

Strategy 2026-2035

The Department of Information Security and Communication Technology

Version	Major updates	date
Version 1	Finalized the first version	28.11.2025

Preface

The strategy for the Department of Information Security and Communication Technology (IIK) at NTNU for the period 2026–2035 builds on the department’s strong academic foundation and its ambition to remain a national leader in Information Security and Communication Technology and recognizes the rapidly evolving technological landscape and changing societal demands and needs. Further, the strategy aims at meeting the challenges that the department faces related to workforce structure and capacity, research performance and quality, the number of PhD candidates, diversity, equity & inclusion, as well as culture and organizational development. The strategy concretizes and operationalizes the goals of NTNU’s and the Faculty of Information Technology and Electrical Engineering’s (IE) overarching strategies and clarifies IIK’s role as a key contributor in collaboration with other units at NTNU.

Through five core areas – education and learning environment, research and PhD education, innovation and entrepreneurship, dissemination and communication, and organizational management and work environment – the strategy outlines development goals and prioritized actions to ensure the department’s academic and societal relevance in the years ahead, as well as a set of metrics to help measuring the performance in each core area. The ambition of the department is to increase the performance in each of the items defined in the metrics.

The goal for the Department for 2035

IIK 2035 is an overall picture of where IIK wants to be at the end of the strategy period. By 2035, IIK:

- Should strengthen our research excellence and be world-recognised in our key strategic research areas as well as have at least one national research center. Should strengthen our innovation and dissemination activities nationally and be involved in at least 5 spin-off companies
- Continues to be the preferred national provider of graduates in Information Security and Communication Technology
- Should be the major provider of competences in these areas within NTNU
- Should be an attractive place to work and have a better gender balance at all levels

Education and learning environment

Developmental

1. Continues to be the preferred national provider of graduates at all levels in Information Security and Communication Technology
2. Should be the major provider of competence in Information Security and Communication Technology within NTNU
3. Provide fundamental and high-quality education within information security and communication technology relevant to all parts of society
4. Ensure sustainable education
5. Should aim to improve the gender balance among students

How we will prioritize to achieve the goals

1. Implement FTS principles in our education.
2. Strengthen the alignment of education and research; and anticipate and adapt to future societal needs.
3. Strengthen collaboration with society on our study programs
4. Strengthen internationalization of some of our study programs
5. Develop a structured offering for life-long learning and continuous education
6. Ensure sufficient and more gender-balanced number of students and faculty members and sufficient infrastructure and lab support
7. Strengthen inclusion and retention of underrepresented gender

Metrics

- Number of first-priority applicants and number of seats filled
- Throughput
- Long-term student satisfaction
- Number of incoming and outgoing exchange students

Research and PhD education

Developmental

1. We shall be nationally leading and internationally recognised in both Information Security and Communication Technology
2. Produce leading research results in our core areas and conduct collaborative research enabling other disciplines
3. Develop excellent long-term collaboration with key partners and actors internally in NTNU, nationally, and internationally
4. Educate PhD candidates that are aware and part of the forefront of their research community

How we will prioritize to achieve the goals

1. Prioritize the following strategic research areas for initiatives and possible growth:
(a) AI and Information Security: Use AI to mitigate threats and build trustworthy and resilient digital and AI infrastructure supporting secure and safe society and digital sovereignty. (b) Communication technology: secure, autonomous, dependable, trustworthy, self-driven, and sustainable networks and services
2. Conduct a blend of fundamental and applied research in our core areas of research
3. Strengthen and develop leading research groups in our strategic research areas that span the spectrum of information security and communication technology that also develop the careers of junior staff and train excellent Ph.D. students
4. Strengthen international collaboration through staff and student exchanges
5. Enhance visibility of research profile for excellent key partners globally
6. Strengthen collaboration with key entities from the public sector and critical national players in the industry
7. Strengthen collaboration within NTNU and the institute sector on communication and computing infrastructure systems and AI
8. Encourage Ph.D. candidates to participate in networks of supervisors and to establish their own networks as part of an explicit mentoring programme

Metrics

- Publication quality (ICORE rankings, best paper awards, citations etc.)
- Mobility of staff and students/researchers
- Co-ordination and participation particularly in competitive grant schemes (*SFF, SFI, ERC Consolidator Grants*)
- Organisation of recognised conferences and seminars
- Peer review activities (journals, conferences, research funding bodies)
- Editorships
- Number and importance of impact cases

Innovation and Value Creation

Developmental

1. Develop a high-level active engagement and meeting arenas with partners in a way that creates value for the partners and society

