



# Action Plan Research and Innovation 2024-2027

The action plan is based on the OUS Development Plan 2040, which describes two clear ambitions towards 2040 and six long-term goals that provide direction for the desired development. The Action Plans specify these six objectives and describe goals and measures in a four-year perspective.

This is an unofficial English translation of the original Norwegian document.

Plan Owner: Director of Research, Innovation, and Education  
Version 1.0

Processed by the hospital management team June 2023

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## About the Action Plan

Research is one of four main tasks in hospitals, as stated in *Spesialisthelsetjenesteloven* (Specialist Health Services Act) § 3-8 and *Helseforetaksloven* (Health Trusts Act) §§ 1 and 2. The hospitals have a primary responsibility for patient-oriented clinical research, which includes developing new diagnostic and treatment options, as well as assessing the benefits and harms of current treatments. The research must therefore be closely integrated with the clinical activities. Hospitals also have a special role in research that contributes to the transfer of results from biomedical research to diagnosis and patient care (translational research). Collaboration between basic research and clinical research is important in testing the relevance of experimental findings to clinical practice and bringing clinical experience back to the laboratory. The hospital also receives commissions related to innovation and collaboration with industry through national strategies and annual commissions from the owner. In the Commissioner's Document from the South-Eastern Norway Regional Health Authority for 2023, one of the main goals is to strengthen research, innovation, and competence, and improve quality and patient safety. OUS contributes annually to over 2000 scientific articles and has broad collaboration both nationally and internationally.

Research and innovation are closely integrated with clinical and diagnostic activities and are carried out in all hospital divisions. The line managers are responsible for implementation and professional prioritization. Most Division Leaders have a combined position with the University of Oslo (UiO) and overall responsibility for research activity in both lines. Each division has a Head of Research with a combined employment with the hospital and the Faculty of Medicine. Research is organized through research groups, which either can follow the line structure or be established thematically across departments and divisions. Divisions and departments are responsible for facilitating research and ensuring that research is conducted in a safe and efficient manner. Support functions for research and innovation are provided by the hospital divisions themselves, Oslo Hospital Service Research Support, Division of Technology and Innovation, Division of Laboratory Medicine, and Division of Radiology and Nuclear Medicine. OUS and UiO jointly owns the technology transfer office, Inven2 AS, which assists in commercializable innovation and administration of industry sponsored clinical trials. Strategic responsibility and system responsibility lie with the Research, Innovation and Education unit. OUS has a strategic advisory Research Committee, as well as a more administration-oriented joint Research Leader Forum together with UiO, Faculty of Medicine, and Department of Clinical Medicine.

## Framework Conditions

Our extensive clinical activity provides significant opportunities for quality improvement and health services research, and it is important that the development of new diagnostics and treatments is documented and implemented in a scientific manner. We should also actively contribute to processes related to laws and regulations related to health research. This activity ensures that we are closer to achieving the goal of providing excellent health services for the benefit of patients and their relatives. As a university hospital, OUS has a special responsibility for developing tomorrow's medicine. It is, therefore, important to see this action plan in conjunction with the Patient Treatment Action Plan.

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Important framework conditions in research are adequate funding, time, support staff, infrastructure such as equipment, ICT, and space, as well as good professional partners/networks nationally and internationally.

# Situation and Needs Description

## Research conducted at Oslo University Hospital - key figures for 2021 (2022)

	Scientific Publications	Doctorates completed at OUS	Clinical Trials (ongoing with recruitment)
Oslo University Hospital	2462 (2432)	101 (92)	251 (270)
South-Eastern Norway Regional Health Authority	3281	145	349
Total for all health trusts	5029	255	485

Source: [Nasjonalt system for måling av forsknings- og innovasjonsaktivitet i helseforetakene og kompetansesentre utenfor spesialisthelsetjenesten](#). Quality-assured figures for 2022 will be available in mid-2023.

Research work years at OUS in 2022: approx. 1650, including support staff (partly estimated work years).

Research funding at OUS in 2022: approx. NOK 2.5 billion, of which approx. 46% is externally funded.

Research and innovation require significant resources and time from clinical/diagnostic personnel. This is particularly challenging for clinical trials, where the government aims for a national doubling in the period 2021-2025. Leaders often face demanding prioritizations and conflicting goals when it comes to sufficient time, investment funds, and space.

