

STRATEGY 2018–2025

# SCIENCE IN THE CENTRE

NTNU University Museum

Approved by the Museum's Board on 25.06.2018

## Guide to readers

For the consultative process: This is an adjustment of the strategic plan in effect, not a new strategy.

The adjustments have been made in form, not in content, to improve consistency with NTNU's structure. NTNU's strategy 2018-2025 "Knowledge for a Better World" is the overarching framework for the NTNU University Museum's strategy.

The strategy consists of three parts.

Part 1 describes our vision, values, mission, key challenges and main objectives.

NTNU's vision and values are identical to those of the Museum.

Part 2 deals with the core tasks of the NTNU University Museum. These concern the science collections, the education and learning environment, research, dissemination and outreach.

Part 3 addresses themes that cut across core tasks. These are the work environment and capacity for development, sustainability, campus development, digitalization, innovation, and our role in the region. These are in alphabetical order.

Parts 2 and 3 describe the strategies themselves. They describe the preferred state for the NTNU University Museum at the end of the strategy period. In addition, they specify development goals of particular importance for the museum in each area.

The strategies and related development goals are intended to help realize the museum's main objectives as they are described in the chapter "Main objectives – NTNU University Museum 2025". A revision of the strategy is planned in 2021. Three-year action plans based on the strategy will be prepared. The NTNU University Museum places science at the centre. Our special strengths are the sources of knowledge that the science collections represent, our interdisciplinary competence, our central location and our long tradition of knowledge. We will build on these benefits to help to achieve our vision of "Knowledge for a Better World".

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OUR VISION

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# 01



# OUR VISION: KNOWLEDGE FOR A BETTER WORLD

Knowledge provides people with opportunities and influence, as well as a foundation for making wise choices. Knowledge inspires and challenges. It changes attitudes, mindsets, and how we perceive the world around us. Informed debate strengthens our democracy. NTNU's activities should benefit society as a whole and society can trust that our findings comply with best scientific practice.

Knowledge and technology development create opportunities for increasing sustainable value creation and finding answers to major challenges. Through the United Nations, the world has agreed on 17 Sustainable Development Goals. NTNU will contribute actively towards achieving the Sustainable Development Goals.

NTNU's strength is our competence in science and technology combined with academic breadth and interdisciplinarity.

# OUR VALUES

The NTNU University Museum is a member of the International Council of Museums (ICOM). We have thus adopted the ICOM code of ethics shared by the international museum community. The code of ethics sets standards for museums and the professional practice and conduct of their staff.

NTNU's values serve as a guide for all staff and students, and our behaviour reflects these values. Our work is founded on four values: to be creative, critical, constructive and respectful.

■	CREATIVE	Academic freedom is the basis for our activities. We take on challenging questions and tasks, and seek innovative solutions based on our academic breadth. NTNU supports the development of disciplines, people and cultures. We value and encourage innovation among students and staff as well as innovative teaching, research and artistic activities.
■	CRITICAL	Our activities build on fundamental democratic values and we represent an unprejudiced and independent voice. Hallmarks of our academic culture are debate, critical reflection, fact-based knowledge, impartiality and high ethical awareness. We challenge conventional ideas and solutions.
■	CONSTRUCTIVE	We engage in an open and solution-oriented dialogue with the outside world and emphasize both external and internal collaboration. We take social responsibility and we influence, correct and develop each other and our environment through dialogue and dissemination of knowledge. NTNU places emphasis on co-determination and active involvement by students and employees.
■	RESPECTFUL	Every employee and student has a responsibility to contribute to a work and study environment characterized by respect and consideration. We facilitate personal growth and development of skills. We contribute to diversity and equal opportunity in society and in our own activities. We promote equality and tolerance. At NTNU, we show respect for varying attitudes and opinions.

# OUR MISSION

The NTNU University Museum develops and shares knowledge about nature, culture and science as a basis for sustainable societal development. The Museum protects and manages its science collections and uses them actively through research, public outreach and education.

## Our general mission

Act relating to Universities and University Colleges (universitets- og høyskoleloven):

Section 1-4. Special responsibilities of individual institutions

[2] The University of Bergen, the University of Oslo, UiT The Arctic University of Norway, the Norwegian University of Science and Technology and the University of Stavanger have a special national responsibility for building up, managing and maintaining museums with scientific collections and public exhibitions.

NTNU's mission (excerpt from strategy 2018-2025):

*"We also have a leading university museum with unique scientific collections and public exhibitions."*

One of the university's responsibilities, and thus one of ours, is to participate in a knowledge-based public debate. We use our knowledge to benefit society. We are committed to solving global challenges and to fulfilling the UN's Sustainable Development Goals.

