

TU/e Annual Report 2021

In the annual report, Eindhoven University of Technology (TU/e) publicly accounts for the policies pursued, the performance achieved and the financial results realized in the year 2021.

The report is part of the university's governance cycle.

TU/e Strategy 2030, the Strategic Plan 2020-2025 and the 2021 budget guided the policies of 2021.

The annual report consists of a management report and an annual statement of accounts. These have been prepared in accordance with the Annual Accounts Regulations (*Regeling Jaarverslaggeving Onderwijs*, RJO).

Management summary

Leading the change

TU/e's mission is to educate students and promote scientific research and innovation for the benefit of society. TU/e integrates education and research to enable its students and scientists to become 'thought leaders' capable of solving complex problems and designing and achieving the unimaginable. The TU/e Strategy 2030, adopted in 2018, is based on challenges that will affect our society and the university over the next decade: the path to a sustainable world, the digital technological revolution and the impact of technology on society.

The Strategic Plan 2020-2025, 'Leading the change', describes the implementation agenda of TU/e Strategy 2030 up to 2025. The implementation focuses on 17 strategic priorities divided into the areas of Talent, Cooperation and Resilience. In 2021, TU/e took significant steps forward with the implementation of Strategy 2030. In light of the ongoing impact of COVID-19 and other major external trends and developments, the strategic mid-term evaluation process was initiated at the end of 2021 to revisit the strategic priorities up to 2025.

Talent

TU/e aims to attract the best students, researchers and employees to realize its ambitions. This can be done by offering innovative, high-quality education, exploring promising research areas and fostering academic leadership, with TU/e striving to be a diverse and inclusive employer.

Challenge-Based & Blended Learning

For TU/e, Challenge-Based & Blended Learning are promising ways to educate the engineers of the future. Challenge-Based & Blended Learning are forms of activating education in which students learn to work in a solution-oriented manner, to cooperate in

teams and to communicate well. These are precisely the skills that the business world also desperately needs.

Significant steps were taken in 2021 to establish a university-wide Challenge-Based Learning program. Teachers have been encouraged to establish Challenge-Based Learning (CBL) projects; many of these have continued and have been completed, sometimes in a somewhat modified form due to COVID-19.

At a national level, the concept and activities of TU/e innovation Space, expertise center for CBL, are now also being rewarded. On March 1, 2021, TU/e innovation Space received first prize in the first Dutch Higher Education Award from outgoing Minister of Education, Culture & Science Ingrid van Engelshoven. This €1.2 million award launched three projects that will jointly contribute to innovating education and achieving the goals of the TU/e Educational Vision 2030. The COVID-19 crisis taught TU/e a lot about online education and blended learning. These lessons have been translated into the BOOST! program, which has now grown to 95 pilots in which teachers experiment with digitizing their education and making it more flexible, among other things.

Cross-Disciplinary Institutes

TU/e aims to achieve high scientific quality and relevance by building competencies in the contributing disciplines, attracting talent and research funding, developing methodologies, establishing shared infrastructures and exploring promising research areas.

In addition to the existing Institute for Complex Molecular Sciences (ICMS), the Eindhoven Artificial Intelligence Institute (EAISI) that was established in 2019 and the Eindhoven Institute for Renewable Energy Systems (EIRES) that was established in 2020, TU/e established its fourth institute in 2021: the Eindhoven Hendrik Casimir Institute. This institute will focus on the convergence of quantum technology and photonics.

Both EAISI and EIRES are now leading institutes in the national collaborations on artificial intelligence and energy facilities that have been provided with substantial multi-year financial injections via the Growth Fund. The Eindhoven Hendrik Casimir Institute also attracted great interest from industry when it was founded. ASML symbolically presented four 'gifts' with a total value of €3.5 million.

Recognition and Rewards

Recognition and Rewards form one of the priorities of the talent policy. In early 2021, a task force with scientists from all departments drew up six leading principles for the new personnel policy for academic staff. The leading principles were discussed in dialogue sessions with a total of some 150 university (associate and assistant) professors in the spring of 2021. On this basis, a draft vision was written: an important building block for the implementation of policy on Recognition and Rewards.

Diversity and Inclusion

TU/e strives for a diverse, internationally composed workforce with a special focus on improving the gender balance among the academic staff. In 2021, the percentage of female academic staff increased from 27% to 28%. This limited increase was affected by the

temporary suspension of the Irène Curie Fellowship program between July 2020 and May 2021 due to a ruling by the Netherlands Institute for Human Rights. However, the fact that more than a third of the newly recruited academic staff is female at all job levels sends a positive signal about the cultural change that has been initiated. The fact that as much as half of the new intake of professors is female was recognized with an award from the Dutch Network of Women Professors in 2021. In 2021, a follow-up study on equal pay for men and women in core academic staff positions was carried out and Diversity Week took place for the second time. A Gender Equality Plan was also drawn up in 2021, which contains planned initiatives that will further improve and support gender equality through to 2025.

Cooperation

TU/e is known for its intensive cooperation with industry, knowledge institutions and public authorities. The triple helix collaboration of Brainport is an example to regions all over the world. This manner of cooperating locally and (inter)nationally is the basis for the societal impact of our university and our reputation around the world.

Regional

A third of TU/e graduates find their first workplace in the Brainport region. The need for highly skilled engineers is high in the region and has been increasing for years. In 2021, TU/e – together with Brainport organizations – issued the Brainport Bid for the new cabinet in order to call for sustained attention to the Brainport(s) of the Netherlands. The new cabinet took this up energetically in the coalition agreement in which specific attention was paid to the further development of the Mainport Brainport.

