a challenge experienced by many institutions. It is somewhat remarkable that researchers at the administrative unit have only used one of the listed international infrastructures (namely the European Synchrotron Radiation Facility). It is not clear from the self-assessment what this is due to. It is unclear why the administrative unit does not make use of more international infrastructures, for example ELIXIR, the European life sciences data infrastructure.

The administrative unit participates in one national infrastructure. Its self-reported SWOT analysis indicated that it is challenging for the administrative unit to be located remotely from most RCN-funded national infrastructures. The administrative unit does not host any national infrastructure. This is something that is worth exploring. Despite the challenges of the remote location, it is surprising that the administrative unit does not see advantages in using more infrastructures, both national as well as international. Apart from the obvious research benefits, there are many advantages of being involved in infrastructures, not least from the point of view of being able to drive infrastructure questions that are important for the administrative unit at the national level. The administrative unit could participate by being on the strategy boards for the national infrastructures. *Participating in national as well as international infrastructures provides an opportunity for visibility, something that the administrative unit should seriously consider.*

1.5 National and international collaboration

The administrative unit has collaborations with several national public institutions, other Universities and the University Hospital of Stavanger. It also has collaborations with five national research institutes, and in total, six international collaborations. Within some of these collaborations, there are several ongoing projects, while with others only one project seems to be active. Given the administrative unit's small size, there appear to be several projects that would benefit from more national and/or international collaboration. The statistics show that researchers at the administrative unit publish together with researchers from top-ranking universities internationally to a much lower degree than other Norwegian institutions in the bioscience research area, indicating that there is room for improvement in terms of international collaborations.

The administrative unit recruits academic personnel at all levels on the international market, which is commendable. This indicates that it recruits openly, aiming for the best talent. The administrative unit neither hosts any national infrastructure nor participates to a significant degree in national or international infrastructures. There should be plenty of opportunities to seize in this area. *The administrative unit could make use of the fact that many of the faculty (at all levels) come from outside Norway.* This is an important point for obtaining more international recognition for its research. Specific ways of achieving a more international reputation include providing opportunities to invite specialists and potential collaborators from universities outside Norway.

1.6 Research staff

The University provides several courses for early-career researchers, and there appears to be a very good system in place to support PhD candidates with so-called soft skills. There are also opportunities for tenured faculty to take sabbaticals and for PhD candidates to work or study abroad.

The administrative unit has, to our understanding, around 30 permanently employed professors and associate professors, 9 postdocs and 16 PhD candidates. Around 50% of all employees are female, while only 18% of all professors are female, which is typical for an administrative unit such as this one. A research community typically contains more junior staff (PhD candidates and postdocs) than professors, but this does not seem to be the case here. The composition of academic staff is very different from the international average. This is most likely a reflection of the fact that there is a lack of funding for employing junior researchers, or difficulties attracting them. An efficient research environment clearly has a greater need for more junior staff and the administrative unit should look into this. *The administrative unit is strongly recommended to work on a strategy to attract more funding to be able to increase the proportion of junior staff, e.g. postdoctoral fellows and PhD candidates.*

2. Research production, quality and integrity

Both research groups of the administrative unit were evaluated by an expert panel, whose evaluation summaries and performance scores are reproduced below after a spelling and language check. The output in terms of publications is reasonable, and there is a positive upwards trend in the last few years. The publications are heavily slanted towards materials chemistry, energy and chemistry, which may reflect a stronger publication track record within one of the two groups of the administrative unit. This observation is something that the administrative unit may want to look into. An analysis may give insights into what areas to support, and also provide information about whether certain areas should be strengthened or perhaps combined to provide a larger community.

The expert panels have evaluated the two research groups individually and the quality scores of both groups were similar and at the lower end in the national comparison. In both cases, a recommendation for developing research strategies that are aligned with the overarching strategies at the University and Faculty level is made. Recent recruitments within both research groups should be helpful when defining the future direction of the research within the administrative unit. *The administrative unit should take this opportunity to focus on gaining a critical mass in all relevant research areas and to define a research strategy in alignment with the overall strategies of the University and of the Faculty. The strategy should provide better opportunities to foster collaborations both within and between the two research groups. The administrative unit is encouraged to make use of the opportunity to work towards leading the way for the green transition through both the groups.*

2.1 Research quality and integrity

Circular Economy and Sustainability research group – overall assessment by Expert Panel 7

The Circular Economy and Sustainability group has the potential to make significant contributions to economic and societal development in Norway with its recent new reorientation. In particular, the University of Stavanger's commitment to realising the imperatives of the green transition creates a supportive institutional environment for the Circular Economy and Sustainability group. The group's relevance to the university's broader mission of leading the green transition in the region and beyond is a key consideration for the panel. However, the panel notes that the group has yet to fully articulate its position and contribution within this larger framework, highlighting the need for clearer alignment with the university's strategic priorities.

Overall, the group has shown some promising signs in terms of its potential contribution to the green transition and sustainability efforts. However, improvements are needed in areas such as research quality, knowledge transfer, and public outreach to fully realise this potential. With a clearer alignment with the University of Stavanger's strategic priorities, stronger funding strategies, and a more active engagement with knowledge transfer and public outreach, the Circular Economy and Sustainability group can make a significant contribution to the economic and societal development of Norway.