## Our specific mission

The NTNU University Museum is one of Norway's leading institutions in protection, preservation, accessibility and research concerning natural and cultural collections. The Museum offers professionally oriented education in archaeology, and as a regional museum we have heritage management responsibilities under the Cultural Heritage Act.

This involves archaeological surveys at sea and on land in our management area, as well as responsibility for conservation of objects governed by the Act.

The Museum benefits from being part of a university with expertise in science and technology and from being a university museum. This ensures integration between research, management, dissemination and outreach.

The Museum is NTNU's central showcase at the heart of Trondheim, and the University has given us a special responsibility for public outreach. The Museum contributes to this with our natural and cultural history profile, and with our strong commitment to interdisciplinary perspectives and cooperation.

# CHALLENGES IN 2018

We have identified four challenges that will be important for the Museum in the strategy period until 2025: The challenging storage situation, more intense competition, expectations of greater interaction with the community, and building a stronger culture of change.

## Challenging storage situation

For several years, the Museum has faced challenges in both the capacity and quality of its storage facilities for the science collections.

The Government has decided that improvements must take place through NTNU's campus project. In the short term, the challenge for NTNU and the Museum is to meet the legal requirements for prudent management of the science collections in an extremely challenging storage situation. In the longer term, the challenge for NTNU and the Museum is to establish adequate storage facilities that also improve access for the public and researchers

## More intense competition

The Museum will experience more intense competition ahead, in both recruitment and funding. Our competition will also become increasingly international. The Museum must develop outstanding research environments in the areas where we have expertise and special qualifications. The Museum as a whole will face a financial situation characterized by increased competition for resources and expertise internally and externally, and by greater demands for external funding.

## Expectations of strengthened interaction with society

For generations, the Museum has been an important knowledge provider for local and regional administration, and thus a policy contributor for sustainable social development. The Museum also has a significant role in outreach, as one of Norway's most visited museums. There are high expectations for visibility of the Museum's employees and collections throughout central Norway as well as in Trondheim. We also experience increased societal expectations that researchers will participate in public debate.

## Building a stronger culture of change

We will need to make a commitment to asserting ourselves in the competition for the best people and the best partners. We must continue to develop and professionalize our activities further, with a more targeted focus on expertise that can secure international research funding for us. The Museum must meet the expectations of a creative working environment for challenges that inspire development in our disciplines, making it an attractive workplace for all our employee groups.

# MAIN OBJECTIVES

## THE NTNU UNIVERSITY MUSEUM 2025

In 2025, we are an internationally recognized university museum, because we have taken advantage of the opportunities available to us as part of a university with technological communities at the global forefront. We are part of Norway's largest university, we are NTNU's vanguard in dissemination and outreach, and we have a national responsibility as a regional museum.

In 2025, the Museum has realized new exhibition areas and solved the storage challenges for our science collections. This has changed our position, increasing our potential for attracting both the public and researchers who want to collaborate with us. We are a national leader in digital sharing and a preferred showcase for international travelling exhibitions. We have strengthened Kalvskinnet as a hub of knowledge and culture in Trondheim, and we are a central meeting place between NTNU and the city.

The Museum's science collections are the core of our activities. In 2025 we have strengthened the collections for active use as an important knowledge base and research infrastructure. We have ensured that they are preserved and developed for the future, and we have made the rest of NTNU aware of the potential of our collections.

The NTNU University Museum has interdisciplinary expertise with a focus on natural and cultural history. We are an attractive research partner and active producer of knowledge at a high international level for a sustainable natural and cultural environment. In 2025, we have achieved our most ambitious goal, which is that both our departments have academic groups proven to be at a high international level in at least one of their core areas.

We are a national leader in archaeological surveys, and an attractive partner for cultural heritage management.

Students experience the education we offer as having a focus on practice, with opportunities for professional and social development, fieldwork and participation in research groups and heritage management projects. Employers know that the quality of our graduates is high, and students know that they will gain an academic and practical background that benefits them.

The Museum has a special responsibility for public outreach at NTNU. We achieve this through physical and digital meeting places between the public and researchers from the entire university. We have an active presence in central Norway, and a key position in communicating knowledge to the public. We realize NTNU's ambition to spark interest and understanding of science and innovation among children and young people.

