



# ANNUAL REPORT 2022

# PUBLISHING DETAILS

## TELEPHONE

+31 (0) 53 48 99 111

## EMAIL

[info@utwente.nl](mailto:info@utwente.nl)

## POSTAL ADDRESS

PO Box 217  
7500 AE Enschede

## WEBSITE

[www.utwente.nl/en](http://www.utwente.nl/en)

## COVER PHOTOGRAPH

Jaya Baloo is presented with an honorary doctorate by Willem Jonker.

## EDITORS

Inge Broekman (Strategy & Policy)  
Chris Tuinbeek (Finance)

## NAME OF DOCUMENT

Annual report 2022 University of Twente

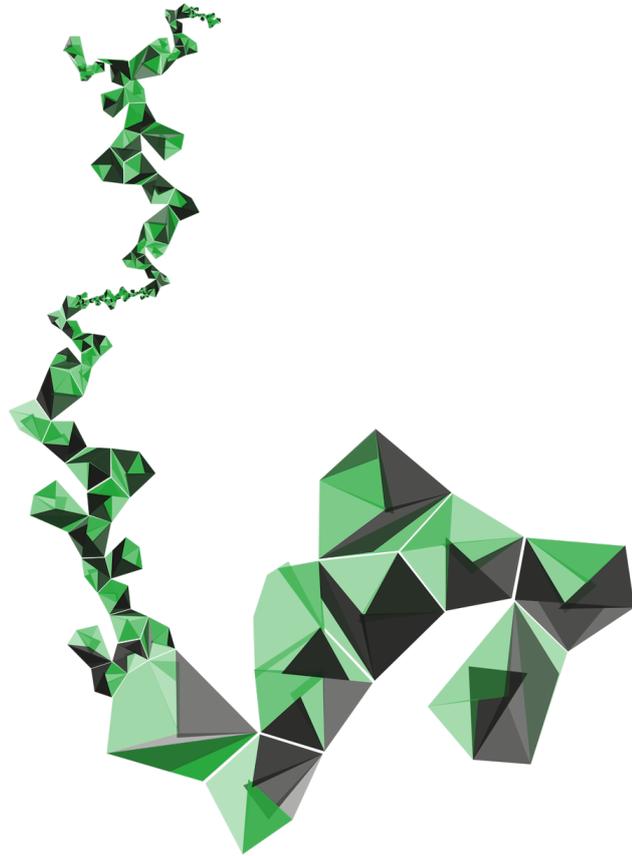
## DISCLAIMER

The auditor's report was issued for the Dutch version of the annual report. In case of discrepancies between the original text and the English translation, the Dutch version therefore prevails.

## COPYRIGHT

© University of Twente, The Netherlands.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, be it electronic, mechanical, by photocopying, recording or otherwise, without the prior written permission of the University of Twente.

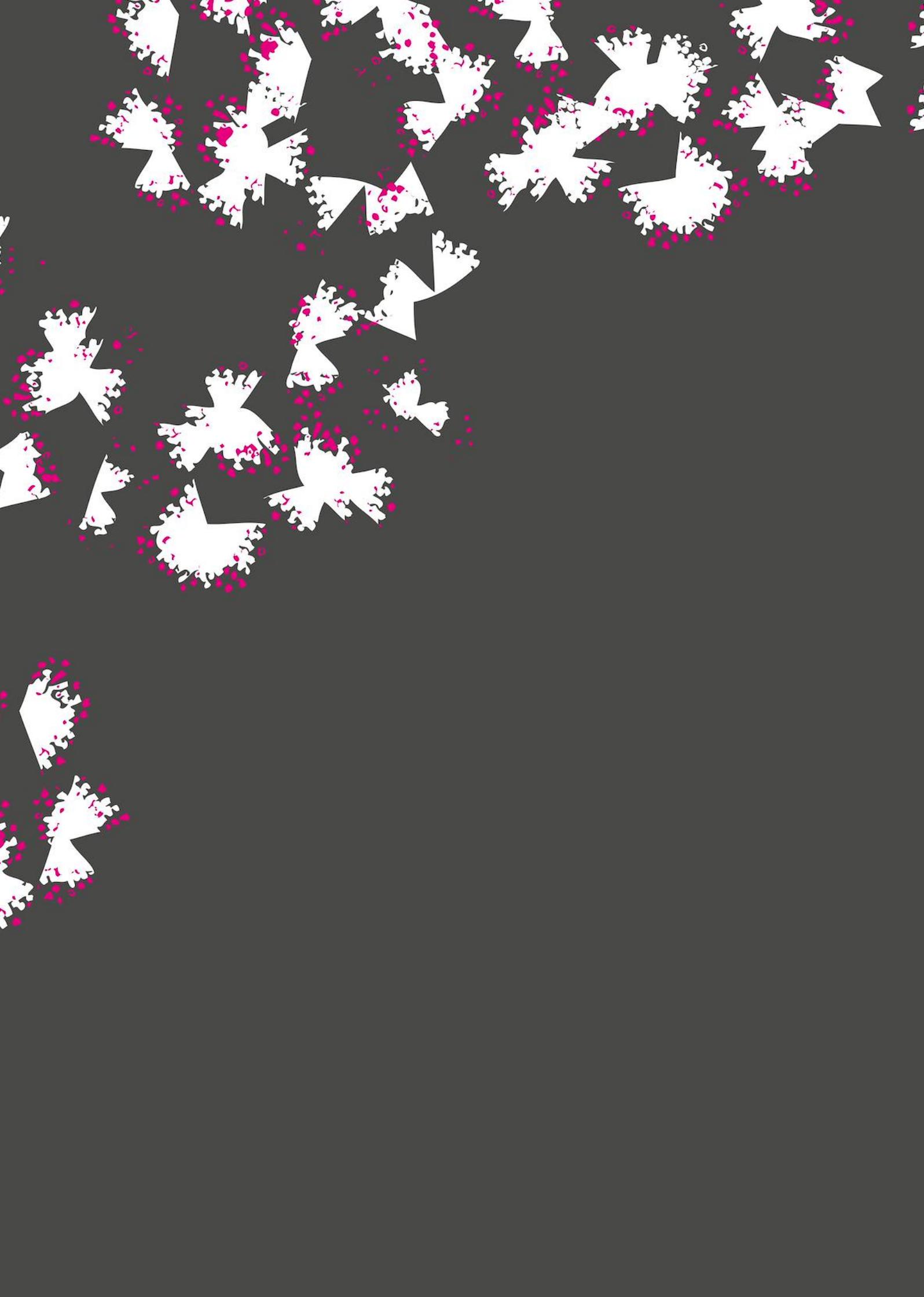


# CONTENT

<b>PUBLISHING DETAILS</b>	<b>2</b>
<b>MANAGEMENT REPORT</b>	
<b>FOREWORD BY THE EXECUTIVE BOARD</b>	<b>8</b>
<b>LETTER FROM THE SUPERVISORY BOARD</b>	<b>10</b>
<b>READER'S GUIDE</b>	<b>13</b>
<b>KEY FIGURES</b>	<b>14</b>
<b>VALUE CREATION MODEL</b>	<b>16</b>
<b>OUR FOUNDATIONS</b>	<b>19</b>
SHAPING2030	20
POLICY PRINCIPLES	21
GOVERNANCE	26
FINANCIAL ANNUAL REPORT	28
<b>SHAPING IN 2022</b>	<b>34</b>
<b>SHAPING SOCIETY</b>	<b>37</b>
EDUCATING STUDENTS FOR TODAY'S CHALLENGES	38
EDUCATION BEFORE AND AFTER UNIVERSITY	41
RESEARCH THAT MAKES A DIFFERENCE	42
DEMAND-DRIVEN IMPACT ON SOCIETY	46
CONTRIBUTING TO THE DEBATE IN SOCIETY	49
A SUSTAINABLE INSTITUTION	51
<b>SHAPING CONNECTIONS</b>	<b>57</b>
ON AND AROUND THE CAMPUS	58
REGIONAL IMPACT	60
NATIONAL COOPERATION	63
INTERNATIONAL UNIVERSITY NETWORK	65
GLOBAL COMMUNITY	67
DIGITAL TRANSFORMATION	69
<b>SHAPING INDIVIDUALS</b>	<b>71</b>
THE STUDENT JOURNEY	72
STUDENT DEVELOPMENT AND WELL-BEING	79
OUR STAFF AND THEIR WELL-BEING	83

DEVELOPMENT, REWARD AND RECOGNITION	89
FOR AN INCLUSIVE AND SAFE ENVIRONMENT	92
OTHER ORGANISATIONAL ASPECTS	95
<b>CONTINUITY SECTION</b>	<b>99</b>
A. DATA SET	99
DEVELOPMENT OF KEY FIGURES (A1)	99
MULTIANNUAL BUDGET (A2)	100
B. OTHER REPORTS	106
THE STRUCTURE AND FUNCTIONING OF THE INTERNAL RISK MANAGEMENT AND CONTROL SYSTEM (B1)	106
DESCRIPTION OF THE MAIN RISKS AND UNCERTAINTIES (B2)	112
REPORT OF THE SUPERVISORY BODY (B3)	123
<b>ANNEXES</b>	<b>125</b>
ORGANISATIONAL STRUCTURE	126
ABBREVIATIONS AND DEFINITIONS	129
OUR STAKEHOLDERS	136
GOVERNANCE AGREEMENT	139
MEMORANDUM ON CLARITY	141
QUALITY AGREEMENTS	143
PANDEMIC	150
EDUCATIONAL PROGRAMMES (CROHO/RIO)	154
INAUGURAL LECTURES & FAREWELL SPEECHES	155
AWARDS, INDIVIDUAL GRANTS, MEMBERSHIPS AND EUROPEAN PROJECTS	157
ANCILLARY POSITIONS OF EXECUTIVE BOARD MEMBERS	164
EXPENSE CLAIMS EXECUTIVE BOARD	165
PARTICIPATION	166
SUPERVISORY BOARD	168
LIST OF URLS (HYPERLINKS)	169
<b>FINANCIAL STATEMENTS</b>	
<b>CONSOLIDATED FINANCIAL STATEMENTS</b>	<b>174</b>
CONSOLIDATED BALANCE SHEET AS AT 31 DECEMBER 2022 (AFTER APPROPRIATION OF RESULT)	174
CONSOLIDATED STATEMENT OF INCOME AND EXPENSES FOR 2022	175
CONSOLIDATED CASH FLOW STATEMENT 2022	176
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME 2022	177
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2022	178

NOTES TO THE CONSOLIDATED BALANCE SHEET AS AT 31 DECEMBER 2022	194
NOTES TO THE CONSOLIDATED STATEMENT OF INCOME AND EXPENSES FOR 2022	210
<b>SINGLE-ENTITY FINANCIAL STATEMENTS</b>	<b>216</b>
SINGLE-ENTITY BALANCE SHEET AS AT 31 DECEMBER 2022 (AFTER APPROPRIATION OF RESULT)	216
SINGLE-ENTITY STATEMENT OF INCOME AND EXPENSES FOR 2022	217
NOTES TO THE SINGLE-ENTITY FINANCIAL STATEMENTS 2022	218
NOTES TO THE SINGLE-ENTITY BALANCE SHEET AS AT 31 DECEMBER 2022	219
NOTES TO THE SINGLE-ENTITY STATEMENT OF INCOME AND EXPENSES FOR 2022	230
<b>OTHER INFORMATION</b>	
<b>LEGAL BASIS FOR APPROPRIATION OF THE RESULT</b>	<b>246</b>
<b>INDEPENDENT AUDITOR'S REPORT</b>	<b>247</b>



# MANAGEMENT REPORT

# FOREWORD BY THE EXECUTIVE BOARD

In May 2022, the University of Twente celebrated its 60th Dies Natalis in style. The academic ceremony had been postponed by several months, as COVID-19 prevented any opportunity of coming together to celebrate this joyous occasion in the autumn of 2021. After a period in which we were largely prevented from seeing and talking to each other physically, there was a strong need to meet.

It was a momentous occasion in a turbulent time. A period of social distancing and working and studying from home lay just behind us, and now our foundations were shaken again by terrible images of war from Ukraine, after Russia invaded the country with a devastating military campaign. The suffering is indescribable, and the invasion also triggered a major geopolitical shockwave, resulting in potentially long-lasting global tension.

These events overshadowed the celebration of the university's 60th anniversary. The landscape in which the university operates has changed significantly during those sixty years, and UT has changed with it. Whereas initially the focus lay on strengthening the economic vitality of the region, the task addressed by the university has increasingly taken on a broader social character. Society faces major challenges. Shaping2030, our institutional strategy, is focussed on generating social impact to help face these challenges.



*Executive Board*

In 2022, there were also wonderful examples of how we are successfully contributing to a just and more sustainable world, making the most of the opportunities created by technology and digitalisation. One of these contributions is to train the young talent that will shape the world of tomorrow. The University of Twente always gets high scores in the National Student Survey, which measures how satisfied students are with their studies. In 2022 we were again amongst the best-ranking institutions, proving that our educational programmes are both attractive and relevant for the students. Our personal approach is highly appreciated and the students are very satisfied with the quality of the education and facilities provided by UT. But, however positive the students assess us, it is always a challenge to inspire new students to come and study in Twente, as is evidenced by the intake figures.

Our research and knowledge transfer activities also make a substantial contribution to a better world. Our researchers actively engage in the public debate to help find solutions to major challenges, such as future-proofing health care, the climate crisis and digitalisation. We are committed to initiatives both in our region and outside of it. Our collaborative projects in Apeldoorn, Zwolle and with VU University Amsterdam are increasingly taking shape and enable us to make a

social impact there too. Citizen science – where citizens are more closely involved in academic research – is booming at UT and open access publishing is increasingly becoming the norm, ensuring that the knowledge we develop can be accessed by a wider audience.

Not only do we get involved in the public debate, but we are also the subject of discussion ourselves. Currently, the sustainability of our own organisation is under scrutiny. As a university that champions a sustainable future, we are expected to set a good example. We recognise the importance of this and are taking steps together to make it happen.

2022 also saw a revival of the debate about internationalisation in higher education. This is an issue close to our heart, because we as a university must operate in an international arena, not least because of our location close to the Dutch border. We operate with the conviction that internationalisation contributes to a more diverse and talented community, and recognise the added value of attracting international talent to meet the needs of the labour market, both regionally and nationally. This debate is very relevant to the University of Twente, as its outcomes could have a major impact on our future.

It will be a major challenge to further increase our social impact in the coming years, not least because of the financial challenges we face. Rising costs require us to make tough choices about what we can and cannot do, and to scrupulously keep within the budgetary limits. We also need to make a firm commitment to increasing our revenue and making the most of all opportunities that come our way.

With this annual report, the Executive Board renders account for the policies it has pursued and the plans it has implemented in 2022. In so doing, we observe the Code of Good Governance for Universities. As in the previous years, there were no decisions, issues or transactions involving a personal conflict of interest of an Executive Board member this year.

We are on our way to achieving the goals of Shaping2030. We are continuing to build on the robust and agile organisation that is required to fulfil that ambition. The entrepreneurial attitude that characterises UT's staff and students – that resourceful and can-do mindset when confronted with major challenges – is reflected in this report. It enables us to look back with genuine pride, and also with confidence about what the future holds.

Prof. Dr. Vinod Subramaniam, President  
Prof. Dr. Ir. Tom Veldkamp, Rector Magnificus  
Drs. Machteld Roos, Vice-President

# LETTER FROM THE SUPERVISORY BOARD

In 2022, the world was rocked by Russia's invasion of Ukraine. For our staff and students from these countries, particularly Ukraine, this had immediate personal consequences: there were many concerns about family and friends, about the possibility to continue studying in the Netherlands, and about the sufficient availability of funding. The wider economic impact was also significant. The Supervisory Board is completely behind the university for speaking out against war and calling for peace, and offering support to the affected students and staff.

Another theme that attracted considerable attention in society in 2022 was social safety and inappropriate behaviour. The Executive Board is explicitly committed to promoting social safety and addressing inappropriate behaviour. This dialogue has taken place at many levels and various activities have been undertaken to achieve these goals.

The pandemic had a more indirect impact on UT in 2022. After the January lockdown, fewer and fewer restrictive measures were required for working and studying. However, the effects of the pandemic did continue to be noticed in the study and work backlogs, increased absenteeism and the extra effort that was required to maintain social networks.

## ROLES AND ACTIVITIES OF THE SUPERVISORY BOARD

The Supervisory Board is responsible for supervising the administration and management of the university and thus also the activities of the Executive Board. The Supervisory Board ensures that the Executive Board, when exercising its powers, complies with the legislation, rules, guidelines and regulations pertaining to the university, as well as the Code of Good Governance for Universities. The Supervisory Board also fulfils the role of employer of and advisor to the Executive Board.



*f.l.t.r.: Joep van Beurden, Jeroen de Haas (until 11/2022), Sylvia Butzke, Matthias Wessling, Nienke Boersma*

Annual Report (including the financial statements for 2021). This included deliberation on the developments in student intake, our academic performance, the staffing situation and the various funding flows. The Supervisory Board also discussed the risks described in the annual report with the Executive Board and sanctioned these.

The Supervisory Board met with the Executive Board four times in 2022, in all cases preceded by an internal consultation. During these meetings, the Supervisory Board considered developments within UT and the wider social context of higher education. The Supervisory Board discussed the policy choices and their implementation and financial implications. As in the previous years, there were no decisions, issues or transactions involving a personal interest, or conflict of interest, of a Supervisory Board member in 2022.

The Supervisory Board approved the draft budget for 2023, the Spring Memorandum 2023-2027 (long-term financial calendar), the budget and plans for 2023 of the Long-Term Strategic Housing Plan (2023-2032), and the

In 2022, the Supervisory Board discharged the Executive Board from its liability for the policies implemented in 2021. The Supervisory Board monitored quality assurance (articles 9.8(1)(h) and 1.18 of the Higher Education and Research Act) and the lawful acquisition and efficient and lawful allocation and spending of funds obtained pursuant to articles 2.5, 2.6 and 9.8(1)(f) of the Higher Education and Research Act.

The Supervisory Board held regular consultations with the University Council in June and December. The open working relationship between the Executive Board and the University Council was discussed, with all parties reporting they appreciate this relationship. Issues of concern were also discussed, including with the vision for education, developments in social safety, uncertainties in the area of finances, and the tension between the workload and our ambitions. Although the Supervisory Board has an explicitly supervisory and independent role within UT, it always welcomes input and questions from concerned parties in and outside the university.

## **KEY THEMES IN 2022**

### **THE WAR IN UKRAINE AND ITS CONSEQUENCES**

In addition to the support provided to students and staff directly affected monetarily and in their welfare, the war in Ukraine has also had an impact on UT's operations, particularly in the form of rising construction and energy costs. The Supervisory Board has helped the university to adjust to the situation and monitor the consequences.

### **INCLUSIVE LEARNING AND WORKING ENVIRONMENT: SOCIAL SAFETY**

In line with the Code of Good Governance and in the context of an inclusive learning and working environment, the Supervisory Board discussed the Diversity & Inclusion action plan 2.0 and the underlying theme of social safety with the Executive Board. Attention was paid to the annual reports of the Ombuds Officer, the confidential advisors, the complaints committee and the Disputes Committee. It is important to note that these reports are shared and discussed within UT, which helps us to promote an open culture and learn from our experiences.

### **INTEGRATED SAFETY, KNOWLEDGE SAFETY AND CYBERSECURITY**

UT has employed an integrated safety manager since 2021 to supervise an integrated security policy for the university, in keeping with its mission and vision. The Supervisory Board has considered the theme of safety at length. The approach of UT's Knowledge Safety Team (KST) was also intensively discussed. The university is well connected at the national level in the area of knowledge building and knowledge safety. The knowledge safety risk analysis, conducted at the request of the Ministry of Education, Culture and Science, was duly carried out and led to a useful discussion on decision making in this area. The Supervisory Board was also updated on developments in the field of cybersecurity. The Board noted that all possible efforts are being made within UT to ensure cybersecurity and that the institution is keeping abreast of national developments and the work of the relevant national organisation (SURF).

### **STRATEGIC DEVELOPMENTS AT UT**

The Supervisory Board meetings devoted the necessary time to discussing strategic developments related to Shaping2030. Themes include lifelong learning, our research impact and the impact portfolios, collaboration with strategic partners, and recognition and appreciation. The Supervisory Board's main role here is to be a sparring partner, not only with regard to the substantive development of these themes, but also in relation to the transition that is involved.

## REPORTS FROM THE SUPERVISORY BOARD COMMITTEES

### REMUNERATION COMMITTEE

This committee (Sylvia Butzke and Matthias Wessling) conducted the annual performance appraisals with the Executive Board members in the autumn. In October 2022, Jeroen de Haas indicated that he would be leaving the Supervisory Board for health reasons, effective as of 1 November 2022. The process of recruiting new Board members was subsequently initiated. Old and new members of the Executive Board and Supervisory Board are remunerated in accordance with the norms established in the Public and Semi-Public Sector (Standards for Remuneration) Act.

### AUDIT COMMITTEE

The audit committee (Joep van Beurden and Nienke Boersma) met five times in 2022. Recurrent topics discussed in preparation for, and to advise on, the Supervisory Board's decision-making included the 2021 Annual Report (including the financial statements), KPMG's annual management letter and auditor's report, the 2023-2027 Spring Memorandum (with associated budget), the LTSH annual plan, and the periodic management reports. The discussions with the auditor included the response to the auditor's internal control recommendations (including ICT risks).

### EDUCATION AND RESEARCH QUALITY ASSURANCE COMMITTEE

This committee (Matthias Wessling and Jeroen de Haas until 1 November 2022) oversees the design of the quality assurance system for education and research. This committee met twice in 2022. The outcomes of the external education and research reviews that were conducted in the relevant period are discussed by default in this committee. This included an extensive discussion of the implications of the Strategic Evaluation Protocol (SEP) for the research reviews. In addition, UT's strategic cooperation with VU Amsterdam was discussed, as were the broader university partnerships in which UT participates.

## IN CONCLUSION

The year 2022 involved various uncertainties due to geopolitical and other developments. Highlights of the year were the way we looked after each other and finally being able to meet in person again. The return of social and festive events, such as a special Dies to celebrate UT's 60th anniversary (after it was initially postponed) was also much appreciated. The Supervisory Board greatly appreciates the huge efforts made by all UT staff and students over the past year.

Enschede, June 2023

Supervisory Board:

Ir. Sylvia Butzke (chair)

Ir. Nienke Boersma

Ir. Joep van Beurden

Prof. Dr. Ing. Matthias Wessling

# READER'S GUIDE

## ABOUT THIS REPORT

The annual report was prepared between November 2022 and June 2023. The project team was made up of staff members from the Finance and Strategy & Policy service departments. The other service departments provided input and the faculties were interviewed as part of [management report](#) (MARAP) 12 between November and January. The financial figures for the 2022 financial year were finalised in a finely-tuned closing schedule in the first weeks of January 2023. In the subsequent period, the focus shifted to interpreting the data, designing the visualisations, conducting the internal and external review, and the final approval. The report includes an annex with [abbreviations and definitions](#) and an annex with the [URLs](#) of the hyperlinks.

## USE OF ICONS

The icons below can help to guide readers specifically interested in information on education, research, knowledge transfer or operational management. Our [foundations](#) outline UT's [policy principles](#) explicitly from the perspective of education, research, knowledge transfer and operational management. We describe the impact generated in 2022 based on our Shaping2030 institutional strategy: Shaping Society, Shaping Connections and Shaping Individuals.



Education



Research



Knowledge transfer



Operational management

We also share dilemmas, pearls of wisdom and special themes in the following boxes.



### DILEMMAS

Here we describe some of the dilemmas of the past year.



### PEARLS

In these boxes, we highlight a selection of achievements we are proud of.



### SPOTLIGHT

Here we highlight some of the special issues that played out over the past year.

# KEY FIGURES

## TOTAL NUMBER OF STUDENTS



**12,493**

2021: 12,903

Source: Osiris / SIS

## FIRST-YEAR INTAKE



**4,024**

2021: 4,676

Source: Osiris / SIS

## INTERNATIONAL STUDENT BODY



**34%**

2021: 33%

Source: Osiris / SIS

## REFEREED PUBLICATIONS



**2,431**

2021: 2,706

Source: PURE

## BACHELOR'S DEGREES AWARDED



**1,446**

2020-2021: 1,532

Source: Osiris / SIS

## MASTER'S DEGREES AWARDED



**1,532**

2020-2021: 1,738

Source: OSIRIS / SIS

## PHDS COMPLETED



**193**

2021: 206

Source: Hora Finita

## ENGINEERING DOCTORATES



**12**

2021: 14

Source: Hora Finita

**STAFF (INDIVIDUALS)**



**3,933**

2021: 3,813

Source: AFAS

**STAFF (FTE)**



**3,540**

2021: 3,363

Source: AFAS

**ANNUAL TURNOVER  
(IN M€)**



**432.2**

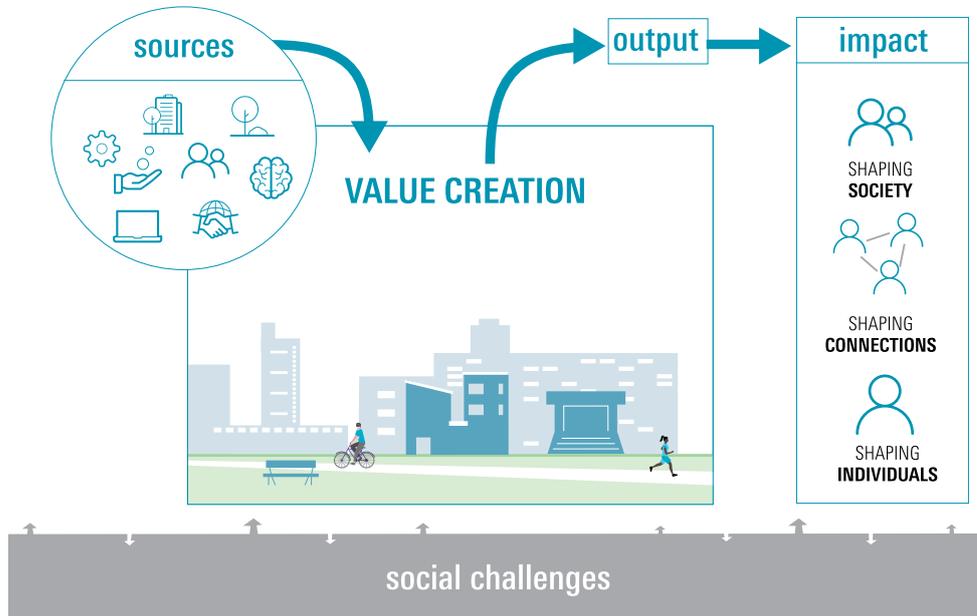
Total income, consolidated, excluding interest income

2021: 401.8

Source: UNIT4

# VALUE CREATION MODEL

The value creation model specifies how we create value. The model consists of a number of components:



## SOURCES

The value creation model begins with input from a wide variety of sources.



### FINANCE

Tuition fees and funding from government and industry.



### PEOPLE

Scientific and support staff, students and PhD candidates.



### TECHNOLOGY

For operational management, education, research and innovation.



### GOODS

Movable items such as laptops and furniture.



### NATURAL

Resources for operational management, such as metals, wood, solar and wind energy, and water.



### INFRASTRUCTURE

Real estate such as laboratories and buildings.



### SOCIAL AND RELATIONSHIPS

Networks and relationships of the University of Twente.



### INTELLECT

Knowledge and methodologies for education, research and innovations.

## VALUE CREATION BY THE UNIVERSITY OF TWENTE

UT creates value by deploying our stakeholders, competences, values and activities.



### STAKEHOLDERS

Various stakeholders are involved in creating value.

- Students
- Staff
- Alumni
- Citizens
- Public partnerships
- Private partnerships
- Physical and digital networks

### STRATEGY

Shaping2030 guides our value creation and consists of three pillars:

#### **WE WORK IN ACCORDANCE WITH OUR CORE VALUES...**

- People-centred
- Just
- Sustainable
- Digital
- Entrepreneurial
- Inclusive
- Open

#### **...AND DEPLOY OUR CORE ACTIVITIES...**



#### **...WITHIN OUR CORE COMPETENCES.**

- High-tech human touch
- Natural Sciences and Technology
- Social and Behavioural Sciences
- Research infrastructure

### VISION

To help create an honest and sustainable digital society.

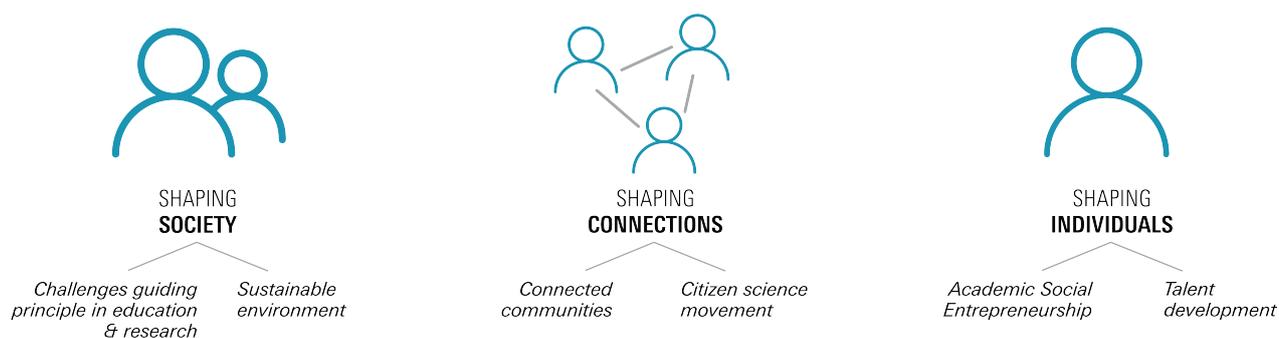
## OUTPUT

The University of Twente's value creation yields output that contributes to social and technical innovations and transitions of social sectors.

- Development of knowledge and core technologies
- Innovations at the intersection of technology and society
- Talented alumni and staff in sustainable careers
- Catalyst of ecosystems
- A safe and stimulating working and learning environment
- Sustainable and people-centred solutions

## IMPACT

There are various ways through which this results in societal impact, allowing us to contribute to solutions to the challenges faced by humankind, society and connections. We focus more and more on this impact in our reporting and accountability. This annual report is an example of this approach.



## SOCIAL CHALLENGES

Through the strong combination of our core activities of research, education and innovation within the fields of natural sciences, technology, engineering and social and behavioural sciences, we contribute solutions to these challenges. We achieve this through cocreation. In addition to the content of our research, this is also given shape in our challenge-based education and research, through which we devise solutions to social challenges through direct cooperation with stakeholders. We focus on the domains of Healthy Living & Better Health Care, Connected Communities and Sustainable Environment.

### WE ARE READY TO RESPOND TO:

- the human capital agenda of the future
- the upcoming energy, climate and materials transitions and digitalisation
- the economic and social development of the region and of the Netherlands

# OUR FOUNDATIONS

The University of Twente (UT) was established to make a social and economic difference in the region, but over the years it has developed into an innovative and entrepreneurial university with an increasing emphasis on the international arena as well. The combination of technical, natural, social and behavioural sciences makes UT a unique university in the Netherlands. With our special approach to education and research, we:

- train students to be out-of-the-box thinking professionals;
- conduct cutting-edge technological and social research that contributes solutions to major societal challenges; and
- generate positive social impact with our entrepreneurial attitude.

## MISSION

The University of Twente is people-centred. We deploy our sustainable technologies to make society stronger.

The University of Twente was founded in 1961 and was always a civic university – a socially engaged educational institution. As an institution, we focus on strengthening our community engagement. The current Shaping2030 strategy is a modern interpretation of concepts such as entrepreneurship, high-tech human touch and knowledge transfer. This community engagement helps to embed our activities in the region and provides inspiration for our education and research, so increasing our relevance as a university. With the campus as our 'home base', we serve the world with cutting-edge research in various academic disciplines and train our students to be global citizens who are ready to operate in an interdisciplinary, international environment. Each student and staff member is a unique talent, and we try to get the best out of each of them with our personal approach. It is only by cooperating that we can bring the world together and contribute solutions to the challenges of today's society.

# SHAPING2030

The world we live in is constantly changing. As a knowledge and innovation stronghold and educator of students with a broad social perspective, UT aims to help the world navigate the transition towards a fair, sustainable and digital world, as reflected in our [Shaping2030 strategy](#). The knowledge we develop is intended to serve people and society, with special attention for the interaction between people and their environment. To continue delivering the highest quality, we ensure our people have the time and room they need to grow and develop their talents. We look to the interests of our students and staff, but also the people affected by the results of our education and research. This is reflected in our research, education and the deployment of new technologies, as well as in the organisation itself, for example in the way we support our students and staff and manage the campus.

Our people-centred approach includes striving for inclusion, both in our own organisation and in society at large. This ambition takes shape in three strategic objectives: generating impact through our contributions to society, connectedness as a foundation of our work and promoting individual development, i.e. Shaping Society, Shaping Connections and Shaping Individuals. Our faculties and service departments each bring their own focus to the elaboration of these objectives and their implementation. The progress of these objectives is monitored as part of the planning and control cycle (see [Continuity](#)) and also followed by various organisational bodies. For example, the Executive Board meets with the management of the various organisational units to reflect on their progress in what we call Shaping Dialogues. UT employees exchanged their contributions to Shaping2030 in the Shaping Stories.