## Key needs

- 1. Research funding:** The clinical divisions depend on external funding, which account for about half of research funding. This creates unpredictability, and there is increasing competition for research funding nationally and internationally.
- 2. Time and resources:** There is a need for more time and resources to plan, apply for, and conduct research and innovation projects. It is particularly challenging to allocate enough time and resources to meet the requirement for a significant increase in clinical trials. Sufficient time for clinical staff for clinical research is a major challenge, as well as limited space in clinical environments to conduct multiple studies. Radiology capacity, and partly laboratory tests, are also significant bottlenecks to be able to conduct more clinical trials.
- 3. Infrastructure:** There is insufficient infrastructure in areas such as ICT, biobanks, and lab space, and IT solutions for research are inferior to those in the university and college sector. In particular, IT solutions for research projects with a need for advanced software and medical equipment, storage solutions for sensitive data, and for cross-regional projects are unsatisfactory. Improved opportunities for secondary use of health data for research require resources such as the establishment of digital consent and register solutions, including clinical data warehouses.

4. **Uncertain career paths:** Temporary and uncertain project funding contributes to uncertain career paths, which is especially challenging for younger researchers.
5. **Recruitment of doctors for research:** Some clinical environments report increasing recruitment problems for research, especially among doctors in certain fields. More limited opportunities to combine clinical and research work, including leave opportunities and salary terms, contribute to this.
6. **Research ethics and integrity:** Increased requirements for training in the research ethics law and the need for better follow-up systems and tools to follow up more closely in the leadership line.

#### Strengths:

- Significant clinical activity, data material, and scientific expertise enable improvement and research in healthcare services.
- Nationally leading health research institution, an attractive partner for academia and industry, closely linked to the University of Oslo.
- Extensive user involvement in research.
- Research and innovation are integrated into patient care.
- Research and innovation are organized through research groups and support functions.
- Owns Inven2 AS with UiO for commercialization of research results.
- New storage facilities for research biobanks have been established at Rikshospitalet.

#### Opportunities:

- Further develop international and national research collaborations
- Increased funding from the EU in Horizon Europe (framework program for research and innovation)
- Government's goal of doubling clinical trials nationally within the five-year period of 2021-2025
- Possibility for secondary use of health data for research through the use of clinical data warehouses
- Strengthen innovation, commercialization, and industry collaboration

#### Weaknesses:

- Lack of resources for planning and application work.
- Clinical personnel often have limited time for research and are dependent on external funding, which creates unpredictability.
- The infrastructure (MTU, ICT, biobanks, and lab space) is insufficient.
- Limited space in clinical environments to conduct multiple projects.
- Uncertain career paths for researchers.
- Increasing recruitment problems of doctors for research in certain fields.
- Inadequate tools for leadership to follow up on research projects and lack of training in research ethics and integrity.
- Insufficient innovation in relation to research activity.

#### Threats:

- Increasing competition for research funding regionally, nationally, and internationally, as well as pressure on internal budgets
- Prioritization conflicts between research and other mission requirements
- Insufficient IT solutions for research projects, including software, medical equipment, and storage solutions for sensitive data and cross-regional projects
- Limited funding for advanced medical-technical equipment for research
- Lower percentage of funds from the health industry compared to other Nordic countries
- Temporary and uncertain positions that can lead to recruitment issues
- Recruitment issues among doctors due to leave and funding constraints.

## Scope 1: Strengthen research and implementation of research results in clinical practice

Goals for the period:	Action points
<p><b>Strengthen research and implementation of research results in clinical practice</b></p>	<ul style="list-style-type: none"> <li>● Prioritize and streamline the use of internal resources in the clinical divisions and facilitate increased external funding.</li> <li>● Stimulate continued high application activity from the divisions.</li> <li>● Strengthen the capacity for administrative research support through central overhead revenues/coverage contributions.</li> <li>● Use the recommendations from the Research Council's subject evaluation 2023-2024 to identify areas for improvement.</li> <li>● Use feedback from peers (project assessments, advisory boards, local research committees/protocol committees, etc.) actively in the divisions for discussion and learning.</li> <li>● Extensive industry collaboration - both pharmaceutical and medical technology industries - in line with the National Action Plan for Clinical Trials, including the investment in NorTrials where OUS has a significant role, as well as the Health Industry Report.</li> <li>● Strategic use of income from clinical trials and innovations for prioritized research and innovation work in the divisions.</li> <li>● Better utilize quality registries - both local and national - for research and local quality improvement.</li> </ul>
<p><b>Significant increase in clinical trials. Requirement from owner is at least 15% annual increase in ongoing clinical treatment trials that include patients, in the period 2021-2025</b></p>	<ul style="list-style-type: none"> <li>● Integrate clinical trials more closely into patient care. Allocate sufficient time and resources to increase clinical trials</li> <li>● Prioritize support functions for clinical trials to ensure feasibility (study nurses, monitoring, etc.). Implement measures identified in interim reports on clinical trials at Oslo University Hospital, including measures related to bottleneck problems in the Division of Radiology and Nuclear Medicine and the Division of Laboratory Medicine.</li> <li>● Register and increase the number of patients contributing to all types of clinical trials, for example through</li> </ul>