We are active and clear in public debate and we are regarded as relevant. Based on expertise in our disciplines, we both launch and participate in relevant debates, especially within the management of our cultural heritage, natural resources, and the environment. We have a strategic and systematic approach to communication.

We have high ambitions for quality, and we invest in skills development and shared social experiences with positive impact. The Museum has highly qualified staff members within many specialized functions, and we are attractive to researchers in the international forefront. We have an individual career plan for each employee. Interdisciplinarity and cooperation are hallmarks of our activities.

An innovative mindset characterizes the entire organization. We have a culture of creating and a common expectation that we will develop and share new methods and solutions.

Sustainability forms the basis of all the museum's activities. We develop knowledge for a better world, and for achievement of the UN's Sustainable Development Goals.

## CORE TASKS

OUR SCIENCE COLLECTIONS

OUR RESEARCH

OUR DISSEMINATION AND OUTREACH

OUR EDUCATION AND LEARNING ENVIRONMENT

# 02



# OUR SCIENCE COLLECTIONS

## THE FOUR PILLARS OF OUR COLLECTION STRATEGY ARE:

Our collections are built up around the academic activity at the Museum, ensuring their **relevance** for research.

**Sustainable** collection, documentation and conservation ensure quality development of the collections.

The **usefulness** of the collections is increased through adaptation to the needs of the discipline, documentation and digital sharing.

The **ICOM code of ethics** sets the standard for collection management.

## DEVELOPMENT GOALS

### The NTNU University Museum will:

Implement and adopt a **collection plan** as a basis for professional priorities.

Develop an **effective infrastructure** for the collections where premises, information systems, skills and work processes are modern and well integrated.

Create a basis for more **collection-based research initiatives**.

Develop a proactive policy for **providing access to and sharing** collections and data.

The Museum's science collections are dynamic collections of high quality. They are centred on the cultural and natural history activities at the museum and they are our most important research infrastructure. The collections are actively used in research, management, education and public exhibitions, because they are protected and accessible in well-functioning storage facilities of high quality.

The collections are systematically developed to realize national and international research ambitions. Digital access makes the collections and associated data available for research, management and the public.

The collections are managed, safeguarded and preserved in accordance with ICOM's Code of Ethics. Management of the collections is strengthened through interdisciplinary and national cooperation.

The scientific quality of the living collections in Ringve Botanical Gardens is high, and the collections are included in projects in research, management, education and public activities.



# OUR RESEARCH

## THE FOUR PILLARS OF OUR RESEARCH STRATEGY ARE:

Development of talented researchers and **excellent research environments**.

**Quality improvement** throughout our organization

Research based on **science collections**, data series and cultural heritage material.

Research within and **across** disciplines.

## DEVELOPMENT GOALS

**The NTNU University Museum will:**

Strengthen research groups and recruit talents who can **make their mark internationally**.

Increase international collaboration and successful applications for **research funding**.

**Use research-related** problem formulations as the basis for archaeological surveys, and actively use results from our cultural heritage and other management activities, collection material and data series in research.

Raise the quality of academic publications and promote **open access** to both the publications and the research data.

Take an active role in NTNU's **strategic areas**.

The Museum is an attractive research partner and active producer of knowledge at a high international level for a sustainable natural and cultural environment. Our research activity is organized in groups and is project-oriented.

The Museum conducts research in:

- taxonomy, systematic and evolutionary history
- ecological processes and species distribution
- interactions between humans and nature
- material culture and forms of culture in a long-term perspective
- archaeology and advanced technology
- dating methods and development of chronologies.

We are a key national actor as a producer of knowledge and data for Norwegian environmental stewardship and we work actively to increase external research funding. We are innovative and a leader in the digital sharing of knowledge. The Museum is at the forefront of open access publishing and contributes to ensuring that knowledge can be shared without cost to users.



# OUR DISSEMINATION AND OUTREACH

## THE THREE PILLARS OF OUR DISSEMINATION AND OUTREACH STRATEGY ARE:

Communication and outreach to share knowledge with the **public**.

Dissemination of results from research and artistic development to the **research community** and to students.

**User-oriented** dissemination of research for specified groups, such as environmental and cultural heritage management.

## DEVELOPMENT GOALS

### The NTNU University Museum will:

Work for the realization of new **exhibition spaces** and ensure renewal of the permanent exhibitions.

Develop a **medieval museum**

Develop the Museum's role in **public outreach for NTNU**

Help to increase the capacity of **teaching and learning activities** and strengthen collaboration with the teacher education programme

Establish a strategic focus on digital sharing and increase our participation in **public debate**



NTNU's communication and outreach spark interest and understanding of science and innovation among children and young people. The Museum plays a key role in this through our experience-based outreach. Kalvskinnet is a vibrant hub, with a view towards the realization of new exhibition spaces. We develop arenas where the public, especially children and families, encounter science and technology in a socially engaging and innovative way.