One Health research group – overall assessment by Expert Panel 4b

This is a small yet exceedingly diverse group, which is currently in flux following retirements and some restructuring. The group is therefore in critical need to develop a clear and realistic future strategy. Unfortunately, this was not well developed or articulated.

The self-assessment was lacking in detail. It would have benefitted from deeper consideration of where the group sits and where it wants to go, with better definition of both future goals and ways to attain them. The group appears to lack a leadership team and strategic planning. Probably as a result of limited funding, the group has few students/postdocs that could contribute to delivering a future strategy. As it stands, it appears that the ambitions of the group may not be matched by its ability to deliver them. The group has some strengths. Its recent international recruits could increase its visibility and help foster collaborations. There is an ambition to become more translational, which makes sense given the research area and current funding landscape. Their diversity could become an asset if they could develop a strategy to leverage it and turn it into truly synergistic interdisciplinarity. Such interdisciplinarity should be used to tackle better defined questions with clearly articulated deliverables. Recent retirements should provide an opportunity to recruit in key strategic areas.

2.2. Open Science

The administrative unit follows the general policy of the University concerning open science and research assessment. The University has signed the Declaration on Research Assessment (DORA) and is also committed to FAIR data principles (Findable, Accessible, Interoperable, and Reusable). The University has a plan for ownership and management of research data that the administrative unit follows.

The administrative unit either publishes most of its work in Gold open access journals (37%) or archives it (34%). The rest (29%) are not published as open access. The administrative unit has improved its statistics for open-access publication dramatically over the last few years and appears to be on the right track. The share of non-open access publications is, however, still well above the Norwegian average (17%), indicating that there is room for improvement. Improvement in open-access publication will also improve the visibility of the administrative unit's research. The administrative unit encourages all staff to openly share research data. They follow the stipulations of the RCN and the EU concerning FAIR principles.

3. Diversity and equality

The administrative unit appears to work along similar lines as other institutions with these questions. For example, they point out gender imbalance in employment advertisements, and have procedures for reporting issues. However, the self-assessment only points towards documentation at the University level, but not at the administrative unit level. The administrative unit should ensure that the documentation and systems in place at the University level are readily available also at the administrative unit level.

Like at similar institutions, the gender imbalance at the professor level is clearly visible, with only 18% of the senior faculty identified as female. For the administrative unit as a whole, there is no gender imbalance with female employees accounting for 50% of all employees. A good way to ensure gender balance including at the professor level is to employ junior researchers, among whom there is normally a better gender balance, through a tenure-track system or other routes that provide the means to support junior faculty to progress to the professor level. The faculty is largely recruited from outside Norway. Although this is a positive thing, indicating a willingness to recruit the best talent, efforts should be made to recruit early-career researchers locally or from other parts of Norway as well. One way of achieving this could be to develop cohesive and structured PhD and postdoc programmes that could attract talent to a well-defined research environment. We suggest the administrative unit *develops a strategy for natural progression from the available master's programmes to a PhD programme to try to keep talented students within the research community.*

4. Relevance to institutional and sectorial purposes

The administrative unit's work within both research groups is closely linked to important societal as well as sectorial questions that are high on the agenda, for example sustainability, green transition and health. In the green transition area, the administrative unit has great potential to make a strong impact. However, the administrative unit needs to develop strategies for this. In the health sector, the administrative unit had hopes for the development of a medical faculty, or a medical school at the University, which did not happen. The administrative unit should instead focus on collaborating with other medical institutions in Norway or abroad that have the same research focus, keeping in mind

that research at the administrative unit should focus on common goals through a unified strategy. The administrative unit provides examples of research that should have impact on the sector.

Teaching and the coupling of teaching and research is of importance for the sector, and the administrative unit uses new research directly in teaching activities, especially in master's and PhD-level education. The self-assessment unfortunately does not list what specific master's or bachelor's programmes the administrative unit contributes to, but the unit as a whole does contribute to programmes in biological chemistry and environmental engineering. Research is often used directly in teaching activities. This should provide a good ground for educating students within the relevant research areas, and this should also provide a link between alumni and local industry that could be used for collaborations.

The administrative unit's research commercialisations are done in collaboration with Validé, the innovation company at UiS. The researchers are generally positive about the help and support that they get from technology transfer services provided by the innovation company. The administrative unit has had several smaller innovation projects and lists two examples of research commercialisations, one being the company Eco Inhibitors (also part of one of the impact cases), the other a method to measure stress hormones in fish, which is of relevance to the fish industry. Unfortunately, both of these examples are only superficially described in the self-assessment. *Overall, given the research focus of the administrative unit, innovation and making use of research outputs are areas that could be improved, and the unit should be more active in interacting with actors outside the university.*

5. Relevance to society

The administrative unit has the potential to make a deep impact on society. The focus of the two research groups is relevant for many of the UN Sustainable Development Goals (SDGs). They list SDGs 3, 12 and 13 as being relevant for their research. The Committee can think of a few more, such as SDGs 7, (energy), 14 and 15.