The [value creation model](#) reveals how UT deploys resources to create impact. We are faced with major challenges, such as climate change, the ageing population in the western world versus the large numbers of young people with limited prospects in developing countries, huge pressure on our health care systems, and the increasing impact of digitalisation on society. Collaboration across various networks – academic, support and operational networks, and regional, national and international networks – will be essential to navigate these joint societal challenges. By deploying our capital – be it human, financial or otherwise – we can contribute to the solutions. At the same time, we will try to limit the negative impact of our activities with appropriate measures, whether it be CO<sub>2</sub> emissions, the noise pollution caused by campus events, or the adverse effects of new technologies.



*Shaping stories: Bob Hoomans & Cornelise Vreman-De Olde, Shaping Story #88*

# POLICY PRINCIPLES



## EDUCATION

The challenges the world faces are complex and will have far-reaching consequences. More than before, the solution does not lie in any single knowledge domain. The challenges demand multidisciplinary collaborations. This is what we prepare our students for with a broad curriculum of bachelor's and master's programmes that combine both the natural and social sciences. Our education programme meets the needs of society in the formulated social challenges to which the students seek solutions (see: Challenge Based Learning). The field of work includes everything from primary and secondary schools to providing specialist training for professionals. Educational growth is important to be able to help meet the demand for highly educated technical (and other) personnel that can work on the major social transitions and thereby strengthen the Netherlands' national and international position.

Our bachelor's programmes are organised along the lines of UT's own Twente Education Model (TOM). The programmes consist of project-based thematic modules. The experiences gained during the first years have resulted in adjustments to the original model, such as building in more flexibility. Students develop a broad range of skills that transcends their chosen discipline and are provided with the support they need to shape their own learning process. They are trained to become accomplished in three roles: as researchers, designers and organisers. The bachelor's programmes offer room to delve deeper into disciplines and skills beyond those offered by the chosen educational programme. The master's programmes focus on integrating education and research skills, thus strengthening our position as a research university. We help our students to develop a broad set of skills and competences with a focus on multidisciplinary and interdisciplinarity.



In 2022, we decided to develop an integrated vision on educational themes. These themes included digitalisation, lifelong learning, our real estate and a first draft of a vision on our master's education. Following lively discussions with various stakeholders, a draft version is now awaiting our approval. In 2023, we are focussing on finalising and integrating all ongoing education-related initiatives under the umbrella of the current vision for education.

Pioneering in education and connecting our education, research and innovation to the societal challenges are both important themes for us. As a co-founder of the European Consortium of Innovative Universities (ECIU), we have been working to build a European

University since 2019: ECIU University. Together with thirteen consortium partners, we are experimenting with

new forms of education and research. We are jointly developing CBL, micro-credentials and lifelong learning programmes to facilitate personalised and flexible educational pathways. Societal challenges are central to our education, research and innovation, and contribute to strengthening the regional ecosystem, making European cooperation more sustainable and increasing our societal impact. The year 2022 marks the end of the first phase of ECIU University and the start of the next phase.



## RESEARCH

Research at UT is driven by scientific curiosity. The resulting fundamental and applied knowledge and techniques are deployed to meet societal challenges and further social developments.

The university focuses on the following social domains:

1. Healthy living & better healthcare;
2. Connected communities;
3. Sustainable environment.

In cooperation with our stakeholders, we translate fundamental knowledge and Key Enabling Technologies (KETs) into more applied technologies and knowledge. We do this based on five profile themes:

1. Shaping our world with smart materials;
2. Improving health care by personalised technologies;
3. Engineering for a resilient world;
4. Engineering our digital society;
5. Creating intelligent manufacturing systems.

Citizen science reinforces the challenge-based structure in the research profile and portfolio. Students and researchers work together with citizens, businesses, civil society organisations and public authorities on solutions to concrete issues, thus narrowing the gap between innovation and application, and between the university and society. These collaborations enable us to develop new insights and bring scientific research closer to society.





---

## KNOWLEDGE TRANSFER

The process of creating value from knowledge by making it available for the benefit of the economy and society is referred to as knowledge transfer. As an entrepreneurial university, UT has a long tradition of knowledge transfer. We encourage students and researchers to be entrepreneurial, creative, daring and off-the-beaten-track. We help them to launch new start-ups and scale-ups by offering mentoring, programmes, facilities and a broad network that gives them access to growth capital and international markets, amongst other advantages. Novel-T and University of Twente Holding B.V. (a 100% subsidiary of the university) are responsible for organising these knowledge transfer activities, but there are also specific initiatives such as the Fraunhofer Project Centre and partnerships with companies, public authorities and other knowledge institutions.

We also increase our social impact through other activities such as our [outreach](#) programmes for sharing knowledge between educational institutions. This is addressed, for example, in the programmes Pre-U Junior (primary education), Pre-U (secondary education), Summer school CuriousU (courses for a wide audience), Pro-U (professional development for teaching staff) and Twente's Institute for Teacher Education, Science Communication & School Practices (ELAN). In the DesignLab, students and researchers work together with businesses and public authorities to find solutions to current social design challenges. But we also encourage UT staff and students to actively participate in the social debate. Through such activities, we make scientific knowledge, insights and results available to the wider society.



---

## PROFESSIONALISING OPERATIONAL MANAGEMENT

To fulfil our mission and vision, we must continuously optimise and professionalise our operational management. Transparency and accountability are high on the agenda, which we can achieve by ensuring structured and readily available data, properly functioning participation bodies, and committees and individuals that judiciously represent the interests of staff and students (such as the Disputes Committee, complaints committee, Scientific Integrity Committee, confidential advisor and Ombuds Officer). We are also continuing to further digitalise and automate the operations. This should help the university free up administrative time for the activities that matter: education, research and innovation.

It is essential that we provide a safe learning, living and working environment. To this end, a broad vision on integral safety was adopted in 2022, with priority for knowledge safety, social safety and cybersecurity. The entire organisation is putting a lot of effort into this, including the university's Diversity, Equity & Inclusion (DE&I) team, integral safety officers and student support, and at the faculty level the safety, health and environment coordinators and student advisers. Sustainability also plays an important role, and is given due attention in our education, research and operational management. The further development of the theme of sustainability will be a priority in 2023.

## QUALITY ASSURANCE

In 2022, a UT programme based on the European Approach was approved for the first time by the Accreditation Organisation of the Netherlands and Flanders (NVAO). This was the [Master of Science in Cartography](#) joint degree programme, which we jointly provide with the technical universities of Dresden, Munich and Vienna. The Bachelor of Creative Technology we established together with VU Amsterdam has also been accredited by the NVAO.

The Risk Management, Electrical Engineering and Industrial Engineering Management programmes all received positive assessments for the consolidation of their accreditation systems. We prepared for the external reviews of the Educational Science & Technology, Embedded Systems, Spatial Engineering (including the special accreditation for internationalisation) and Sustainable Energy Technology programmes. External review procedures were launched for the following programmes: Philosophy of Science, Technology & Society, Management, Society & Technology (including the Joint Degree with Wageningen University & Research), and Business Information Technology. The Health programmes conducted midterm reviews in 2022. The review committee's assessment will contribute to the further development of these programmes.

In addition to the quality assurance of the educational programmes, a follow-up has also been initiated to the preparatory year we offer with our partner Navitas ([Twente Pathway College](#)). UT co-authored the preparatory year quality framework, which was adopted in 2022. Amongst other things, this framework regulates the national admission criteria and cooperation with external parties and agents. In response to this, we have tightened the admission requirements for the preparatory year to further improve quality. In addition, an external consultant conducted an evaluation based on which we and Navitas are making changes to the curriculum to ensure a better fit with the UT learning environment. For example, the Academic Language Skills lesson plan has been updated and our UT Language Centre ([UTLC](#)) has also adopted these changes to help improve the students' proficiency in English.

As part of a Ministry of Education, Culture and Science experiment, students can obtain a level 2 teaching qualification during their master's if they successfully complete the [Educational Module](#) of 30 ECTS credits. In combination with a bachelor's degree, the certificate qualifies the student to teach a subject related to the bachelor's degree subject at the VMBO-T (pre-vocational secondary education) level and to the first three years of senior general secondary education (HAVO) and pre-university secondary education (VWO). Three students participated in the Educational Module in the 2021-2022 academic year. The same qualification can also be obtained by taking the [Learning to Teach](#) (Dutch) minor. In 2021-2022, 57 students were enrolled in this minor. This high number may explain the relatively small number of students taking the Educational Module.

In the area of research, the national Strategy Evaluation Protocol for research reviews has been translated to the UT context. The development of the strategy and its monitoring and evaluation at the faculty level have been embedded in a research quality assurance cycle. Here, we are still looking for the ideal combination between qualitative, narrative and quantitative information and indicators. In 2022, UT and the other Dutch universities signed the European Agreement on Reforming Research Assessment. This agreement was drafted by the European Commission, European University Association (EUA) and Science Europe and focuses on implementing a better, more effective, more efficient and more inclusive research system. The agreement embeds the objectives of the national Recognition & Reward programme at the international level.

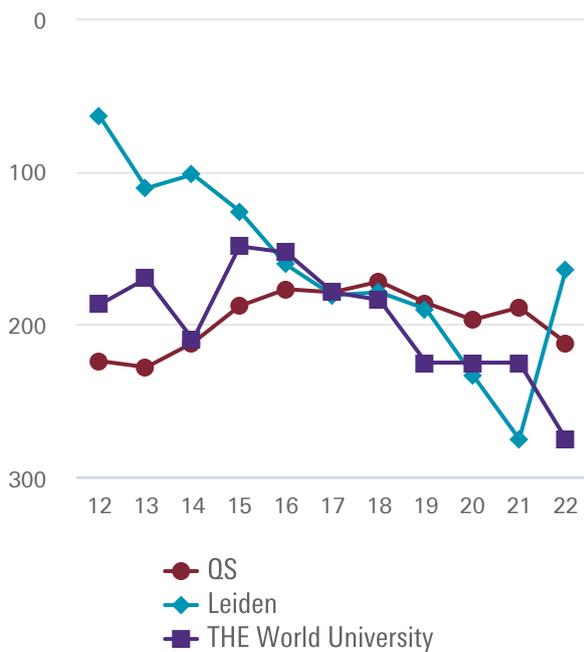
Reviews of the Faculty of Science and Technology and the electrical engineering discipline were prepared in 2022. Four external review reports were published in 2022:

1. Research at the Faculty of Behavioural, Management and Social Sciences is characterised by a focus on social relevance, impact and community engagement. The committee recommends maintaining a continued focus on fundamental research and strengthening this internationally. Read the full [report](#).
2. The committee concludes that part of the [computer science](#) research (Faculty of Electrical Engineering, Mathematics and Computer Science) is of high quality. However, the amount of second- and third-stream funding and the number of PhDs completed were below par in the period assessed. The committee advises the faculty to focus on obtaining more external funding, increasing the number of PhD's completed and improving the gender balance.

3. The committee that visited the mathematics department (Faculty of Electrical Engineering, Mathematics and Computer Science) appreciated the healthy mix of fundamental and multidisciplinary application-oriented research and the modern interaction between mathematics, applications and society. The research quality has been assessed as very good and the committee also praised the department's plans for the future. Read the full [Mathematics Research Review](#).
4. The committee is positive about the Faculty of Geo-Information Science and Earth Observation (ITC)'s international leading position in the fields of remote sensing and spatial analysis. The increasing emphasis on research (in addition to education) is appreciated, as is the commitment to socially and scientifically relevant topics. Recommendations include developing a clear vision and strategy, working on long-term programmes, focussing on global challenges (rather than short-term projects and local issues) and committing to reducing the time spent on obtaining a PhD. Read the full [ITC evaluation report](#).

In 2022, the national science and engineering sector plan committee visited the University of Twente. The committee discussed the monitoring of the implementation of the sector plans. Information was exchanged and the committee met the newly appointed sector plan team and provided valuable feedback. Following the evaluation, it was decided to allocate the sector plan funds until 2024 in line with the current plans.

## Rankings



We aim to measure impact in all dimensions. Traditional rankings have had limited success in this regard. Nevertheless, they provide some insight into our position relative to other institutions. QS and the THE World University Ranking rank universities around the world based on selected performance indicators in education and research. The Leiden ranking is based on the normalised citation impact of UT's publications. In addition to the traditional rankings, UT participated in the THE impact ranking for Sustainable Development Goal 9 ('industry, innovation and infrastructure'). UT increased its ranking to a shared first position. This ranking is based on patents, spin-offs and industry research income.

# GOVERNANCE

We live up to the general principles of good governance, as laid down in the [Code of Good Governance for Universities](#). We do not deviate from any of these principles. The Executive Board is responsible for the management and administration of the university. This includes effective and transparent participation for personnel and students (see [annex](#)). The Supervisory Board is responsible for the internal supervision of the university's Executive Board. Organisational charts, information about the various units and consultation structures are shared in the [annex on organisational structure](#). The annexes also contain an overview of the [ancillary positions held by members of the Executive Board and Supervisory Board](#) and of the [expense statements submitted by members of the Executive Board](#).

## GOVERNANCE AGREEMENT AND MEMORANDUM OF CLARITY

The substantive national objectives are to strengthen the foundations, make space for talent and increase social impact. These are set out in the [2022 governance agreement](#) (Dutch) for higher education and science. Our contribution to these objectives is shared in an [annex](#). We provide an insight into the interpretation and application of the funding rules in the [Memorandum on Clarity](#) (Dutch) in the funding of higher education. We have [listed](#) the themes from the memorandum in an annex. In 2022, national discussions were held regarding the exact requirements concerning the investment of public funds in private activities.

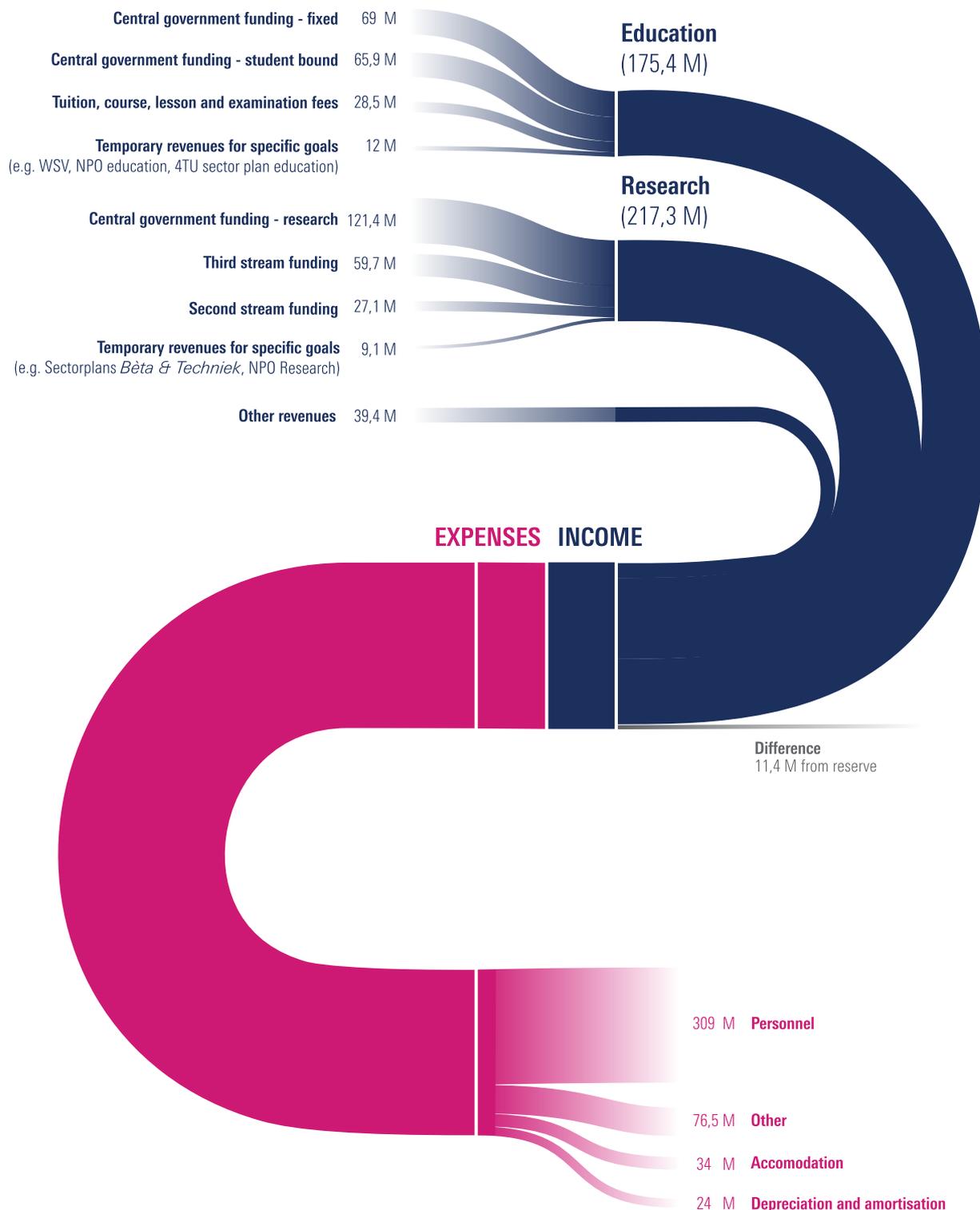
## QUALITY AGREEMENTS

The introduction of the loan system has made extra money available to improve the quality of education. This is being spent in accordance with the [quality agreements](#) (Dutch). The University of Twente's quality agreements were established in 2018 and developed using a bottom-up approach. The University of Twente has developed its plans as five institution-wide programmes: *Community building*, *Learning facilities*, *Teaching professionalisation*, *Global citizens* and *Talent development*. The Accreditation Organisation of the Netherlands and Flanders carried out an interim evaluation in 2022, after which we received a positive assessment in the autumn. In an [annex](#) we account for the way in which the resources are being spent.

## ABOUT COVID

At the start of 2022, the Netherlands was still in lockdown due to the COVID pandemic. Restrictions were imposed by the government to slow down the spread of the virus. These were lifted in February, following a gradual relaxation. Between June and November, the Integrated Safety Team drew up plans to prepare for a possible new outbreak. We made use of various COVID-19-related funding instruments to deal with the effects of the pandemic. For example, the University of Twente received funds from the National Education Programme (NPO) for the recovery and development of education during and after the pandemic. In 2022, researchers also received resources from the governance agreement on a support programme for research recovery and perspectives. The funds from the NPO began to be spent in 2022. The actions concerned can be found throughout this annual report, and in an annex there is also an [integrated text](#) on the NPO and the impact that the pandemic had on the University of Twente.

# WHAT IS COMING IN AND WHAT IS IT BEING SPENT ON?



Source: UNIT4

# FINANCIAL ANNUAL REPORT

## DEVELOPMENT OF RESULTS

UT generated negative normalized result of € 5.2 million in the 2022 reporting year with negative consolidated comprehensive income of € 11.4 million.

A deficit of € 7.6 million had been budgeted. The difference between this budgeted deficit and the negative normalised income of € 5.2 million is € 2.4 million positive. Labour market shortages made it more difficult to fill vacancies. This resulted in lower average establishment level and hence lower-than-budgeted personnel expenses.

The table below reconciles the normalised income of € 5.2 million negative with the consolidated comprehensive income of € 11.4 million negative.

Composition of result (in €m)	2022	
<b>Normalised income 2022</b>		<b>-5.2</b>
<b>Results from exceptional items</b>		
- Rise in energy costs	-11.1	
- Increase in leave hours not taken	-3.5	
- Additional 2021 income of Universiteit Twente Holding B.V.	-0.1	
- Pro rata tax refund	0.2	
- Non-recurring 2022 income of Universiteit Twente Holding B.V.	8.3	
<b>Total income from exceptional items</b>		<b>-6.2</b>
<b>Net income 2022</b>		<b>-11.4</b>

The analysis of UT's 2022 consolidated income is as follows:

Balance of income and expenses (€m) - consolidated	Actual 2022	Budget 2022	Actual 2021	Budget 2021
Faculties	-8.8	-2.3	5.4	-1.8
<b>Total primary process</b>	<b>-8.8</b>	<b>-2.3</b>	<b>5.4</b>	<b>-1.8</b>
Support departments	-0.5	-0.8	-0.6	0.0
Central UT unit	-10.7	-4.7	-4.5	-5.4
Affiliated companies and minority interests of university	8.6	0.2	-0.7	-0.6
<b>Total income</b>	<b>-11.4</b>	<b>-7.6</b>	<b>-0.4</b>	<b>-7.8</b>

The financial statements of the 100% subsidiary Universiteit Twente Holding B.V. will be adopted after the final adoption of the financial statements of UT. Hence it is possible that the final results of Universiteit Twente Holding B.V. for a financial year will differ from the results included in the consolidated UT financial statements. Any difference will be accounted for in the UT figures in the following financial year.

## DEVELOPMENT OF KEY FIGURES

The key financial figures present the following picture:

Key financial figures	Consolidated		Single-entity		
	Actual 2022	Actual 2021	Actual 2022	Actual 2021	Target
Solvency 1	0.35	0.38	0.35	0.39	0.35
Solvency 2	0.37	0.41	0.37	0.42	0.35
Liquidity (current ratio)	0.80	1.04	0.74	1.00	1.00
Liquidity (quick ratio)	0.79	1.04	0.74	1.00	1.00
Buildings ratio	0.12	0.10	0.11	0.00	0.12
Endurance equity ratio	0.38	0.44	0.39	0.44	N/A
Profitability	-2.64	-0.05	-4.77	0.05	0.00

*Solvency 1 = equity / total assets*

*Solvency 2 = (equity + provisions) / total assets*

*Liquidity (current ratio) = current assets / current liabilities*

*Liquidity (quick ratio) = (current assets – inventories) / current liabilities*

*Buildings ratio = (building expenses + depreciation of buildings and grounds) / total expenses*

*Endurance equity ratio = equity / total income*

*Profitability = (result from ordinary activities / total income from ordinary activities) x 100%*

### SOLVENCY

For solvency, UT applies an internal range of 0.30 to 0.40 with a target of 0.35. Single-entity solvency 1 was 0.35 at the end of 2022 and single-entity solvency 2 was 0.37 at the end of 2022. Both values are therefore at or just above the target level.

### SIGNALLING VALUE FOR PUBLIC EQUITY

From the 2020 financial year the Ministry of Education, Culture and Science introduced a signalling value for public equity. This makes it possible to set a signalling value for excessive equity for each educational institution.

The normative public equity calculated for UT in the 2022 financial year is € 445.8 million. UT's actual public equity at the end of 2022 was € 142.4 million. This means UT does not have excessive equity.

The normative public equity is determined on the basis of the formula  $(0.5 \times \text{cost of buildings} \times 1.27) + \text{carrying amount of remaining tangible fixed assets} + (\text{size-dependent calculation factor} \times \text{total income})$ , with the size-dependent calculation factor for UT being 0.05.

### LIQUIDITY

For analysis purposes, the Ministry of Education, Culture and Science has specified a range of 0.75 to 1.5 for the liquidity ratios with effect from the 2022 financial year (2021: 0.5 to 1.5). UT also uses this range, combined with a target of 1.0. Both the current ratio and the quick ratio for the single entity amounted to 0.74 at the end of 2022, whereas both ratios were still at the target level of 1.0 at the end of 2021.

UT applies a liquidity target of € 25 million. In the single-entity balance sheet UT remains above this target with net cash and cash equivalents of € 92.8 million (end of 2021: € 122.1 million).

## BUILDINGS RATIO

For the ratio of building expenses including depreciation of buildings and grounds to total expenses, UT applies its own target of 12%, but the ratio should in any case remain below the Ministry of Education, Culture and Science's standard of 15%. With a single-entity level of 11%, UT fulfilled both requirements at the end of 2022.

## ENDURANCE EQUITY RATIO

UT's single-entity endurance equity ratio decreased to 0.39 in 2022 compared to 0.44 in 2021. UT assesses this key figure in relation to the signalling value of 0.05 applied by the inspectorate of the Ministry of Education, Culture and Science.

## PROFITABILITY

UT applies a multiannual target for profitability. In one year it may reach a minimum of -0.10, provided it reaches -0.05 in two years and 0.00 in three years.

Single-entity profitability in 2022 was -4.77. In 2021, the single-entity profitability was 0.05.

The above key figures play an important role in the assessment of UT's financial continuity.

## FINANCING OF REAL ESTATE / TREASURY STATUTE

UT has concluded a financing agreement with the Ministry of Finance for the financing of its real estate. The facility originally comprised a 30-year loan of € 150 million and an overdraft of € 21 million. The remainder of the loan principal, drawn in three tranches, amounted to € 92.0 million at the end of 2022, € 5.3 million of which was due for repayment within one year and is recognised as a current liability in the balance sheet. Two tranches of the financing agreement have an end-date of 3 January 2039 and the third has an end-date of 2 January 2041.

The credit from Bank Nederlandse Gemeenten at the end of 2022 totalled € 2.0 million (2021 € 2.1 million), € 0.2 million of which was recognised as a current liability in the balance sheet.

Loans drawn from credit institutions as at 31 December (€m) - consolidated total current and non-current	2022	2021
Ministry of Finance	92.0	97.3
Bank Nederlandse Gemeenten	2.0	2.1
<b>Total loans from credit institutions</b>	<b>94.0</b>	<b>99.4</b>

## POLICY AND IMPLEMENTATION

The conditions governing the policies and processes involved in managing, controlling and monitoring UT's financial position and cash flows are laid down in a treasury statute, which was adopted by the Executive Board on 29 May 2017 and has been approved by the Supervisory Board. This statute complies with the 2016 investment, loans and derivatives regulations of the Ministry of Education, Culture and Science.

In its treasury statute, UT applies two standards for the management of interest rate risks. This prevents excessively large fluctuations in interest expenses, in both the short term and long term. A cash limit is set and applied with regard to the short-term risk position and an interest rate risk standard is set and applied with regard to the long-term risk position.

## CASH LIMIT 2022

The cash limit is a management and accountability tool to limit the interest rate risk on current liabilities with a fixed interest term of less than one year. The permitted size of the cash limit is based on the size of the annual budget as at 1 January. The size of the cash limit is set at 20% in UT's treasury statute. This percentage is derived from the Decentralised Government Financing Act. Finally, the calculated amount is assessed against the actual level of the cash limit. If the actual level is lower than the permitted level, headroom is available. If the actual level is higher, there is an excess.

The current short-term financed debt in 2022 has been determined as follows:

Short-term variable-interest loans 2022 (€m) - Single-entity		Position at end			
		Q1-2022	Q2-2022	Q3-2022	Q4-2022
MinFin - variable 3-month Euribor	a				
Swaps	b				
<b>Current short-term financed debt</b>	<b>c=a-b</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Cash limit 2022 (M€)					
Size of budget 2022	d	430.3	430.3	430.3	430.3
Permitted cash limit: % of base	e	20%	20%	20%	20%
<b>Permitted cash limit: amount</b>	<b>f=d*e</b>	<b>86</b>	<b>86</b>	<b>86</b>	<b>86</b>
Current short-term financed debt	c	0	0	0	0
Current account credit balances	g	112	128	104	93
Other outstanding funds	h	0	0	0	0
<b>Total net current debt</b>	<b>i=c-g-h</b>	<b>-112</b>	<b>-128</b>	<b>-104</b>	<b>-93</b>
Permitted cash limit	f	86	86	86	86
<b>Headroom</b>	<b>j=f-i</b>	<b>198</b>	<b>214</b>	<b>190</b>	<b>179</b>

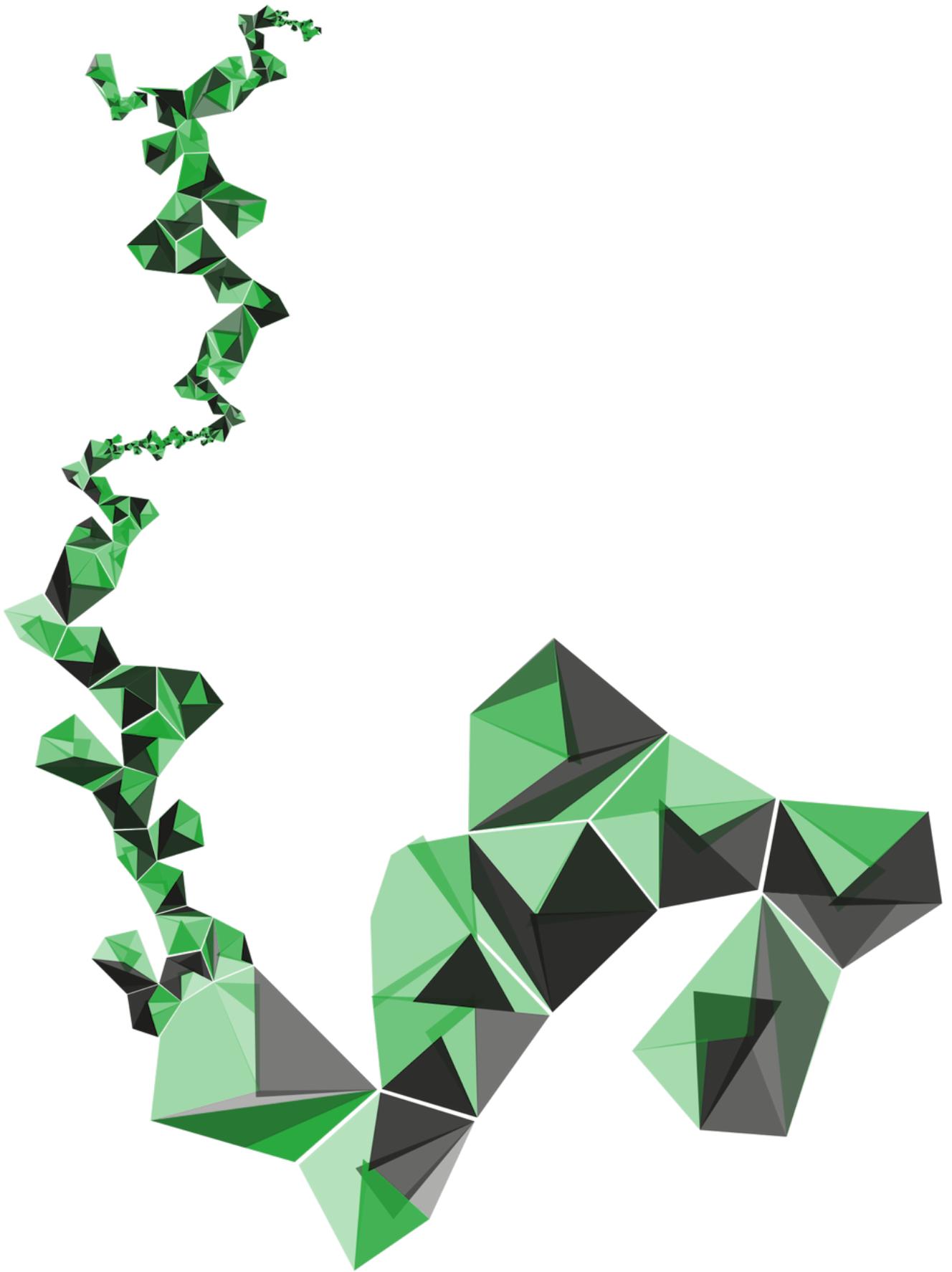
The above table shows that UT remains within the permitted cash limit.

## INTEREST RATE RISK STANDARD 2022

The aim of the interest rate risk standard is to limit the interest rate risk on fixed debt. This standard sets a framework for the long-term loans to be structured in such a way that the interest rate risk arising from interest rate adjustments and loan refinancing is sufficiently limited. In UT's treasury statute, the maximum percentage that may be refinanced or subject to an interest rate adjustment each year is 20%.

Interest rate risk on fixed debt (€m) - Single-entity		2021	2022	2023	2024	2025
Interest rate review on fixed borrowing	a	39.4				45.0
Interest rate review on fixed lending	b					
<b>Interest rate review on fixed debt</b>	<b>c=a-b</b>	<b>39.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>45.0</b>
Newly raised debt	d					
Newly issued long-term loans	e	0.2	0.0	0.0	0.0	0.0
Net newly raised fixed debt	f=d-e	-0.2	0.0	0.0	0.0	0.0
Repayments	g	5.3	5.3	5.4	5.4	5.4
Refinancing	h=lowest f/g	-0.2	0.0	0.0	0.0	0.0
Interest rate risk on fixed debt	i=c+h	39.2	0.0	0.0	0.0	45.0
Fixed debt as at 1 January	j	102.5	97.3	92.0	86.7	81.4
Set %	k	20%	20%	20%	20%	20%
<b>Interest rate risk standard</b>	<b>l=j*k</b>	<b>20.5</b>	<b>19.5</b>	<b>18.4</b>	<b>17.3</b>	<b>16.3</b>
Interest rate risk on fixed debt	m=i	39.2	0.0	0.0	0.0	45.0
<b>Headroom</b>	<b>n=l-m</b>	<b>-18.7</b>	<b>19.5</b>	<b>18.4</b>	<b>17.3</b>	<b>-28.7</b>

The calculated interest rate risk standard and headroom are based on the fixed debt as at 1 January. The negative headroom in 2021 was due to the fact that two loan components were placed back in the market in January 2021. The above table shows that for the years 2022 to 2024 inclusive, the specified interest rate risk standard is met, with no interest rate risk being identified. The expected negative headroom in 2025 is due to the fact that the interest rate on one loan component is scheduled to be revised in January 2025.