Our exhibition activities are based on a clear long-term plan, where the audiences, profile and financing are clearly described. The Museum's permanent exhibitions are renewed and developed. All school students in the county of Trøndelag experience the Museum's educational programmes over the course of their primary and lower secondary schooling, either as a visitor to the Museum in Trondheim or the botanical gardens or at local events.

Our academic staff are actively involved in events intended for the public.

The Museum is a leading and innovative national environment for digital knowledge sharing. We share both results and the processes behind our research and collection activities. We play a clear role and we are relevant in public debate, both by influencing the agenda and by purposefully showcasing our skills and expertise.



# OUR EDUCATION AND LEARNING ENVIRONMENT

## THE THREE PILLARS OF OUR EDUCATION STRATEGY ARE:

Education of **outstanding graduates** for tasks in research, management and museology.

### Quality of education.

Development of an excellent and **practice-oriented learning environment**.

## DEVELOPMENT GOALS

### The NTNU University Museum will:

Contribute with education and supervision based on **the active expert communities at the Museum**.

Facilitate **international student mobility** and be an attractive host institution

Provide innovative and **practice-oriented learning environments**.

Educate **sought-after graduates** who have the knowledge needed to solve future societal challenges.



The Museum offers attractive study programmes in which teaching and supervision are based on the Museum's research skills, infrastructure and areas of activity.

Supervision at master's and PhD levels is linked with the Museum's active research groups. We contribute actively to national and international research schools.

The museum has close links with the community. Through our statutory duties, we have close contact with the public sector, the business community and the public. Students play an active role in this during their studies.

The Museum's learning environment is in the national forefront, where students are trained with direct use of the storage facilities, collections and exhibitions. Field courses and advanced technology are an essential and integral part of the study programmes.

## INTERDISCIPLINARY PRIORITY AREAS

WORK ENVIRONMENT AND CAPACITY FOR DEVELOPMENT

SUSTAINABILITY

CAMPUS DEVELOPMENT

DIGITALIZATION

INNOVATION AND CREATIVITY

REGIONAL ROLE

# 03



# WORK ENVIRONMENT AND CAPACITY FOR DEVELOPMENT

The Museum is an attractive and professionally challenging workplace. We have the skills, finances and infrastructure that enable us to run and develop a modern museum institution. We have a high level of professional credibility and can adapt to society's changes, needs and expectations. Our leaders develop the organization and staff through professional governance and effective engagement. Together, we create results through positive teamwork. We all take responsibility for health, safety, and the environment. Through proper recruitment and good career and leadership development, we build an organization that effectively supports our academic activities.

## DEVELOPMENT GOALS

### The NTNU University Museum will:

Show **willingness to adapt** in response to new regulatory frameworks and expectations from society.

Emphasize and work towards **diversity and gender balance** among students and staff.

Recruit managers and employees with **appropriate skills**, and ensure that they all have personal career plans.

Have resource management that contributes to increased professional activity and **creates room for manoeuvre** in terms of strategic priorities and renewal.

Launch **digitalization initiatives** and improvements that support integrated, standardized procedures and work processes.

# SUSTAINABILITY

In 2025, the Museum has contributed to keeping the UN's Sustainable Development Goals well on the way to fulfilment by 2030. We contribute through research, education, dissemination and public administration as well as through effective management.

We produce knowledge important for achieving the Sustainable Development Goals and we have implemented sustainability ambitions in our day-to-day operations and activities.

Nature itself can help to supply sustainable solutions based on natural ecosystems and the services they provide. Based on the knowledge of the Museum's researchers about nature, culture and the interaction between them, we will help to identify and develop such opportunities.

## DEVELOPMENT GOALS

### The NTNU University Museum will:

Continue to develop our leading research and dissemination related to **species, habitat types and cultural environments** that influence and are influenced by anthropogenic factors.

Develop **outreach activities** around sustainability issues.

Implement good alternative meeting facilities and **sustainable workflows** with the help of digital solutions.

Assess **environmental certification** of our areas of activity.

## CAMPUS DEVELOPMENT

Kalvskinnet is one of the most central areas in NTNU's Trondheim Campus. New buildings and a large increase in student numbers have revitalized the district. The schools at Kalvskinnet also bring youthful energy to the area.