The three impact cases that are very briefly described in the self-assessment, and not elaborated on separately are however, not convincing. The first impact case deals with creating sustainable oil production, while the second has not yet developed into a case that has made an impact on society. Although admirable, the third "impact case" is a simple statement of the importance of generating research and new knowledge. Together, this indicates that the research at the administrative unit, as confirmed by the research group assessments, has not (yet) reached a productivity level or quality that advances the state of the art in the fields of the administrative unit's works. The administrative unit should focus on capitalising on the fact that it has the potential to make significant contributions to important societal challenges in the future.

There are examples of work that the administrative units do to promote exploring the usefulness of their research data. They do this in collaboration with Validé, the innovation company at UiS. Despite these efforts, however, the administrative unit itself admits that there is no tradition to file for patents or to be involved in such activities, alongside the claim that the research is more basic in nature than applied. The Committee does not agree with this and clearly sees the potential for focussing also on societal challenges. There are a few examples of company start-ups from research conducted at the administrative unit. We would strongly recommend the administrative unit to explore this avenue further. The Committee believes that the administrative unit's line of research, if correctly focussed and consolidated, should be able to generate findings that have a more direct societal impact, given the focus on circular economy and sustainability in particular, as well as on health. The research within both research groups is closely linked to important societal questions that are high on the political agenda, for example sustainability, green transition and health. Unfortunately, such efforts

seem to be lacking at the administrative unit level. The administrative unit should make use of any success stories related to industrial and societal use to market its research and to attract both funding and talent.

Comments on impact case 1

Impact case 1 is a description of research projects aimed at developing chemicals for use as inhibitors for crystallisation processes in the oil industry, but also for use within the health sector. The case does not list any patents or own efforts in commercialising these types of molecules, something that could be done in collaboration with industry. Unfortunately, the description of this case is limited and it is unclear as to what extent the results of this research are used outside academia. The example given in Form 10 is most likely related to this case, however. Overall, this type of research should be useful in a broad sense, and there is already evidence for a strong impact on related industry. The administrative unit should encourage its researchers to publicise information about the usefulness of their research more broadly. Possible collaborations with industry should also be used to emphasise the societal importance of the research. They should make use of any such success stories in a better way to market their research.

Comments on impact case 2 – "Fellesløft" project

The second case is a project related to research around inflammatory bowel disease (IBD). An outcome of this project, conducted together with several international and national actors, could lead to future treatments for this disease. The research most likely has a good potential to have a societal impact as the results could be used for developing treatments. As with impact case 1, the description of this case, however, is too superficial to understand whether this research has already made an impact on treatment, or if this is ongoing research. The underpinning research appears to be solid and could lead to the development of treatment of symptoms. At any rate, the administrative unit should become much better at emphasising and publicising such research efforts.

Comments on impact case 3 – Fundamental research over a long period of time

The third case is, in the Committee's opinion, not the type of case that should have been presented here. Although basic research within plant sciences is very important for the administrative unit, and should be applauded, the relevance to society and at least possible innovations should have been highlighted instead. The administrative unit should find a strategy for better marketing its research, as recommended for the other impact cases.

Appendices

List of research groups

Institution	Administrative unit	Research group
University of Stavanger (UiS)	Department of Chemistry, Bioscience and Environmental Engineering	<i>One Health</i>
		<i>Circular Economy and Sustainability</i>

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 document review, the Committee met and conducted 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 three weeks before the interview.

The Committee interviewed the Administrative Unit in an hour-long virtual meeting to validate the Committee's understanding and refine perceptions as well as fill any gaps in understanding and evidence. The Administrative Unit answered the Committee's questions including any follow-up questions.

After the online interview, the Committee held a meeting to review the initial assessment in light of the interview and draft a report based on their assessment of the Unit against the assessment criteria.

A one-page profile of the Administrative Unit was drafted based on information from the self-assessment. The Administrative Unit had the opportunity to fact-check this profile. Thereafter, the profile was included in the final draft of the report.

The final draft was reviewed by committee members and any comments were addressed. After a final copy-edit, the final report was approved by the Committee.

Limitations

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.

Evaluation of Biosciences 2022-2023

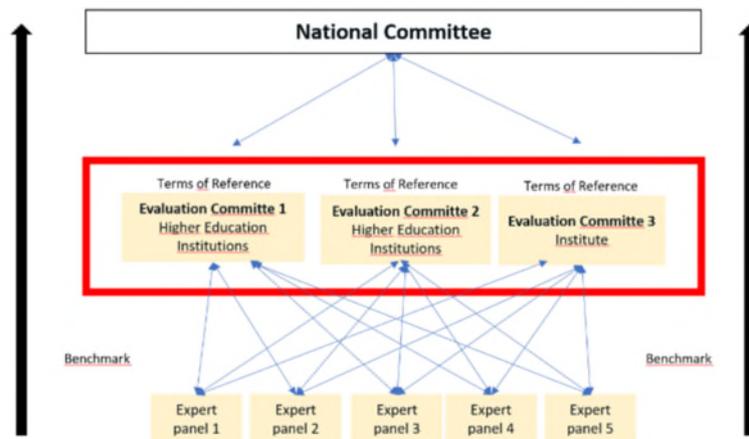
By evaluating Norwegian research and higher education we aim to enhance the quality, relevance, and efficiency. In accordance with the statutes of the Research Council of Norway (RCN), the RCN evaluates Norwegian professional environments to create a solid and up-to-date knowledge base about Norwegian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

