

ES 2025

STRATEGIC PLAN 2020-2025

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DEPARTMENT OF ELECTRONIC SYSTEMS

AALBORG UNIVERSITY

PREFACE

Digital technology shapes all of society as well as all sectors of the economy. It transforms the way industry develops, produces new products and services as well as influences the way we live, travel, work and learn. Digital technology is central to any sustainable future. The focus of the department of Electronic System is on building the technologies that allow us to succeed in such transformations.

ES 2025 is the overall strategic plan for the department and will help us ensure that we continue to develop our strengths, and it will prepare us to meet emerging opportunities and challenges. The strategy process was initiated after a successful research evaluation during 2019. It set up a common baseline from which to formulate a course for the next five years.

The management group identified the four topics that would form the strategy process: organisation, education and teaching, sustainable development goals and positioning. Each topic has a vision and a set of actions, which we will address in the years to come. The vision and the actions are a result of an open and inclusive process involving both faculty and staff.

I thank you all for your valuable contributions and input, and I hope that the dedication to our department will continue in the implementation of the strategy.

Thomas Bak, Prof., Head of Department
The Department of Electronic Systems
March 2020

MISSION

The Department of Electronic Systems is dedicated to higher learning and research within digital technology.

We pass on to our students the highest level of knowledge, preparing them to navigate our complex world. Through our teaching, they become not only highly qualified professionals but also responsible members of society who can make a real difference in the world using problem-based approaches to discovery and innovation in digital technologies.

We value academic excellence as well as creative innovation. We link education and research, and our discoveries foster new technologies for the future.

We have strong links to industry and pride ourselves on ensuring results that positively benefit society. In doing so, we depend on the spirit of discovery as well as the flexibility of the faculty and staff.

With our world-class research and facilities, we make a global difference by creating sustainability in society and in people's lives.

CHARACTERISTICS

To address our development over the next five years, we have decided to focus on our characteristic features, which are the strengths and qualities that make the Department of Electronic Systems unique.

WORLD-CLASS LABORATORIES - Our department has world-class labs that create great opportunities for staff and students to cooperate with both industry and other academic groups.

COLLABORATION WITH INDUSTRY GROUPS - Our department works in close cooperation with staff, students and partners from both private and public institutions. Working with real-world problems ensures that the department maintains close contact with its external partners.

A HIGH POSITION IN INTERNATIONAL RANKINGS - Through the strong interplay between staff and students as well as our collaboration with the outside world, we offer programs with a real-world approach. Our research is highly ranked, and we publish in the best journals. We measure ourselves against the best.

PROBLEM ORIENTATION - We have a problem-based approach to research and education that is strong and well founded. Our researchers and students are highly skilled in applying solution-oriented methods. We take a leading role in seeking solutions.

A MOTIVATING WORKING ENVIRONMENT - We value individual initiative and research-driven activities. We support the ideas generated by our employees and help them thrive.

DEPARTMENT VISION

Through our knowledge and skills, combined with a spirit of discovery and innovation, we are leaders in key digital technologies.

Our results enable production and consumption that respect the boundaries of our planet and maximise the benefits for all of society.

Our results and impacts are everywhere, as we create value for our collaborators and society as a whole.

Our research has a global reach, but we are fully aware of our responsibility to also have a local impact.

To compete with the world's best, we have established international links and have recruited our academic and research staff from around the world.

VISION FOR ORGANISATION

We are an attractive workplace for committed and competent employees, and we act professionally as one community of students, faculty and staff.

We empower faculty and staff to achieve excellence, and we value the freedom of all employees to plan their work.

We encourage collaboration and strive to develop as an organisation.

DEVELOPING ORGANISATIONAL CULTURE

- A.1** To create a culture of trust and winning together, we will define a common set of desired values and behaviours.
- A.2** We will strengthen the definition of research groups to include clearer boundaries, which will assist collaboration.
- A.3** We will stimulate collaboration by creating joint PhD projects, and we will set targets and measure them.

AN EFFICIENT ORGANISATION

- A.4** We strive for an efficient and a developing organisation, and, therefore, we will set up principles for organisational development. We will establish a task force to define the policies that will allow the formation of new research groups, sections, teams and labs.
- A.5** To ensure quality and strategic power in the management of the department, we will develop a new management team structure that is independent of the number of sections.