# SHAPING IN 2022

In the period 2020-2022, six Shaping Expert Groups (SEGs) connected initiatives and colleagues in order to help achieve the Shaping2030 goals across the organisation. In their final product, the SEGs reflect on what they have achieved and also provide the organisation with suggestions and pointers for the next steps.

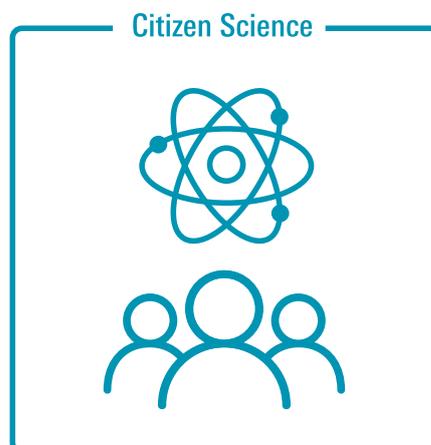
## INNOVATION OF EDUCATION (IOE)

The SEG was active in various educational domains and acted as a sounding board on themes such as LLO and CBL. To guarantee this function, the SEG recommends continuing this with a new university-wide Educational Innovation Platform that is connected to the University Education Committee (UCOW).



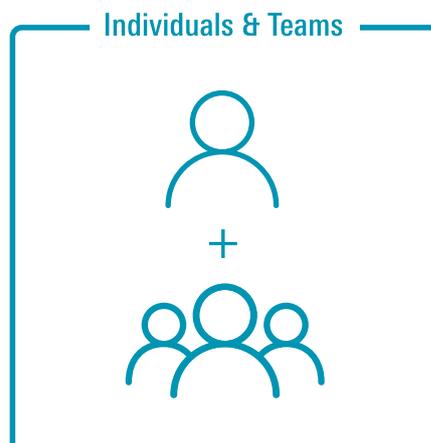
## CITIZEN SCIENCE

The SEG investigated how the University of Twente can generate the most impact in the field of Citizen Science. Here, too, a coordinating committee is lacking within the University of Twente. For this reason, the SEG recommended setting up a Citizen Science core team based at Designlab. A proposal to this effect has been approved by the Executive Board. This has meant an expansion of expertise in co-shaping social changes and designing the future.



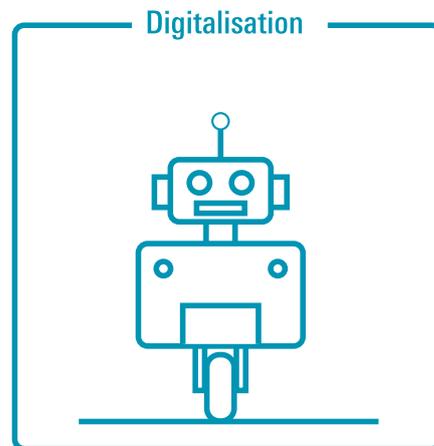
## INDIVIDUALS & TEAMS

This SEG operated in line with the national programme of recognition and reward. The work of the SEG has shown that this is alive and well at the University of Twente, but that more can and, indeed, must be achieved. The SEG's recommendation of establishing a Recognition & Reward (R&R) team has already been taken up. This team focuses on formulating talent development policies, translating criteria and ideas into staff workflow processes, and developing R&R policies for support staff.



## DIGITALISATION

The SEG has drawn up a roadmap for digitisation that will serve as a guide for the university over the next few years. The roadmap sets out the goals in each domain and the actions required to achieve those goals. The completion of the SEG marks the start of an IT strategy board.



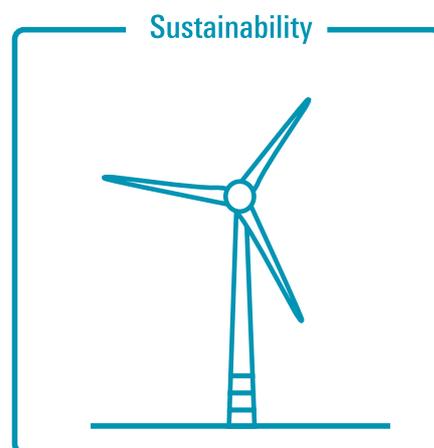
## INCLUSIVITY

The action points provide a broad picture of the current state of inclusivity at the University of Twente and the opportunities for improvement. The final report has been handed over to the DE&I team that is following up on these action points. The action points relate to themes such as individual awareness and skills, behaviour; interpersonal communication and interaction; findability and quality of support; structural barriers and organisational culture.



## SUSTAINABILITY

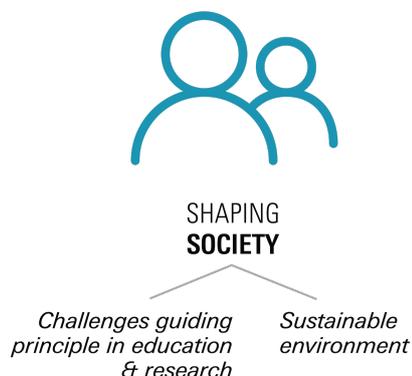
Initially, the SEG focussed on bringing together various ongoing initiatives. On this basis, it drew up advice to make climate an embedded priority. This advice was followed up with a proposal for the UT Climate Initiative, a coordinating lead team that will work on this theme as a long-term priority for the University of Twente.





# SHAPING SOCIETY

Our first pillar is about combining disciplines in order to have an impact on society. In doing so, we anticipate challenges in society and help address them through education and research. We do this by means of an organisation that is sustainable, in terms of both our own operational management and the academic subjects on which we focus.



Read more about the themes of Shaping Society:



EDUCATING STUDENTS FOR TODAY'S CHALLENGES



EDUCATION BEFORE AND AFTER UNIVERSITY



RESEARCH THAT MAKES A DIFFERENCE



DEMAND-DRIVEN IMPACT ON SOCIETY



CONTRIBUTING TO THE DEBATE IN SOCIETY



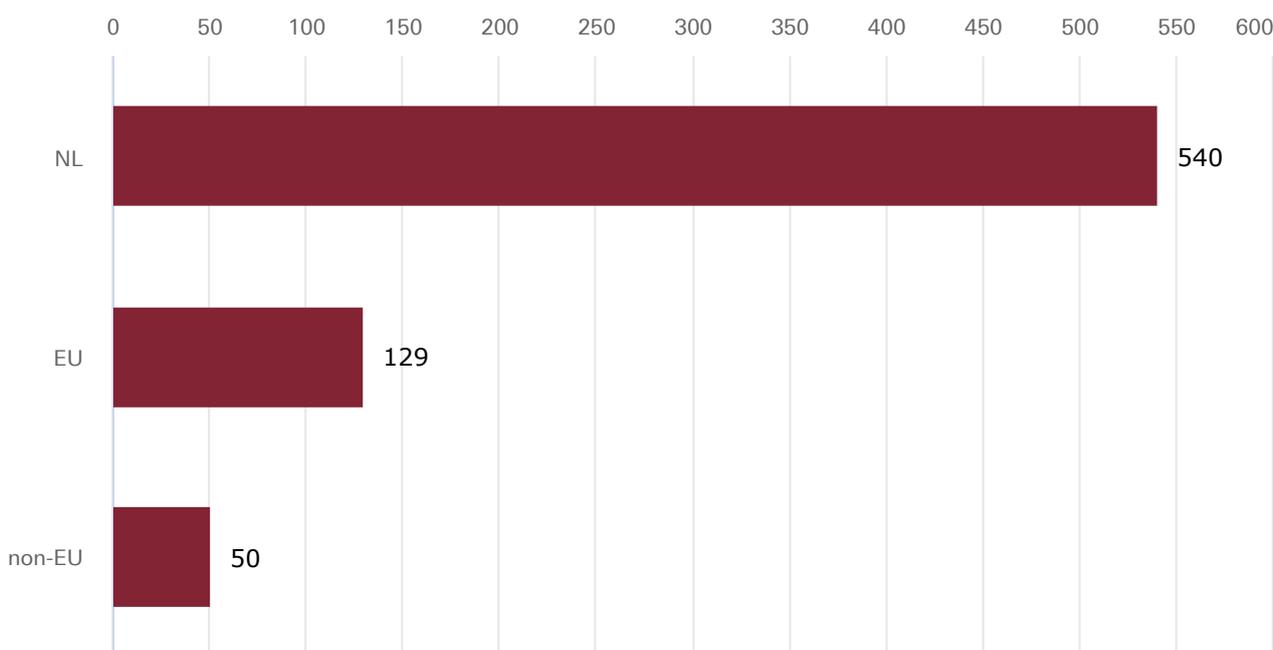
A SUSTAINABLE INSTITUTION

# EDUCATING STUDENTS FOR TODAY'S CHALLENGES



Today's labour market requires well-qualified, academically trained technicians. The University of Twente teaches its graduates to understand the interaction between science, technology and society, and to use their knowledge and skills to solve social challenges anywhere in the world. The [annex Educational programmes \(CROHO/RIO\)](#) provides an overview of all educational programmes. These programmes give students the opportunity to immerse themselves in the relevant disciplines and skills. Electives also provide additional opportunities for students to broaden their knowledge. The number of opportunities to do this is increasing. This year, for example, a new minor was launched: *Going Dutch: Kickstart your Dutch Work Life*.

## Internships 2021-2022



Source: Mobility Online

In addition to completing an internship in the Netherlands or abroad, participating in an exchange programme is another learning instrument at the boundary between science, technology and society. We will return to this in [Shaping Connections](#) and [Shaping Individuals](#).

Our education includes Challenge-Based Learning (CBL), a concept in which students work on challenges from society.



*Robotics-event*

The recently launched Master of Robotics uses CBL as an integral part of the programme. CBL is also at the core of ECIU University. In its first implementation phase (which ended in 2022), 1,100 students and 150 lecturers at the University of Twente were actively involved in CBL. Through an ECIU@UT call, 26 proposals for the development of CBL have been honoured. These projects have also helped to identify programme bottlenecks and show how these can be resolved. Learning communities have been set up and training courses and workshops have attracted many participants. Teaching & Learning Fellows, trained as part of 4TU, have been working to continue supporting the

concept in the workplace. In addition, three participants in the Senior Teaching Qualification (SKO) programme have carried out research focussing on CBL. In 2022, people across the university acquired experience in CBL, particularly at the Master's level, as a result of which a large proportion of our students are already familiar with it.

Social themes are reflected in various ways in and alongside the programme, such as in the drones Creathon. The central element here was an assignment provided by the Netherlands Police and TNO regarding the societal acceptance of drones. How can we ensure that people view the use of drones by the police in a more positive light? Space53, a local partnership platform that includes public-sector bodies, knowledge institutions, first responders and businesses, also aims to make Enschede into Europe's drone capital. What steps can the municipality take to achieve this? And what would it ultimately mean? How do smart cities deploy sensors in an effective manner? How do we ensure that sensors in public space are used ethically? The students enthusiastically tackled all these questions during the Creathon.

Other examples include the video made by students of the Working Group Developmental Technologies (WOT) and the article published by four students of Technical Medicine. The first example is a video that explains how to access a water source using a drill. The counter currently stands at over 1.7 million views. The second example is an article in the American Journal of Respiratory and Critical Care in which the students discuss the model they developed that could be used to predict at which angle COVID-19 patients need to lie in order to be ventilated as effectively as possible.

Today's challenges also require entrepreneurship. Popular educational programmes in this field include the tracks in Computer Science and Interaction Technology, which have been offered as a double degree within the EIT Digital Master School since 2011. The master's programme combines technology with innovation and entrepreneurship. Every year about 25 students take part in these tracks. To date, EIT has awarded almost 200 UT double degree diplomas.



### **RESPONDING TO THE LABOUR MARKET**

One of the most important functions of a university is to provide students with a good academic education that enables them to think critically and independently. At the same time, the labour market requires technical personnel who have completed the relevant technical education. This means that a fine balance is required in every educational programme between upholding academic values while also giving students the right skills to respond adequately to the needs of the labour market.

A healthy balance is also needed between the demand for highly skilled workers and the number of students who can take part in a high-quality educational programme. For this reason, three additional instruments were deployed concerning [admission](#) in 2022. The Bachelor of Mechanical Engineering in Enschede and Amsterdam, the Bachelor of Creative Technology in Enschede and Amsterdam and the Bachelor of Advanced Technology all include compulsory selection and study choice check activities. Additionally, a numerus clausus was introduced for the programmes in Psychology (400 places), Technical Medicine (150 places) and Technical Computer Science (400 places). Finally, the Bachelor's in ATLAS also features a selection procedure due to its special feature of intensive, small-scale tuition.

Our educational programmes are rising in the rankings. The programmes in Applied Mathematics, ATLAS, Communication Science, Industrial Engineering and Management and Applied Physics programs were all awarded the 'top programme' distinction. Twelve other educational programmes were rated the best in their field. In the Keuzegids ranking of other universities, the University of Twente has risen to third place after Wageningen University & Research and the Open University. See: [University of Twente in strong position once again in Keuzegids university ranking](#). In the Keuzegids ranking for master's programmes, we are now ranked third amongst all the regular full-time universities, after Maastricht University and Eindhoven University of Technology. See: [University of Twente ranks near the top in new Keuzegids Masters ranking](#).

# EDUCATION BEFORE AND AFTER UNIVERSITY



The University of Twente sees the whole education chain as important. After all, teachers in primary and secondary education are responsible for preparing students who will go on to study at our institution. Equally, learning does not stop after a student is awarded a degree. We therefore want to support our alumni with a lifelong learning offer, and ongoing training is also essential for other groups to keep up with the labour market.

At the other end of the education chain, we work with dozens of schools in the east of the Netherlands on educational and professional development programmes for pupils and teachers. The Pre-U Junior programme, which is designed for primary schools, is a science hub that strengthens science and technology in primary education. Meanwhile, the Pre-U programme, which is designed for secondary schools, resumed its full activities in 2022 following the pandemic. It has helped over 4,000 pupils at 26 regional secondary schools to prepare for higher education. Its educational activities took the form of master classes, workshops, web classes and e-learning. In addition, there were events such as the Twenthe Maths Relay, the InspireU summer camp and the Night of the Nerds. One characteristic of the UT/Pre-U programme is the high degree of commitment from the student assistants who act as supervisors and role models when developing and carrying out the activities. Both programmes received a good rating (7.2-8 on a scale of 10). Furthermore, in 2022, the Pre-U of the 4TU institutions will launch a partnership for an online education pilot to develop engineering skills within the secondary education curriculum. The Pro-U programme provides a link between the university's expertise and that of teachers in secondary education.

At the other end of the educational chain is lifelong development. In 2022, the recommendations from the 2021 roadmap were translated into concrete activities that will be rolled out from 2023 onwards. The University of Twente aims to integrate lifelong development as a fully-fledged pillar of the university's education based on a distinctive profile; training professionals to work on the challenges of today and tomorrow and the interaction between technology and society. Over the years to come, the faculties and institutes will expand and enhance the range of lifelong development activities that they offer. In terms of processes, the focus is on facilitating the intake for lifelong development: building systems and infrastructure around administration, communication and developing business cases and costing.



## THE EDUCATION CHAIN

Society requires professionals with a technical education and academically trained engineers. How can we educate the kind of graduates that our labour market needs in this area? It is becoming ever clearer from the social debate that it is important to approach the education chain as a whole. After all, the engineers of the future are currently in primary or secondary education. This is a challenge that we are working on with our 4TU partners. Another issue is the shortage of teachers in primary education. The University of Twente's teacher training programmes place it at the heart of the response to this issue. Together with schools, social institutions and companies, we are committed to tackling the teacher shortage.

# RESEARCH THAT MAKES A DIFFERENCE



The domains of Healthy Living & Better Healthcare, Connected Communities and Sustainable Environment have a central place in our research. Within these, we focus on the themes of Shaping our world with smart materials; Improving health care by personalised technologies; Engineering for a resilient world; Engineering our digital society and Creating intelligent manufacturing systems.

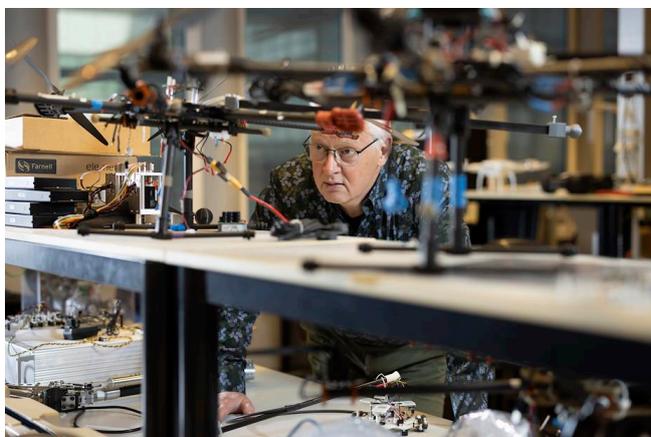
## STRENGTHENING THE FOUNDATION

The university's academic organisation was strengthened in various ways in 2022; the number of academic staff increased and new professors were appointed (see annex on [inaugural lectures and farewell speeches](#)). Almost all the positions in the sector plans for science and technology were filled in 2022. The 2022 governance agreement created scope for new, additional sector plans. Although these sector plans relate primarily to strengthening the foundation disciplines, they also focus on societal challenges. The University of Twente is involved in the sector plans for Social Sciences & Humanities, Science II (earth and environmental sciences) and Technology II with additional scientific domains. The university receives more than € 2.8 million annually to contribute towards these domains. An additional investment of € 140 million in total is expected in 2023. This means a total structural investment of € 200 million into the scientific foundation of the Netherlands by the Ministry of Education, Culture and Science.

The University of Twente also receives a budget for starters and incentive grants. However, the budget promised by the Ministry of Education, Culture and Science is insufficient to fund every researcher who qualifies for a grant. This means, of course, that choices have to be made with respect to allocation. As such, it is important to focus on the objective of the instrument – namely to reduce workload and strengthen independent research – and, moreover, to determine how the resources are to be distributed in a fair and transparent manner.

## SCIENTIFIC AND SOCIAL IMPACT

The University of Twente generates impact through its fundamental scientific research. In 2022, 2,431 peer-reviewed publications were published in the form of articles, conference contributions and books in the social domains in which we are active. The ChipTech Twente cluster underwent further development in 2022. The semiconductor shortage may seem like a minor problem in the context of other global crises, but it has many aspects and includes a geopolitical component. The EU aims to reduce its dependence on Asia and the US for its supply of microchips. Twente is emerging as a centre for photonics and semiconductors, and aims to contribute to European productivity by developing its chip sector.



*Robotics*

In the new Robotics Centre, we bring together scientific knowledge and social knowledge, and integrate human-oriented robotics in a safe, ethical and effective manner. The Robotics Centre is an initiative of the Faculties of EEMCS and ET, but also partners actively with other faculties and research institutes at the university. The centre brings together researchers, students and partners in industry and society to take the next steps in robotics solutions in the fields of medicine, industry and society. The Fraunhofer Innovation Platform for Advanced Manufacturing was built in 2022. It was set up to support the manufacturing industry in the digital transition and innovation towards Smart Industry and Industry 4.0. Its core activities are application research, demonstrators and knowledge transfer. This test-before-invest facility offers manufacturing companies a host of opportunities for industrial research projects.

A selection of our externally financed projects:

- In 2022, several Growth Fund proposals were honoured in which the University of Twente is a partner. These included NXTGEN high tech, PhotonDelta, Einstein Telescope and Impulse Open Learning Material. Guus Rijnders, Timo Meinders, Marcel ter Brake and Ton de Jong coordinate the University of Twente's representation in these programmes. In addition, there were awards for contributions to Sustainable Materials NL, the Water Technology Growth Plan, NL 2120, the Green Earning Capacity of NL and the Aviation in Transition project. This strengthened the High Tech and Materials, Agriculture-Food-Land-Water and Mobility sectors.
- In addition, we have become a partner in two new research programmes for which we, as a co-applicant, are receiving a Gravitation Grant from the Netherlands Organisation for Scientific Research. Alexander Brinkman is involved in QUMAT, which focuses on new materials with stable quantum states. This enables existing methods of data processing to be made more powerful and energy-efficient. Matthijs Noordzij is involved in Stress-in-Action: advancing the science of stress by moving the lab to daily life. Stress-related diseases can be prevented by exploring responses to stress in greater detail.
- The Arise project is about a sustainable living environment. In this project, we are building infrastructure together with other parties to identify and monitor every species of multicellular flora and fauna in the Netherlands. The first pilot version will be achieved at the end of 2022. The project is co-financed from NWO's National Roadmap for Large Scientific Infrastructure.

Revenue from second-stream funding fell from € 29 million in 2021 to € 27.1 million in 2022. Revenue from third-stream funding rose from € 59.3 million in 2021 to € 59.7 million in 2022. Revenue from both funding flows combined fell by € 1.5 million from € 88.3 in 2021 to € 86.8 million in 2022.



### THE PRESSURE TO APPLY FOR FUNDING

How much time should be spent on applying for research grants? It is important for the University of Twente to increase its revenue from external funding, and researchers are largely dependent on external funds for research funding. However, applying for this funding is time-consuming and the success rate is low. To determine which funding instruments offer the best opportunities, the results of previous applications were analysed. The starters and incentive grants provide some relief from the pressure to apply for funding.

## IMPACT AND ENTREPRENEURSHIP

We use this scientific foundation to generate impact. The economic impact of research done by the University of Twente was the main theme of a [report](#) drawn up for 4TU by the Biggar agency. In 2022, the economic impact of our research in 2021 was estimated using relevant data. That year, the University of Twente accounted for € 2.2 billion in gross added value and 18,690 additional jobs in the Netherlands. Every € 1 of public money spent by the University of Twente generates € 8 for the Dutch economy. Approximately half of this is due to the direct economic effects of the university and half is due to the added economic value of education, research and valorisation.

A proof of concept is one of the steps in transforming a new invention into a product: it focuses on the feasibility of a concept or idea, primarily in technical terms. The European Research Council (ERC) makes grants available to support this step in the development process. This involves testing the feasibility of ideas that have emerged from research previously funded by the ERC. These grants are reserved for inventions with "breakthrough innovation potential, the potential to drive innovation and business inventiveness and/or tackle societal challenges, and that the proposed expected outcomes are innovative or distinctive compared to existing solutions". Over the entire term of this funding, the University of Twente has received the [highest number](#) of all Dutch universities (20).

In 2022, six researchers from the University of Twente were awarded an ERC grant: David Fernandez Rivas, Jeroen Rouwkema, Stefano Stramigioli, Ivo Vellekoop, Wiebe de Vos and Alvaro Gomez Marin. The realisation of a proof of concept is helpful when applying for a patent. In 2022, the University of Twente was involved in 30 patent applications, slightly more than in previous years. Other grants are available to support the final steps towards the market. In 2022, 13 researchers from the University of Twente received a voucher through the grant scheme for Thematic Technology Transfer (TTT) (seven within MedTech and six at Smart Systems) and seven researchers were awarded a take-off voucher from NWO. Researchers can use these vouchers to validate their business case and thus accelerate their idea towards the spin-off phase.

The number of University of Twente spin-offs grew from five in 2021 to six in 2022. They are: ReCarbn BV, Aluvia Photonics BV, Superlight Photonics BV, Flux Robotics BV, FoamPrint3D BV and Impact! op onderwijs B.V. The Entrepreneurial Researcher Programme supports researchers who have an idea with spin-off potential. The programme helps participants to develop their knowledge and skills to convert the results of their research into a spin-off company. The themes addressed include business models, market research, intellectual property, pitching and financing.



### ALUVIA

Aluvia Photonics is a recent addition to the Twente photonics ecosystem. The technology, which was developed by University of Twente researchers Sonia Garcia Blanco and Ward Hendriks, enables the production of photonic integrated circuits that can be used in the ultraviolet wavelength range (~200 nm). This is useful in industries that use biochemical processes, metrology, UV lasers and quantum computing. Aluvia is the result of a development that began in 2015. In that year, Sonia Garcia Blanco was awarded an ERC Consolidator Grant for her research. In 2020, a European Proof-of-Concept grant followed, so that the results of the research, as described above, could be tested. In 2022, national and European funding was obtained to take the next step: an NWO Take-off Phase I grant and a Transition grant from the European Innovation Council (EIC). This last grant amounted to over € 2 million and was awarded for the purpose of validating the technology and developing a business case for going to market.



The Knowledge Transfer Office (KTO) has launched a pilot in which researchers' publications are reviewed for their commercial potential using an AI tool. Partly on this basis, 73 colleagues took part in the Entrepreneurial Research Bootcamps. A total of 26 researchers from the University of Twente completed the full Entrepreneurial Researcher Programme. One book by Twente researcher and entrepreneur David Fernandes Rivas on this subject deserves special mention: *Empathic entrepreneurial engineering*. The book is a guide to conceiving and developing a new technology or product based on empathy with people or sections of society that need better solutions.

Novel-T is a partnership between the University of Twente, Saxion University of Applied Sciences and the regional government, which helps new companies to emerge and grow and existing companies to innovate:

- The START boot camps, the Start-Up Talks and guest lectures were all organised in order to enhance the entrepreneurial skills of students and researchers. Some 4,619 students and 390 researchers have been involved. In addition, through programmes such as START, over 160 teams (from the student population) have been able to validate their business case and 38 new companies have been established. In addition, at least 51 start-ups and scale-ups set up in previous years have received support for further development by participating in START Advanced, but also through contact with investors at home and abroad. Examples include CES in Las Vegas, Collision in Toronto and Viva Tech in Paris. The Grow Programme helps successful start-ups to grow into strong companies.
- Novel-T also operates as part of 4TU (4TU Impact). One highlight was the joint visit to SLUSH, where the final of the 4TU Challenge took place. Over 180 people joined the mission to Helsinki. The start-ups involved from Twente were: Codesandbox, SAVR, Managescape, Greenzeen, Flux Robotics, 3D Medical and Pescheck. Other partners, such as REACH, Windesheim CFE, Adyen and Forward One, also took part.
- Novel-T connects the University of Twente with SMEs that are experiencing issues with innovation and expertise through the SMART desk. These organisations are linked to students from the University of Twente and Saxion University of Applied Sciences. In 2022, 182 requests were received, of which 167 were successfully matched. A total of 599 students from Saxion and the University of Twente got to work on these issues at the individual and team levels, through internships, graduation assignments, challenges and final projects. Some 85,718 research hours were spent on it, and 4,901 credits were issued. SMEs receive support from the Innovate GO programme, a programme for SMEs in which companies can work on a new product or service and bring this onto the market within a short period of time. In 2022, around 110 SME businesspeople collaborated on more than 85 new business cases.

More spin-offs that had already been established were successful in attracting investment capital in 2022.

- Quix Quantum, established in 2019, raised € 5.5 million in one investment round. The start-up is using this money to develop a quantum computer based on photonic technology. This will enhance computing power enormously. Later in 2022, Quix Quantum signed a contract with the German Aerospace Centre for the delivery of the first Universal Quantum Computer. This made it the first company in the world to sell a universal light-based quantum computer on a commercial basis.
- lamFluidics, the Twente spin-off that is developing technology to enable the production of small droplets and particles up to a thousand times faster, has received an investment of € 4 million.
- Robert Passier and his colleagues received a € 4-million grant from the EIC-Pathfinder Challenge. This will fund the development of a miniature beating human heart and human biorobots that are capable of swimming. It was awarded to a consortium that consists of two companies, River BioMedics (RBM, co-founded by Robert Passier) and NanoScale systems (Nanoss), the University of Twente and the University of Malaga (UMA).

# DEMAND-DRIVEN IMPACT ON SOCIETY



In challenge-based research, we work together with partners from society on the challenges they face. In 2022, the University of Twente began project-based testing of a new method known as 'responsible futuring', a specialisation of the DesignLab. This involves starting with the desired future social impact and thinking backwards to which action and research is required. Impact-driven research themes have been formulated using the impact-by-design approach on this basis. Groups of scientists are working on identifying the intended impact required when developing new education, research or valorisation activities. In addition, the ECIU virtual research institute SMART-ER is focussing on challenges that are related to sustainable cities (SDG 11) through 14 projects. The University of Twente is involved in three of these projects.



## AIMING FOR IMPACT

A question that often arises is what is the best time to switch to impact as the most important priority in external accountability and quality assurance, and in internal management and evaluation. Traditionally, citation indices and established rankings are screening excellence, but increasingly the University of Twente is focussing on measuring impact instead. However, the right information and instruments for this are only partly available. How do we operate during this transitional phase, which steps are we taking already, and which steps have yet to be taken? What does this mean for the work of researchers and lecturers? How can this be integrated into Recognition & Reward? Where do we test the new instruments and where do we apply the existing ones? These are all relevant questions, nationally and internationally, which we are trying to answer together.



*Catching the water monsters*

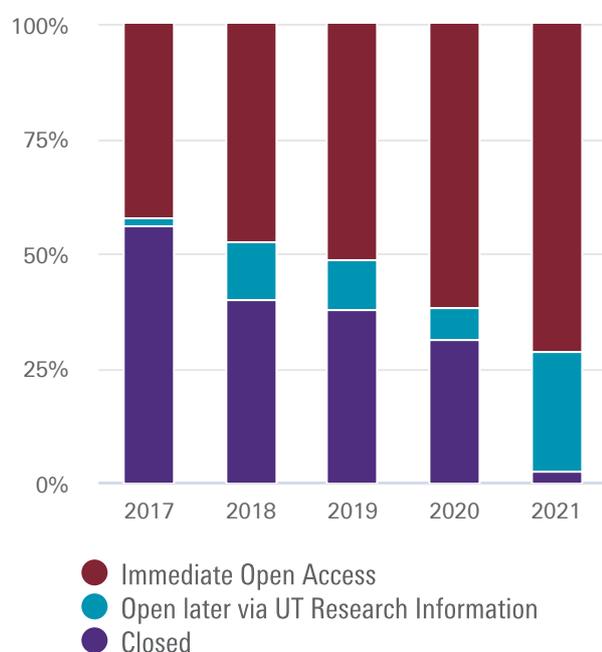
Citizen Science reinforces the challenge-based structure in the research profile and portfolio. In 2022, citizens were involved in about 60 research projects. One project by the Geo Science Hub at the ITC faculty is particularly noteworthy in this regard. Water Rangers in Twente was Katja Egerova's contribution to the national Vang de Watermonsters campaign by Nature & the Environment. In the summer of 2022, the children of Ukrainian families who were staying temporarily in the Netherlands contributed to this by collecting water samples and other geographical data. An analysis of the results was presented at the 2022 conference for Citizen science for planetary health (see [Projects Geo Citizen Science](#)).



## INGENUITY

The name of the investment programme of the Faculty of Geo-Information Science and Earth Observation stands for 'Invest in Geo and new ITC'. Initially, the programme was (only) aimed at generating additional regular income to compensate for the increase in accommodation costs. Now it has become a creative innovation programme for education, research and institutional strengthening, in line with the mission of the Faculty of ITC. A series of inspiration days began in spring 2022, when the project leaders of the 16 different projects met to inspire and inform one another on developments in their respective projects. Promising projects include the [UAV Centre](#), the [Centre for Disaster Resilience](#), [Digital Twins](#) and a new online learning environment called Geoversity.

## Open access publications



Citizen Science is part of the wider Open Science movement. We aim to maximise the reach of our scientific output through Open Science. The University Library (UL) therefore automatically makes closed publications in the UT database that contain research results (UT Research Information) publicly available after six months, unless an author chooses to opt out of this. In December 2021, a new policy was adopted on this. The guideline is that University of Twente authors make all their publications open access, preferably directly through a license for secondary use, but no later than six months after the first publication date. Because the figures for 2022 are not yet available, here we present the data for 2021. While 69% of material was published open access in 2020, this rose sharply to 97% in 2021. The main reason for this is that the University Library also makes publications available with retroactive effect. The aim is to increase the percentage of publications that are initially published open access to 100%. More effort will be required to achieve this, however. The further embedding of the ideas and support means that we can be confident about the future.

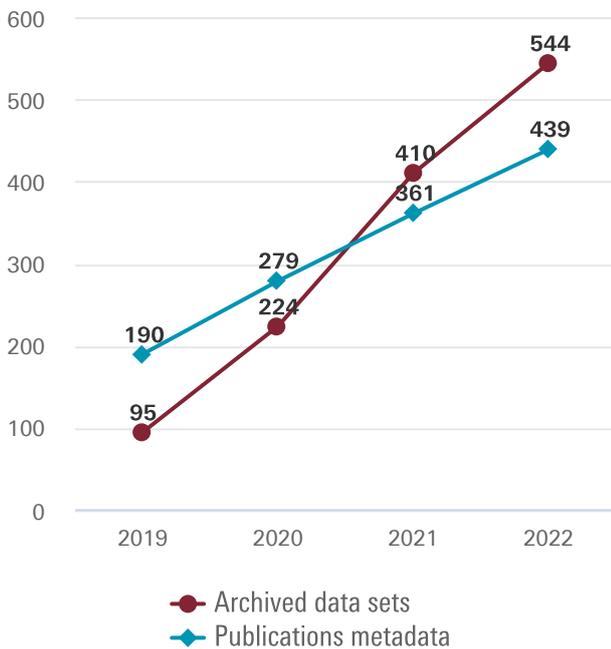
Source: UT Research Information



## OPEN TALKS

In 2022, we organised an [Open Access week](#) and launched the Open Talks podcast series.

