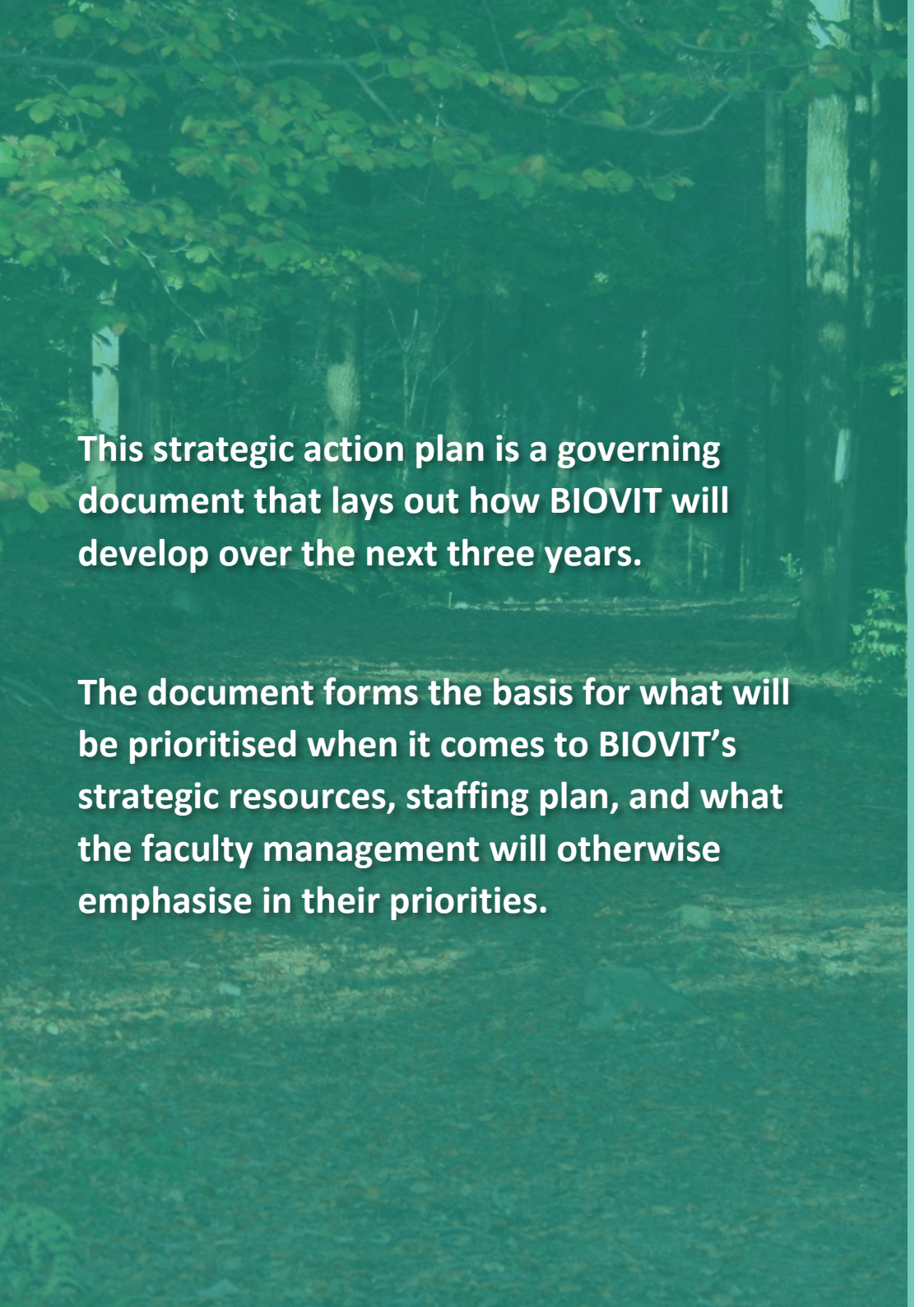




Norwegian
University of
Life Sciences

Strategic Action Plan for the Faculty of Biosciences 2023–2026



This strategic action plan is a governing document that lays out how BIOVIT will develop over the next three years.

The document forms the basis for what will be prioritised when it comes to BIOVIT's strategic resources, staffing plan, and what the faculty management will otherwise emphasise in their priorities.