Collaboration with major companies was further intensified in 2021. TU/e is increasingly focusing on investing in strategic long-term partnerships with industry. The implementation of these strategic partnerships with industrial partners will start in 2022.

Another great example of a strategic partnership is the Jheronimus Academy of Data Science (JADS) in Den Bosch. This institute was founded by TU/e in 2016 together with the Municipality of Den Bosch, the Province of Noord-Brabant and the University of Tilburg. In June 2021, a successful re-accreditation was carried out of the master's program in Den Bosch and the bachelor's programs in Eindhoven and Tilburg.

Another achievement was a doubling of the intake for the master's compared to 2020.

In early 2021, The Gate was launched as the platform for tech startups in the first phase of their existence. Together with partners BOM, Fontys, Summa and the regional startup ecosystem, the business developers of Brainport Development and TU/e offer information and guidance in terms of workplaces, financing, training and coaching to enterprising students, scientists and tech startups. The collective goal is to improve the quality and quantity of the high-tech startup climate in Brainport Eindhoven.

National

At a national level, TU/e cooperates with other Dutch universities in the Universities of the Netherlands (UNL) partnership and with the technical universities in the 4TU.Federation. In addition, TU/e has been collaborating with Wageningen University & Research, Utrecht

University and UMC Utrecht since 2020 in a strategic alliance to address urgent societal challenges and realize sustainable transitions for a better future. Over the next eight years, the alliance will invest €100 million in joint research and education projects to solve global issues in health, food, energy and sustainability. In 2021, the first annual plan was drafted and initiated to explore a long-term strategy beyond 2024; this will take shape in early 2022.

International

In 2021, EuroTech, the alliance of leading European science and technology universities, celebrated its tenth anniversary, including an Innovation Day, a website relaunch, the digital campaign EuroTech in Action and the policy event Technology for Society. The first 35 candidates were selected for the EuroTechPostdoc2 program in 2021, ten of them from TU/e. In addition, the five 'initiatives@scale' have been further developed: Research, Innovation & Infrastructure, Education, Sustainable Campus Development, Policy Dialogue and Positioning & Communication. In the area of education, the EuroTeQ project saw further development. EuroTeQ aims to accelerate cooperation with educational institutions in different countries. Meanwhile, some 400 students have made use of the EuroTeQ Course Catalogue, a set of courses on technology, entrepreneurship and languages.

Resilience

TU/e's third priority is to strengthen its clout: Resilience. The impact of the COVID-19 crisis has demonstrated the great importance of firm, qualitative and resilient service provision in order to continue to achieve excellence in teaching and research under all circumstances.

Support Quality Drive

Professional support facilitates teachers, researchers and students in achieving their goals. Support should be provided in a cost-effective and efficient manner, including across support disciplines where necessary. To this end, TU/e launched the Support Quality Drive (SQUAD) program in 2021. In the period 2021-2023, all support disciplines will go through a process of identifying tasks, people and resources, reflecting on quality, efficiency and effectiveness, and examining the accessibility of education and research, after which a review by peers and users will lead to a change plan. In the summer of 2021, Information Management & Services (IMS) and Data Management & Library (DML) began as the first two disciplines.

Enabling the Strategy

In the area of good facilities, meaningful strides were made in 2021, including improving professional processes, continuing to build a warm and vibrant campus and bringing about a future-proof IT landscape.

Within the program on chain-oriented collaboration, a supported vision of the Research Life Cycle was realized in 2021. This vision has been translated into ten concrete goals on the road to 2025, including strengthened support for project management, information provision for researchers and program management at the institutes.

This year also saw the launch of the In Partnership Agreed Services (IPAS) project aimed at achieving agreement on the scope, quality and financial settlement of service provision. Service provision agreements for eight services were delivered in 2021.

Regarding the campus, the real estate strategy was revised in 2021. Substantial investments will be made in the campus through to 2030 in order to support teaching, research and valorization with suitable, cost-effective premises. In 2021, a start was made on the renovation of the Neuron building, the Gemini buildings and the Sports Center, for which the final design phase has been reached and tendering process begun. The realization of the Qubit building has started. In addition, tendering for the 735 student residences has taken place.

Several developments contributed to a future-proof IT landscape in 2021. The new HR package went live, the financial software was tendered and implementation begun. The security of the IT facilities also received increased attention.

In the area of leadership, the Leadership Vision developed in 2021 has formed the basis for the TU/e Leadership Profile. This profile elaborates on the values for four levels of leadership within our organization. In 2021, the leadership theme was additionally given concrete substance alongside the strategic themes of social safety and hybrid working.

Based on ambitions in the area of quality management, several pilots were conducted in 2020 and 2021, including customer satisfaction surveys, an employee satisfaction survey and a European Framework Quality Management (EFQM) assessment. These three pilots have been positively evaluated and have since been integrated into the Support Quality Drive program.

Impact of COVID-19

For several periods in 2021, there were prolonged lockdowns in which only online education could be offered. The lockdowns placed great demands on teachers and students in terms of energy and well-being. During 2021, additional monitoring processes took place in connection with the COVID-19 measures, such as frequent study progress and binding recommendation analyses, research into student well-being and surveys of students regarding their experiences with the transition to online education and testing. Increased attention will continue to be paid to student well-being in 2022.

65 years of TU/e!

After all of the extraordinary efforts of people at the university and around the world to deal with COVID-19 and keep society, research and education going, TU/e was inspired to choose an anniversary theme that reflects this amazing commitment: Heroes Like You. Each month, several TU/e heroes were placed in the spotlight for their contribution to TU/e and to society.

The highlight of the anniversary year was the Heroes Like You Festival in October with a wide range of activities and artists.