## FAIR data



As well as open access publishing, we are focussing on making all underlying data FAIR. FAIR data is data that respects the principles of findability, accessibility and interoperability, in order to optimise data reuse. The increase in the number of University of Twente datasets (archived datasets) and the publication of metadata continued in 2022. This process is being supported by our Digital Competence Centre (DCC). Knowledge and awareness of proper reporting, storage and data archiving has also improved, partly due to the work of data stewards. These data stewards play an important role in training researchers in the field of research data management (RDM). In 2022, 304 academics participated in five RDM Bootcamp courses. In addition, two Software Carpentry Workshops were held for the basic coding skills that are needed to make datasets reproducible. In the region, we are partnering with the Open Science Community Twente (OSCT), and at the national level the DCC participates in thematic discussions about, for example, making software FAIR (Open Software).

Sources: UT Research Information, 4TU ResearchData & DANS

Cooperation, knowledge transfer and technology are essential for any university. One drawback of this, however, is that sensitive knowledge and technology can end up in the wrong hands. In 2022, at the request of the Ministry of Education, Culture and Science, the University of Twente conducted a risk analysis of formal cooperation with partners in Iran, Russia and China, three countries mentioned in the State Actors Threat Analysis of the intelligence and security service. The risk analysis focussed on identifying partnerships on key technologies that involve partners in those countries. It emerged that the University of Twente has a small number of agreements with partners in China, and that all agreements with Russian partners have been suspended. There were no ongoing collaborations with Iran as of the end of 2022.

The University of Twente set out a new knowledge security policy in 2022. The rapid changes in policy and regulations at the national and European levels have led to an even higher priority for knowledge security. We are working on raising awareness, ensuring transparent procedures for collaboration and screening, tools to make it easier to work safely (e.g. a due diligence tool and an incident log, including a privacy checklist) and a menu of training courses.



### WORKING WITH PARTNERS

Should we partner with fossil companies or not? Researchers from the University of Twente work with partners that are active in industrial sectors with high carbon emissions. Some people believe that all cooperation with oil companies should be discontinued, because in their view these companies continue to focus too much on fossil fuel extraction and too little on renewable energy. Other stakeholders indicate that collaboration is actually contributing to the energy transition through research into alternatives to fossil fuels, and is therefore invaluable. Fossil fuel companies also have the knowledge and infrastructure at their disposal that are required for applying the results of our research in practice and at a large scale.

# CONTRIBUTING TO THE DEBATE IN SOCIETY



Scientists from the University of Twente contribute to the social debate on major global challenges in many places. A good example is the role of Esther Turnhout in research into the quality of Dutch nature. Nature in the Netherlands is deteriorating rapidly. According to the Council for the Environment and Infrastructure (RLI), the biodiversity crisis is just as serious as the climate crisis. As an external committee member, Turnhout was involved in preparing the recommendation that the Council presented to the cabinet ministers for Nature and Nitrogen, Agriculture, Nature and Food Quality, Housing and Spatial Planning and to the presidents of the Dutch Senate and House of Representatives.

At the international level, climate scientists Diana Reckien and Maarten van Aalst played an active role in the Intergovernmental Panel on Climate Change (IPCC). In 2022, the IPCC concluded that the consequences of climate change are already widespread, that the risks are increasing more rapidly than we thought, and that it is more urgent than ever to reduce emissions and adapt to the increased risk of adverse weather events. Reckien and Van Aalst played a key role in developing the report and negotiating the executive summary for policy makers. They have been quoted in media around the world, on the radio and television, in newspapers such as the *New York Times* and magazines such as *Nature* and *The Economist*.



EDUbox DDW

The contribution of researchers and students to major national events helps the University of Twente to reach an even larger audience. At the Zwarte Cross festival, for example, Bob Hoomans was in the university tent with *De CO<sub>2</sub> blues* and Ton Spil gave a lecture on whether beer and ICT can be successfully combined (Universiteit Zwarte Cross). During Dutch Design Week, we contributed to the programme components of Embassy of Health, Transitions by Design United and the DRIVE festival. For example, visitors were able to look around in Alberto Martinetti's EDUBox. This is a self-contained, off-grid, modular learning environment that was developed to provide educational facilities for refugees but now has a broader purpose (Humanitarian Engineering).

In September, the Techrede 2022 took place at the Floriade in Almere's Aanjagers van

Technologie (Dutch) event. A group of students from the Netherlands' four universities of technology is committed to achieving social impact with an eye to the short term and how to accelerate change. At the Techrede, these 'drivers of technology' talked about what has already been achieved over the past year, and appeals were also made to politicians to take concrete steps that they could start on the very next day. The State Secretary for Infrastructure and Water Management, Vivianne Heijnen, watched the Techrede with the students in a green mobile cinema, and praised the idea of including the voice of the future in the debate on societal challenges and driving technological innovation as a useful and necessary addition. "It's good that the new generation is helping to come up with smart solutions to make the world a better place. This event shows that you can make an impact by involving everybody who wants and needs to participate," said Heijnen.

The frequent media appearances made by various University of Twente staff members are motivated primarily by the desire to contribute to the social debate and to inspire people through science and technology. In 2022, the University of Twente was mentioned almost 2,000 times in the media. In many cases, this concerned reporting on scientific successes and new knowledge, such as published scientific results or successful applications for research funding. Maarten van Aalst won the UT in the Media Award. Azadeh Akbari took second place. She stands up for women's rights in her home country of Iran and had an opinion piece published in *The Guardian*. Marcel Boogers came third for his contributions to governance issues. Breast cancer research using photoacoustics earned Rianne Bulthuis the UT PhD media award. The Electric Superbike Twente team won the prize for the most media impact in the student category of [UT Winners in the Media Prize 2022](#).



### INTERNATIONALISATION

In 2022, a lively social and political discussion got underway regarding how we can internationalise our higher education sector in a controlled and sustainable manner. This is a dilemma that we also focussed on in our previous annual report (see p. 54 of [UT Annual Report 2021](#) (dutch)). Despite the recognised added value of attracting international students to the Netherlands and retaining them here, the rise in the number of students from abroad has led to some major capacity challenges in certain cities and higher education institutions. The need for ways to control and, above all, limit the flow of students from other countries has led to a lively debate that affects the entire field of higher education. The University of Twente, together with regional partners and like-minded partners elsewhere in the country, is seeking to make it clear that the situation around international students is different in different parts of the country, and that a diverse set of instruments is therefore desirable: a one-size-fits-all approach will not benefit everybody.

It is also clear that our university is being affected by the debate in society, such as an episode of the news programme *Nieuwsuur* that in April 2022 focussed on the – often inadequate – registration of ancillary activities at universities in the Netherlands. Transparency in this area and on externally financed professorial chairs is important in order to prevent inappropriate forms of influence. Although the University of Twente has a better system of registration than many other universities, the episode in question certainly put the spotlight on this subject. The University of Twente has published a list of all externally funded professors on its website, as requested by the Minister of Education, Culture and Science. In 2023, a further review of externally funded professors and chairs will begin.

# A SUSTAINABLE INSTITUTION

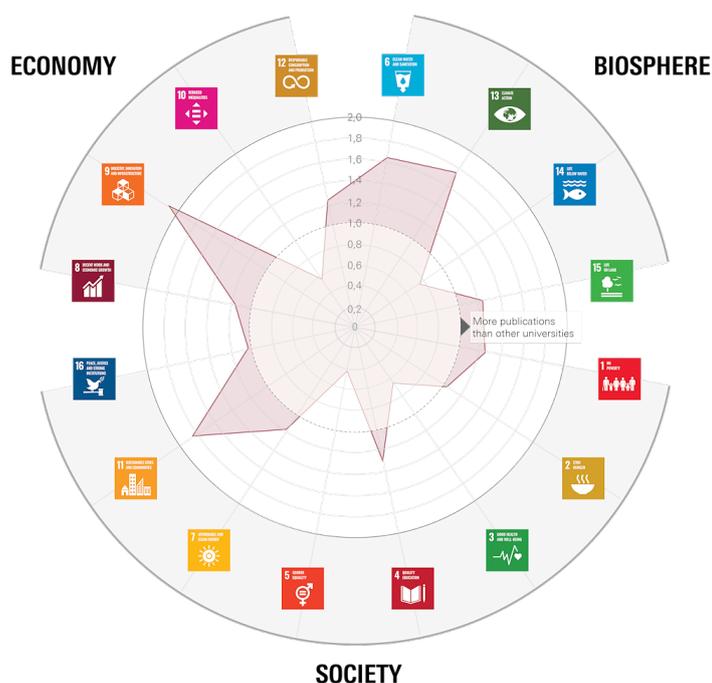


As an educator, employer and manager of the only true university campus in the Netherlands since its establishment, the University of Twente feels a great responsibility for ensuring its sustainability. This is the core of our existence. Our mission states that we aim to propose proactive and sustainable solutions for people and planet, and this is one of the societal domains that our scientific activities focus on. As a university, we strive to set a good example in this regard. In our education, research and operational management, there is a structural focus on the environmental sustainability and in particular on aspects involving society and human well-being.

In 2022, the Green Hub reached about 200 people with workshops on sustainability, including in the summer school CuriousU and the honours programme. The podcast series [Green Talks](#) was also launched to keep people informed about the impact of our education and research in the field of sustainability. There was also a joint programme with Saxion University of Applied Sciences and the Regional Education and Training Centre in which undergraduates, staff and the local population discussed the energy transition, sustainability objectives, campus sustainability and sustainable student accommodation.

## SDG PUBLICATIONS 2017-2022

An analysis of UT publications in relation to the Sustainable Development Goals (SDGs) reveals a major contribution to the goals of good health and well-being (SDG 3, 1,809 publications), industry, innovation and infrastructure (SDG 9, 1,034 publications) and affordable and renewable energy (SDG 7, 992 publications). The picture is different when we compare the University of Twente with other universities.



Source: SciVal

The graphic shows the University of Twente compared to other universities worldwide. Outside the transparent white circle (>1): University of Twente publishes more on a given SDG than other universities. Inside the transparent white circle (<1): University of Twente publishes less on a given SDG than other universities. Compared to other universities, we publish more on industry, innovation and infrastructure (SDG 9), climate action (SDG 13) and sustainable cities and communities (SDG 11).

To ensure that the campus provides an inspiring and healthy living and working environment, social sustainability is one of our priority areas:

- The section on Development, Reward and Recognition addresses sustainable employability and lifelong development in the organisation.
- Students and staff work together on initiatives for a healthy work and study environment through projects such as Healthy Campus.
- Following the national agreements in the National Prevention Agreement, alcohol consumption on campus is another area of focus. In 2022, a code of conduct for responsible alcohol consumption was established, with an emphasis on awareness and prevention. The Student Union, study associations, student associations and student teams have developed the associated objectives, such as a reassessment of alcohol policy.

In 2022, we were issued with an official warning from the Dutch Food and Consumer Product Safety Authority for non-compliance with legal requirements regarding the smoke-free campus. The Executive Board asked management to focus on this area by setting up its own unit. The Student Union was also approached with respect to bringing the theme to the attention of the students through its channels. The subject of a smoke-free campus was also addressed on the staff and student portals. A survey was carried out and various staff members indicated that they wanted to contribute ideas about the successful implementation of a policy for a smoke-free campus.

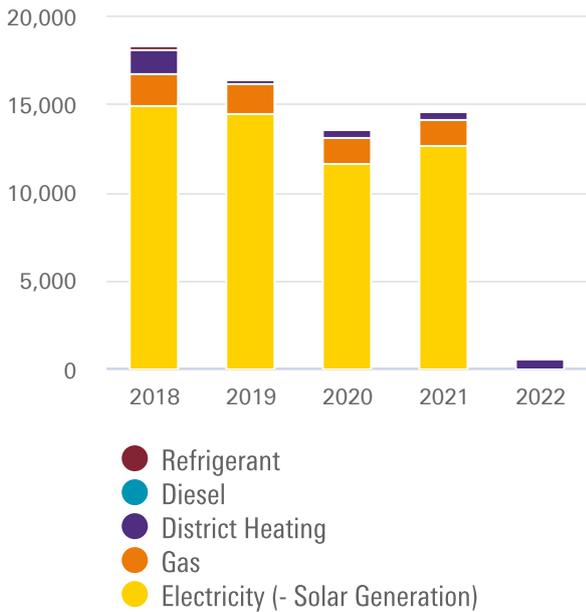
The sustainability policy on environmental aspects is made up of ten themes. The University of Twente aims to have an CO<sub>2</sub>-neutral campus by 2030. The focus is therefore on reducing energy consumption on campus. In addition to ideological motivation, the increase in the price of energy in 2022 was a further reason for taking action. All university staff have been called on to be aware of the options that we all have in helping to save energy. In all rooms, the temperature was reduced to 19 degrees, or to a temperature at least one and a half degrees lower than previously. The university's energy bill is expected to rise by over € 10 million in 2023 due to the energy crisis. All units have been set the target of consuming 12% less energy by 2023. The data on carbon emissions, like the data in the visualisations of environmental performance, comes from the administration of our Campus and Facility Management service.

# CARBON FOOTPRINT

Carbon emissions can be divided into direct emissions from the University of Twente itself (scope 1 and 2) and emissions that do not come directly from the university but are caused by activities within our sphere of influence (scope 3).

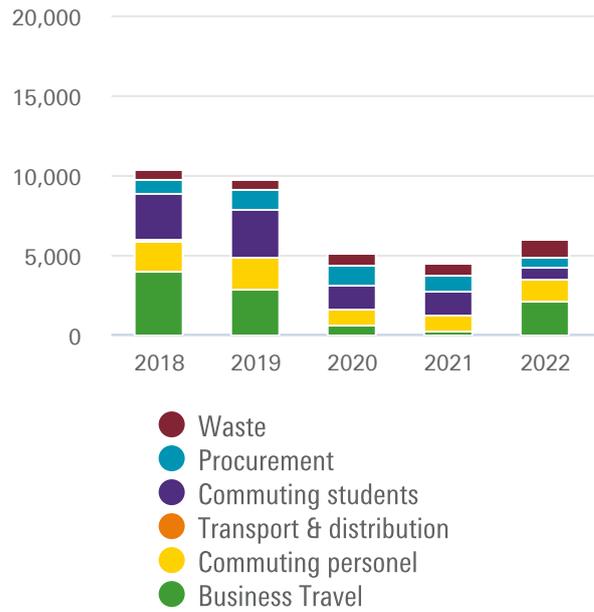
## Scope 1 en 2

### Direct emissions



## Scope3

### Indirect emissions



We are also taking measures to limit the impact of our remaining energy consumption as much as possible. Since 2022, the University of Twente has only used green electricity and almost all our buildings are heated through a local heating network. This is why the graph showing the carbon footprint for scope 1 and 2 no longer includes carbon emissions from electricity in 2022. The emissions from our gas consumption have been offset through Voluntary Emissions Reduction (VER) carbon credits. These are emission-reduction projects that prevent emissions elsewhere in the world or actively remove carbon from the atmosphere. This helps to reduce emissions elsewhere in the world. That is why carbon emissions due to gas consumption by the University of Twente in 2022 (1,210 tons of CO<sub>2</sub>) are not included in the graph. Despite every effort, internal research shows that there is still a great deal to be done in order to achieve the goals of the Paris Agreement by 2030. The annual carbon footprint report provides an insight into progress. Below, we will expand on four themes in our policy in more detail.

# FOOD

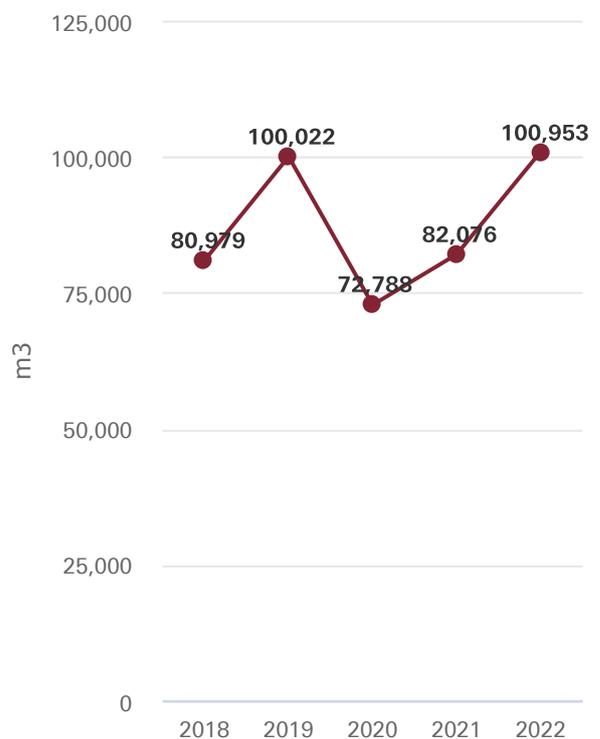


Lunches provided by the University of Twente will be vegetarian as standard from October 2022. This is one way in which we can move towards sustainability in our catering services. We are also working with our caterers Appèl and Greendish, who are experts in sustainable food, to arrive at a catering offering that is not only tasty and healthy, but also respects the limits of planetary sustainability.

## WATER



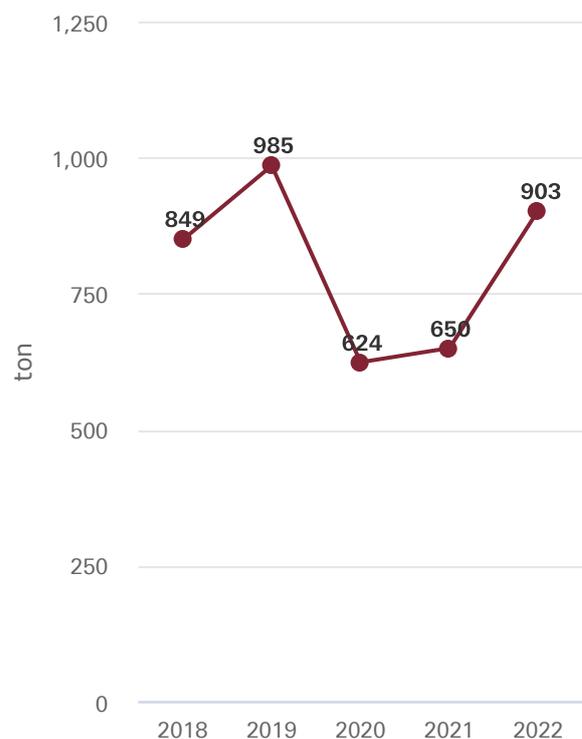
A glass laboratory has been built on Hogekampplein for research into the purification of many types of polluted water. The lab also houses a water purification plant that converts pond water into water that is clean enough to drink, so that it can be used to spray the astroturf sports pitches ([The university will also get a water lab on Hogekampplein \(Dutch\)](#)). In September, a prototype of a smart water reservoir – a converted eight-metre-high milk tank – was installed on campus. This rainwater reservoir provides a buffer for the sewage system in Enschede: it takes the strain off the sewage system at the University of Twente and allows rainwater to infiltrate and ultimately to replenish groundwater (Eight-metre-high milk tanker converted into a huge smart rainwater reservoir on the university campus). By the end of 2022, we had returned to around pre-pandemic levels of water consumption.



## WASTE



Disposable cups have been removed from vending machines in the Linde and Spiegel buildings, and the [Billie Cup](#) has been introduced in their place. Drinks are dispensed in reusable cups for a deposit of € 1. A pilot was also begun using recyclable cups for events during the Induction Week in September. At the Sports Party and the Kick-Out Party, for instance, partygoers were able to exchange ten cups for a free drink token. This [pilot](#) was evaluated positively by all those involved. The amount of waste produced fell sharply during the pandemic. It currently remains below the pre-pandemic level, partly due to increased home-working.



## MOBILITY

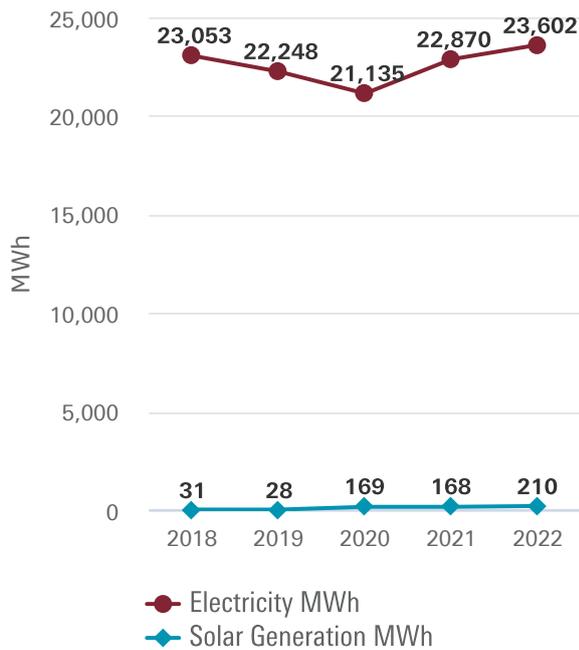


In 2022, the University of Twente published the Train Zone Map: a map of travel destinations that makes it easy to compare the relative carbon impact and convenience of travel by train and by aeroplane. The aim is to encourage staff and students to take the train for trips of less than 800 kilometres. The map not only makes it easy to compare carbon emissions, but also the total travel time and the number of changes required ([UT promotes train travel with Train Zone Map](#)). The

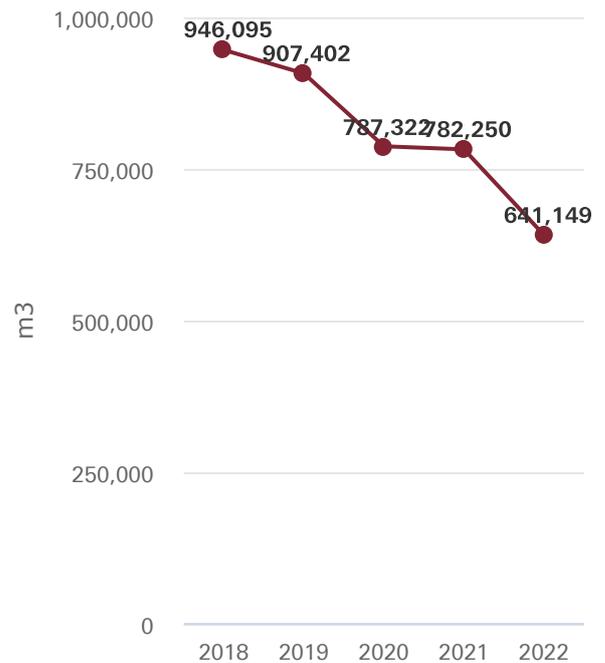
English version of this article is the most read article of all news articles about the University of Twente. When it comes to commuting, in 2020 we committed ourselves to the Higher Education Bicycle Mission of the Ministry of Infrastructure and Water Management, which means increasing the number of people who come to the university by bicycle by 10%. A mobility survey from 2022 shows that this goal has already been achieved.

## ENERGY

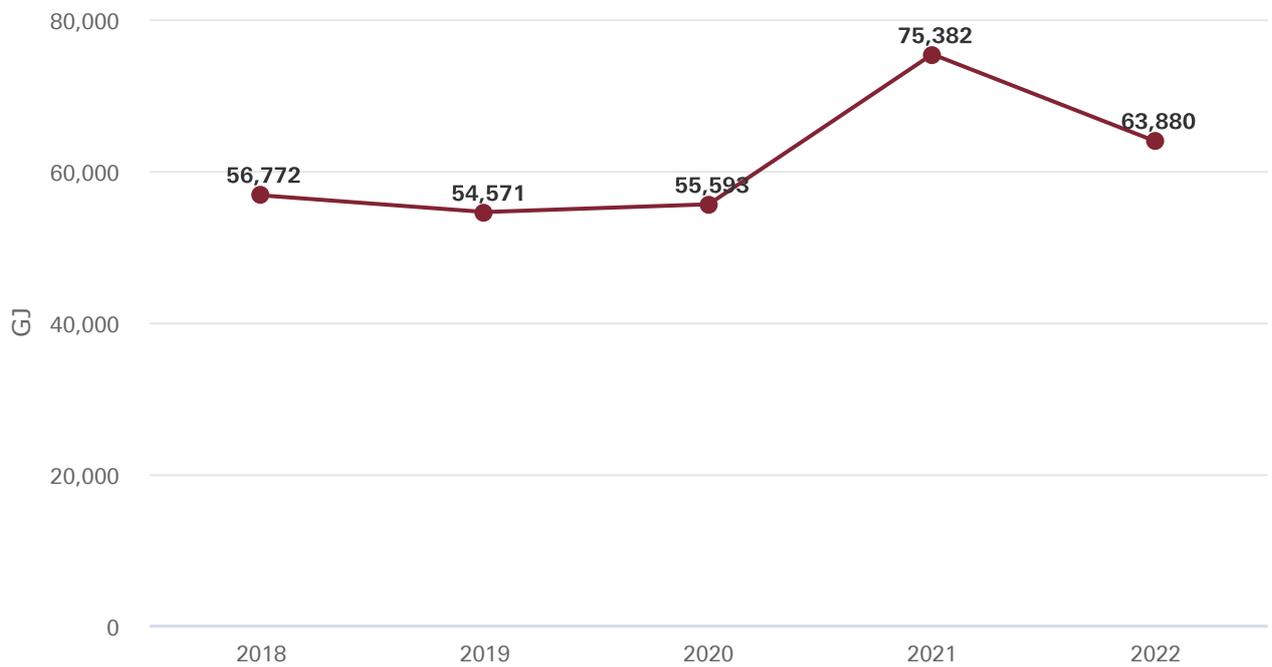
### Electricity



### Gas

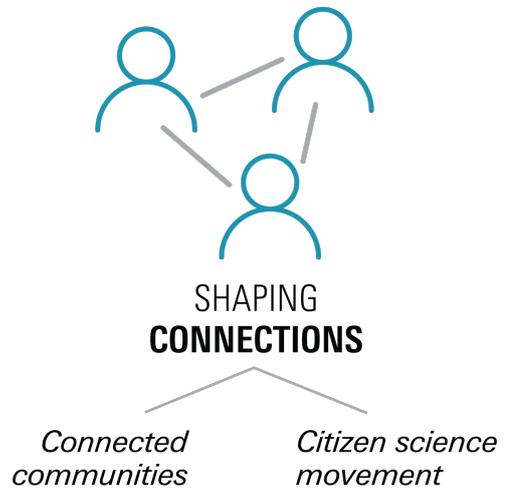


## Direct Heating



# SHAPING CONNECTIONS

This is about building, highlighting and deploying networks to fulfil our ambitions. As a campus university in Enschede, we are an important link between science and society in the region, in the Netherlands and the world. We embrace Open Science, respond to developments in society and the world of higher education and focus on interaction with society. Outside in & inside out: we bring people, knowledge, questions and technology to UT and seek to close the gap between science, innovation and society. In this way we reduce the 'knowledge paradox', the problem that society often fails to make optimum use of new knowledge and technology.



Read more about the themes of Shaping Connections:



ON AND AROUND  
THE CAMPUS



REGIONAL  
IMPACT



NATIONAL  
COOPERATION



INTERNATIONAL UNIVERSITY  
NETWORK



GLOBAL  
COMMUNITY



DIGITAL  
TRANSFORMATION

# ON AND AROUND THE CAMPUS



*Construction of student housing*

In recent years, we have experienced an increase in staff and student numbers. The number of staff members rose again in 2022, but the number of incoming students fell for the first time in years. Nevertheless, the pressure on accommodation continues to be significant because, for example, recent graduates cannot always move into their own home immediately due to the tight housing market. In 2022, 230 student accommodation units were completed on campus. This is the result of an initiative by the Twente Board, the municipality and the housing corporations, in consultation with the University of Twente. These temporary units will remain in place for the next seven years.

In addition, housing corporation De Veste (Vechtdal Wonen) will build 117 permanent student residences on the Boulevard. There continues to be a shortage of accommodation for new staff members (in particular international ones).

The University of Twente strives for sustainable and high-quality expansion. The Long-Term Strategic Housing Plan 2023-2032 (LTSHP) was revised and updated to reflect this in 2022. In new LTSHP 2032, in addition to the renovation of existing real estate (Citadel, Langezijds and Technohal buildings), efforts will also be made to expand the amount of space available, particularly for education and labs. This is the first time that new buildings are being built by the University of Twente since the construction of the Carré, Nanolab and Ravelijn buildings in 2010. The new buildings will be located at the Es, and will include, for example, the construction of the Living Innovation lab. The aim is to provide laboratories not only for fundamental research, but also for societal applications and cooperation with external partners.



## **SPATIAL MANAGEMENT PROJECT**

The aim of the Spatial Management Project (CEF programme) is to relieve pressure on Central Educational Facilities (COV) and accommodate the rise in student numbers. It will collect data on the current usage of facilities through sensors that can detect how many people there are in a room. This data will be used by Campus and Facility Management and the timetabling team in order to monitor the usage of the university's various spaces. The sensors can detect the number of people in a room without identifying them. The data generated can be used to use the university's existing facilities even more efficiently, so that there continues to be enough room for everybody.

Rising student numbers are also affecting the sports and cultural facilities on campus. Due to the importance of adequate facilities for the well-being of students and staff, a sports and culture master plan was drawn up in 2022. This addresses the capacity problems that have arisen from years of expansion, in addition to the need to modernize facilities, add new functionalities and initiatives to continue being inclusive in the future while also meeting the relevant safety (and other) standards.

In 2022, a great deal of progress was made in the renovation of the Langezijds building, which the Faculty of Geo-Information Science and Earth Observation will move to. One milestone was in the spring, when the new building was made windtight and watertight. Staff and students are actively involved in the various milestones in the construction process. For example, there were guided tours, and an online environment was created where people could get an idea of the [new location of Geo-Information Science and Earth Observation at Langezijds](#), and FAQs relating to the impending move were answered. It was also possible [to follow the progress being made](#) through a series of interviews.



### HYBRID WORKING AND STUDYING

Although we were able to spend an increasing amount of time on campus in 2022, there will continue to be a need for options for working and studying remotely. According to the most recent UT well-being survey, 86% of respondents want to combine working at home and working on campus. The results reveal a wide range of preferences, with almost 40% preferring to work from home for two to three days a week. Because we think it is important that staff have a healthy and sustainable workplace, a [home workplace](#) has been developed. This will have consequences for buildings on campus. Offices are empty some of the time, while meeting rooms and workplaces are very busy at other times. Some lectures are very well-attended, while others are only attended by a few students. This dynamic situation makes it challenging to find a good balance between suitable facilities.

In May the campus also acquired a new work of art. The famous artist Joep van Lieshout made *The Head* to mark the University of Twente's 60th anniversary. You can admire *The Head* both inside and outside, and also climb onto and into it: the work therefore encourages you to take different perspectives, both literally and figuratively.

We are happy to make our facilities available for social purposes. In June, the University of Twente hosted nearly 3,000 athletes and coaches who took part in the largest multi-sports event for people with intellectual disabilities in the Netherlands: the Special Olympics National Games (SONS). The athletes

slept in tents on the Carillonveld, and also had breakfast together there. Every day they left by bus to the surrounding areas to practise their sports. The annual sports day for students of the international educational institutes IHS Rotterdam, UNESCO-IHE, Saxion, KIT Amsterdam ISS The Hague and our Faculty of Geo-Information Science and Earth Observation also took place on campus this year.



*The Head*

# REGIONAL IMPACT



There is no universal definition of the region that is served by the University of Twente: it could be Enschede, Twente, Overijssel, the Eastern Netherlands or the cross-border Euregio. But regardless of how the region is defined, it is a priority to generate impact through cooperation in education, research and valorisation with organisations and companies located across a wide radius from the university. Regional cooperation aims to strengthen the economy in Twente across the board, and to identify how research and innovation can contribute to sustainable economic growth.



*EB receives Enschede medal*

The importance of the university for the city of Enschede and the region was highlighted once again when the mayor of Enschede, Roelof Bleker, surprised the Executive Board at the conclusion of the Dies Natalis (Dutch) in order to present the Enschede medal. In May, we also celebrated the sixtieth anniversary of the University of Twente with an extensive programme based on the principle of 'Every connection has a story'. Various Twente students who had won prizes in 2021 were also put in the spotlight. Four honorary doctors – Debra Roberts, Wim van Saarloos, Jaya Baloo and Prince Constantijn van Oranje – gave mini lectures.

MedTech Twente was launched in 2022: an innovation hub where the business community and healthcare institutions work with researchers from knowledge institutions to develop innovations for the healthcare of tomorrow and targeted regional investment agendas. It bundles initiatives and connects actors in healthcare, facilitated and accelerated by supporting organisations such as Novel-T, OostNL, VitaalTwente, HIP, WTC, TechMed Center and HealthValley.