Our strategic action plan is in accordance with NMBU's overall strategy and is dedicated to promoting our institution's competitiveness in terms of research funding, both nationally and internationally.

We are at the forefront of sustainable food and bioproduction, genetics and biotechnology, both on land and in water, in line with the priority areas set out by the Norwegian government.¹ The faculty has strong research groups involved in the EU initiatives 'Farm to Fork' and 'A European Green Deal'.

We are committed to continuing to develop and strengthen these groups, while integrating their expertise into our study programmes in order to provide students with an education that is relevant for the future.

This does not mean that the traditional subject disciplines are not strong, for, as Associate Professor of Philosophy at Aarhus University Hans Fink says:

'Subject disciplines are under pressure. Today's demand for limitless expertise threatens to tear down the boundaries between disciplines in order to open the door to the promised land of transdisciplinary. However, there is no shortcut behind the subjects, because even though the subject disciplines are artificial borders in a borderless, modern world, we cannot do without them.'

The faculty has responsibility for two of NMBU's sustainability arenas: Sustainable food systems and Green and smart cities. The faculty has also prioritised a special focus on sustainable aquaculture. These arenas promote both internal and external cooperation.

An important initiative for BIOVIT over the next three years is to strengthen expertise and capacity in systems thinking, transdisciplinarity, digitalisation, artificial intelligence and automation. This will enable a deeper integration of research and education at our faculty, with the aim of addressing the complex societal challenges associated with sustainable food systems. This requires wider collaboration with other faculties at NMBU and external expert environments that possess expertise that supplements our own.

¹ Long-term plan for research and higher education 2023–2032

The faculty will have strong subject disciplines with independent basic research, close cooperation with industry and the ability to address complex challenges within our academic domains.

We will recruit more students by learning from the success of the biology programme, increasing the number of students in our long-established agricultural disciplines, and by enrolling students on our new Bachelor of Aquaculture programme.

We will ensure that the faculty is an inclusive and pleasant work and study environment, while maintaining a high quality of education and research.

BIOVIT has set itself ambitious long-term goals for 2030:

- The number of students is increased by 25 per cent, including continuing education.
- The number of grant or contract activity projects is increased by 25 per cent.
- An annual result with NOK 0.5-1 million surplus, including surplus from grant and contract activity.
- The finances of leasing sites are balanced through research, teaching, regulatory innovation and a moderate level of investment. For the leasing sites, time-limited exemptions will be possible for strategic reasons.

The faculty's finances allow an annual investment budget of NOK 7–8 million for infrastructure and initiatives. The measures described in this three-year action plan will help to achieve the above objectives and develop the faculty's key areas, as described below:

Area	Description
Sustainable food systems	Promote sustainability in food and bioproduction, sustainable aquaculture and harnessing the potential of the ocean, including climate and animal friendly approaches to all production. Understand systems thinking and a holistic approach to food systems.
Basic and applied biology	Understand the basic biological needs relating to the growth, development and behaviour of plants, livestock and fish. This includes how genetic, nutritional and environmental factors affect changes in order to increase the robustness and health of plants and animals.
Digitalisation, artificial intelligence and automation	Develop and implement digital information, automation, and data-driven solutions in agricultural, aquaculture and production environments for process optimisation and decision making.
The future's feed resources	Contribute to supplying our livestock and fish with known and new, high-grade and sustainable feed resources.
Urban agriculture	Employ a multidisciplinary approach in production biology, technology, social sciences, climate and the environment, in order to develop sustainable urban food production, while also taking into account the social aspects of sustainability.
Genomics, epigenetics and biotechnology	Make use of the genome to understand biological and physiological processes, and explore the genetic and physiological potential of plants, livestock and fish. This is essential to promoting sustainable food production by improving productivity, reducing the use of resources and minimising environmental impact.

Joint research efforts

The green transition requires cooperation and convergence rather than competition. As a faculty, we must promote both academic freedom and collaboration. This involves conducting ground-breaking basic research in relevant disciplines and linking it to research that addresses specific societal challenges.