The evaluation of life sciences is conducted in 2022 - 2024. The evaluation of biosciences takes place in 2022 - 2023, and the evaluation of medicine and health is carried out in 2023-2024. 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 biosciences (EVALBIOVIT) 2022-2023

The evaluation of biosciences includes twenty-two administrative units (e.g., faculty, department, institution) which are assessed by evaluation committees according to sectorial affiliation and/or other relevant similarities between the units. The administrative units enrolled their research groups (97) to five expert panels organised by research subjects or themes and assessed across institutions and sectors.

Organisation of evaluation of biosciences research 2022 - 2023



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

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

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

The web page for the evaluation of biosciences 2022-2023:

<https://www.forskningsradet.no/en/analysis-numbers/evaluations/subject-theme/biosciences/>

Til innmeldte administrative enheter til
fagevaluering av biovitenskap (EVALBIOVIT)

Vår saksbehandler/tlf.
Hilde D.G. Nielsen/4092 2260

Vår ref.
21/10653
Deres ref.

Oslo,
21.04.2022

Fagevaluering av biovitenskap (EVALBIOVIT) 2022 – 2023

Vi viser til invitasjonsbrev om å delta i fagevaluering av biovitenskap (EVALBIOVIT) datert 11.11.2021 og til informasjonsmøte med innmeldte administrative enheter 15.12.2021.

Porteføljestyret for livsvitenskap vedtok evalueringsprotokollen for fagevaluering av biovitenskap 05.04.2022 (vedlegg 1). Protokollen beskriver roller, prosesser og ansvarsfordeling i evalueringsarbeidet og er i tråd med forslaget til nytt nasjonalt rammeverk for evaluering av forskning og høyere utdanning utarbeidet i regi av Kunnskapsdepartementet.

Forskningsrådet har mottatt innmelding av 37 administrative enheter til EVALBIOVIT. Disse vil bli fordelt på sektorspesifikke evalueringskomitéer: 1-2 evalueringskomité/er for administrative enheter som tilhører instituttsektoren og 1-2 evalueringskomité/er for administrative enheter som tilhører UH-sektor. Universitetsmuseene vil bli evaluert samlet i én evalueringskomité for UH-sektor. Det skal i tillegg opprettes internasjonale fagekspertpaneler etter faglig eller tematisk likhet på tvers av sektorer. Ekspertpanelene skal evaluere forskergruppene som de administrative enhetene melder inn. Evalueringskomitéene og ekspertpanelene skal vurdere de innsamlede dataene og gi anbefalinger til den enkelte institusjon, til Forskningsrådet og til departementene.

Tilpasning av mandat (vedlegg 1)

Forskningsrådet ber med dette administrative enheter om å tilpasse mandatet (vedlegg 1) til de lokale forhold ved egen institusjon. Tilpasningen gjøres ved å fylle inn de åpne punktene i malen (Appendix A). Utfylt skjema sendes på epost til evalbiovit@forskningsradet.no *innen 30. september 2022.*

Innmelding av forskergrupper (vedlegg 2a og 2b)

Forskningsrådet ber administrative enheter om å melde inn forskergrupper i tråd med forskergruppedefinisjonen beskrevet i kapittel 1.2 i evalueringsprotokollen. Det bes også om at forskergruppene innplasseres i den tentative fagpanelinndelingen for EVALBIOVIT (vedlegg 2a). Utfylt regneark (vedlegg 2b) sendes til evalbiovit@forskningsradet.no *innen 31. mai 2022.*

Forskningsrådet vil ferdigstille panelstruktur og avgjøre den endelige fordelingen av forskergruppene på fagpaneler etter at alle forskergrupper er meldt inn.

Invitasjon til å foreslå eksperter (vedlegg 3a og 3b)

Forskningsrådet inviterer administrative enheter til å spille inn forslag til eksperter som kan inngå i evalueringskomitéene og i ekspertpanelene (vedlegg 3a). Hver evalueringskomité skal bestå av 7-9 komitémedlemmer. Hvert ekspertpanel skal bestå av 5-7 eksperter. Utfylt regneark (vedlegg 3b, fane 1 og fane 2) sendes til evalbiovit@forskningsradet.no innen 31. mai 2022.

Forskningsrådet v/porteføljestyret for livsvitenskap vil oppnevne leder og medlemmer til evalueringskomitéene og til ekspertpanelene.

Data og datainnsamling

Forskningsrådet har nå ute et oppdrag for analyse av data om personal og forskningsproduksjon. Analysen skal i hovedsak baseres på data i DBH, NIFUs forskerpersonaleregister og Cristin. Analysene vil inkludere indikatorer som skal brukes for evaluering av alle institusjoner.