## HYDROGEL

With the support of ReumaNederland, Marcel Karperien and his team have developed a hydrogel that can be used to replace damaged cartilage through keyhole surgery or by means of a local injection. The gel attaches itself to healthy cartilage around the damage, restoring its function. It was tested on humans for the first time in 2022. Karperien is one of the scientists who founded Hy2Care, a spin-off of the TechMed Centre, in 2014. He raised a further € 6 million from the European Commission in 2022 to complete clinical studies and obtain European approval for optimal cartilage repair using the hydrogel.



Partnering with the municipality of Enschede, ASR Dutch Science Park Fund and the regional organisation Kennispark, the University of Twente is working on the transformation of Kennispark Twente into a modern, sustainable science park with a focus on technological themes. On 21 April 2022, there was a ground-breaking ceremony with all the other parties involved in the development of ten buildings with a total investment value of € 100 million.

There were several visits focussing on cooperation in the region in 2022. For example, during the visit of Robbert Dijkgraaf, the Minister of Education,

Culture and Science, there was a specific focus on the role of ROC Twente, Saxion and UT in bringing knowledge to the market and society, in addition to educating students. Themes such as safety, healthcare and technology, climate and energy were central. During the visit of MEP Bart Groothuis, the focus was on strengthening ChipTech in Twente in order to make a meaningful contribution to the European Commission's ambition to become less dependent on Asia and the US in the field of semiconductor production. In mid-June, Rob Jetten, Minister of Climate and Energy, visited the Future Factory (Dutch), the joint workshop of DroneTeam Twente, Electric Superbike Twente, Green Team Twente, RoboTeam Twente and Solar Boat Twente, to find out how students are working on a more sustainable future.

Also in 2022, the University of Twente received a visit from Mark Harbers (Dutch), Minister of Infrastructure & Water Management. Discussions focussed on two important themes: the latest developments in climate adaptation and optimising the maintenance of road infrastructure in the Netherlands. Finally, there was an exchange regarding policy development in which lifelong learning was central.



*Working visit Minister Harbers*

The University of Twente is also regionally active in the Twente Board, a partnership body involving business, the public sector and educational institutions in the region. Its aim is to promote socio-economic development in Twente. A new investment agenda was confirmed in 2022. The Twente Board works on three societal challenges: a smart, future-proof energy supply; moving towards a sustainable and circular economy; and innovation in healthcare. In the area of these three strategic themes, we are forging connections between the business community and Twente's strong knowledge position. Investment in attracting, training and retaining sufficient talent is crucial to achieving the ambitions of the Twente Board.

There are various initiatives to retain international talent in the Netherlands and in our region. The minor Going Dutch: Kickstart your Dutch Work Life, which was mentioned previously, plays a helpful role in this regard, by helping people to integrate into the world of work in the Netherlands. In [Connect Forward](#), [Novel-T](#) provides a platform that brings together international students and companies from the region. This has been temporarily supplemented with a project that aims to provide part-time jobs for vulnerable students from crisis-struck areas. This project helped around 270 students from Ukraine, Russia and Belarus in 2022.

The University of Twente is also active in Zwolle and Apeldoorn. Cooperation in the Zwolle region will be formalized in 2022, for instance. Through targeted supervision, flexible admissions and good coordination between educational programmes, we are enabling students to move more easily between Windesheim University of Applied Sciences and the University of Twente, and vice versa. This coordination has been nicknamed *wisselstroom* (alternating current). At present, switching often takes an unnecessary length of time. Progressing from Hogeschool Windesheim to a master's programme at UT will also be made easier. Both institutions see opportunities to continue developing a future-proof, complementary system of higher education for the Eastern Netherlands, consolidating their research cooperation in the Zwolle region with respect to economic and social challenges, and also working to fulfil the urgent demand for trained teachers in the eastern part of the Netherlands. The following themes have been selected for the research partnerships in the Zwolle region: the manufacturing sector, healthcare, climate adaptation and the energy transition.

In Apeldoorn, we are partnering with various knowledge institutions and companies in the Centre for Security and Digitisation (CVD) to work on challenges in the field of digital security. Since the consortium was launched in 2021 and the centre opened its doors in 2022, we have been providing lifelong development activities there. In 2022, the centre received a € 3-million grant from the province of Gelderland, which has helped the three programme lines of research, lifelong development and education to get off to a flying start. Six research assistants have been appointed (all under the supervision of the participating knowledge institutions), a joint design has been drawn up for a master's programme in the field of safety with Saxion University of Applied Sciences, and the involvement of companies in the professional programme has been intensified. The Netherlands Institute for Public Safety (NIPV) and ROC Aventus have also joined the core group.

# NATIONAL COOPERATION



One of  
University

of Twente's priority areas is its partnership with VU University (VU) Amsterdam. In 2022, the first cohort of students graduated from the joint English-taught Bachelor of Mechanical Engineering, which was launched in 2019. In 2022, following approval by the University Council, preparations will get underway for the start of the UT Bachelor of Creative Technology at the VU. The first students will begin the programme in 2023. The organisation is

made up of four impact coalitions: 1. secure societies (crisis management, polarisation and undermining, resilience and security); 2. responsible societies (circular economy, energy-neutral development, climate change); 3. smart societies (sustainability); and 4. education and talent (multidisciplinary education, cross-university talent development). An internal call for cooperation at both universities has led to various proposals being honoured this year, giving further substance to cooperation within the impact coalitions. The parallel stakeholder development programme focuses on creating connections with external stakeholders.



*VU-UT graduation*

As one of the Netherlands' fourteen universities, we are active in various networks in the university sector, including UNL and 4TU. Regarding our activities in UNL in 2022:

- With respect to the binding education recommendation (BSA), this year the focus shifted from adjustments in response to the COVID-19 pandemic to a wider discussion.
- We contributed to the UNL-wide vision for student well-being and to initial proposals regarding institutional accreditation.
- The University of Twente was the driving force behind the UNL knowledge security working group and risk and incident management subgroup, and was actively involved in setting up a national toolbox for knowledge security.
- We contributed to the Lifelong Development Growth Fund proposals and to Digital Impulse.
- The International Student Code of Conduct was updated, with a particular focus on the use of clear and simple language: the Code of Conduct is now easier to read and contains fewer ambiguities.

In the partnership between the Netherlands' four technical universities (4TU), Vinod Subramaniam took over the chair from Louise Fresco (Wageningen UR) in 2022. Through 4TU, we are helping to meet the rising demand for engineers and design engineers, and strengthening and bundling of technical knowledge:

- The [4TU.VO platform](#) (Dutch) now has a permanent place within the 4TU organisation. It is growing to become a progressive platform for education in engineering, providing relevant, up-to-date content for the secondary education curriculum. This initiative brings together the Netherlands' four technical universities to ensure that their characteristic approach to engineering is reflected in educational materials. The platform is thus meeting the needs of secondary education and helping to prepare pupils to study at one of our country's four technical universities.
- The 4TU Responsible Sustainability Challenge (4TU.RSC) – an honours programme organized by three 4TU centres – [was launched](#) in 2022. Over a period of seven months, students work on a case submitted by a company or public-sector organisation. The cases reflect the themes of the EU's Green Deal.

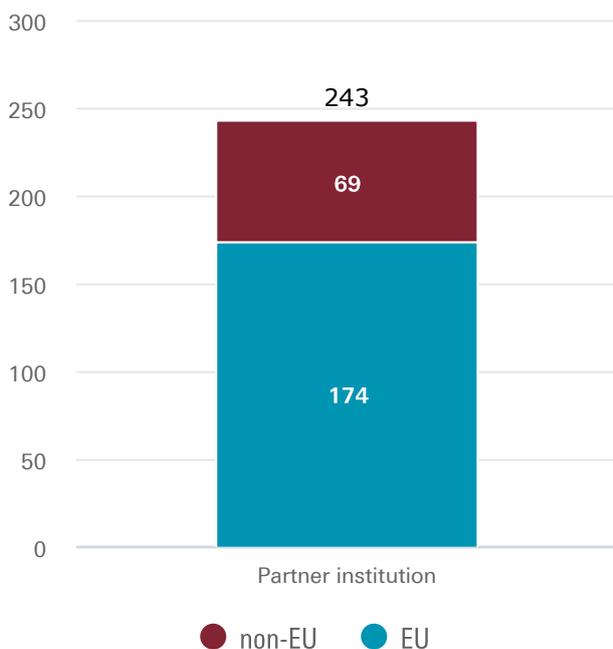
- Under the name of 4TU High Tech for a Sustainable Future (HTSF), we are funding research to promote cooperation. The 54 expressions of interest received in 2021 led to six proposals. In 2022, four of these were awarded a total of € 20 million for a period of five years. The projects all involve research relating to a more sustainable future: personalized healthcare (RECENTRE), reducing heat in cities (HERITAGE), developing green, biodegradable sensors (Green sensors) and a future-proof food system (High-tech & data-driven agri-food system of the future). An important goal of HTSF is to hire new permanent academic staff: 19 tenure trackers. Cooperation with external partners is being sought to ensure that the research results lead to innovations that benefit society.

# INTERNATIONAL UNIVERSITY NETWORK



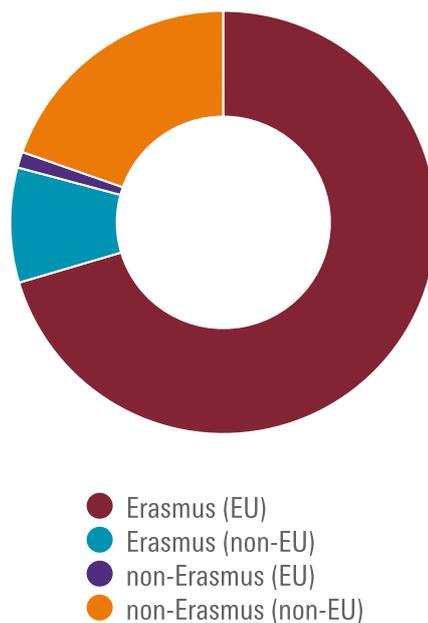
A core element of our vision is that we educate our students to become global citizens who have an open, inclusive and entrepreneurial mindset. To achieve this, we build targeted, impactful partnerships (both nationally and internationally), and provide a wide range of international learning experiences to students and staff members. The Erasmus programme is an important instrument in this respect. It enables student and staff exchanges (for academic and support staff), for instance. In the field of education, we also offer joint programmes with various partner universities. For example, we offer single, double and joint degrees with international partners at the bachelor's, master's and PhD levels.

## Partner Institutions



Source: Mobility Online

## Exchange Agreements



Source: Mobility Online

We launched the International Partnership Framework project in 2022 to support international cooperation at various levels within our organisation. The project aims to provide a better picture of all ongoing partnerships at the institutional level. The goal of institutional partnerships is to create momentum and impact around shared goals through long-term commitment and support from both parties. One of those partners is the University of Waterloo in Canada. In the summer of 2022, the partnership was formalised during a [working visit](#) from a Canadian delegation. The focus areas for the partnership are health, bioengineering and biotechnology, nano and water.



25-year partnership with the Tec de Monterrey

In addition to bilateral, international partnerships, the University of Twente is also a member of various consortia. The ECIU consortium plays an important role in staff and student exchanges, joint research proposals and lobbying in Brussels. The consortium marked its 25th anniversary in 2022. This anniversary was celebrated at the University of Twente in December with delegations from the various ECIU partners, regional partners and the original founders of the consortium. The 25th anniversary of the partnership with ECIU partner Tec de Monterrey in Mexico was celebrated with a [visit by a UT delegation to the Tec](#). During the visit, ambitions for the years to come were discussed and a PhD double degree agreement was signed, which all UT departments can make use of with immediate effect.

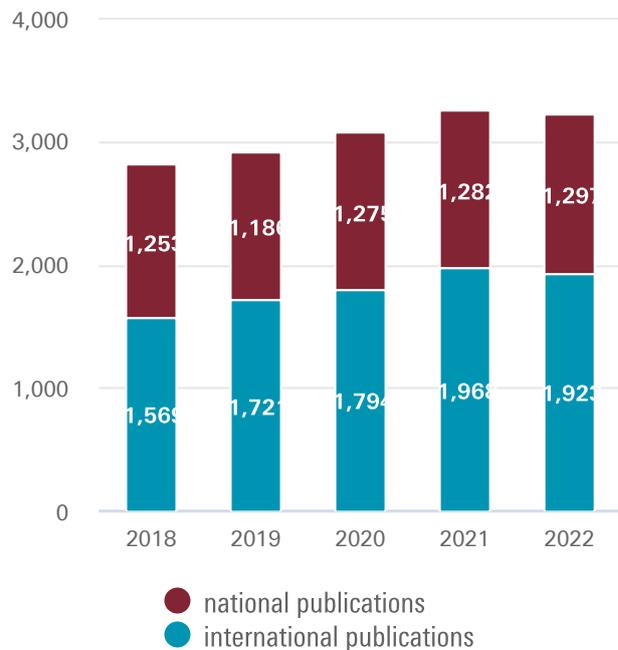
The year 2022 also marked the start of the second phase of ECIU University. ECIU University has been allocated a budget of € 14.4 million for [the next four years](#). This will be used to continue developing the joint educational offer around challenges and micro-modules in the field of SDG 11.

Since 2011, we have been a part of the European [EIT Digital](#) network. This is an open innovation ecosystem which European companies, universities and research institutes from 28 different countries are affiliated to. Tracks from our Master of Computer Science and Master of Interaction Technology are offered as a double degree programme within the EIT Digital Master School. Students in these master's programmes study one year at the University of Twente and one year at one of our partners (Aalto University in Finland, KTH in Sweden, Université Paris-Saclay in France, Technical University of Madrid in Spain, Politecnico di Milano in Italy or University of Trento in Italy). The master's programme combines engineering and technology with innovation and entrepreneurship. As of 2023, the University of Twente will be the only Dutch university participating in this programme. An agreement has been signed for the period 2023-2027.

The number of publications written as the result of international cooperation continues to rise. Some 60% of UT publications are now associated with at least one author from an organisation outside the Netherlands. In 2022, there were 1,923 publications, which were also cited more often, on average, than publications involving national-level collaboration or no collaboration. As in 2021, the French Centre National de la Recherche Scientifique (CNRS) was the foreign organisation with which the University of Twente co-published the most in 2022.

Agreements have also been made in the field of operational management. Since the introduction of the Public Servants (Standardisation of Legal Status) Act (WNRA), university staff who spend a long period of time abroad have been liable for national insurance contributions and tax in the relevant country. An agreement must therefore be signed with a certified partner (accountant) in the country concerned. We cooperate with other universities on this where possible. The list of seven countries for which an agreement had been signed in 2021 (Spain, Germany, the UK, Switzerland, Belgium and the US) was extended in 2022 to include Cyprus, France, Italy and Austria.

(Inter-)national publications

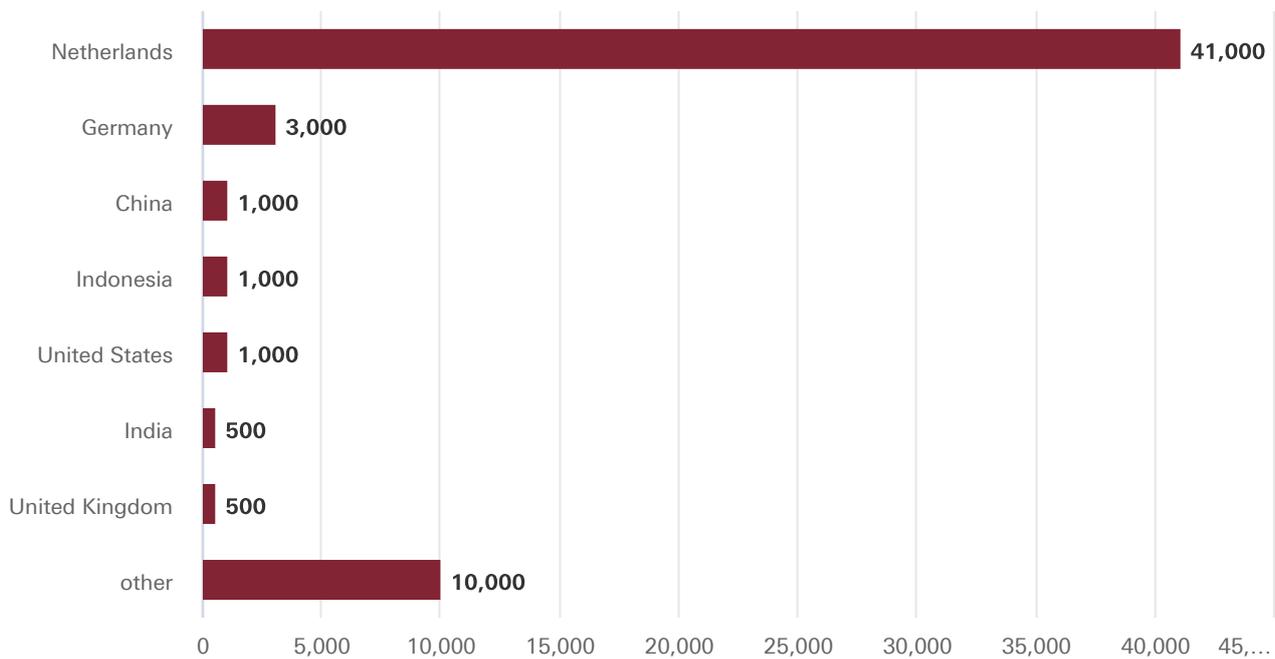


Source: SciVal

# GLOBAL COMMUNITY



## Origin alumni



Source: UT Alumni Office

Together with current students, staff members and former staff members, the University of Twente has over 58,000 alumni who form a worldwide community of more than 75,000 people. Their knowledge and experience has a real impact on societies.

The Twente University Fund and the UT Ambassador Network support our community through friend-raising and fund-raising activities. An average of 7,000 students and community members attend the approximately 100 events sponsored by the University Fund every year. The fund thus acts as a driving force for the UT-Community for Life.



*Alumni talks*

Nearly 2,500 alumni, associates, staff and students donated a total of € 250,000 to research, grants, prizes and student activities. A few examples of the donations received:

- € 20,000: follow-up donation from a donor for Wiebe de Vos's Waterlab design.
- € 30,000: annual contribution received from a married couple, donated for research by the neurologists Michel van Putten and Jeannette Hofmeijer into the prevention and repair of brain damage caused by hypoxia.
- € 36,000: crowdfunding campaign for a Ukraine emergency fund to support students from Ukraine and Russia who are in financial difficulty because of the war.

In addition to the UT community, the 4TU Dutch Engineers Alumni Networks (DEAN) is another active community in which alumni of TU Delft, TU Eindhoven, Wageningen Research University and the University of Twente meet to exchange knowledge and experiences and to visit one another's companies. DEAN has a presence in Copenhagen, Geneva, Madrid, Melbourne, Sydney, New York, San Francisco, Tokyo and other places.

The Young Alumni Network helps to introduce young alumni to the labour market through peer-to-peer mentoring during the first years of their career. An average of 2,000 alumni attend an annual event organised by the alumni office, the alumni associations or the alumni circles. These events range from reunions and lectures to company visits and workshops.



*Alumni day*



*Iran protest*

Our community includes people from various war and crisis zones. Following Russia's invasion of Ukraine, mental health support was made available to anybody affected by the situation. We created temporary job openings for scientists from Ukraine (and other conflict zones). Together with the Twente Board, jobs have also been created at local companies. The University of Twente has helped by matching students with companies. An emergency fund was set up for students affected by the situation, and a group of Ukrainian students received financial support for a period of three months. The Dutch universities added to the temporary assistance they were given by the Dutch government by offering them reduced tuition fees. In addition to those that fell under

the temporary protection directive, the University of Twente also offered the reduced tuition fees to asylum seekers during their nominal study period.

# DIGITAL TRANSFORMATION



What we do and the way in which we do it can be enhanced and accelerated by digitisation and automation – but only if we create the right connections.

In 2022, we continued to invest in facilities to enable students to follow lectures remotely or at a time of their own choosing. The year was all about continuing to make improvements, and evaluating and building on existing innovations. The focus was on rolling out facilities to support teachers, such as the further development of the DIY studio, light board, podcast facilities (such as [EduTalks](#)) and support for designing education and the digital learning environment. Digital testing is also on the rise: in 2022, 648 tests were taken digitally, compared to 583 in 2021. This includes both remote tests and a digital tests taken in an exam room.

Through the smarter use of data, lecturers now have more accurate information at their disposal regarding the progress of their students. We are investigating how learning analytics can play a greater role in the meaningful use of education data. An initial proof of concept that will give students and teaching staff new tools to improve the quality of education has been approved and translated into concrete pilots. The digital processing of results has also been introduced and, for example, student data from the Faculty of Geo-Information Science and Earth Observation has now also been transferred to our central systems.

Due to the completion of our new vision for education and the developments around lifelong learning, no new Massive Online Open Courses (MOOCs) have been launched and the branding of the existing programmes has been put on hold. This was visible immediately in the number of participants: in 2022, 4,000 participants applied for the existing seven programmes, which was considerably fewer than the over 10,000 applications in 2021.

Nationally, the University of Twente plays an active role in the Acceleration Plan for Educational Innovation through ICT. Various [living labs](#) have been set up in the teacher professionalisation zone. In 2022, a [hackathon](#) on the theme of providing feedback in education was held in the AI living lab. Over three days, seven teams worked to solve a self-chosen case study, with the chemistry team [crowned the winners](#). The University of Twente also contributed to a [toolkit for blended learning](#).



*The winning team with the jury*

Support for our research also saw continued momentum in 2022:

- AREDA was implemented in full. AREDA is our non-public archive system for research data that currently cannot be stored in trusted repositories with public datasets such as 4TURearchdata and DANS (Data Archiving and Networked Services). Some of the data in AREDA will still be published through the research information system PURE.
- In order to provide broader support on data issues in the future, we are working to develop digital infrastructure for the storage, analysis and reuse of data. This includes communication with stakeholders, digital toolkits for citizen science research and data management.
- The Virtual Research Environment has been upgraded to enable scientists to start recording and processing data almost immediately. A university-wide tool has also been introduced to improve the support for ethical review.



### **ACCESSIBILITY OF RESULTS AND MATERIALS**

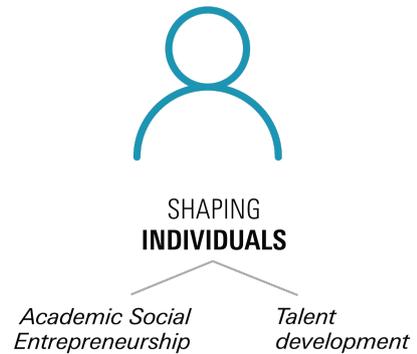
The University of Twente strives to make research results and educational materials as accessible as possible, but this is not always possible. Some research results cannot be made public due to knowledge security considerations or the commercial interests of the companies that co-funded the research. The distribution of learning materials is sometimes restricted due to licenses.

With respect to operational management, following the introduction of a new procurement system (in 2020) and a new HR system (in 2021), the Oracle financial package was also replaced by UNIT4 in 2022. This made it possible to phase out 17 custom applications. Financial administration, project administration and time registration across the whole of the university now takes place within the new system. The roll-out of the software was a major project; the migration was successful in technical terms, but the development of reports and training still requires attention.

Operational management was also enhanced by the implementation of the Erasmus Without Paper Network and Dashboard, the European Student Identifier, the digital Learning Agreement and the digital Inter-Institutional Agreement. All these tools simplify the movement of students and staff members within the Erasmus programme by enabling data to be exchanged digitally (and securely). An additional benefit is the considerable reduction in paper (and paperwork) that this leads to, because printed contracts no longer need to be sent to partner institutions.

# SHAPING INDIVIDUALS

This is the third pillar of Shaping2030. Staff and students are the foundation of our organisation. They are intrinsically motivated and adapt flexibly to the continuously changing environment. We aim to instil these values in the education of our students and to encourage them amongst our staff. We also want to help strengthen individuals and organisations in society.



Read more about the themes of Shaping Individuals:



THE STUDENT JOURNEY



STUDENT DEVELOPMENT AND WELL-BEING



OUR STAFF AND THEIR WELL-BEING



DEVELOPMENT, REWARD AND RECOGNITION



FOR AN INCLUSIVE AND SAFE ENVIRONMENT

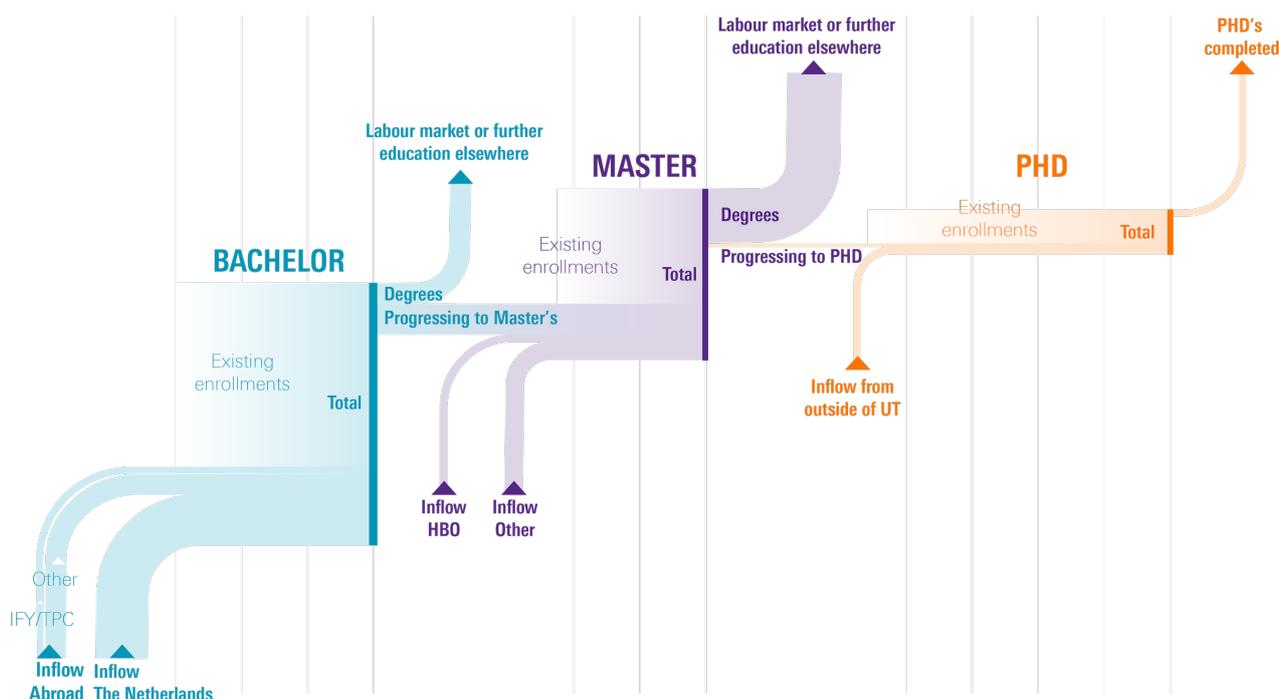


OTHER ORGANISATIONAL ASPECTS

# THE STUDENT JOURNEY



Our students mainly come to us from secondary education, higher professional education or from abroad. The University of Twente offers bachelor's and master's programmes that culminate in science degrees and qualifications. We also award Doctorates and Engineering Doctorates (EngD). We are committed to ensuring that students' progress through our university is smooth. When students first arrive with us, it is important to ensure that they are in the right place and to provide high-quality supervision (including anticipating cases of students dropping out or switching programmes). Later in their academic careers, our aim is to ensure that as many students as possible leave the university with a degree. Below, we will review the different phases in the student journey.

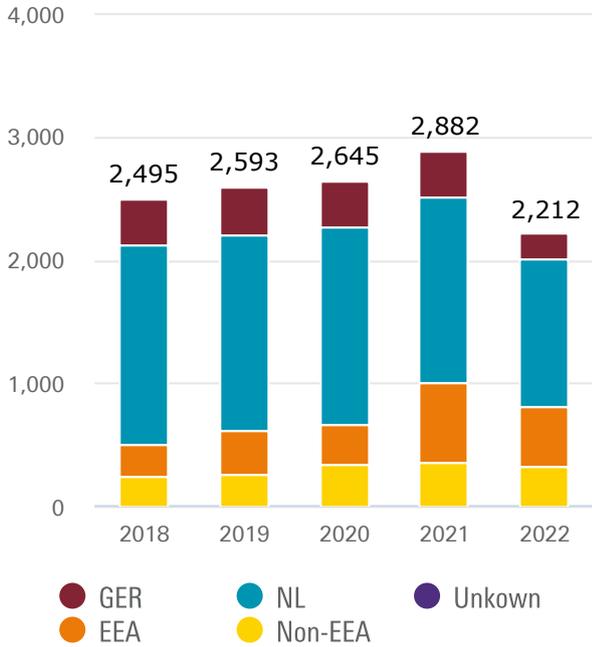


Choosing the right educational programme is important but can be challenging for prospective students. In 2022, a wide range of tools were available to help prospective students choose a programme and give them a better idea of whether particular programmes would meet their own ambitions, needs and strengths. For the first time in a number of years, the Open Days were held in 2022, along with a Taster Day, the Campus Experience and the individual orientation days. The online Open Days and online meet-ups, meanwhile, were aimed mainly at international students seeking bachelor's and master's programmes.

As part of our effort to get every student in the right place, 2022 saw the launch of a project that aims to understand which types of student flourish at the University of Twente and how we can reach those students in the Netherlands, as well as internationally. In addition, in order to stress the importance of good English language skills for academic success, minimum scores for the sub-skills of language proficiency (reading, listening, speaking and writing) will also be determined in 2022.

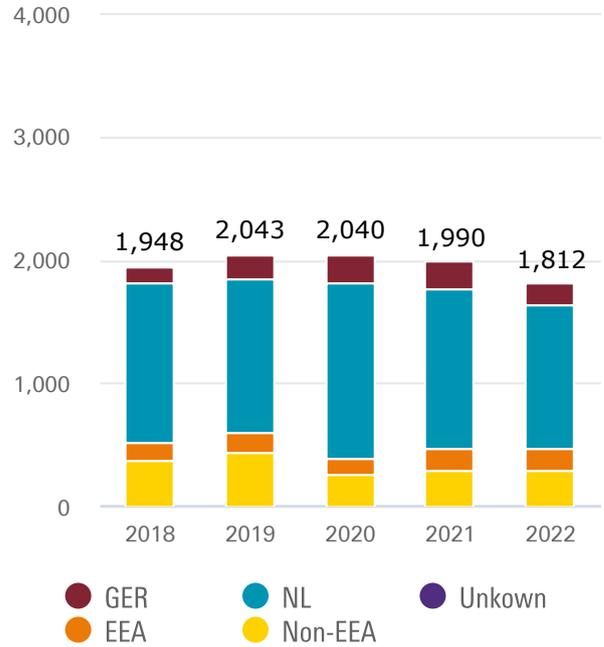
## NUMBER OF NEW STUDENTS

### Bachelor



Source: Osiris / SIS

### Master

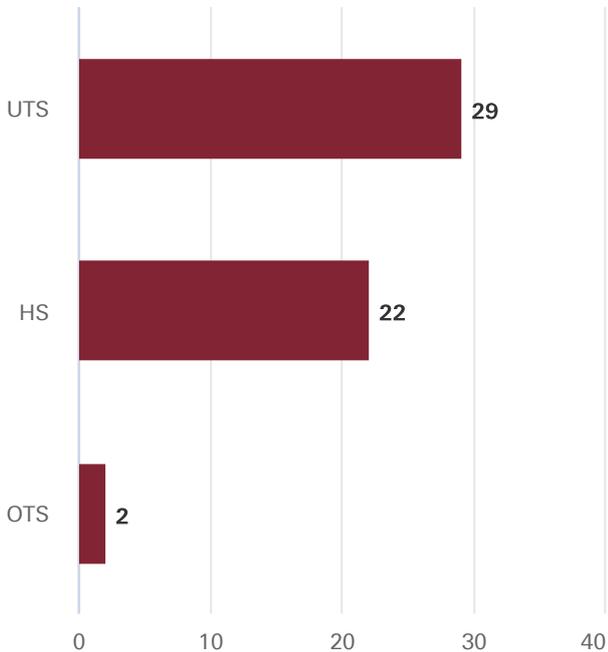


Source: Osiris / SIS

In 2022, a total of 4,024 new students enrolled, which was 848 fewer than in 2021. The total number of students at the university fell from 12,903 in 2021 to 12,493 in 2022. Given that student numbers at other universities have increased slightly, this fall at the University of Twente is noteworthy. This may be related to the introduction of the numerus clausus for the programmes in Psychology and Technical Computer Science. External factors – such as the reintroduction of the basic grant in September 2023, the tightening of admission requirements for Indian students and new legislation in Germany that means studying in the Netherlands has become less advantageous for German students than previously – have probably also played a role. Research shows that students who attended open days on location in the past found that UT exceeded their expectations. The fact that only online and hybrid information was available in 2020 and 2021 will therefore probably also have played a role. The percentage of international students rose slightly in 2022, from 33% to 34% of the total population.