	structured registration and labeling in DIPS (need for functionality in Dips Arena).
<b>Extensive international cooperation, with increased approval of projects from the EU</b>	<ul style="list-style-type: none"> <li>• Participate in international research networks and increase the number of applications to the EU.</li> </ul>
<b>Support the national effort on personalized medicine through research</b>	<ul style="list-style-type: none"> <li>• Prioritize research infrastructure that supports the focus on personalized medicine, cf. process with a roadmap for research infrastructure at OUS.</li> <li>• Continue strategic research initiatives (internal allocations) where personalized medicine is central.</li> </ul>
<b>Further develop collaboration with universities through joint professional meeting places, projects, and infrastructures</b>	<ul style="list-style-type: none"> <li>• Strengthen coordination with the University of Oslo and OsloMet regarding plans for combined positions and other forms of competence development through side jobs.</li> <li>• Stimulate joint applications for advanced infrastructure from the Research Council and the EU.</li> </ul>
<b>Improve knowledge and training in research integrity, ethics, and responsibility, including strengthening our internal control and support for leaders who are responsible for their research</b>	<ul style="list-style-type: none"> <li>• Improve functionality and support for leaders in the registry tool "Medinsight OUS - overview of OUS data processing."</li> <li>• Revise guiding documents to make them shorter, better linguistically, and with less overlap.</li> <li>• Clarify the leadership responsibility for reliability, implementation, internal control, and training.</li> <li>• Regularly bring the topic to the agenda in the research committee's meetings and the Research Leaders Forum.</li> </ul>
<b>Effective and appropriate user involvement in research</b>	<ul style="list-style-type: none"> <li>• Involve users in all studies where possible and appropriate, and ensure good training and communication.</li> </ul>

## Scope 2: Strengthen infrastructure and frameworks for research

Goals for the period:	Action points
<p><b>Establish well-functioning ICT systems and digital support for research - better opportunities for data handling, data analysis and data sharing. Increased access to pseudonymized data</b></p>	<ul style="list-style-type: none"> <li>● Implement new regional ICT solutions:               <ul style="list-style-type: none"> <li>○ Forskningsportalen</li> <li>○ Electronic lab notebook</li> <li>○ Registry tool</li> </ul> </li> <li>● Facilitate the use of national/international infrastructures that enable sharing of pseudonymized data in cloud solutions within secure barriers</li> <li>● Collaborate with UiO on IT solutions for research</li> </ul>
<p><b>Satisfactory biobank infrastructure through a well-functioning Biobank Unit and sufficient storage areas for research biobanks</b></p>	<ul style="list-style-type: none"> <li>● Complete and operate storage area in Forskningsveien, Aker Hospital and Radium Hospital</li> <li>● Find replacement areas for freezers when lease agreement with Myrens Verksted/ Norwegian Institute of Public Health (NIPH) expires in 2024</li> <li>● Develop the Biobank Unit in the Division of Laboratory Medicine with centralized responsibility for biobank infrastructure</li> </ul>
<p><b>Follow up on guidelines for "Open research/Open Science"</b></p>	<ul style="list-style-type: none"> <li>● Establish routines for data sharing and reuse of generated research data that meet GDPR and FAIR principles</li> <li>● Follow requirements for open publishing, including using the new national knowledge archive when it becomes available</li> </ul>
<p><b>Strengthen investments in MTU for research</b></p>	<ul style="list-style-type: none"> <li>● Increase annual allocation to research MTU in accordance with Long-term economic plan and Action Plan for Technology and Equipment, and seek external financing for advanced scientific equipment</li> <li>● Collaborate on established and new core facilities and technology utilization, including in planning infrastructure in the Life Science Building</li> <li>● Establish a roadmap for research infrastructure, including describing what is prioritized within annual allocated MTU budgets for research purposes (cf. Action Plan for Technology and Equipment). Outline in the plan which</li> </ul>



