

ELLIIT

Excellence Center at Linköping - Lund in Information Technology

Strategic Plan 2026-2030



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in Information Technology

ELLIIT: A LEADING INTERNATIONAL ENVIRONMENT FOR FUNDAMENTAL AND APPLIED RESEARCH IN IT AND MOBILE COMMUNICATIONS

ELLIIT is one of Sweden's two government-funded strategic research environments in information technology and mobile communications. It has been funded by the Swedish government since 2010, and was expanded significantly in 2020 to meet the needs of technology development and a skilled workforce for the digital transformation of society. ELLIIT's partners are Linköping University (LiU), Lund University (LU), Blekinge Institute of Technology (BTH) and Halmstad University (HH), with LiU as the coordinating partner.

Vision of ELLIIT

Our vision is to be a world-leading research environment that advances understanding, creates knowledge, and builds competence in information technology and mobile communications to enable innovations that address emerging societal and technological needs.

Mission of ELLIIT

Our mission is to enable ground-breaking research by bringing excellent researchers and students together in a creative research and learning environment, supporting both fundamental and applied research in the broad field of information and communication technology.

Culture and Values

We strive for

- scientific excellence by publishing in leading international journals and conferences.
- excellence in education, delivering high-quality courses and driving the development of new educational programs. ELLIIT recruited faculty and project leaders teach at all levels, and drive course and curriculum development.
- dissemination of knowledge beyond traditional academic publication channels. This includes technology talks, blogs, podcasts, media appearances, and other forms of public outreach.
- visibility, nationally and internationally.
- industrial and societal relevance.
- cooperation across traditional disciplines.
- being an active and attractive partner in international collaborations such as Horizon Europe projects.

ELLIIT creates impact

- on *academia*, through publications, talks, academic service, and courses;
- on *industry*, by educating the next generation of researchers and engineers, and commercializing research results;
- on *society*, by generating and disseminating knowledge, and educating engineers who make use of their knowledge to design, develop and deploy new products and services.

Operational Principles

- **Regular Evaluation**. To assess our position in relation to the forefront of international research, we regularly seek advice from international experts, for example, through the appointment of scientific advisory committees or reviewers. To assess our impact with respect to innovation and societal challenges, we document impact stories, for example, *ELLIIT – Strategic Research for Society and Industry* (2021).
- **Cross-Fertilization**. Collaboration across disciplines, institutions, and research areas, combined with a diversity of funding instruments and an open collaborative culture, promotes cross-fertilization and research renewal.
- **Research Renewal**. The ELLIIT management continuously works to identify trends and challenges that guide our long-term strategic development work. The work is summarized in our publications *ELLIIT 2030 Technology Foresight* (2021), and *ELLIIT Technology Foresight, 2023 Companion* (2023).
- **Ph.D. Projects**. To promote research renewal and build competence, we regularly issue open, competitive calls for new Ph.D. projects, which are supported for five years. Ph.D. projects should account for 30–50% of ELLIIT's total budget.
- **Recruited Faculty**. To further promote research renewal and research excellence, we support the recruitment of highly skilled, internationally leading researchers to full-time permanent faculty positions at the partner universities. Recruited faculty should account for 30–50% of ELLIIT's total budget.
- **Infrastructure**. To promote a creative research and learning environment at the forefront of research, ELLIIT supports research infrastructure to facilitate experimental research, to enable cross-fertilization within the environment, and to increase cooperation with industry.
- **Focus Periods**. To promote research renewal and excellence, ELLIIT supports five-week focus periods that bring together international scholars and students to exchange knowledge and collaborate intensively on a common research topic.
- **Leadership Development**. To train a new generation of research leaders, ELLIIT offers leadership roles at all levels, for example through ELLIIT's program group, workshop chairs, focus period organization, and research project leadership.
- **Diversity**. ELLIIT recognizes the importance of improving diversity and gender balance within STEM research and education at all levels. To promote a creative research and learning environment, ELLIIT supports a dedicated diversity program using role models and other activities to inspire young researchers from underrepresented groups.
- **Industrial and Societal Relevance**. We actively address emerging technological, industrial, and societal requirements for ICT systems. To ensure industrial and societal relevance, we engage with major industrial actors, authorities, public bodies, and regional companies, for example through:
    - *The Industrial Advisory Board*. This board consists of representatives from industry partners with strong relevance for the ELLIIT environment. Their roles are to provide advice to ELLIIT management, facilitate technology transfer, promote academia-industry mobility, identify broader industrial challenges relevant to ELLIIT's research, increase awareness of ELLIIT within industry, and facilitate new joint university-industry projects (for example, within Vinnova and EU).
    - *The Industry Forum*. This forum is an informal association, open to everyone in the Swedish business community who is interested in ELLIIT's activities. Activities include industry forum breakfasts to enable new contacts between ELLIIT researchers and companies, especially SMEs. Some focus is on companies located in geographic proximity to the four ELLIIT partner universities.
- **Visibility.** ELLIIT has a communication plan that is revisited regularly, defining how ELLIIT will increase its visibility within the research and professional communities, e.g., through an active website, newsletters, and LinkedIn posts.
- **Outreach**. We work on broadening and increasing engagement with the public through accessible communication formats, such as short explanatory videos, open seminars, and interactive demos. Our researchers provide independent and reliable expertise to the media and wider society.
- **Exploitation**. ELLIIT encourages the exploitation of research results through industrial collaboration and supports commercialization and the formation of new companies in cooperation with the partner universities' innovation offices.

- **Education**. We uphold excellence in education by delivering high-quality courses and driving development of new educational programs and formats. All of our faculty and PIs teach and lead continuous curriculum innovation, ensuring a strong connection between world-leading research and high-quality education.

Success criteria

1. **Scientific excellence and impact** – as assessed by publications in highly ranked, high-impact peer-reviewed international venues, and by citations.
2. **Quality of the ELLIIT recruited faculty** – as evidenced by publications, international experience, visibility, and external research grants.
3. **Cross-disciplinary cooperation** – new collaborations initiated as a direct result of ELLIIT.
4. **Inter-site (LiU-LU-BTH-HH) cooperation** – new collaborations initiated as a direct result of ELLIIT.
5. **Industrial cooperation and impact** – as quantified via master's thesis projects with industry, joint publications with industry, adjunct faculty positions, commissioned research, cooperation agreements with research co-funding, patent applications, granted patents, and successful commercialization or deployment of ELLIIT-developed technology.
6. **Distinctions** – including prestigious grants and international awards received by ELLIIT researchers, and significant service to the international academic community.
7. **Outreach and broader impact** – for example publicly available software, popular-science communication, and media impact.
8. **Educational impact** – impact on education, including undergraduate and graduate courses and programs.
9. **External funding attracted** – competitive external research funding attracted by ELLIIT researchers.
10. **Careers of ELLIIT alumni** – how ELLIIT alumni bring skills and new knowledge to industry, the public sector, and civil society after leaving the environment.