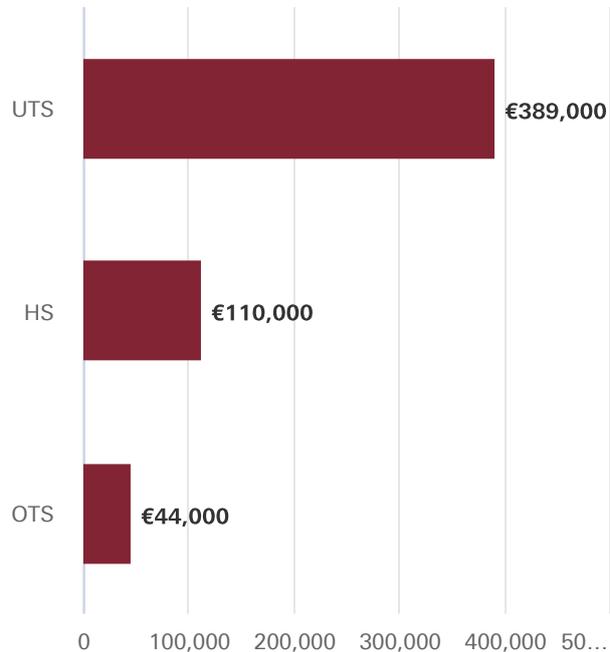
## UT GRANT PROGRAMMES

### Number of students



Source: Mobility Online and the Scholarship Office and International Relations & Partnerships

### Budget amount



Source: Mobility Online and the Scholarship Office and International Relations & Partnerships

We are committed to diversity because we believe that it contributes to a better quality learning and working environment. The University of Twente Scholarship programme (UTS) is in place in order to attract outstanding international students to the region. The Holland Scholarship programme (HS) is a co-financing programme run by the Ministry of Education, Culture and Science that focuses on, amongst other things, students from outside the European Economic Area. The Orange Tulip programme (OTS) aims to promote Dutch higher education in particular countries: this year funding grants went to students from Indonesia and Zimbabwe.



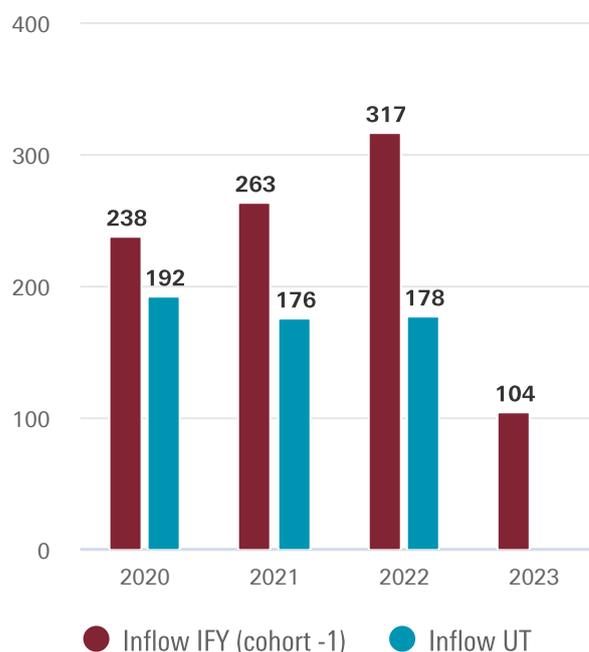
### GROWTH

Our society needs academically educated technical workers. The ambition of our university is to grow, but for the first time in 2022 we saw a fall in the number of incoming students. How can we attract more students and thus fulfil our role for society? This is a question to which there is no clear answer. There is also the question of how we grow. On the one hand, we seek to give all students a chance, but on the other hand we are being asked by the government to adopt a more selective approach to welcoming international students. The steps taken include increasing our name recognition and our partnership with VU Amsterdam to attract more students from other regions.

For international prospective students who are not directly admissible to a bachelor's programme, we offer the International Foundation Year (IFY). In October 2022, 104 students began their IFY, and 178 of the 317 students from the 2021 cohort entered our bachelor's programmes. The pre-master's programme is designed for students who are not automatically admissible to a master's programme. Due to improved registration, the numbers vary slightly from previous years. Nevertheless, these have been adapted so that they can still be shown on a trend graphic.

Our information activities ensure a good match between students and their studies. In order to get new students off to a flying start, the Freshers' week (aka Kick-In) is held every year. This is when first-year students are introduced to the academic and social world of the University of Twente and the city of Enschede. In 2022, the Kick-In was able to take place in person and on location for the first time since the pandemic.

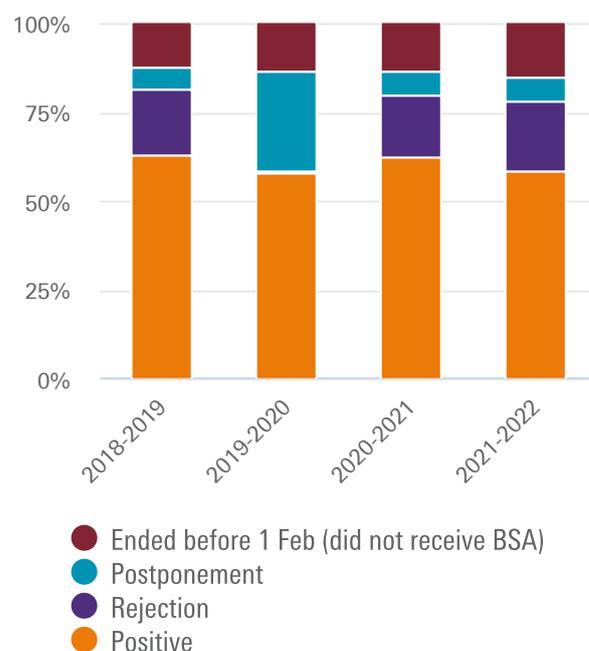
## International Foundation Year



Source: combined IFY / Osiris / SIS systems

After students have started their educational programme, we continue to make sure that they are in the right place and are getting the opportunity to achieve their full potential. The binding education recommendation (BSA) provides another means of ensuring that students do not spend too long in a programme that they are not suited to. For students who began their studies in 2021, the binding education recommendation was relaxed due to the pandemic, in line with other higher education institutions in the Netherlands. Under normal circumstances, students are required to obtain at least 45 credits in the first year of their bachelor's programme. For the 2021-2022 cohort this was reduced to 40 credits.

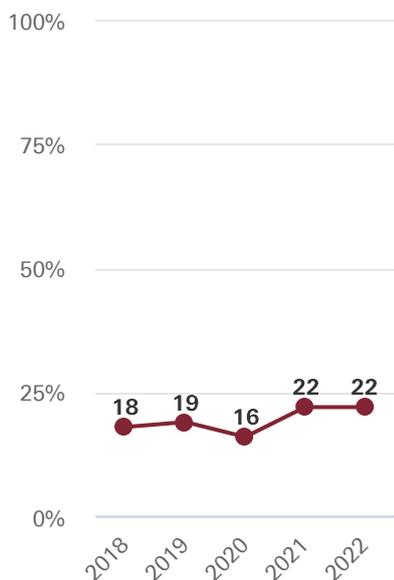
## BSA



Source: Osiris / SIS

### Drop-out

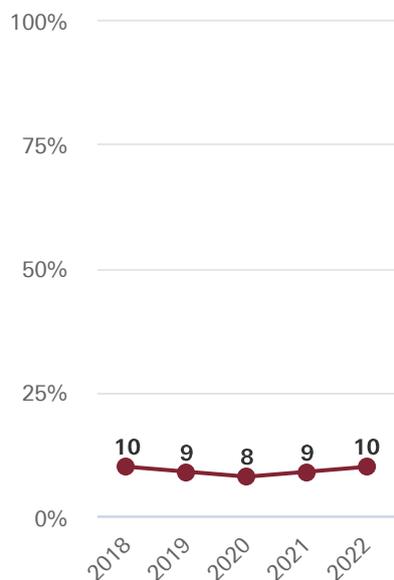
% quit bachelor in year 1



Source: Osiris / SIS

### Switch

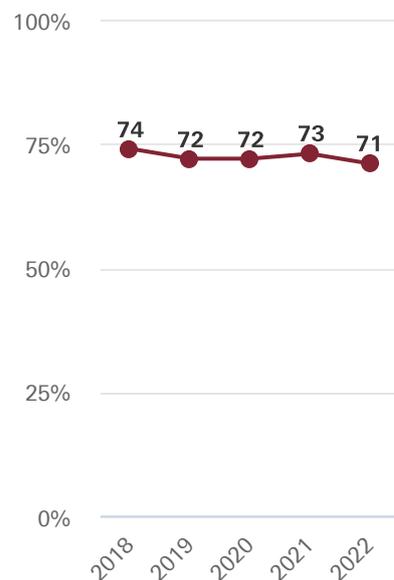
% switched to other programme



Source: Osiris / SIS

### Graduation rate

% completed bachelor in 4 years



Source: Osiris / SIS

The bachelor-before-master rule stipulates that students may only begin a master's programme after they have fully completed their bachelor's degree. This is designed to ensure that students embark on the next phase of their academic career with complete focus and without the burden of unfinished courses from the previous phase. This rule was suspended in 2022 due to the pandemic, just as it was last year. In 2022, 71 new students embarked on a master's programme in this way. The visual also shows how many students made use of this exemption in 2020 and 2021 and have since obtained their bachelor's or pre-master's degree.

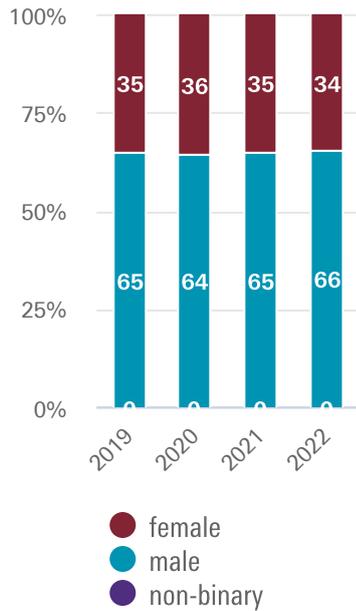
### Bachelor-before-master rule



Source: Osiris / SIS

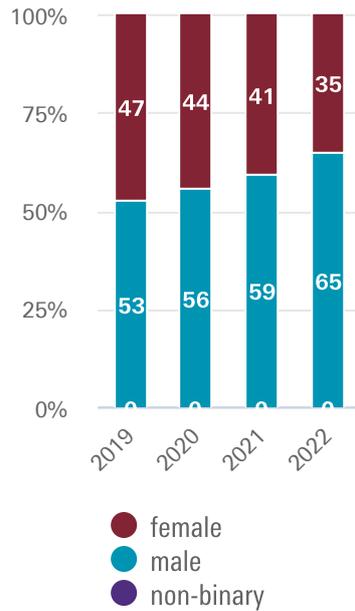
The new educational programme in Robotics began in September 2022. What is remarkable is that a quarter of the initial intake were women, a high percentage compared to other engineering programmes. We engage in various activities to attract more female students. For example, Pre-U participates in the annual girls' day, an initiative of the Expertise Centre for Gender Diversity in Science, Technology & IT.

Gender %  
Bachelor



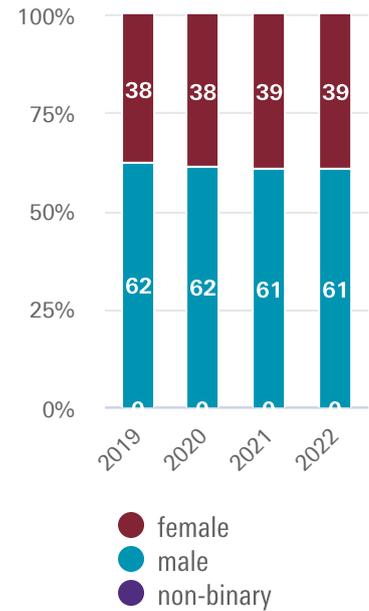
Source: Osiris / SIS

Gender %  
Pre-master



Source: Osiris / SIS

Gender %  
Master



Source: Osiris / SIS

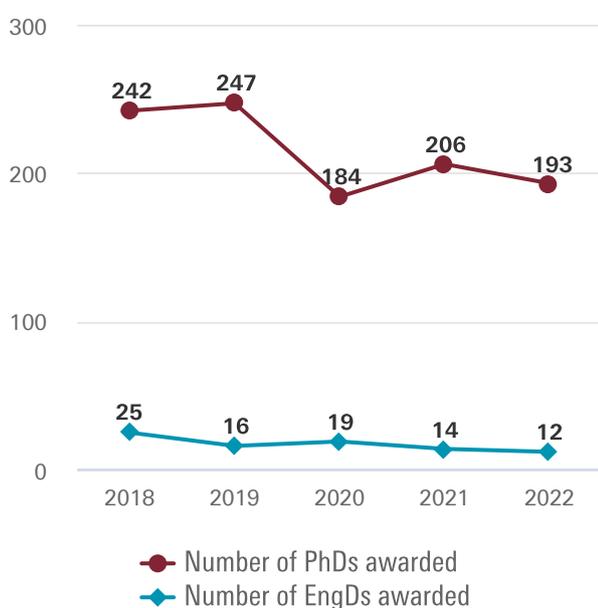
In 2021-22, 1,446 bachelor's degrees were awarded, which was 86 fewer than in 2020-21. The number of master's degrees awarded fell to 1,532, a decline of 206. There has been some speculation about the cause of this decline. After completing their studies, students move on to the labour market. We use the National Alumni Survey to measure the extent to which our educational programmes meet the needs of the labour market. UT master's alumni who graduated in 2019-20 were surveyed in the final months of 2021. That year, 17% of alumni completed the survey in full (more on the response rate below). Of those students, 97% were in paid employment (compared to 93% of the prior year's cohort). A total of 83% indicated that they were employed in their own field of study or in a related field (this was 82% in the previous year). 72% of respondents were working in a position suitable for a university graduate (compared to 52% in the previous year) and 28% were working in an HBO-level position (compared to 34% in the previous year).



## RESPONSE RATE

Student feedback plays an important role in our culture of continuous improvement. We conduct internal and external evaluations to measure how satisfied students are with the education that we provide. Input for our quality assurance cycle is provided internally through module evaluations combined with interviews with student panels. Externally, we take part in the National Student Survey (NSE), the National Alumni Survey (NAE) and the International Student Barometer (ISB). The results of these surveys are also used for study information and benchmarking. The response rate continues to decline every year, however. Although we try to minimise the number of surveys by coordinating requests, and also use various incentives, this is a recurring issue.

## Number of PhDs and EngDs awarded



After completing a master's degree, some students continue their academic career with a PhD. In 2021 there was a rise in the number of PhDs and engineering doctorates awarded, but that trend has not continued. In coordination with the relevant departments and the planning and control cycle, we are looking into the reasons for this in order to identify what steps we can take to increase the number of PhDs completed, not least by focussing on the well-being of young researchers. Since 2014, our Twente Graduate School (TGS) has been offering independent advice and support to PhD and EngD candidates. In response to the issues identified, a new range of courses has been developed with a focus on progress and well-being. The average duration of a PhD is 4.93 years. This is longer than previously, partly due to extensions granted as a result of the pandemic.

Source: Hora Finita

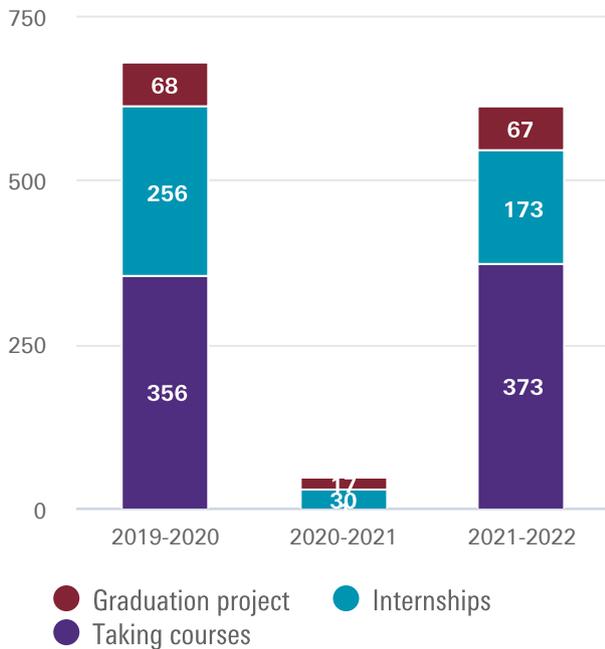
EngD programmes, also known as Engineering Doctorates, are an example of demand-driven impact. They focus on solving technical design challenges from the commercial sector. The EngD is a two-year post-master's design programme at the 4TU.school for Technology Design at the Stan Ackermans Institute (SAI). It is comparable in level to university PhD programmes. Until recently, this qualification was known as a Professional Doctorate in Engineering (PDEng). The name was changed to Engineering Doctorate (EngD) in September 2022 to give it a more distinctive profile, both nationally and internationally. The 4TU is working on updating quality assurance for these programmes.

# STUDENT DEVELOPMENT AND WELL-BEING

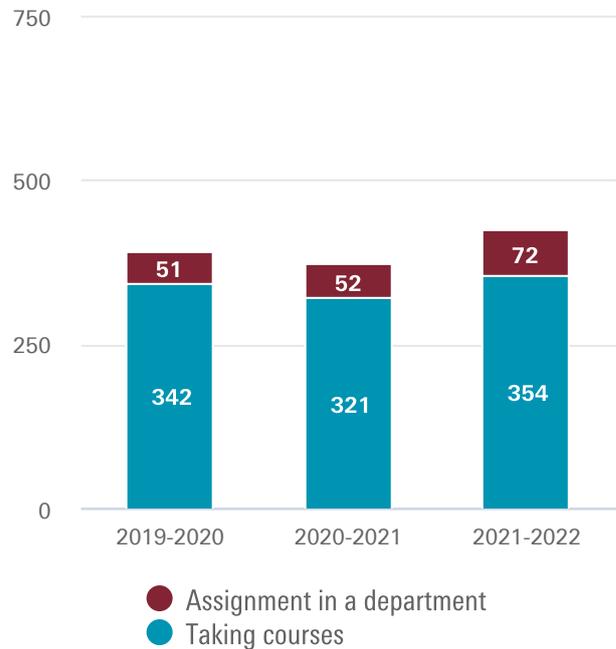


Giving our students the scope to develop their talents inside and outside the curriculum contributes to their development. Both Shaping2030 and the quality agreements involve, amongst other things, promoting talent development. These talent programmes help students to develop a wider skill set, enhancing their career opportunities and well-being.

## Outgoing exchange students



## Incoming exchange students

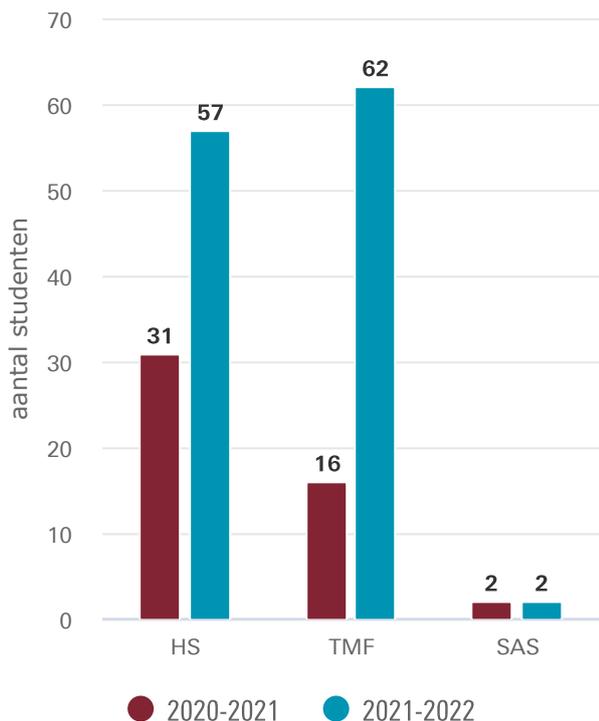


Mobility Online and the Scholarship Office and International Relations & Partnerships

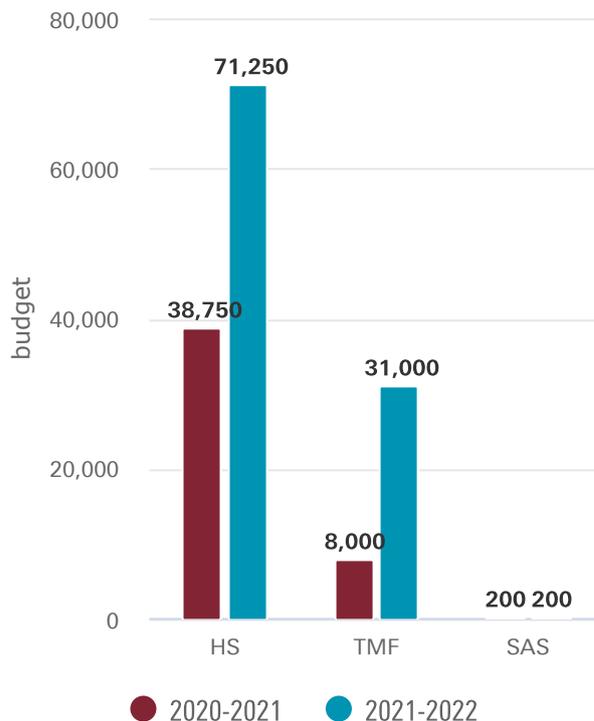
Mobility Online and the Scholarship Office and International Relations & Partnerships

We prepare our students for an international environment by enabling them to study in an international learning environment, but we also provide various additional opportunities for them to gain international experience externally during their studies. This can be done by, for example, taking courses or completing an internship abroad. Although the pandemic had a significant impact, it was possible to restart outgoing mobility programmes in 2021-22. The number of incoming exchange students has remained stable in recent years.

## SCHOLARSHIPS FOR OUTGOING EXCHANGE STUDENTS



Source: Mobility Online



Source: Mobility Online

Scholarships are available to encourage students to venture abroad, such as those from the Erasmus programme. In addition, the University of Twente has its own programme with the Twente Mobility Fund (TMF), the Student Ambassador Scholarship (SAS) and the Holland Scholarship (HS) Programme (funded 50% by UT, 50% by the Ministry of Education, Culture and Science).

Students are given the opportunity to broaden their development by joining the board of a sports, cultural or study association, a student team, the information team or a participation body. Some remarkable results have been achieved: for example, the RoboTeam came third at the Robot Football World Cup in Bangkok.



*Concert on the Oude Markt in Enschede*

The year 2022 marked the end of pandemic restrictions for students. This made it possible to hold cultural performances and organise competitions and tournaments once again, without the need for precautions or limitations. The fact that many associations select a new board every year led to major challenges when it came to the return to in-person events, however. Often, knowledge about how to organise in-person meetings and events was no longer available.



## POST-PANDEMIC ISSUES

In-person education could be resumed in 2022, following the pandemic. It proved difficult to get the students back into lecture halls and classrooms, however. Study and student associations also struggled to find students to serve as board members. No grants for student activism were awarded in 2022.

The University of Twente has an extensive system of support for students during their studies. This involves input and interaction between the educational programmes, which provide academic advice as well as education, a university-wide service that provides more generic support, and the study and student associations. The Student Union (SU) also plays an important role. The pandemic and its effects demonstrated the importance of student well-being. This not only involves ensuring the mental well-being of individual students and providing support, but also creating an open, safe and inclusive environment, which is essential if students are to flourish academically and grow as individuals.

UT's vision for student well-being was finalised in 2022. This is consistent with the ambitions of the UNL. What is unique in the case of the University of Twente is the emphasis on the role of the student as an active member of the community and the role of the campus and the associations. Student-to-student support will be expanded in 2022 with the introduction of Confidential Contact Persons for students. Students help each other, for example with respect to unwanted behaviour, and are therefore an indirect part of the university support structure. Courses in looking after friends, bystander intervention training and stress management are some examples of the support infrastructure that is available.



## STUDENT WELL-BEING

The well-being of students and staff is a key consideration. This is an area that requires an increasing amount of attention. How far can we and should we go in the field of student well-being? The current organisation challenges are not exclusively a result of the pandemic. Data from the student psychologists shows that non-EU students make up an increasingly large proportion of their client population. Studying in a different language, learning to live in a different culture, and often at a young age – all of this can prove more challenging for students than they had expected. There are also students who arrive with problems that make studying virtually impossible. Research is being carried out into the various factors that play a role here, as well as possible remedial steps.

The University Library contributes to student well-being by providing suitable workplaces that meet a diverse range of study needs. The record number of visitors to the library in 2022 (468,685) underscores its importance. Serving a diverse student population, the challenge is to provide a quiet place to study, but also places for groupwork or relaxation during breaks. Students were also involved in the library as a Living Lab in 2022, which led to:

- The healthy ergonomic aids pilot and a posture awareness campaign designed by honours programme students.
- The Sustainable Book Stack project: an industrial design student created a location for people to exchange books.
- A Meet & Greet Community Board hosted by University Innovation Fellows.
- A Welfare & Inclusion project space set up by Th!nkwithPride with support from the Inclusion Fund.



## MINDFULNEST



This room for one person gives students and staff a place for silence, focus, awareness or relaxation. In the two and half months of the pilot, over 1,800 students used the nest, 87% of the 736 students who expressed their opinion afterwards said that spending time here had helped them to reduce their stress level.

Promoting student well-being requires appropriate financial support. For example, the University of Twente provides financial support for students in difficult situations. Asylum seekers and students who fall under the temporary protection directive are eligible for reduced tuition fees during the nominal duration of their educational programme. In 2022, we set up an emergency fund for Ukraine, Russia and Belarus for students who were unable to pay their tuition fees and support themselves because of the war in Ukraine and/or the sanctions imposed on Russia and Belarus. This fund was newly established, along with the COVID emergency fund set up in 2020. In 2022 it was also decided that students from Ukraine who had fallen behind in their studies due to special circumstances could apply for financial support through the regular Financial Support for Special Circumstances Students (FOBOS) scheme.

FOBOS 2022 reference date 10-1-2023	Total amount paid (in €)	Number of applications		Average amount granted (= total amount paid / applications granted) (in €)
		granted	rejected	
Force majeure: Force majeure EEA	113,717	88	9	1,292
Administrators: Student activism	0	0	0	0
Other items: Top sport/top culture	8,895	17	0	523
Other items: Force majeure non-EEA	200,320	41	8	4,886
<b>Total</b>	<b>322,932</b>	<b>146</b>	<b>17</b>	

FOBOS 2022 reference date 10-1-2023	Total length of grant period in months	Number of applications granted	Average length of period (= total length of period / granted applications)
Administrators: Student activism	0	0	0
Other items: Top sport/top culture	216	17	13
Other items: Force majeure non-EEA	372	41	9
<b>Total</b>	<b>2,376</b>	<b>146</b>	

Source: Oracle, budget: Student Support Fund

# OUR STAFF AND THEIR WELL-BEING



The societal, technological and scientific challenges that we face demonstrate the need for high-quality scientific research. The government's sector plans enable the creation of additional positions for this purpose. However, attracting and retaining new talent for the University of Twente and the Twente region is a challenge due to the current tight conditions in the labour market. For this reason, we will work on improving the applicant tracking system from 2022 onwards. The Strategic Personnel Planning also links objectives and current developments to both current and future ambitions for the deployment of personnel. It provides an indication of which knowledge and skills are required in order to recruit in a targeted manner. All tools relating to recruitment have also been bundled together in a service portal for managers. To help new staff members get off to a good start and also to continue growing and developing, the information they are provided with has been split into phases. All this information is now available in one place, and is structured so that it is easy to find when it is needed.

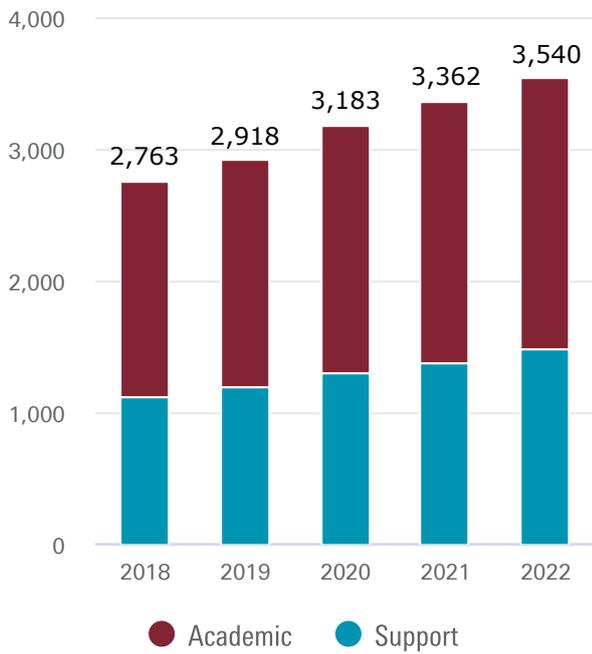
In 2022, recruitment and selection agency services and employment agency services will be put out to tender, and a hiring desk will be set up to match the supply of and demand for temporary (and other) staff across the university. We are also training new talent for our organisation through the Young Professional programme. A pilot is underway in 2020-2023: six academically trained junior staff members are completing a two-year traineeship during which they can work on strategic projects within faculties and service departments. Student assistants represent a special category of staff who are deployed in both the primary process and support. Remarkably, in 2022, there was a great deal of interest in these positions from many students from outside the EU. We encourage this because it contributes to the integration of international students into life at our university. It did lead to an increase in the workload for our HR Division, however. The number of applications for work permits or extensions to work permits amongst working students rose sharply in 2022.



## LEARNING ASSISTANTS

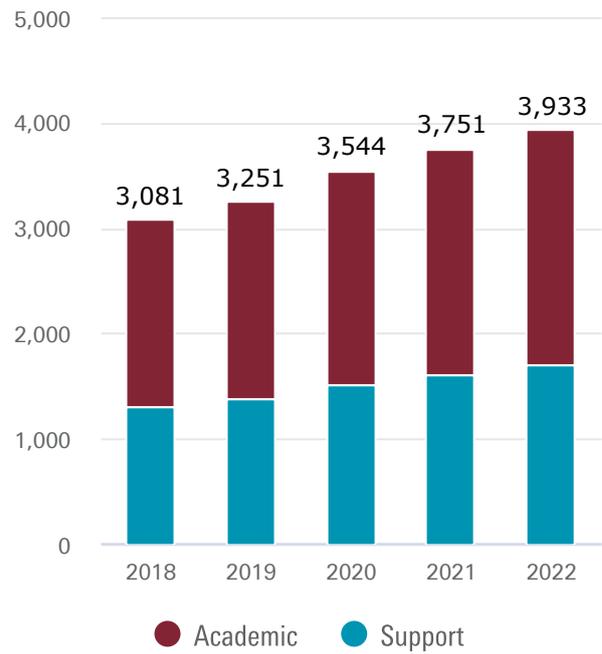
Student-driven learning is central to the education that we provide. Students share responsibility for their own learning. In order to work on this while also working as a student assistant during lectures, in labs or group lessons, for instance, students can take part in the [Learning Assistants](#) programme. In 2022, almost 300 students completed the programme. It teaches students to reflect on their own role based on pedagogical and didactic training.