	<p>equipment is sought to be financed through external sources.</p>
<p><b>Co-location of research institutes at Rikshospitalet and in the Life Science Building, with a view to efficiency and academic synergy</b></p>	<ul style="list-style-type: none"> <li>● Co-location at Rikshospitalet of translational research institutes: Develop and follow up on plan in accordance with conclusion from concept phase</li> <li>● Co-location between OUS Division of Laboratory Medicine and UiO in the Life Science Building</li> </ul>
<p><b>Improve conditions for career development for researchers, taking into account challenges related to temporary financing, temporary positions, and the possibility of positions that combine clinical practice and research</b></p>	<ul style="list-style-type: none"> <li>● Systematic career guidance, for example, using the tool OUS-CAM. Cf. eHandbook - OUS-CAM - tool for competence assessment and career guidance for researchers in OUS</li> <li>● Active participation in postdoctoral programs at UiO and OsloMet in collaboration with OUS</li> <li>● Develop better models related to combining clinical practice and research, especially for younger physicians who must both develop and maintain their clinical competence while also having enough time to conduct research (shared positions with sufficient time for both purposes).</li> </ul>

## Scope 3: Investing in research-based innovation and service innovation

Goals for the period:	Action points
<p><b>Increase revenue from innovation and industry collaboration for further research and innovation in the clinical divisions</b></p>	<ul style="list-style-type: none"> <li>• Strengthen collaboration between OUS, the UiO Growth House, and Inven2, using early-stage commercialization funds, to increase the number of innovations (DOFI) and commercializations from the research environments.</li> <li>• Encourage the divisions to seek external innovation funding nationally and from the EU, with support from the Innovation Unit in the Division of Technology and Innovation and Research Support in Oslo Hospital Service.</li> <li>• Clarify guidelines in collaboration with UiO to facilitate good innovation processes and strengthen industry collaboration.</li> <li>• Clarify how the divisions can better coordinate innovation activities.</li> </ul>
<p><b>Develop collaborative arenas that increase the pace of innovation in the hospital and ensure that innovative solutions are utilized</b></p>	<ul style="list-style-type: none"> <li>• By the end of 2025, Health2B will be one of the hospital's collaborative arenas for public and private collaboration, to develop useful solutions for the hospital that are commercialized and implemented.</li> <li>• Develop efficient processes for testing and implementing medical technology and e-health together with the industry.</li> <li>• Increase the number and value of contracts and agreements between OUS and the industry.</li> <li>• Discuss and evaluate how we best measure successful innovations at OUS, so that it is clear that innovation benefits patients and generates revenue for further research and innovation work.</li> </ul>
<p><b>Develop/procure and implement digital solutions and new technology in personnel-saving service innovations</b></p>	<ul style="list-style-type: none"> <li>• By the end of 2028, OUS will have implemented 3-4 technological solutions annually that shift resource usage from staffing to technology.</li> <li>• Through service innovation, make it easier for divisions to develop, establish, operate, and expand specialized health services in the home.</li> <li>• Develop and establish necessary infrastructure and support services across the divisions.</li> </ul>

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## Reference list

- Adopted strategies and action plans in Oslo University Hospital HF:  
[eHåndbok - Forskningsstrategi 2021-2025 \(ous-hf.no\)](#) and [eHåndbok - Handlingsplan forskning 2021-2023 \(ous-hf.no\)](#)  
[eHåndbok - Innovasjonsstrategi 2018-2022 \(ous-hf.no\)](#) (planned to be incorporated into a new strategy for technology and innovation)
- [Nasjonal handlingsplan for kliniske studier 2021-2025 - regjeringen.no](#)
- [Langtidsplanen for forskning og høyere utdanning 2023 – 2032 - regjeringen.no](#)
- [Strategi for personilpasset medisin - regjeringen.no](#)
- [HelseOmsorg21-strategien](#)
- Health Industry Report: [Meld. St. 18 \(2018–2019\) - regjeringen.no](#)