2. Engage with and contribute research-based knowledge to policy makers and regulators at regional, national, and European levels
3. Increase commercialization activities of the department
4. Increase societal impact of the activities of the department
5. Improve the overall Information Security posture and communication technology resilience and efficiency in Norway
6. Increase open-source contributions and impact from the activities of the department

How we will prioritize to achieve the goals

1. Strengthen the role of our centers (like CCIS) and NCR in engaging actively with partners
2. Strengthen the role of our centers to boost innovation and commercialization
3. Strengthen the collaboration and involvement with TTO and innovation ecosystem regionally and nationally, for example, Innlandet Science Park, Vaagard, and Cyber City
4. Develop nationally relevant labs of IIK, such as the Norwegian Cyber Range (NCR) and 5G-lab, with the goal to increase the volume and the scope of the Information Security posture and communication technology resilience and efficiency exercises in Norway
5. Encourage staff and students to actively and consciously get involved in the open-source community
6. Educating students and staff members on entrepreneurship skills and commercialization of research results

Metric

- Number of partners and societal actors who approach us to collaborate
- Number of student/staff innovations
- Number of DOFI applications
- Number of spin-offs (increase by 50% to the current strategy period)
- Number of open-source contributions (increase by 50% to the current strategy period)
- Number of exercises towards societal actors.

Dissemination and communication

Developmental

1. Make our research results more visible to the academic community and broader society
2. Increase societal awareness and critical thinking within the areas of IIKs expertise
3. Develop IIKs organizational structure, processes and mandates for dissemination activities
4. Develop culture for dissemination and research communication in the IIK
5. Strengthen and develop dissemination and communication arenas regionally, nationally, and internationally within own areas of expertise

How we will prioritize to achieve the goals

1. Improve the dissemination of our research results to high impact venues
2. Develop and increase and active role in the research community (journal editorial board, conference / workshop organization, technical committees of related international organizations like IEEE, ACM and IFIP, etc.)
3. Improve the visibility of IIKs research and innovation in IIKs websites and newsletters and in NTNUs generic websites and other communication channels.
4. Improve the visibility of IIKs research and innovation through more targeted contributions in national media, radio and TV channels, etc..
5. Measure and increase the number of knowledge input in key societal decision makers, such as white papers, media engagement and inputs in the public debate, regional strategies, company strategies, regulatory policy documents, etc.
6. Map and prioritise dissemination and communication arenas within our area of expertise
7. Develop an organizational structure, mandate, and plan for communication and dissemination in alignment with NTNU's overall plan and structure
8. Increase dissemination culture, staff awareness and knowledge about how to engage with and timely contribute to media requests through meetings and courses (f.ex. basic understanding media communication) for the entire IIK
9. Develop and maintain dissemination and communication arenas for timely discussion of broader digital security and communication policy issues with key stakeholders
10. Strengthen and develop specific dissemination and communication action plans at campus Gjøvik and Ålesund within the areas of expertise of the IIK

Metrics

- Number of Engagement in professional organizations.
- Number of Media presence with participation from staff
- Number of Media enquiries
- Number of Presence in the national political and decision-making arena
- Number of Impact cases at the national level

Corporate governance and working environment

Developmental

1. Continue developing IIK to be an attractive hub for learning and research in a positive collaborative, inclusive and respectful work environment
2. Develop transparent, reproducible, and open administrative processes and governance.
3. Ensure robust staff development aligned with the strategic staff planning
4. Continue developing and transmitting a culture focusing on NTNU's values (creative, critical, constructive, and respectful) with a transparent leadership model and participatory governance
5. Continue strengthening the learning environment for students
6. Should aim to improve the gender balance among staff members
7. Continue improving cross-campus collaboration for teaching, research and administration.
8. Continue strategic development of lab infrastructure for teaching and research

How we will prioritize to achieve the goals

1. Provide opportunities for students to engage with potential employers in the industry and public sector
2. Build a collaborative culture by treating everyone equally and respectfully
3. Increase attractiveness for inbound and outbound students
4. Develop understanding and improve teaching for campus, off-campus and EVU based on different student groups' needs
5. Analyse the challenges, needs and opportunities at different campuses: Trondheim, Ålesund and Gjøvik, and develop action plans accordingly
6. Provide necessary training for staff, like onboarding and mentoring programs.
7. Facilitate cross-campus interaction
8. Develop working spaces at all campuses so that the department has an integrated environment accommodating academic staff, researchers, and doctoral students in close proximity
9. We will aim to incentivise excellence through award and recognition schemes

Metrics

- ARK
- The Student Barometer
- Staff turnover
- Staff presence on campus
- Attractiveness for leader development
- Number of cross campus activities, such as trips, projects, courses, etc
- Attractiveness of IIK positions (real applicants)