## Staff (FTE)



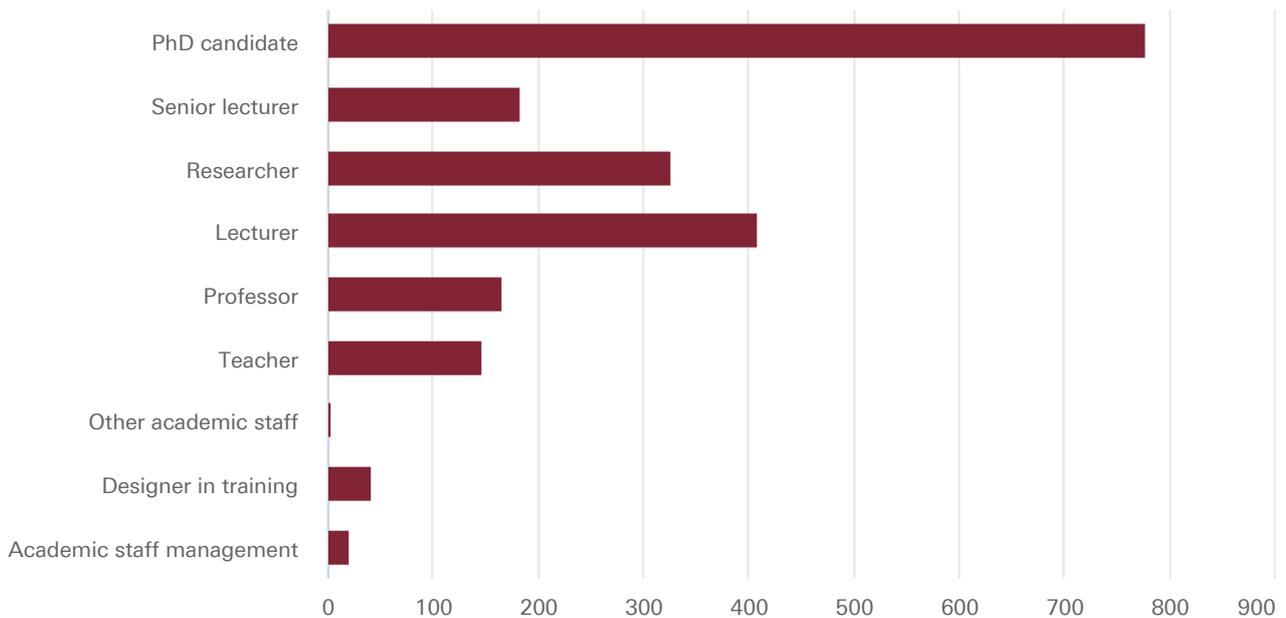
Source: AFAS

## Staff (individuals)



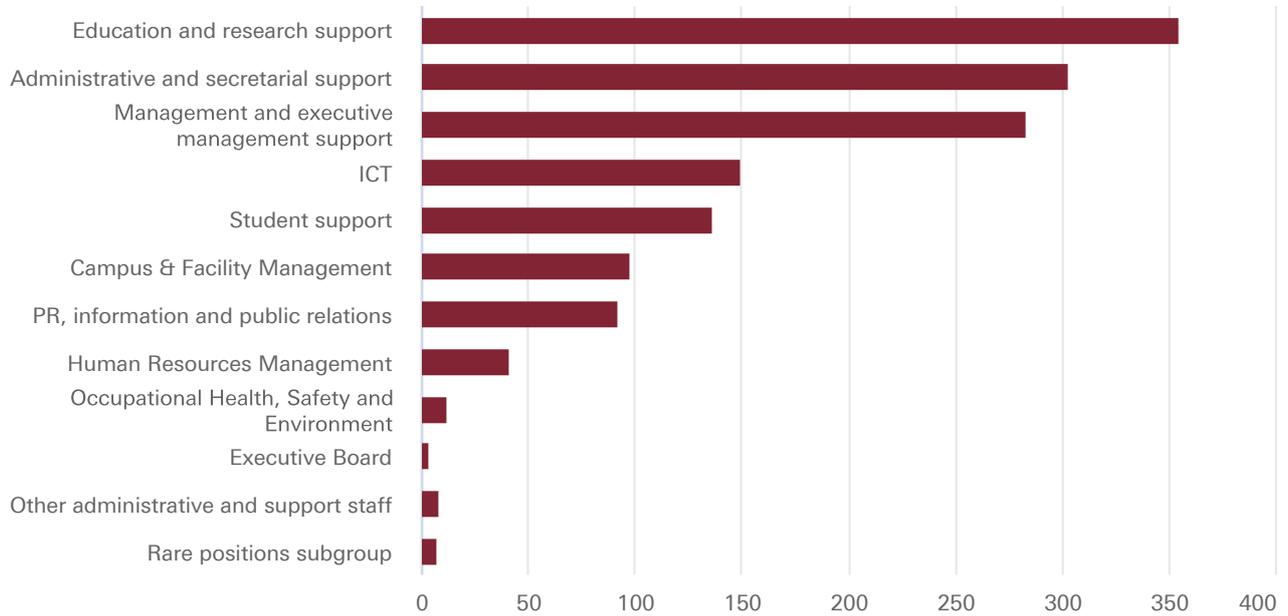
Source: AFAS

## Academic Staff (WP) in FTE (31-12)



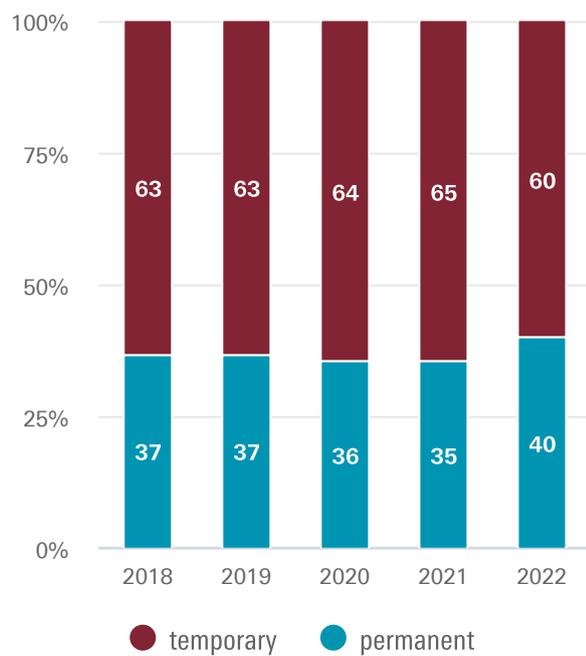
Source: AFAS

## Support Staff (OBP) in FTE (31-12)



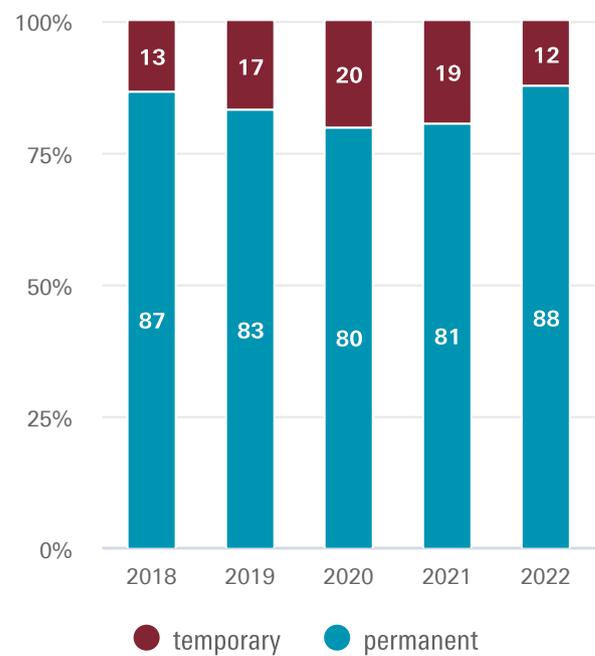
Source: AFAS

## Permanent-temporary % WP



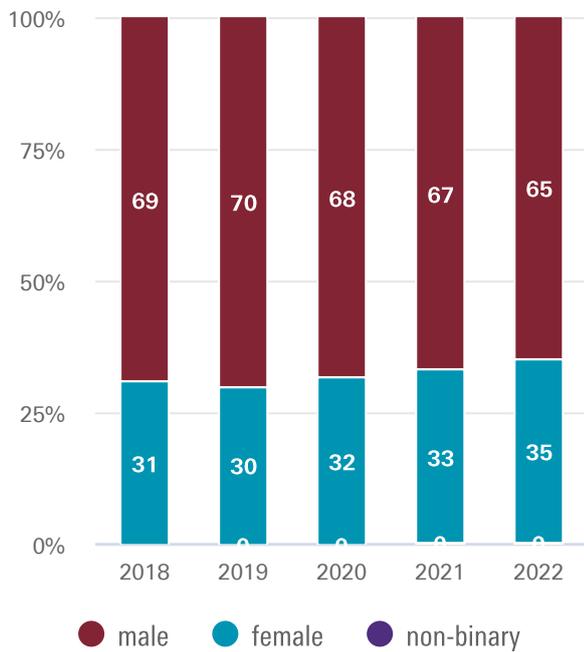
Source: AFAS

## Permanent-temporary % OBP



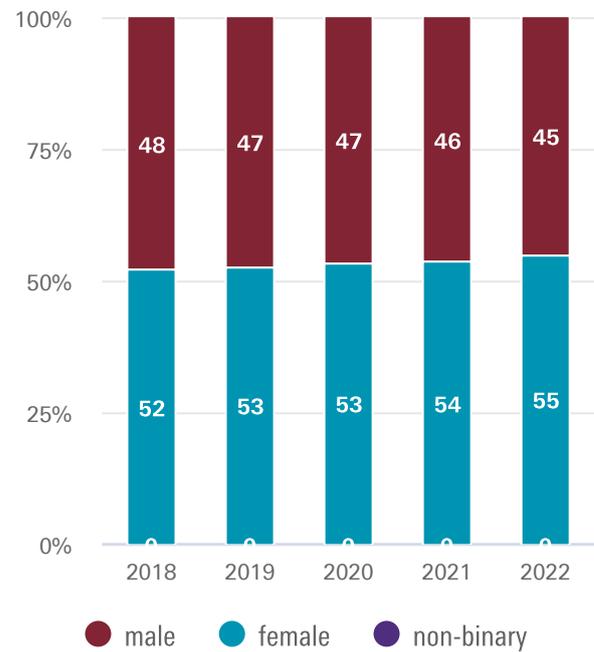
Source: AFAS

## Gender % WP



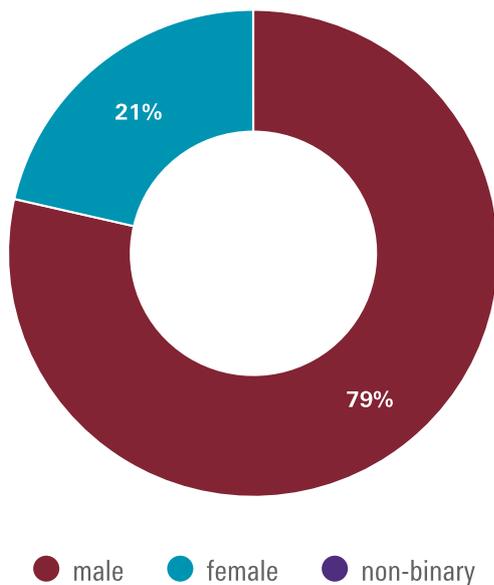
Source: AFAS

## Gender % OBP



Source: AFAS

## Gender Professors in %



Source: AFAS

In order to ensure that our university is a better reflection of wider society, recruiting female scientists and academics is a particular point of focus. Although we meet the quota for female staff set out in the sector plans for Science and Technology (this varies per discipline, between 33% and 50%), the number of female colleagues in academic and decision-making positions at the University of Twente remains below the number of male colleagues in similar positions. In 2021, in part at the request of the LNVH network, a target figure for the year 2025 was set: the University of Twente is aiming for at least 25% female professors (FTE) by 2025. The actual figure was 21% in 2021, and this was unchanged at the end of 2022. A Hypatia campaign is underway in order ensure progress in the right direction. The campaign targets female internal and external candidates for the positions of assistant professor, associate professor and professor.

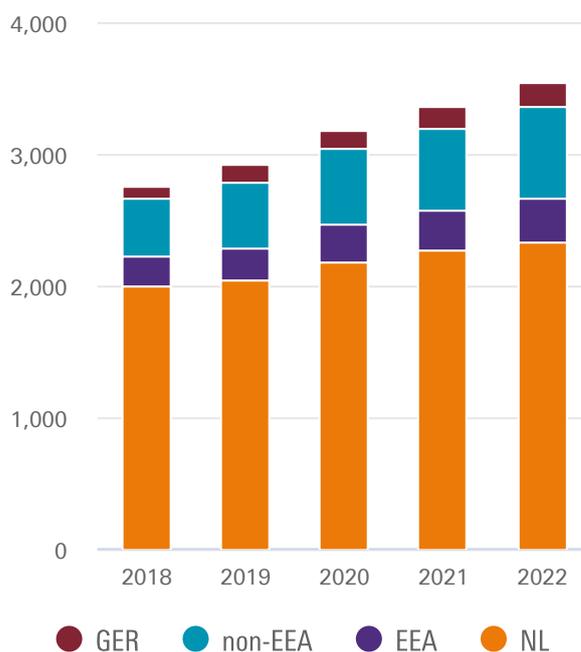
The Gender Equality Plan (GEP) was updated in 2022. In addition to creating awareness, the focus is now on implementing concrete steps in the field of diverse, equitable and inclusive research, education and leadership. The focus areas are cultural cohesion, accessibility, equal treatment and gender. In 2022, more faculties and services will integrate the theme of diversity, equity and inclusion (DE&I) into their own (HR) annual plan and into the team development processes. One example is the Department of Electrical Engineering, Mathematics & Computer Science, which formed its own DE&I team in 2022.

In order to establish a clear picture of staff well-being, two surveys were carried out. Some 1,500 staff members took part in these surveys (a response rate of 29% and 38%, respectively). Satisfaction with the University of Twente as an employer remains unchanged with a score of 7.5/10. 78% of respondents said that their work gives them energy and 86% said they are committed to their job. Working partly from home is standard for 76% of respondents. While the first survey in 2022 showed that 15% of staff worked exclusively on campus, this had risen to 26% by the time of the second survey. Information and material about hybrid working is shared on the service portal.



highest number ever. High inflation and rising energy costs are affecting the personal financial situation of staff members. An (anonymous) [financial servicedesk](#) has been established for questions and assistance. There was a discussion of the role that HR and managers can play in recognising and discussing financial worries.

## Origin staff (FTE)



Source: AFAS

Heavy workloads remain an issue. Some 51% of respondents indicated that they experience stress, 38% feel that they have too much work to do, 50% work more hours than they are officially employed for and 25% stated that they use their days off to finish off their work. The qualitative input gathered from the surveys is used to make improvements. For example, well-being weeks are organised, based on the results of the student and staff surveys along with feedback from across the organisation. In the spring, the theme was 'Reflect and respect' and in the autumn it was 'Take the lead'. A total of 1,380 people took part in these university Well-Being Weeks. The autumn Well-Being Week, which focussed on the financial fitness of staff and students, saw 830 participants – the



### **HIGH WORKLOAD**

In previous staff satisfaction surveys, 38% of respondents amongst academic staff indicated that their workload was high. A capacity management tool has been created (and tested in a pilot) to help measure this. The tool makes it possible to plan all types of work at different levels. This provides an insight into each staff member's workload, as well as reliable input for discussions between staff members and managers. Capacity management spans the whole spectrum of staff deployment.

Team leaders play a key role in staff well-being. This includes both reward and recognition, as well as providing the right tools to achieve a better work-life balance and commitment together. A self-designed leadership expedition began in 2022, consisting of a six-day programme spread over a six-month period. The first three groups completed the programme in the summer of 2022, after which five new expeditions began. This brought the total number of team leaders who have begun their expedition to 108. The impact is wide-ranging, with representation from all faculties and services, 55 women and 53 men, 57 academic staff and 51 administrative and support staff.

Staff and managers from the faculties and service departments receive support from Human Resources in various areas, both first and second line. This ranges from answering HR-related questions that staff members may have to supporting and advising managers on performance appraisal processes, long-term illness, severance schemes and issues around employee dismissal. Ex-staff members who have stopped working due to long-term illness or incapacitation for work also receive support from HR, so that they can return to work wherever possible. There are interventions that promote recovery or aim to find an alternative position outside the University of Twente, for example. In 2022, the absenteeism percentage was 4.03% with a reporting frequency of 1.07.

# DEVELOPMENT, REWARD AND RECOGNITION



The University of Twente wants to nurture every talent, provide scope for development and help people to realise their ambitions, both at the individual and team levels. This is reflected in developments in the field of reward and recognition. The results of the Teaching Culture Survey (TCS), a survey initiated by universities around the world that wish to improve support for and appreciation of university education, reveal a tentative shift in the balance between research and education. The number who strongly agreed with the statement 'Roles that focus on university education limit one's career' fell from 21% in 2019 to 14% in 2022 (see [Recognition and Rewards](#)). The survey was completed by 650 scientists from the University of Twente in 2022 and the response rate was 30% (average response 24%).

We are always seeking new ways to offer an attractive career to exceptionally talented teaching staff. Impact Narrative was launched in 2022, and is an experiment that focuses on candidates who want to complete a PhD with an emphasis on teaching. A fellowship can also offer good career prospects. The seven Teaching and Learning Fellows who began at the 4TU Centre of Engineering Education (4TU.CEE) in 2022 are engaged in digitisation. In 2021, five faculty fellows and two senior fellows also began work in the field of CBL. This programme enables people to work on their own professional development and contributes to the university-wide educational agenda. The University of Twente has also set up the UT Teaching Community in the context of the 4TU.CEE.



## TEACHING ACADEMY

This academy of the Faculty of Behavioural, Management and Social Sciences supports and facilitates activities that promote cooperation on educational innovation and provide recognition and reward in this area. In 2022, the Edfest education festival was held, there were meetings for all teaching staff members who began work during the pandemic, there was a Professional Learning Communities pilot for teaching staff, 22 educational innovation projects were completed and six new ones were started, and a framework for the professionalisation of teachers who hold the Basic Teaching Qualification was established.

Future-oriented education, 2022:

- Eight participants from University of Twente and nine from University of Groningen, with which we provide this programme, successfully completed the [Educational Leadership Programme](#). The programme helps people in a leadership position in education to lead educational innovation successfully.
- Seventy UT staff members obtained the Basic Teaching Qualification (BKO) and 205 teaching staff members followed one or more BKO courses. The BKO programme was redesigned in 2022, and in the spring of 2023 partial certificates began to be issued for Teaching implementation and Supervising graduation programmes.
- Ten UT staff members also completed the Senior Teaching Qualification (SKO). A total of 41 UT teaching staff members now hold the SKO certificate. This programme has also been redesigned, and a new group will start in 2023.
- Six UT staff members completed their Senior Examination Qualification (SKE). 17 UT participants also began the English variant of the programme (SUEQ). A total of 25 UT staff members now hold the SKE certificate.

- 120 UT participants followed one or more master classes for professional development for teaching staff. Examples include 'Blended learning course design', 'How to activate the learning brain' and 'Teaching in an international classroom'.
- Some 220 PhD students took part in the Taste of Teaching, a course that prepares this target group for teaching and supervising students who are completing the graduation phase.
- The Basic Qualification for Study Advisers (BKS) will also be redesigned in 2022 and a programme for new programme directors will start in 2022.

#### Future-oriented development, 2022:

- Some 139 staff opted to take part in a development meeting. That represents an increase of 54% compared to the two previous years during the pandemic, and is in line with pre-pandemic years. Of the 139 staff members, 41% are academic staff and 59% are support staff. Furthermore, 60% of those staff members opted for a follow-up to the meeting in the form of coaching, career guidance or assessment.
- A total of 1,286 staff and 62 students participated in the 108 training courses we offer. Of those staff members, 31% were academic staff and 41% were support staff. Amongst PhD candidates, the Analytic Storytelling, Project Management and Time Management courses were particularly popular. The training courses 'Integrity: Active bystander', 'Lean Green Belt' and 'Mental Health First Aid' were popular with staff members.
- A total of 936 staff have created an account for the online learning platform Good Habitz, of whom 220 have actively completed an online training course. Of the training courses completed, 25% fall under the category of personal strength (up 5% compared to last year) and 30% digital skills (up 13% compared to last year).
- The range of training available is continuously being expanded. We have launched customised programmes to support team development in relation to reward and recognition and team science.

Prizes and awards are awarded to acknowledge particularly noteworthy achievements. The University of Twente believes it is important to express our appreciation of researchers, teaching staff and students by awarding prizes and nominating those who have performed exceptionally well for external prizes and honours. The university prizes and awards committee focuses increasingly on academics who manage to create social impact through their work, and it is moving towards rewarding team results more than individual achievements. To provide a snapshot of the inspiring work that our staff do on a daily basis, we will mention a few here. The [annex](#) provides an overview of prizes, individual grants, memberships and European projects.



*Winning the Dutch Higher Ed Award*

In 2022 the Dutch Higher Education Award went to the Twente team headed by Klaasjan Visscher that developed the transdisciplinary Master-Insert Shaping Responsible Futures. The team was presented with the prestigious prize for educational innovation by Robbert Dijkgraaf, the Minister for Education, Culture and Science. The prize includes with a cash sum of € 1.2 million. The jury was impressed by the way it gets students to work in a transdisciplinary context within the DesignLab environment. Involving students from different backgrounds, such as philosophy or technical studies, gives them a completely different view of the assignments put forward by the stakeholders.

Jan Buitenweg is one of the three prize winners of a grant from the Comenius programme. This programme contributes to innovations and enhancements in higher education in the Netherlands. Buitenweg pointed out that control over which study path a student takes often lies with the educational programme, even though we would like students to take responsibility for the direction of their own development. He wrote an application for the development of the University of Twente Curriculum Inventory (UTCI), a tool that students can use to take control of organising their own education based on their own development goals and their aspirations for their future role in society. Educational programmes can respond to the increasing diversity of student needs and characteristics by providing a flexible range of education.

In addition to Sissi de Beer's appointment as the new programme director for Applied Physics, 2022 was also a very successful year for her in the field of research. She and her colleagues received grants from various funders: NWO KIC [Key Enabling Technologies call](#), NWO TTW [Open Technology Programme](#), NWO NWA-ORC (Dutch) for OBSerVeD (Odour-Based Selective Recognition of Veterinary Diseases) and the German Research Foundation (DFG).

Annemieke Witteveen won the [KNAW Early Career Award](#) in 2022 for her work in the field of eHealth technology. The KNAW (Royal Netherlands Academy of Arts and Sciences) awards this prize to researchers who conduct innovative and original scientific research. Christina Zaga received their annual [Diversity & Inclusion Initiative Award](#) from NWO for the project entitled Diversity, Equity and Inclusion for Embodied AI (DEI4EAI). This is a research collective made up of researchers from the University of Twente, TU Delft, TU/e and Leiden University. It focuses on the development and evaluation of embodied AI, the associated policy-making, and the promotion of a diverse and inclusive culture.

A selection of our laureates:

- Eefje Hendriks, Francis Kalloor Joseph, Tom Kamperman, Anastasia Lavrenko, Lonneke Lenferink and Kirsten Pondman each received a Veni grant of € 250,000.
- Jimmy Faria Albanese and Roelof Rietbroek were each awarded a Vidi grant of € 800,000.
- Kerensa Broersen was awarded a Vici grant of € 1.5 million.
- Chris Bäumer, Nienke Bosschaart, Sander Huisman, Saskia Kelders, Guillaume Lajoinie and Tim Segers received European Research Council Starting Grants of € 1.5 million.
- David Marpaung was awarded an European Research Council Consolidator Grant of € 2 million.
- Leon Smook won two prizes for his master's research: The Unilever Research Prize 2022 and the KNCV Golden Master Award 2022. He was awarded these prizes for his research into polymer brushes for use in electronic noses.
- The 2022 UT Education Award was won by Nelly Litvak.
- Hannah Ottenschot received the active student award, a prize awarded by the Student Union for exceptional achievement by students.
- Dennis Reidsma received the Juliana medal for the tool that he developed for the ethical review of research proposals.



*Nelly Litvak wins UT Education Award*

In addition to prizes, there are also some special appointments that we would like to highlight:

- [Deveraj van der Meer was elected as a fellow of the American Physical Society.](#)
- [Vinod Subramaniam took up a post as a council member for the Advisory Council for Science, Technology and Innovation \(AWTI\).](#)
- [Antonio Franchi was named a 2023 IEEE Fellow.](#)

# FOR AN INCLUSIVE AND SAFE ENVIRONMENT



Our staff and students are our capital, which is why it is essential that we provide a safe learning, living and working environment. Social safety is a topical and important issue at our university, as it is in the rest of society. In 2022, several departments, including DE&I, integrated safety, HR, M&C and CES, as well as the Ombuds Officer and the student associations, joined forces to ensure that everyone who works, studies, plays sports, visits or lives on the UT campus feels safe – and knows where to get support if they do not. This led to the development of various codes of conduct, roadmaps and tools to help safeguard integrity at UT. We also contributed to the WetenschapVeilig hotline for academics facing threats and intimidation, both online and in real life. In addition to improving access to and cooperation between our support structures, our efforts to increase social safety have explicitly focussed on preventing unwanted behaviour.



## LET'S TALK ABOUT YES



Rector Magnificus Tom Veldkamp signed Amnesty International's 'Let's Talk About YES' manifesto, which is aimed at preventing sexual violence and ensuring that survivors receive proper support. Veldkamp signed the manifesto in the presence of several study, sports and student associations.

Mindlab, a theatre production by TheaterMakers Radio Kootwijk, is part of our integrated integrity programme. The production shines a light on various integrity issues university staff might face. In 2022, as in previous years, Mindlab was performed at several events to promote the importance of creating an open and safe working environment together, and a video recording of the production was made. Last year also saw the launch of an ultra-short Mindlab experience, One Minute Mindlab, which introduces viewers to Mindlab, the theatre production about working in academia that premiered in 2020, through a video clip from the show. After that, they are asked to reflect on a question that appears on-screen – about scientific integrity, social safety or personal choices (and the consequences thereof).

In 2022, we participated for the first time in the Workplace Pride Global Benchmark, which compares how organisations perform on LGBTQI+ inclusion. This gave us a baseline measurement so that we can assess the impact of our activities in this area in two years' time. We achieved an overall score of 20% and received a report offering suggestions for improvement. The first plans to address these recommendations are already being implemented. For example, we are examining how we can make our terms of employment more inclusive by improving our parental leave policy for alternative families and offering more gender options in our AFAS HR systems and forms.

The UT Incentive Fund provides financial assistance and support for project proposals related to diversity (including gender diversity), equality and inclusion. Previously, access to this fund was limited to staff, but in 2022 students were also able to submit proposals for the first time. The Ambassadors' Network received eight proposals (six from staff, two from students), five of which were granted funding (three from staff, two from students). Proposal topics included support for neurodivergent students and staff, room for error in PhDs and improving the Computer Science programme's female-to-male ratio.



### DIVERSITY WEEK

The second edition of UT's annual Diversity Week covered a wide range of themes: gender equality, social justice, data justice, building accessibility, studying and working with disabilities and inclusive education. The theme week was part of a larger regional event, which we hosted together with other local educational institutions. Given the large differences in attendance between the various activities, we are currently looking at how we can reach a wider audience moving forward.

We still have a long way to go when it comes to ensuring social safety for everyone. This is evident from the annual reports of our own Ombuds Officer and confidential advisors, but also from the national survey conducted by the Ellemers committee. UT's Ombuds Officer received 37 reports from staff and PhD students and four from students in the 2021/2022 academic year. In handling these reports, the goal is always to resolve the underlying problem with the parties involved so that people can continue their work or studies in a healthy environment. The Ombuds Officer has indicated that there could be more focus on resolving problems through dialogue than is currently the case. This approach would be based on the understanding that complaints can also arise at an organisation like UT, and that turning to someone like the Ombuds Officer for support is a normal part of searching for a solution together. After all, that is what the Ombuds Officer is for. "[A sympathetic ear or acute escalation; the UT offers no middle ground](#)".

The complaints committee consists of five external members, two of whom were replaced in 2021/2022. Ten complaints were filed in 2021/2022. Six of these were submitted by a current or former student, two by a member of staff and two by people with no direct connection to UT. The committee also processed a prior complaint from 2020, handling a total of eight complaints in 2021/2022. Five of these were subsequently withdrawn by the complainants, and the committee issued an opinion to the Executive Board for two complaints. One complaint will be handled in the 2022/2023 academic year. Two complaints were not considered by the committee because they related to a substantive issue outside its competence. One of the complaints was divided into two sub-complaints. In addition, a challenge request was submitted in one case, which was granted by the Executive Board. The current committee then closed the file, after which the case was handled by an external complaints committee.

The Disputes Committee was established on 1 November 2020 and consists of four external members. It handles employment law disputes filed by staff. The [national disputes procedure](#), which applies to all Dutch universities, specifies which disputes can be filed. The committee's role is to investigate and adjudicate disputes, and to advise the Executive Board. In 2021/2022, staff filed four disputes to the committee, two of which were considered. One of these disputes was later withdrawn by the member of staff who had filed it. The committee issued an opinion to the Executive Board for one dispute. Furthermore, in mid-2022 the effectiveness of the sectoral disputes procedure was reviewed by the Universities of the Netherlands (UNL). This did not result in any changes to the collective labour agreement, and it was decided to reassess the procedure in five years.



In 2022, the Scientific Integrity Committee (CWI) issued opinions on three open complaints from 2021, with the National Board for Research Integrity (LOWI) issuing additional opinions in two cases. In the case of one complaint, LOWI's opinion (to declare the complaint wholly unfounded) differed from CWI's opinion to declare the complaint partially founded ([Opinion 2022-14](#)). Both CWI and LOWI advised the Executive Board to declare the other complaint unfounded ([Opinion 2022-16](#)). In the end, all three complaints were declared unfounded by the Executive Board. One new complaint was received in 2022, which was not considered by CWI due to its inadmissibility. All resolved complaints have been anonymised and published in full on [UNL's website](#) (Dutch).

We also publish a [summary of the complaints](#) on our own website.

To ensure a safe physical environment, we have 132 emergency responders covering our daily operations and 417 emergency responders for specific activities. To keep their knowledge up to date, 18 basic emergency assistance training courses were taught in 2022 (with an average of 15 participants per course), as well as 11 refresher courses (also with an average of 15 participants per course). In addition, several crisis drills were held for the central and decentralised crisis teams. A total of 16 accident reports were received in 2022: five reports of a dangerous situation, two near misses, two puncture accidents, five workplace accidents and two other accidents. Where possible, these led to the introduction of additional safety measures.

There were also developments with regard to hazardous substances and ionising radiation in 2022. The system that was previously used to record and manage hazardous substances was replaced by SOFOS 360, as planned, in April 2022. Chemicals used in the NanoLab are now also recorded in the central system. A self-built radiation machine (E-beam) was commissioned at S&T. The faculty has also appointed a local radiation expert under whose responsibility ionising radiation may be used, as required by the radiation licence. Upon completion of the TechMed Centre, radiation measurements were carried out for several rooms to ensure that the shielding had been installed in accordance with the relevant regulations.

# OTHER ORGANISATIONAL ASPECTS



## NEW COLLECTIVE LABOUR AGREEMENT FOR DUTCH UNIVERSITIES

In June 2022, UNL reached an agreement with employee organisations FNV, AC/FBZ, CNV Overheid and AOb on a new collective labour agreement for the period from 1 January 2022 to 31 March 2023. The focus remains on reducing workload by giving staff more control over how they spend their work hours and helping them protect their work-life balance. Another important topic is reward and recognition. Although the envisaged changes in this area will have to be developed and implemented primarily at the institutional level, the collective bargaining parties will periodically explore and discuss relevant developments at sectoral level as well. This ensures that the exchange of ideas and their possible translation into national frameworks can be prepared jointly and in good consultation.

## PARTICIPATION JOBS

In mid-2022, participation jobs at UT totalled 43 FTEs. Although no central policy has yet been adopted, decentralised efforts were made in 2022 to increase the number of participation jobs. In job ads, for example, we explicitly invite candidates from the target group to apply. We also collaborate with external parties to better reach potential candidates, and we exchange knowledge and experience regarding participation jobs with other universities.

## KNOWLEDGE SECURITY

In 2022, UT reached out to the National Contact Point for Knowledge Security five times. UT's risk management for knowledge security includes the following elements: prevention when preparing contracts and agreements, export and sanctions screening, risk management in relation to partners, risk management in relation to foreign influence, risk management in relation to sensitive areas of research and risk management in relation to non-compliance. Furthermore, two licences have been acquired: one for export screening and one for partner due diligence and sanctions screening.

## EU DIRECTIVE ON TRANSPARENT AND PREDICTABLE WORKING CONDITIONS

This EU directive came into force on 1 August 2022 and entails an extension of the information obligation for employers, as well as a prohibition on forbidding employees from doing ancillary work for no objectively justifiable reason. It also extends employees' entitlement to free training during work hours. Following the introduction of the directive, the information provision in UT's model employment contracts has been expanded and the UT Continuing Education Regulations have been amended.

## PAID PARENTAL LEAVE ACT



This act came into force on 2 August 2022. As a result, the collective labour agreement was amended with effect from 1 August 2022. From that date, staff with a child under the age of 1 who have not yet received 13 weeks of partially paid parental leave for that child have been entitled to leave with continued payment of 70% of their salary for up to 13 times their weekly work hours.

## EMPLOYEE BENEFITS FUNDS

Spending targets for employee benefits funds were adopted in 2022. These targets were based on the collective labour agreement, Shaping2030 and the university's desire to provide room for innovation. Last year also saw the introduction of internet and home working allowances, as well as the formation of a steering committee to develop more integrated hybrid working policies from a digital, housing and human resources perspective. As part of the standing Vitality, Employability and Basic themes, further offerings were developed to increase wellbeing, including through the continued development of lifestyle coaching. Meanwhile, the Informal Care and Personal Benefit Statement pilots were successfully completed. In the second half of the year, partly at the request of the unions, attention was paid to employees' financial fitness in the face of rising inflation and the energy crisis. The package of measures that was introduced in this context focuses on sustainable employability and financial fitness, and the relationship between the two.

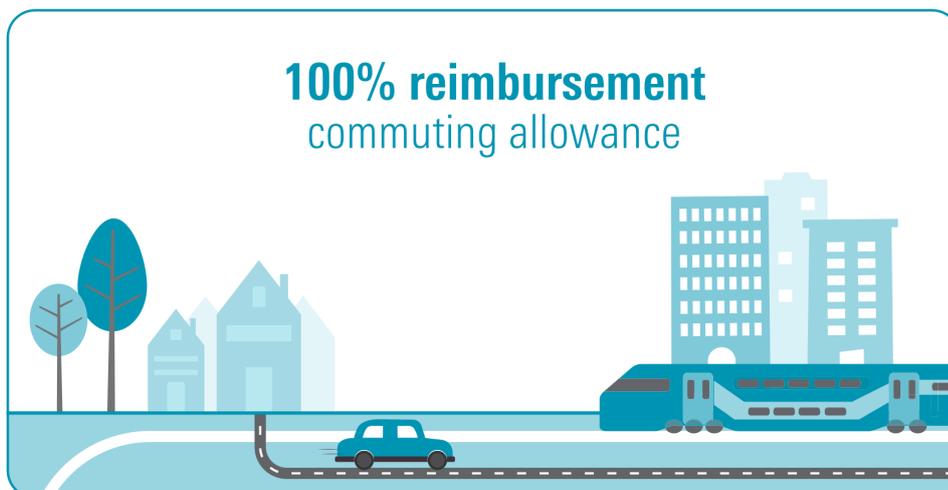
## HORIZONTAL MONITORING AGREEMENT WITH THE TAX AND CUSTOMS ADMINISTRATION

The Tax and Customs Administration has implemented changes to its horizontal monitoring, which have resulted in updated principles and tightened criteria. For UT's new horizontal monitoring agreement, all internal tax processes were re-mapped and recorded in a tax risk and control matrix. The new agreement was signed in November 2022.