VISION FOR EDUCATION AND TEACHING

We value diversity in our students, and we make a special effort to ensure diversity in our programs.

Our students acquire solid technical and theoretical knowledge, practical skills and the ability to take part in interdisciplinary activities.

We work within an environment of mutual trust among teachers and students, and we encourage excellence, curiosity, creativity, independent thinking and a responsible, professional mode of behaviour.

Our educational portfolio reflects the core competence of the department, and it is viable in terms of student numbers and our budget while meeting our societal obligations.

Our study programs are founded in problem- and project-based learning, and we strive to establish close collaboration with industry groups in our students' projects. Our programmes are aligned to the needs of businesses.

COHERENT TEACHING PORTFOLIO

- B.1** We will outline the meaning of coherent education portfolio. We will do this by considering the balance between such parameters as the economy, organisation, sustainability, positioning, academic profiles as well as societal demands.
- B.2** We will set up criteria for outlining concrete design principles for our future education portfolio.
- B.3** We will redevelop our education portfolio and set up a plan for implementing our future educational programs.

TEACHING

- B.4** We will identify and modify existing and new learning methods (e.g., digitalisation) to increase the quality, as well as access to, our programmes.
- B.5** We will identify and present new didactically and pedagogical goals to our teachers.
- B.6** We will develop procedures for staff in order to make sure the teaching supports their pedagogical development. We will also set targets and measure them and involve relevant stakeholders in quality assurance.

RECRUITING AND BRANDING

- B.7** We will develop an enhanced strategy for recruitment, with a focus on attracting a diverse group of motivated and qualified students. We will set targets and measure them and involve relevant actors in quality assurance.
- B.8** We will design our recruiting and branding programs using evidence-based research to appeal to target groups.
- B.9** The domain of continuing and further education for digital technologies will be analysed, and we will formulate a development plan. We will set targets and measure them and involve relevant stakeholders in quality assurance.

VISION FOR SUSTAINABLE DEVELOPMENT GOALS

We deliver excellent research within digital technology which enables production and consumption that respect the boundaries of our planet and maximise the benefits for all of society.

We understand and acknowledge that contributing to one of the sustainable development goals (SDGs) may result in a negative impact within other SDG goals.

We promote our contributions to the SDGs and strive to make a difference in the world.

INCLUSION OF SDG IN EDUCATION

c.1 We will include SDG related topics into supervisor suggested students projects. We will set targets and measure it.

STAFF COMPETECIES AND CULTURE

c.2 We will invite one distinguished lecturer per year to speak about a particular SDG in order to increase awareness surrounding the SDGs among staff and students.

c.3 We will map our contributions to SDGs to enhance visibility both internally and externally.

MARKETING

c.4 We will identify projects that offer solutions to the SDGs and use them in marketing and PR according to our marketing strategy. We will also set targets and measure them.

c.5 We will organise an annual workshop with industry partners and define success criteria and evaluate them.

c.6 We will identify relevant forums and make plans for our department's representation.

VISION FOR POSITIONING

We are engaging in the national and international agendas, and we are capable of managing both society's demands as well as new advancements in digital technologies.

Our communication is positive and reaches the intended audience, and we can promote our values and strengths within the university and externally.