GOAL:

High-quality research that shapes sustainable food systems of the future

How to achieve these goals:

- **Develop more interdisciplinary and transdisciplinary cooperation:** Promote interdisciplinary cooperation in order to strengthen research into sustainable food and bioproduction and to make more efficient use of resources and equipment. Develop the faculty with the expertise needed to take us from sustainable food and bioproduction to sustainable food systems. The faculty management will arrange workshops in connection with any calls for proposals, where we explore areas of collaboration internally at the faculty, with other faculties at NMBU and with external stakeholders. The faculty will offer skills development and tools to enable transdisciplinary research.
- **Increased knowledge about digitalisation, artificial intelligence and automation:** In collaboration with REALTEK and other relevant technology communities, the faculty will master various aspects of digitalisation and automation that help modernise and optimise the food production industry so that it meets the future needs for sustainable, efficient and technology-driven production.

- **Be an active stakeholder in research** that finds solutions to the social mission initiated by the government of having sustainable feed production.²
- **International standard:** Maintain and improve research quality. Targeted publication in recognised journals and the development of competitive applications to ensure research at the forefront of international research.
- **Research innovation:** Increase knowledge of innovation. Contribute research that is focused on innovation in order to develop solutions that support the transition to sustainable food systems, the green transition and to meet societal needs.
- **Developing the future's top scientists in sustainable food systems:** Actively encourage young researchers to participate in research into sustainable food systems, in particular by guiding them through application processes and giving them roles in project implementation. Implement effective follow-up mechanisms to increase the speed of completing doctoral projects.
- **Cooperation with industry:** Strengthen cooperation with industry in order to develop and implement solutions that promote sustainable food and bioproduction. This includes partnerships with industry relevance for research projects and doctoral students.
- **Infrastructure for sustainability:** Ensure sufficient financial leeway to upgrade and maintain the necessary research and education infrastructure that supports sustainable food systems.

² Sustainable feed as a social mission (forskingsradet.no) (in Norwegian)

Lifelong learning

Our main objective is clear: to maintain the quality and relevance of education while increasing the number of students and the completion rate. We shall offer an education that meets the needs of future students as well as today's, and ensure that the study programmes are perceived as relevant and of high quality.

We are proud of our long-established disciplines, but we also want to be at the forefront of societal change. We will equip our students with what is required to solve the challenges faced by society today and in the future. In order to succeed, we must maintain expertise in our basic subjects, while also being open to society's changing needs, new challenges and innovative solutions.

This requires insight into technological development and a fundamental understanding of the importance of biology to our environment and our health. In addition, we want to increase the number of students, as we believe the potential for continuing education has not been reached.

We are a physical learning arena and a social community for inquisitive and societally engaged students.

GOAL:

BIOVIT will provide the high-quality, research-based teaching that society and prospective students demand

How we will achieve these goals:

- **Up-to-date study programmes:** Continuously update study programmes to include sustainability perspectives and systems thinking in study programmes and courses.

- **Academic competence:** Provide teaching staff the opportunity to maintain a high level of competence in our basic subjects and to be continuously updated on society's knowledge needs, societal challenges and innovations.
- **Engaging in working life:** Involve students in the world of work through work experience and by societal and industry stakeholders contributing to teaching and supervision.
- **Attractive portfolio:** Develop a study programme and course portfolio that appeals to students and responds to the needs of society. Review the naming and promotion of programmes in order to increase their appeal. The faculty will arrange workshops to look at how we can develop our portfolio at a faculty level.
- **Recruitment:** Systematic and targeted recruitment in collaboration with the Department of Information and our own students.
- **Student-active learning:** Promote student-active learning and collaborative assignments as part of the teaching.
- **Pedagogical development:** Develop the pedagogical skills of several lecturers by sharing experience internally and utilising the resources offered by NMBU.
- **Academic and social communities:** Create and develop academic arenas for socialising and learning, where students can learn from each other.
- **Continuing education:** Explore digital courses and study programmes for the continuing education market and gain experience with flexible study programmes and digital learning.

- **Funding models for continuing education:** Investigate possibilities in the upcoming change to the regulations relating to student fees in higher education in respect to the reuse of teaching material and payment models for continuing education.
- **Student-run innovation arenas:** Actively collaborate with different student-run innovation arenas at NMBU and ensure that our students know about and are engaged in these initiatives.