The Forskningstorget science fair has made its mark as an outdoor festival at Kalvskinnet, and draws a large number of visitors in the years it is organized. This helps to strengthen the area's status as a hub of public outreach in Trondheim.

The rich heritage of former social institutions and museums in central Trondheim in general, and Kalvskinnet in particular, helps to create an evocative setting for historical storytelling in time and space. The tradition of knowledge that led to NTNU has strong roots in this area, providing a basis for telling the story of the university and the city.

### DEVELOPMENT GOALS

**The NTNU University Museum will:**

Be a **window into NTNU** at the centre of Trondheim and a meeting place for students, researchers and the public.

Ensure **modern storage facilities**.

Develop exciting content in **newly built exhibition areas**.

Contribute to **One Unified NTNU**.

## DIGITALIZATION

The Museum sees digitization in a broad perspective. For us, digitalization means platforms for sharing and communication, sharing of data flows and adaptation of scientific information, work processes that can contribute to faster results, as well as communication and presentation opportunities. We emphasize best practice and universal design.

We are a national leader in digital sharing and share large volumes of data in international networks. We transform the potential of citizen science into reality.

The technical infrastructure supporting our collection activities, in terms of both collection data and photos, has been modernized and plays a key role in achievement of our goals. We want interaction with the public, users and the research community. The Museum is developing a competence cluster for its digital initiatives. This is a hub of relevant knowledge, which ensures both continuity and progress in development and improvement projects.

### DEVELOPMENT GOALS

**The NTNU University Museum will:**

Develop a **common platform** for data made available from the science collections, and raise awareness of our data sets through clearly structured presentation.

Establish a well-functioning **organizational structure and workflow** conducive to digital thinking and make the development of digital solutions a self-evident commitment throughout the organization.

Improve the **technical infrastructure for collection activities**, including automation of processes.

Make use of innovative and engaging **digital dissemination methods**.

## INNOVATION AND CREATIVITY

The Museum has increased awareness about the scope of our innovative activities. We have built on our culture of sharing and cooperation, and we facilitate open innovation. We recognize valuable suggestions and comments, and we highlight good ideas.

We use our natural collections as an infrastructure that helps to solve socially relevant issues. We are early adopters of new technology and new solutions in our activities. We are Norway's only museum with laboratories, research expertise, age determination facilities and collection material in the same organization.

The Museum is an active team player with NTNU's technology communities. Through our environmental and heritage management activities as well as contract research, we have special potential for further development of methods and knowledge. We contribute to the development of new technology through direct application and testing in our research. We also work together with experts in technology to develop innovative experiences in dissemination and outreach.

In cooperation with the teacher education programmes, among others, we develop exciting approaches to learning and teaching, which are used in the exhibitions, the botanical gardens and local arrangements. We are a living laboratory for practice-oriented education in teaching methods, and we are an active participant in the Trondheim University Municipality project (Universitetskommunen).

### DEVELOPMENT GOALS

#### The NTNU University Museum will:

Support a culture of **employee-driven innovation** throughout the organization

**Showcase the potential** for innovation based on the **science collections**

Create innovative **outreach experiences in urban space**

Develop alternative **teaching methods** and arenas

## REGIONAL ROLE

As a designated management museum for archaeology, the NTNU University Museum is responsible for cultural heritage management between Romsdalsfjorden in the south and Saltfjellet in the north. This involves archaeological surveys, preservation and storage of objects, as well as research and dissemination of archaeological finds. We have extensive loan activities, in which other institutions exhibit objects from our collections.

The Museum conducts contract and collaborative research in natural resource management, is an important policy contributor, and uses our expertise to contribute to sustainable solutions.

The master plans for the three counties that we serve as a regional museum are all about quality of life, creating value, skills, adaptation, integration – the desire to live in a geographical community. Here, the Museum contributes as a knowledge provider, a partner with the working world, and an actor in dissemination and outreach. In particular, we want to develop good historical narratives that contribute to local identity, and that visitors also find interesting.

## DEVELOPMENT GOALS

### The NTNU University Museum will:

Be a **museum institution with a clear profile** in our region

Contribute to **sustainable regional management of cultural and natural heritage**

Strengthen the commitment to **experience-based tourism** based on our collections and knowledge

# FROM VISION TO REALITY

## 2018–2025

The Museum's strategies are realized through an action plan with a three-year perspective. This will include specific initiatives and policies that apply across our organization. In addition, action plans and more detailed plans will be available for several areas within the core activities and areas of focus both for the whole museum and at the department / section level.