Videre vil institusjonene få et ansvar for innsamling av data til en egevaluering som skal inngå i vurderingsgrunnlaget for evalueringskomiteene. For å sikre at evalueringen blir nyttig for forskningsinstitusjonenes utvikling, vil Forskningsrådet også invitere institusjonene til å delta i utvelgelse av relevante evalueringsdata og indikatorer som kan danne grunnlag for vurdering opp mot institusjonens egne strategiske mål og sektormål. På bakgrunn av dette har Forskningsrådet en forventning om at institusjonene som deltar i evalueringen stiller med nødvendige ressurser gjennom hele evalueringsprosessen.

Forskningsrådet har, etter en anbudskonkurranse om sekretariatstjenester, inngått en avtale med Technopolis Group som skal bistå Forskningsrådets administrasjon i arbeidet med EVALBIOVIT. Sekretariatet skal blant annet koordinere datainnsamlingen fra institusjonene og systematisere det innsamlede materialet for vurdering i ekspertpaneler og evalueringskomitéer.

Endring av administrativ enhet

For noen få tilfeller kan det være behov for å gjøre noen endringer i forhold til den administrative enheten¹ som allerede er innmeldt til EVALBIOVIT. For eksempel kan et fakultet som ble meldt inn samlet til EVALBIOVIT i desember 2021 finne det mer hensiktsmessig å heller melde inn fakultetets institutter som egne administrative enheter. Hvis man ønsker å endre på den administrative enheten må dette meldes Forskningsrådets administrasjon så fort som mulig, men ikke senere enn 31.05.2022. Melding om endring sendes på epost til: evalbiovit@forskningsradet.no.

Informasjonsmøte 9. mai 2022 og nettside for EVALBIOVIT

Forskningsrådet arrangerer 09.05.2022 kl. 12.00-12.45 et informasjonsmøte for alle som deltar i EVALBIOVIT. Møtet vil foregå digitalt (Zoom). Vi vil i møtet bl.a. gå gjennom evalueringsprotokollen samt at det vil være mulig å stille spørsmål. Påmelding til evalbiovit@forskningsradet.no innen 07.05.2022.

Forskningsrådet har opprette en egen nettside hvor informasjon om EVALBIOVIT vil bli publisert fortløpende. Lenke til nettsiden finner dere her: <https://www.forskningsradet.no/statistikk-evalueringer/biovitenskap-2022-2023/>.

¹ Med administrativ enhet menes en organisatorisk enhet på nivå 2 eller 3 i organisasjonsstrukturen til DBH for UH sektor eller NIFUs organisasjonsregister for institutt- og helsesektoren.

Spørsmål som gjelder fagevalueringen kan sendes på epost til evalbiovit@forskningsradet.no eller ved å kontakte Hilde Dorthea Grindvik Nielsen på epost hgn@forskningsradet.no /mobil 40 92 22 60.

Med vennlig hilsen
Norges forskningsråd

Ole Johan Borge
avdelingsdirektør
Avdeling for helseforskning og helseinnovasjon

Hilde G. Nielsen
spesialrådgiver
Avdeling for helseforskning og helseinnovasjon

Vedlegg

1. Evalueringsprotokoll for fagevaluering av biovitenskap 2022-2023
- 2a. Tentativ fagpanelinndeling for evaluering av forskergrupper
- 2b. Skjema for innmelding av forskergrupper
- 3a. Invitasjon til å foreslå eksperter og informasjon om evalueringskomitéer og ekspertpaneler
- 3b. Skjema for å foreslå eksperter til evalueringskomitéer og ekspertpaneler

Evaluation of life sciences in Norway 2022-2023

LIVSEVAL protocol version 1.0

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

© The Research Council of Norway 2022

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

Telephone: +47 22 03 70 00

Telefax: +47 22 03 70 01

post@rcn.no

www.rcn.no

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

Oslo, 5 April 2022

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

1 Introduction

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

1.1 Evaluation units

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

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

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

1.2 Minimum requirements for research groups

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

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

1.3 The evaluation in a nutshell

The assessment concerns:

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

The Research Council of Norway (RCN) will:

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

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

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

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

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

1.4 Target groups

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

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

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

2 Assessment criteria

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

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

2.1 Strategy, resources and organisation

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

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

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

2.2 Research production, quality and integrity

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

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

2.3 Diversity and equality

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

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

2.4 Relevance to institutional and sectoral purposes

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

Higher Education Institutions

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

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

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

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

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

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

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

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

Research institutes (the institute sector)

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

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

The institutes should:

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

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

The hospital sector

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

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

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

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

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

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

2.5 Relevance to society

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

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

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

3 Evaluation process and organisation

The RCN will organise the assessment process as follows:

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

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

3.1 Division of tasks between the committee and panel levels

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

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

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

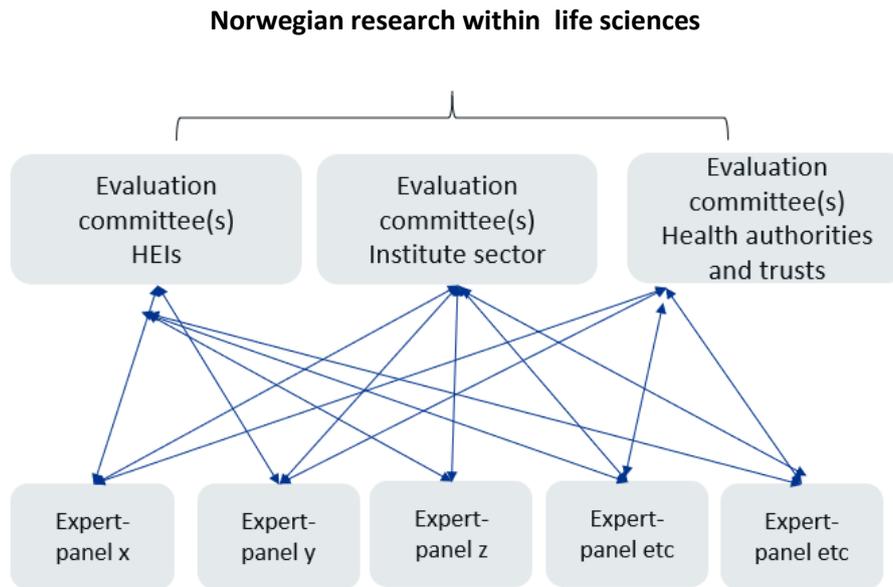


Figure 1. Evaluation committees and expert panels

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

3.2 Accuracy of factual information

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

3.3 National level report

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

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

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

Appendix A: Terms of References (ToR)

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

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

Assessment

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

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

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

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

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

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

Documentation

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

The documents will include the following:

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

Interviews with representatives from the evaluated units

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

Statement on impartiality and confidence

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

Assessment report

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

Appendix B: Data sources

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

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

National registers

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

Self-assessments

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

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

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

Table 1. Types of evaluation data per criterion

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



**The Research Council
of Norway**

EVALBIOVIT

Self-assessment for administrative
units

Version 1.2

Overview

Institution (name and short name):

Administrative unit (name and short name):

Date:

Contact person:

Contact details (email):

1 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), and by the institute sector. For the life sciences area, research undertaken by regional health authorities and health trusts is also included. 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 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 the past 10 years. All the submitted data will be evaluated by evaluation committees (for administrative units) and expert panels (for research groups). Please read through the whole document including all instructions before answering the questions to avoid overlaps.

As an administrative unit, you are also responsible for collecting the completed self-assessment for each of the research groups that belong to the unit. The research groups need to submit their completed self- assessment to the unit no later than the 1st of December 2022. The unit will submit the research groups' completed self-assessments and the unit's own completed self-assessment no later than the 5th of December 2022.

The whole self-assessment shall be written in English.

Please use the following format when naming your document: name of the institution, and name of the administrative unit, e.g. UiO_FacBiosci. Send it to evalbiovit@technopolis-group.com no later than 5th of December 2022.

For questions concerning the self-assessment or EVALBIOVIT in general, please contact RCN's evaluation secretariat at Technopolis Group: evalbiovit.questions@technopolis-group.com.

Many thanks in advance!

¹ Personal information will be deleted when evaluation reports are published and no later than 30 April 2024

For more information on how Technopolis Group handles data processing, see: <http://www.technopolis-group.com/privacy-policy/>

For more information on how the Research Council of Norway handles data processing, see: <https://www.forskingsradet.no/en/privacy-policy/>

2 Self-assessment for administrative units

Self-assessment guidelines:

- Data on personnel should refer to reporting to DBH on 1 October 2021 for HEIs and to the yearly reporting for 2021 for the institute sector
- Other data should refer to 31 December 2021 if not specified otherwise
- Please read the entire self-assessment document before answering
- Provide information – provide documents and other relevant data or figures about the administrative unit, 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 administrative unit (most often this includes filling out specific forms) and inform the reader about the administrative unit
- Reflect – comment in a reflective and evaluative manner how the administrative unit operates
- 4000 characters including spaces equals one page

2.1 Strategy, resources and organisation of research

2.1.1 Research strategy

- 2.1.1.1 Describe the main strategic goals for research and innovation of the administrative unit (1000–4000 characters). How are these goals related to institutional strategies?
- Describe the main fields and focus of research and innovation in the unit
 - Describe how you work to maximise synergies between the different purposes of the 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 long-term research strategy – explain why

Form 1 Administrative unit's strategic planning documents

Instructions: For each category (Research strategy, Research funding, Cooperation policy, Open science policy) present up to 5 documents that according to you are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then present these documents. Please use the following formatting: Name of document, Years active, Link to the document.

Example: Norwegian University of Science and Technology Strategy, 2021–2025, [hyperlink to the document](#)

2.1.2 Organisation of research

- 2.1.2.1 Describe the organisation of research and innovation activities at the unit, including how responsibilities for research and other purposes (education, knowledge exchange, patient treatment, training etc) are distributed and delegated (500–1500 characters).

Form 2 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 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 (500–2000 characters per cell).

2.1.3 Research funding

- 2.1.3.1 Describe the funding sources of the unit and indicate the share of the unit's budget (NOK) dedicated to research compared to other purposes. Shares may be calculated based on full time equivalents (FTE) allocated to research compared to total FTE in unit (500–1500 characters).
- 2.1.3.2 Describe how successful the administrative unit has been in obtaining competitive regional, national and/or international research funding grants (200–1000 characters).