Innovation and creativity

In a world that is forever demanding new solutions, it is our task to ensure continuous renewal at our research and education institution. While we pursue our long-established disciplines with pride, we recognise the need for renewal in order to meet the challenges of the future. Our faculty is characterised by a diverse portfolio of grant or contract activity. This lays the foundation for close cooperation with a wide range of external societal and industry stakeholders. This network enables us to participate actively in the development of business and industry, and to help realise the government's goals of increased industry-oriented research, increased competitiveness and the rapid implementation of innovative solutions.

BIOVIT will continue to work with societal and industry stakeholders in order to ensure that research is taken into use. To achieve this, the faculty management and staff need to develop a culture at the faculty that encourages and supports new ideas, processes and technologies that provide society with new solutions and new job opportunities. There needs to be cooperation between different industries, business stakeholders, societal stakeholders and disciplines in order to innovate in complex areas.

BIOVIT has a huge potential to commercialise more of our results. We will increase our staff's expertise in innovation as well as opportunities for the results from research to be used in practice.

BIOVIT will be a driving force for ensuring that ideas and research results benefit society and contribute to value creation and sustainable transition.

GOAL:

BIOVIT will create new innovations for the future

How to achieve this goal:

- **Promote creativity and thinking outside the box:** Encourage innovative ideas and unconventional ways of thinking.
- **Increase innovation expertise:** Strengthen staff expertise in innovation and commercialisation using informative resources and intensive courses and workshops offered by NMBU.
- **Close cooperation with industry:** Ensure that the application of new knowledge is never far away by having close cooperation with industry in projects and teaching.
- **Develop strong business networks:** Continuously develop strong networks and cooperation with the business community in order to exchange ideas and knowledge. Offer our students innovation expertise in selected courses.
- **Plan for sustainable feed:** The management will develop a strategy and plan for how BIOVIT can meet the societal challenges relating to sustainable feed production.

Our NMBU

Our values are the cornerstone of our working environment. These values can have different meanings to different members of staff, and we value this diversity as a catalyst for development and innovation in the way we perceive and carry out our work as an organisation.

The diversity we seek is about giving equal opportunities to everyone. We are therefore continuously committed to creating a positive work environment where each member of staff is valued equally, where their potential is developed for the good of the community, and where everyone feels safe to express their opinions, make suggestions, share their expertise and ask for support.

We understand that organisational culture is an ongoing process that cannot be marked as complete during a single strategy period. Transparency and mutual respect should act as guidelines not only for individual members of staff but for structures, systems and the way we communicate – internally and externally.

We also want to build on our strength, which is the interaction and community that arises from cooperation. This will be a cornerstone in our continued development as an organisation.

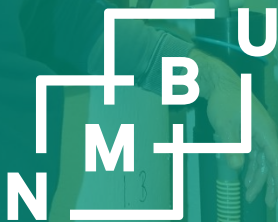
GOAL:

BIOVIT will create a sense of belonging, a good student and work environment, employee cooperation and satisfaction, and a culture of fellowship

BIOVIT will:

- **Promote fellowship and cooperation:** Create a work environment in which staff continuously develop, take responsibility, and are committed colleagues that actively and enthusiastically contribute to achieving the faculty's goals.

- **Display our knowledge:** Ensure that our knowledge is on display and accessible to society, the business community and the public administration.
- **Increase expertise in sustainability and innovation:** Enable members of staff to increase their expertise in sustainability and innovation.
- **Reduce our climate footprint:** Help to reduce our climate footprint by promoting awareness about modes of transport, optimising the use of buildings and space, and being conscious of resources.
- **Ensure efficient use of resources:** Ensure the efficient use of resources and financial control by using performance management and strategic staffing plans.
- **Promote cooperation and interdisciplinarity:** Promote cooperation and interdisciplinarity between the faculty's departments and academic communities in order to achieve common goals.
- **Streamline administration:** Have an administration that works to simplify and streamline processes, develops useful tools and provides easily accessible information.
- **Management-ready administration:** Practise good administrative management by clarifying, communicating and following up goal and performance expectations with staff.
- **Foster closer cooperation between the administration and research/education:** Work towards an even closer cooperation between the administration, researchers and teaching staff in order to form closer ties and strengthen interaction between administrative and academic staff.



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