ACTING UPON THE UNIVERSITY'S TRENDS

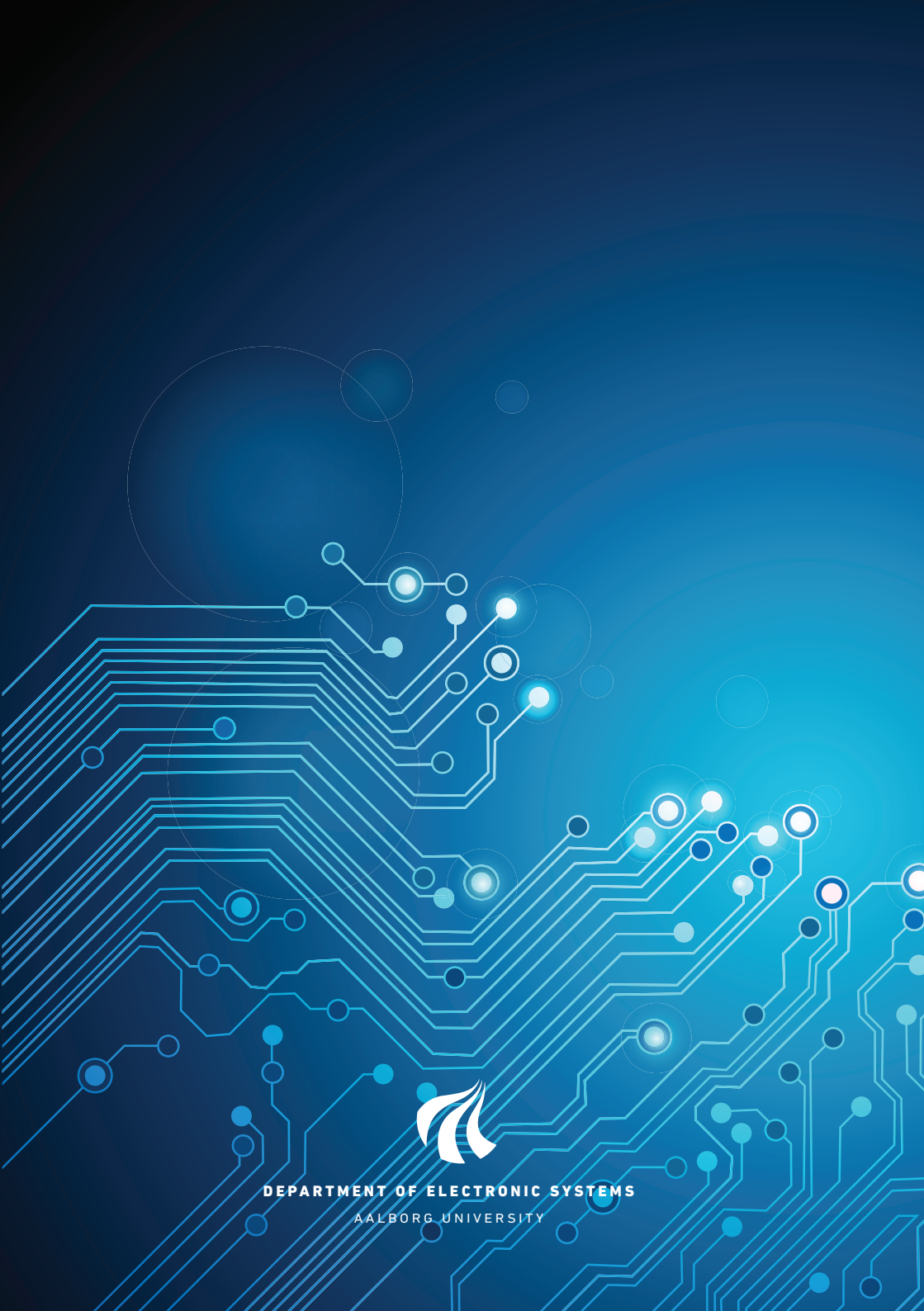
- D.1** We will increase support for soft funding through improved dialogue within the university. Our fundraising efforts will help identify soft funding and initiate a conversation within the university.
- D.2** We will proactively engage in cross-disciplinary activities with other departments and faculties.

INTERNAL COMMUNICATION

- D.3** Communication on university decisions and trends will be timely, open and useful for the department staff.
- D.4** We will communicate through different platforms and in a way that is relevant to the staff and faculty.
- D.5** We will promote the diverse excellence of our department and highlight our strong links to industry groups as well as to our external partners.
- D.6** We will share our achievements with both the university and society. When new labs and projects are initiated, we will arrange events and encourage participation from both our internal and external partners.
- D.7** The management group will act as a collective, constructive partner for the head of the department. The objective will be to create a shared strategy of communication, which can inspire and help qualify decisions and strategies.

EXTERNAL COMMUNICATION

- D.8** We will communicate our strengths and research to society. We will set targets and measure them.
- D.9** We will create awareness about our competences, uniqueness and characteristics in order to make them stand out.
- D.10** We will formulate a communication strategy and communicate as one department.



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