Form 3 Funding levels for the administrative unit for 2021

Instructions: For administrative units in the institute sector receiving basic funding via RCN, funding levels should be provided for 2021 in the funding categories used in the yearly reporting:

- a) National grants (NOK) (post 1.1 og 1.2):
 - i) from the Research Council of Norway (NOK) – excluding basic funding
 - ii) from the ministries and underlying directorates (NOK)
 - iii) from industry (NOK)
 - iv) other national grants including third sector, private associations and foundations (NOK)
- b) National contract research (post 1.3)
- c) International grants (post 1.4)
- d) Funding related to public management (forvaltningsoppgaver post 1.5)

For Higher Education Institutions costs covered by external funding sources should be reported according to the same categories as far as possible. Costs may be classified as Other if they cannot be placed in one of the specified categories. Reporting should be based on incurred costs (regnskapstall) for 2021.

2.1.4 Participation in national infrastructures

- 2.1.4.1 Describe the most important participation in the national infrastructures listed in the Norwegian roadmap for research infrastructures (Nasjonalt veikart for forskningsinfrastruktur) including as host institution(s) (200–1000 characters).

Form 4 Infrastructures listed in the Norwegian roadmap for research infrastructures (Nasjonalt veikart for forskningsinfrastruktur)

Instructions: Please present up to 5 participations in the national infrastructures listed in the Norwegian roadmap for research infrastructures (Nasjonalt veikart for forskningsinfrastruktur) for each area that were the most important to your administrative unit. For each category area, please use the following formatting:

Name of research infrastructure, Years when used, Description (100–500 characters) of the engagement with the research infrastructure (reasoning, objectives, expected/actual outcomes).

² Excluding basic funding.

³ For research institutes only research activities should be included from section 1.3 in the yearly reporting

- 2.1.4.2 Describe the most important participation in the international infrastructures funded by the ministries (Norsk deltakelse i internasjonale forskningsorganisasjoner finansiert av departementene) (200–1000 characters).

Form 5 Participation in international research organisations

Instructions: Please describe up to 5 participations in international and European infrastructures (ESFRI) for each area that have been most important to your research unit. When presenting your participation, please use the following formatting:

Name of research infrastructure, Years when used, Description (100–500 characters) of the participation in the research infrastructure (reasoning, objectives, expected/actual outcomes).

2.1.4.3 Describe the most important participation in European (ESFRI) infrastructures (Norske medlemskap i infrastrukturer i ESFRI roadmap) including as host institution(s) (200–1000 characters).

Form 6 Participation in infrastructures on the ESFRI Roadmap

Instructions: For each area, please give a description of up to 5 engagements that have been most important to your research unit. When presenting your participation, please use the following formatting: Name of research infrastructure, Years when used, Description (100–500 characters) of the engagement with the research infrastructure (reasoning, objectives, expected/actual outcomes)."

2.1.5 Accessibility to research infrastructures

2.1.5.1 Describe the accessibility to research infrastructures for your researchers. Considering both physical and electronic infrastructure (200–1000 characters).

2.1.5.2 Describe what is done at the unit to fulfil the FAIR-principles⁴ (200–1000 characters).

2.1.6 Research staff

2.1.6.1 Describe the profile of research personnel at the unit in terms of position and gender (200–1000 characters).

Form 7 Administrative data on the division of staff resources for 2021

2.1.6.2 Describe the structures and practices to foster researcher careers and help early-career researchers to make their way into the profession (200–1000 characters).

2.1.6.3 Describe how research time is distributed among staff including criteria for research leave (forskningsfri) (200–1000 characters).

2.1.6.4 Describe research mobility options (200–1000 characters).

2.2 Research production, quality, and integrity

2.2.1 Research quality and integrity

2.2.1.1 Describe the scientific focus areas of the research conducted at the administrative unit, including the unit's contribution to these areas (500–2000 characters).

2.2.1.2 Describe the unit's policy for research integrity, including preventative measures when integrity is at risk, or violated (200–1000 characters).⁵

2.2.2 Open Science policies at the administrative unit

2.2.2.1 Describe the institutional policies, approaches, and activities to the following Open Science areas (consider each area separately, 500–1000 characters in total):

- 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
- Skills and training for Open Science
- Citizen science and/or involvement of stakeholders / user groups

2.2.2.2 Describe the most important contributions and impact of the unit's researchers towards the different Open Science areas (consider each area separately, 500–1000 characters in total):

- 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
- Skills and training for Open Science
- Citizen science and/or involvement of stakeholders/user groups

2.2.2.3 Describe the institutional policy regarding ownership of research data, data management, and confidentiality (200–1000 characters). Is the use of data management plans implemented at the unit?

2.3 Diversity and equality

2.3.1 Diversity and equality practices

2.3.1.1 Describe the policy and practices to protect against any form of discrimination in the administrative unit (200–1000 characters).

Form 8 Administrative unit's policies against discrimination

Instructions: 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. For each document use the following formatting: Name of document, Years active, Link to the document

Example: Norwegian University of Science and Technology Strategy, 2021–2025, [hyperlink to the document](#)

2.4 Relevance to institutional and sectorial purposes

2.4.1 Sector specific impact

2.4.1.1 Describe whether the administrative unit has activities aimed at achieving sector-specific objectives⁶ or focused 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 (500–3000 characters).

- Alternatively, describe whether the activities of the 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.

2.4.2 Research innovation and commercialisation

2.4.2.1 Describe the administrative unit's practices for innovation and commercialisation (500–1500 characters).

- Describe the interest among the research staff in doing innovation and commercialisation activities
- Describe how innovation and commercialisation is supported at the unit

Form 9 Administrative unit's policies for research innovation

Instructions: Describe up to 5 documents of the administrative unit's policies for research 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. For each document use the following formatting: Name of document, Years active, Link to the document

Example: Norwegian University of Science and Technology Strategy, 2021–2025, [hyperlink to the document](#)

2.4.2.2 Provide examples of successful innovation and commercialisation results, such as new patents, licenses, etc (500–1500 characters).

Form 10 Administrative description of successful innovation and commercialisation results

Instructions: Please describe up to 10 successful innovation and commercialisation results at your administrative unit. For each result, please use the following formatting: Name of innovation and commercial results, Year, Links to relevant documents, articles, etc. that present the result, Description (100–500 characters) of successful innovation and commercialisation result.

2.4.3 Collaboration

2.4.3.1 Describe the unit's policy towards regional, national and international collaboration, as well as how cross-sectorial collaboration and interdisciplinary collaboration is approached at the administrative unit (500–1500 characters). Please fill out the forms that match your institution: the institute sector fills out Form 11a and Form 11b; HEIs fill out Form 12.

- Reflect on how successful the unit have been in meeting its aspirations for collaborations

Form 11a (institute sector) Administrative unit's partnerships ('faktisk samarbeid')

Instructions: For each of the administrative unit's tender and project-based cooperation (which are not tax deducted) please present up to 5 examples under each category (Collaboration with national public institutions; Collaboration with national private institutions; Collaboration with international public institutions; Collaboration with international private institutions). Please use 100– 500 characters to describe the impacts and relevance of collaboration.

Form 11b (institute sector) Administrative unit's collaboration

Instructions: For each of the administrative unit's tender and project-based cooperation please present up to 5 examples under each category (Collaboration with academic partners nationally; Collaboration with non-academic partners nationally; Collaboration with academic partners internationally; Collaboration with non-academic partners internationally). Please use 100–500 characters to describe the impacts and relevance of collaboration.

2.4.3.2 Reflect on the importance of different types of collaboration for the administrative unit (200–1000 characters).

- Regional, national and international collaborations
Collaborations with different sectors, including public, private and third sector

Form 12 (HEIs) Administrative unit's partnerships" ('faktisk samarbeid')

Instructions: For each of the administrative unit's tender and project-based cooperation (which are not tax deducted) please present up to 5 examples under each category (Collaboration with national public institutions; Collaboration with national private institutions; Collaboration with international public institutions; Collaboration with international private institutions). Please use 100– 500 characters to describe the impacts and relevance of collaboration.

2.4.3.3 Reflect on the importance of different types of collaboration for the administrative unit, the added value of these collaborations to the administrative unit and Norwegian research system (500–1500 characters).

2.4.4 ONLY for higher education institutions

- 2.4.4.1 Reflect on how research at the unit contributes towards master and PhD-level education provision, at your institutions and beyond (200–1000 characters).⁷
- 2.4.4.2 Describe the opportunities for master and bachelor students to become involved in research activities at the unit (200–1000 characters).

2.4.5 ONLY for research institutes

- 2.4.5.1 Describe how the research activities at the administrative unit contribute to the knowledge base for policy development, sustainable development, and societal and industrial transformations more generally (500–1500 characters).⁸
- 2.4.5.2 Describe the most important research activities including those with partners outside of research organisations (500–1500 characters).

2.5 Relevance to society

2.5.1 Administrative unit's societal impact

- 2.5.1.1 Reflect on the unit's contribution towards the Norwegian Long-term plan for research and higher education, societal challenges more widely, and the UN Sustainable Development Goals (500–1500 characters).
- 2.5.1.2 Describe how the administrative unit's research and innovation has contributed to economic, societal and cultural development by submitting one to five impact cases depending on the size of the 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. Please use the attached template for impact cases. Each impact case will be submitted as an attachment to the self-evaluation. Institutions that submit impact cases do not have to fill in the box below.

Case no. 1

Thank you for completing the self-assessment.

⁷ Please note: RCN will provide data from the national student survey (Studiebarometeret) on students' experience with research methods and exposure to research activities. The data will most probably be on an aggregate level but including the unit under assessment.

⁸ Strategi for helhetlig instituttpolitikk, Kunnskapsdepartementet, p.4): «Instituttsektoren skal utvikle kunnskapsgrunnlag for politikktutforming og bidra til bærekraftig utvikling og omstilling, gjennom forskning av høy kvalitet og relevans.» ([The government's strategy for an independent institute sector](#)).



Scales for research group assessment

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 https://credit.niso.org/
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

Besøksadresse: Drammensveien 288
Postboks 564
1327 Lysaker

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

post@forskningsradet.no
www.forskningsradet.no

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

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

ISBN 978-82-12-03977-3 (pdf)