## ONGOING REDUNDANCY PLAN (DSP)

In coordination with UT's employee participation body, a new DSP has been agreed, which will be in effect until 31 December 2024. The updated DSP, which acts as a supplement to the collective labour agreement, has been designed to minimise the adverse impact of future organisational changes on staff's employment opportunities, legal status and working conditions. The new DSP was adopted because the previous version had expired and the legislation around working conditions at universities had changed as a result of the Public Servants (Standardisation of Legal Status) Act.

## COMMUTING ALLOWANCE



A new commuting allowance scheme was introduced in 2022. This means that from 1 January 2022, all staff will receive 100% reimbursement of their commuting costs if they use public transport (second class), or a fixed travel allowance of € 0.10 per kilometre if they use their own means of transport. In addition to this € 0.10 allowance, staff can opt to fiscally exchange € 0.09 per kilometre.

## OTHER TERMS OF EMPLOYMENT

- From 2022, staff can opt to have their holiday bonus paid monthly. This measure was introduced to accommodate staff who are struggling financially due to the high cost of living.
- Under the Optional Model for Employment Conditions, from 2023, staff will be able to receive a tax deduction based on expenses incurred from 1 January 2022 to improve the sustainability of their homes, up to an amount of € 5,000 over a five-year period (maximum € 1,000 per year).
- The temporary internet and home working allowance scheme introduced in 2021 has been included in the 2022-2023 collective labour agreement. Staff now receive a monthly internet allowance of € 25 and a homeworking allowance of € 2 per homeworking day.
- In 2022, 336 employees purchased a bicycle through the Optional Model.

## UT STUDENT JOBS

Following amended legislation and regulations, preparations were made in 2022 to reclassify student jobs into two types. Under this new system, student assistants who make a direct contribution to academic education or research, such as students who help mark exams, will remain employed by UT. They will be offered a temporary employment contract for a fixed number of hours for the duration of their assignment. Flexible student workers who do not contribute directly to academic education or research will be employed through a payroll agency. These include students who do administrative and organisational work, such as front desk workers. The new system will make it more expensive to employ these students.

## GENETICALLY MODIFIED ORGANISMS (GMOS) AND RELATED LEGISLATION

In September, UT's compliance with GMO legislation was audited by the Human Environment and Transport Inspectorate. The outcome of the audit was positive. The Netherlands Food and Consumer Product Safety Authority conducted its triennial animal by-products inspection in November. Although a number of points for improvement were identified, UT's licence was once again renewed for three years.

## **NIRPA REGISTRATION**

In 2022, we became the first university in the Netherlands to obtain collective NIRPA certification. This means that enough of our payroll staff are registered with NIRPA, and that they demonstrably keep their knowledge up to date and comply with the code of conduct and the professional code for payroll professionals. In addition, the design of the automated control measures in the AFAS HR application for HR and payroll processes was audited. Based on the result of this audit, HR concludes that the control measures are effective.

## **ANIMAL TESTING**



UT has a small animal testing facility, which is set up to house rodents. The laboratory animals that are kept at this facility are used for fundamental research. In 2021, 419 mice and 81 rats were used for cancer research, gastrointestinal and liver disease research, and nervous system research. As the figures about the use of laboratory animals do not become available until halfway through the calendar year, the 2021 figures are reported here. This also means that the figures reported last year were from 2020, not 2021 as stated in the previous annual report.

# CONTINUITY SECTION

The continuity section provides insight into the results of the financial policy for the reporting year 2022 and the intended financial policy for the period between 2023 and 2027. The continuity section consists of an A part and a B part.

In part A, we consider the expected operating result in the coming years and the development of the capital position, including the prescribed numerical tables with regard to the development of student numbers, staffing, operating results and balance sheet items. With the existing policy, under which the government grant budgets for 2023 are guaranteed in the Spring Memorandum, the Executive Board offers a stable financial framework to the faculties and support departments. The income from tuition fees is allocated in the budget on the basis of the most up-to-date intake data.

Part B of the continuity paragraph discusses the risks and uncertainties faced by UT, and the measures the university takes to manage and mitigate them. In this context, part B also describes how the internal risk management system is set up and how it functions in practice.

## A. DATA SET

### DEVELOPMENT OF KEY FIGURES (A1)

#### DEVELOPMENT OF STUDENT AND STAFF NUMBERS

UT strives to maintain its unique position, with small-scale education and a close-knit student community, which are appreciated by all stakeholders. At UT, people always come first. This also means that we carefully consider the needs of future students, as well as how the increasingly fast-changing context in which our university exists might play a role in their lives. The size and composition of the student body are therefore key issues in Shaping2030. By 2030, our student community will be inclusive and diverse. In 2022, we critically examined our priorities and made adjustments where necessary.

Enrolments showed an upward trend in the years up to 2021. In 2022, however, there was a decrease compared to 2021. The 2023 budget was still based on the assumption that the student body would continue to grow, but new projections are currently being drawn up.

Personnel and student projections	2022	2023*)	2024*)	2025*)	2026*)	2027*)
Changes in student numbers	12,409	13,526	13,927	14,355	14,672	14,866
Personnel (average FTEs)						
• Governance/Management	20	20	20	20	20	20
• Primary process personnel	1,995	2,176	2,180	2,203	2,199	2,178
• Support staff	1,469	1,613	1,592	1,580	1,570	1,567
<b>Total staff</b>	<b>3,484</b>	<b>3,809</b>	<b>3,792</b>	<b>3,803</b>	<b>3,789</b>	<b>3,765</b>

UT wants to help meet the increasing demand for technically trained graduates in the labour market, which is set to continue growing sharply in the coming years. In the national discussion on the future of higher education and research, we therefore assume higher growth ambitions.

Our expectation is that academic staff will have to increase in the coming years compared to 2022, partly as a result of the sector plans. Given the tight labour market, however, it remains difficult to fill vacancies. We also see high staff turnover in a number of fields, and the onboarding process for new hires requires extra effort from our existing staff. In the short term, this means that the growing number of FTEs will cause the workload – which is already high – to increase as well, before it is reduced by the new staff. As a result, workload will remain a key issue in the coming years.

## **MULTIANNUAL BUDGET (A2)**

### **FINANCIAL POLICY PRINCIPLES**

The available first-stream funding (direct government funding plus tuition fees) is allocated to education and research. This is done through our own distribution model, which matches the Ministry of Education's funding model as closely as possible. As the Minister will not announce any compensation for increased wages, prices and student numbers until June of the current financial year, we have used our own estimates for this in the budget for the coming year. Anticipated developments will thus continue to be integrated into the university's budget in the coming years, as they have been in recent years.

In order to maintain stability in the longer term, we use a five-year budget horizon. The financial year determines the tasks to be carried out, while the multiannual budget sets the long-term course. The use of reserves must comply with our reserves policy and be approved by both the Executive Board and the Supervisory Board. In addition, the use of reserves is subject to approval by the University Council. Operational management and housing budgets are allocated on the basis of internal calculation rules, which are regularly reviewed for market conformity.

To maintain sound finances, we review planned material expenditure against applicable standards for solvency, liquidity and impact on operating profit and cash flow. Ratio developments are reported periodically in the management report.

Our aim is to focus less on control (record keeping and accountability) and more on tactical and strategic input, offering constructive feedback to support the organisation. To this end, we apply the principle of continuous improvement when implementing our financial policy, continuously tightening and adjusting our planning and control, as well as our risk management. A project to adjust our own distribution model was launched in 2020. The scope of this project covers master's budgets, research budgets and earmarked budgets. The new distribution model for master's budgets and the analysis of earmarked budgets have already been incorporated in the 2022-2026 budget. Meanwhile, the education and research component of the research budget has been incorporated in the 2023-2027 budget. The allocation of other research budgets is still pending. Here, in addition to stability, the focus is on transparency and future-proofing, as well as on realising our Shaping2030 ambitions.

## DEVELOPMENT OF BALANCE SHEET 2023-2027

Based on the 2023-2027 result budget, the Long-Term Strategic Housing Plan (LTSH) and the repayment schedule for long-term funding, the following balance sheet development is expected for the years 2023-2027:

Balance sheet as at 31 December (€m) consolidated	2022	2023*)	2024*)	2025*)	2026*)	2027*)
Intangible fixed assets	0.0	0.0	0.0	0.0	0.0	0.0
Tangible fixed assets	296.0	305.3	328.0	350.0	370.2	395.8
Financial fixed assets	14.8	16.0	16.3	16.3	16.4	16.2
<b>Total fixed assets</b>	<b>310.8</b>	<b>321.3</b>	<b>344.3</b>	<b>366.3</b>	<b>386.6</b>	<b>412.0</b>
Inventories	0.4	0.4	0.4	0.4	0.4	0.4
Receivables	60.0	47.5	47.5	47.5	47.5	47.5
Marketable securities	0.0	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalents	106.6	49.7	50.2	53.0	55.5	58.5
<b>Total current assets</b>	<b>167.0</b>	<b>97.7</b>	<b>98.2</b>	<b>101.0</b>	<b>103.5</b>	<b>106.5</b>
<b>Total assets</b>	<b>477.8</b>	<b>419.1</b>	<b>442.5</b>	<b>467.4</b>	<b>490.1</b>	<b>518.6</b>
General reserve	142.5	134.3	122.8	118.1	121.1	129.7
Appropriated reserve (public)	0.0	0.0	0.0	0.0	0.0	0.0
Appropriated reserve (private)	22.7	14.2	14.5	14.5	14.6	14.9
Special-purpose funds (public)	0.0	0.0	0.0	0.0	0.0	0.0
Special-purpose funds (private)	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total of capital and reserves</b>	<b>165.2</b>	<b>148.5</b>	<b>137.3</b>	<b>132.6</b>	<b>135.7</b>	<b>144.6</b>
Provisions	9.9	11.0	11.0	11.0	11.0	11.0
Non-current liabilities	92.7	87.2	121.8	151.4	171.0	190.6
Current liabilities	210.0	172.3	172.3	172.3	172.3	172.3
<b>Total liabilities</b>	<b>477.8</b>	<b>419.1</b>	<b>442.5</b>	<b>467.4</b>	<b>490.1</b>	<b>518.6</b>

\* Based on the approved budget for 2023-2027

In the coming years, planned property investments, which will be capitalised upon commissioning, will have the most significant influence on the balance sheet shown above. There are also regular repayments of long-term loans, and we expect a new loan of € 125 million for the benefit of the LTSH. For the years ahead, the above picture results in a solvency ratio ((equity + provisions)/total assets) between 30% and 39%. This is within acceptable limits, as the trigger value is 30%. Based on this outlook, there is room to make responsible investments in the necessary replacement or expansion of large-scale strategic infrastructure and other necessary or desirable infrastructure, housing and, for example, talent development within our research programmes or the development of new educational programmes.

# NOTES ON THE BALANCE SHEET

## TANGIBLE FIXED ASSETS

Tangible fixed assets (€m) consolidated		Land and buildings	Land development	Inventory and equipment	Other tangible fixed assets	In progress and prepaid	TFA not required by the process	Total
Purchase price 1-1-2023	a	518.9	47.7	61.2	1.6	49.8	16.9	696.1
Accumulated depreciation, amortisation and impairment 1-1-2023	b	-341.7	-17.6	-27.8	-1.3	-	-11.7	-400.1
Carrying amount 1-1-2023	c=a+b	177.2	30.1	33.4	0.3	49.8	5.2	296.0
Investments 2023-2027	d	273.2	-	18.4	-	-49.8	-	241.7
Acquisition cost of divestments 2023	e	-23.6	-2.4	-	-	-	-	-26.0
Depreciation and amortisation 2023-2027	f	-93.5	-	-44.6	-	-	-	-138.1
Depreciation and amortisation of divestments 2023-2027	g	21.7	0.5	-	-	-	-	22.2
Reversal of impairment loss	h	-	-	-	-	-	-	-
Acquisition cost and reversal of impairment loss 31-12-2027	i=a+d+e+h	768.5	45.3	79.6	1.6	-	16.9	911.8
Accumulated depreciation, amortisation and impairment 31-12-2027	j=b+f+g	-413.5	-17.1	-72.4	-1.3	-	-11.7	-516.0
<b>Carrying amount 31-12-2027</b>	<b>k=i+j</b>	<b>355.0</b>	<b>28.2</b>	<b>7.2</b>	<b>0.3</b>	<b>-</b>	<b>5.2</b>	<b>395.8</b>

## PROPERTY INVESTMENTS

The LTSH's multiannual framework determines the financing scope available for the realisation of housing within the solvency and liquidity limits set by the Supervisory Board. Under the current plan, the solvency, liquidity and housing ratios will remain within the specified limits in the coming years.

At 11-12%, the housing ratio (housing costs/total expenses) will remain below the Inspectorate of Education's trigger value of 15% in the coming years. The projected effects of these investments on UT's solvency and current ratio have also been calculated.

Decisions on individual investments larger than € 5 million are submitted to the University Council, while investments larger than € 10 million must be approved by the Supervisory Board. If the total outgoing cash flow for the LTSH exceeds the Annual Plan's budget by 10% or more, prior approval is sought from the Supervisory Board. This ensures that both the Supervisory Board and the relevant participation bodies are involved in a timely manner when financial risks change.

## INVENTORY, EQUIPMENT AND LARGE-SCALE INFRASTRUCTURE

Based on the 2023-2027 multiannual budget, investments in inventory, research equipment and replacements are projected to total € 26.1 in the coming years. This includes investments in the NanoLab, the Fraunhofer Innovation Platform, the new Faculty of Geo-Information Science and Earth Observation (ITC) building, investments in sports and cultural facilities and investments under the sector plan for science and technology.

## RESERVES AND PROVISIONS

Given the large demand for our education, research and knowledge, and the need to manage the workload of both our staff and students, the Executive Board will continue to make investments moving forward. These will include investments in support. This means that there will be negative results in the period from 2023 to 2027, specifically in the years 2023, 2024 and 2025. As a consequence, UT's reserves will decrease in the coming years.

## BUDGET FOR 2023-2027

The consolidated budget for the period from 2023 to 2027 provides insight into the expected result developments.

Statement of income and expenses (€m) consolidated	2022	2023 *)	2024 *)	2025 *)	2026 *)	2027 *)
Central government funding	285.0	306.1	312.3	320.3	325.3	328.6
Tuition, course and examination fees	28.5	38.5	42.3	44.6	46.2	47.4
Income from work on behalf of third parties	86.8	98.3	100.3	103.5	106.2	108.5
Other income	23.6	30.0	29.9	29.4	28.0	26.6
<b>Total income</b>	<b>423.9</b>	<b>472.9</b>	<b>484.8</b>	<b>497.8</b>	<b>505.7</b>	<b>511.1</b>
Personnel expenses	309.0	339.1	348.2	354.8	357.2	355.7
Depreciation and amortisation	24.0	30.8	30.6	30.8	27.4	29.6
Accommodation expenses	34.0	43.9	40.2	39.1	38.2	37.2
Other expenses	76.5	80.1	76.8	77.3	79.4	79.4
<b>Total expenses</b>	<b>443.5</b>	<b>493.9</b>	<b>495.7</b>	<b>502.1</b>	<b>502.1</b>	<b>501.9</b>
<b>Net income and expenses</b>	<b>-19.6</b>	<b>-21.0</b>	<b>-10.9</b>	<b>-4.3</b>	<b>3.6</b>	<b>9.2</b>
Net income and expenses financial operational management	-	-0.4	-0.3	-0.4	-0.4	-0.3
Balance of extraordinary income and expenses	8.3	6.4	-	-	-	-
<b>Result from ordinary operations</b>	<b>-11.3</b>	<b>-15.0</b>	<b>-11.2</b>	<b>-4.7</b>	<b>3.2</b>	<b>8.9</b>
Result from participating interests	-0.1	-	-	-	-	-
<b>Total result</b>	<b>-11.4</b>	<b>-15.0</b>	<b>-11.2</b>	<b>-4.7</b>	<b>3.2</b>	<b>8.9</b>

\* Based on the approved budget for 2023-2027

## EXPLANATORY NOTES

Above, under reserves and provisions, we noted that the Executive Board will continue to make investments in the coming years. To ensure a responsible investment strategy, a realistic UT budget that can be properly monitored in the management reports is key. In addition, the result development depends to a large extent on developments and uncertainties with regard to government funding and other income, student numbers, staffing levels, inflation, energy costs and investments in the coming years (with regard to depreciation costs). In addition, given the nature of the activities within the participating interests brought together within University of Twente Holding (UTH), the results of the participating interests are difficult to predict.

### CENTRAL GOVERNMENT FUNDING

Central government funding was estimated based on the t-2 provisional funding picture. There have been several developments with regard to central government funding. For instance, the startup and incentive grants and the coalition agreement's sector plans have been incorporated in this budget. In addition, the wage and price index has been calculated based on a projection of 4.25%.

The consultancy firms PwC and Berenschot were commissioned by the Ministry of Education to carry out studies on the adequacy of government funding for senior secondary vocational education and higher education, and the optimal ratio between fixed and variable funding, respectively. Their findings were presented in March 2021 and are currently being translated into policy.

The current government signed its coalition agreement in December 2021. In this document, the coalition parties agreed to give universities more resources to reduce workload, improve student well-being, fund research and invest in their digital infrastructure.

To strengthen the foundation of higher education and research in a targeted and sustainable way, the Ministry of Education is investing in sector plans. The first tranche was awarded in 2022. As sector plan funding for 2023 and beyond was not yet announced in the first funding letter for 2023, we used projections in our 2023-2027 budget. Partly to encourage independent research, the Ministry of Education introduced startup and incentive grants. These funds were included in both the first funding letter for 2023 and our budget for 2023-2027. Both tools will be further fleshed out and implemented in the coming period.

The National Growth Fund offers new opportunities for research and research infrastructure. In 2022, a number of proposals we submitted to the Growth Fund (together with partners) were awarded. Winning projects included NXTGEN hightech, PhotonDelta, Einstein Telescope and Impulse Open Learning Materials. In addition, there were awards for contributions to Sustainable Materials NL, the Water Technology Growth Plan, NL 2120, the Green Earning Capacity of NL and the Aviation in Transition project. The third funding round is now open for submissions.

### TUITION FEES

Tuition fees show an increase in 2023 compared to 2022 due to the generic tuition fee reduction all students received under the National Education Programme in the 2021/2022 academic year.

### INCOME FROM WORK ON BEHALF OF THIRD PARTIES

Looking at the years ahead, income from second-stream funding and third-stream funding is expected to increase in volume from € 98.3 million in 2023 to € 108.5 million in 2027. Faculties expect more income from second-stream funding and third-stream funding partly because we will be able to increase our impact as a result of the sector plans for research and our contributions to Growth Fund proposals. The awarded proposal funding has not yet been included in the budget.

## **OTHER INCOME**

Other income shows a slight decrease between 2023 and 2027.

## **PERSONNEL COSTS**

The wage costs in the budget are based on the collective labour agreement for 2022 and the most up-to-date rates for social security and pension contributions. As there are several developments that affect the multiannual cost level, such as the collective labour agreement's expiration on 31 March 2023, it was decided to allow for a 2.5% increase in the 2023 budget. It is difficult to predict how wages will develop, partly due to the high inflation levels in 2022. Additional wage cost increases have not yet been taken into account in the multiannual perspective.

## **DEPRECIATION**

Depreciation will decrease from € 29.9 million in 2023 to € 28.7 million in 2027. More details can be found in the balance sheet's explanatory notes, under 'Tangible fixed assets'.

## **HOUSING EXPENSES**

The principles for housing investments are set out in the current LTSH. At 11-12%, the housing ratio (housing costs/total expenses) will remain below the Inspectorate of Education's trigger value of 15% in the coming years.

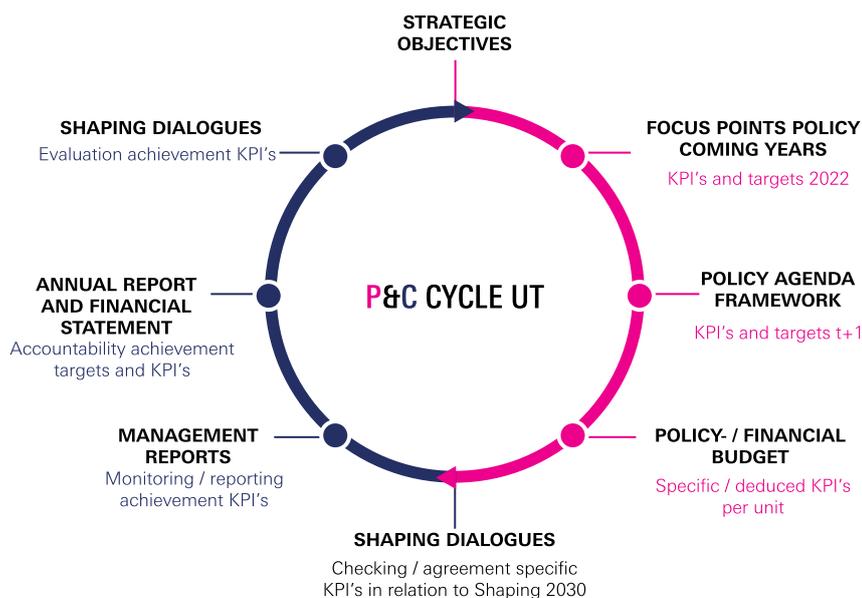
From the fourth quarter of 2021, energy prices began to rise sharply. At present, it is difficult to predict how energy prices will develop and whether they will remain at their current high levels. The budget for 2023 presumes that high energy prices will persist. Besides increased energy prices, the 2023-2027 budget takes into account upcoming energy measures, and a slight decrease in prices is expected in the period from 2024 to 2027. The resulting cost savings have been calculated at € 2 million in 2023, rising to € 10 million in 2027. (It should be noted here that these projected cost savings would follow the nearly 300% cost increase from 2021 to 2023.)

## B. OTHER REPORTS

# THE STRUCTURE AND FUNCTIONING OF THE INTERNAL RISK MANAGEMENT AND CONTROL SYSTEM (B1)

## FUNCTIONING AND DESIGN

Risk management aims to manage risks continuously and proactively. It complements existing operational management and as such is integrated into existing processes. A risk is defined as "an event that has a positive or negative impact on the achievement of organisational objectives, presenting either an opportunity or a threat". The achievement of the strategic objectives, which are determined as part of the planning and control process (see diagram), therefore plays a central role in risk management.



### Results (control)

- Which planned measures were implemented and which ones were not? Why not?
- Have the objectives been achieved? And why not?
- What were the costs of implemented measures?
- Further implementation or new objectives?

### Policy (planning)

- Which objectives do we want to achieve?
- Which measures will we implement? And when?
- What are the associated costs?

In 2023, as in 2022, we will continue to develop our administrative priorities. Last year, these priorities were critically assessed. As a result, UT will focus on five administrative priorities and two supporting fundamental activities in 2023. We will use periodic management reports to monitor the implementation of adopted policies, and to track the realisation of our plans. Based on these reports, we will determine whether risk mitigation or other measures are needed. In this context, it is important that management has access to reliable, relevant and timely information.

Continued efforts are being made to further strengthen a more steering-oriented planning and control cycle while also improving the products included in this cycle.

## **RISK AREAS: THREATS AND OPPORTUNITIES**

### **INTERNAL DEVELOPMENTS**

A more or less fixed set of identified strategic risks are monitored periodically in the management reports. Each report has its own emphasis, based on adjustment opportunities in the planning and control cycle. We distinguish the following risk areas: education, research, human resources, finance, ICT, commercial knowledge transfer and knowledge security. Further context for each of these areas is provided under 'Description of the main risks and uncertainties (B2)'.

### **EXTERNAL DEVELOPMENTS**

The external opportunities and threats identified by UT are mainly related to national politics and the geopolitical landscape.

A number of important developments in this context are set out below.

#### **WAR IN UKRAINE**

The ongoing war in Ukraine has implications for the global economy, and therefore also for the Dutch economy. Moreover, it has an impact on the well-being of our students, staff and all those whose lives are either directly or indirectly affected. To ensure access to higher education, tuition fees for Ukrainian refugees have been reduced to the statutory rate for the 2022/2023 academic year.

#### **PRICE INCREASES**

Inflation was high in 2022, with commodity and energy prices rising sharply, partly as a result of the war in Ukraine. At the moment, it is uncertain to what extent these increases will continue and whether prices will remain high. It also remains unclear whether and to what extent the government will offer higher wage and price compensation.

#### **GOVERNMENT FUNDING MODEL**

In 2021, the consultancy firms PwC and Berenschot were commissioned by the Ministry of Education to carry out studies on the adequacy of government funding for senior secondary vocational education and higher education, and the optimal ratio between fixed and variable funding, respectively.

Both of these studies could potentially have implications for the future development of government funding for universities.

## **MINISTRY OF EDUCATION'S FINANCIAL POLICY**

Every year, it is uncertain whether and to what extent the Ministry will offer universities compensation for increased wages, prices and enrolments. As a result of this uncertainty, the pressure on UT's budget has increased. Compensation is not announced until June, making it difficult to allocate it in any meaningful way in the current budget. UT recognises this risk and makes its own estimates, projecting € 12 million in compensation for 2023. In doing so, we are responding to the Minister's call for less risk-averse budgeting. It should be noted, however, that this shifts financial risks from the Ministry to the universities.

## **INTERNATIONALISATION**

Internationalisation has long been one of the pillars of UT's strategy, with an emphasis on the quality of education (international classroom) and meeting the labour market's demand for academically trained engineers. ECIU is one of UT's strategic priorities, as it plays an important role in the realisation of Shaping2030 and UT's vision on internationalisation. It is one of the largest consortia working on building a European university, and input on European policies is increasingly sought through these types of European alliances. The added value of the initiative is also recognised by the Ministry of Education, which has promised to allocate funding for European university initiatives. On the other hand, we have great ambitions for ECIU, and working together at this scale and pace also involves challenges. For example, faculties sometimes struggle to accommodate the developments in this area.

A risk with regard to internationalisation lies in the current political debate around the recruitment of international students. A new package of management measures for international student intake was initially scheduled to be announced in February 2023, which was later postponed to April. The national discussion at the moment seems to be solely focussed on reducing international enrolments. UT would benefit from a more nuanced narrative in which intake could continue to increase for programmes whose graduates go on to find employment in sectors facing personnel shortages (such as engineering programmes). A broader set of instruments, aimed at managing intake instead of simply restricting it, would allow UT to better target its recruitment efforts to attract students who fit the institutional profile. In view of UT's vision and strategy, regional ties have been strengthened to highlight the added value of internationalisation for the Twente region.

One tool UT is currently using to create a diverse, international classroom is the preparatory year in cooperation with Navitas. The International Foundation Year (IFY) at UT is designed to fill any gaps in knowledge and is aimed at international students whose country of origin does not offer a qualification equivalent to a Dutch VWO diploma. The IFY framework, which was tightened in 2022, calls for limiting the preparatory year and emphasises the need to critically consider cooperation with commercial parties. Should the effectiveness of this instrument be further curtailed by the ongoing societal debate, we may have to discontinue our partnership with Navitas or stop offering the IFY altogether.

The issues above also relate to the autonomy of universities. Before, decisions with regard to internationalisation (and recruitment in particular) were made by individual universities – within the context of a self-regulatory system, for example through the joint formulation of the Code of Conduct for International Students. The current political climate may lead to more centralised control from The Hague, which could have implications for UT's autonomy and lead to increased accountability pressure.

## **SUSTAINABILITY**

Sustainability is a key pillar of Shaping2030 and offers opportunities for UT. The broad UT community has demonstrated the urgency of this issue through numerous initiatives. The university aims to have a significant impact on sustainability challenges and has developed ambitious plans to achieve this through the SEE programme.

## CONTROL MEASURES

Control measures are both preventive and repressive. Internally, there are two types of control measures: hard controls (agreements and guidelines) and soft controls (focussing on staff performance). Examples of hard controls at UT include the Executive and Management Regulations, the mandate regulations, the Ancillary Activities Regulations and various legal guidelines. While the emphasis is on hard controls, we are currently exploring a shift to more soft controls.

The controls are designed to manage operational, financial and regulatory risks. Periodic monitoring of the effectiveness of the controls takes place both centrally and at the level of individual units (faculties, institutes and service departments) and is aimed at detecting deviations from UT's plans in time. Where necessary, an investigation takes place to identify the causes and course corrections are made.

Developments in the above indicators, the functioning of the controls used and the risks identified are monitored in the management reports and periodically discussed by the Executive Board, the consultation body formed by Executive Board and the deans (*CvB-decanenoverleg*), the Supervisory Board and the University Council. Updates are also made available to managers for information purposes, and these topics are discussed in the Shaping Dialogues between the Executive Board and faculty boards as well.

Controls with regard to external developments are mainly developed through joint action with other universities (UNL, 4TU, VU University Amsterdam), universities of applied sciences and the municipality, and through our own scenario analyses and lobbying processes.

## FUTURE RISK MANAGEMENT

Our risk management system is strategically embedded, provides control mechanisms and is embraced by the Board, management, the participation bodies and the supervisor. Nevertheless, based on our risk awareness, we understand that internal and external developments require ongoing improvements, which are being fleshed out by the Governance, Risk and Compliance working group.

- In 2022, a working group was formed to develop a UT-wide Governance, Risk and Compliance (GRC) framework. Its members are staff from various units who bring to the table expertise in finance, integral safety, knowledge security and internal auditing. A blueprint of the GRC framework is currently being drawn up and relevant areas of focus are being identified. These areas of focus are either general (such as finance and business continuity) or strategic in nature. For the strategic areas of focus, the working group decided to use UT's priorities, as these are based on the ambitions set out in Shaping2030. The working group will engage with staff involved in the five priorities about risks and how they mitigate them. For the general areas of focus, the working group will also identify risks and controls. By engaging with the UT organisation, the working group aims to identify step by step how UT manages risks in the key areas of focus.

## INTERNAL AUDIT

Internal Audit is UT's internal audit unit, which is primarily concerned with conducting non-repetitive investigations into matters about which management requires additional assurance (management control). In addition to controls such as guidelines and procedures, cultural and behavioural aspects such as leadership and integrity are increasingly considered. Besides this primary role, Internal Audit supports management in analysing causes of problems (gaining insights) and makes recommendations to improve processes and internal control. Moreover, it advises the Executive Board and the Supervisory Board audit committee on more structural developments with regard to risks and related control measures, for example in the area of cybersecurity. This

new interpretation of Internal Audit's responsibilities involves offering consulting services (in addition to independent and objective audit services) designed to both protect and add value to the organisation and improve its business operations. The department does this by working in a demand-driven manner (in coordination with key stakeholders) and playing a coordinating role in optimising mutual cooperation between units with control tasks.

Internal Audit has a broad scope of services, allowing it to address all issues that are relevant to UT, and to respond to new developments and emerging risks. Besides financial audits, behavioural, operational and IT audits are carried out as well, and the department also provides insights and advice. With the addition of sustainability as an area of focus in 2023, Internal Audit will also be able to provide consulting and auditing with regard to non-financial sustainability information. The topics Internal Audit investigates and advises on are set out in a risk-based multiannual internal audit plan, which is reviewed periodically.

The further development of new areas of focus (behavioural and IT auditing and advisory) was a key issue in the 2022 reporting year.

For the purposes of behavioural auditing, a pilot was conducted in autumn 2021 aimed at gaining insight into how UT staff perceive the impact of working from home as a result of the pandemic, specifically with regard to remote collaboration and the required digitisation of work activities. This has yielded insights into potential risks remote working poses to the university's control and governance. The effectiveness of controls (such as contingency plans for crisis situations like the COVID-19 pandemic) depends in part on intangible factors that influence behaviour in an organisation (so-called drivers) and affect staff performance.

In 2022, as a follow-up to the pilot mentioned above, a study was conducted into the tools UT uses to influence these drivers, namely seven codes of conduct and integrity and security regulations. In these codes of conduct and regulations, UT describes what it considers to be desirable and undesirable behaviour and outlines how employees are expected to treat colleagues, customers and UT property. The study assessed the quality of these codes of conduct and regulations on completeness, timeliness, clarity, accessibility, consistency and authenticity.

In the follow-up to this study, which focussed mainly on substantive issues (the design of the codes of conduct and regulations), the screening policy was examined in more detail, with researchers focussing specifically on the way it was embedded and functioned in the organisation. As a result of the implementation of new legislation and regulations around knowledge security and privacy, findings from this study will be used to revise the screening policy.

Furthermore, a survey was conducted at the ET faculty in 2022 with the aim of gaining insights into staff and students' thoughts on diversity, equity and inclusion (DE&I) in the context of the faculty's work and study environment and culture. This survey was conducted in order to gather input for the DE&I action plan. The faculty board considers DE&I an important issue and is responsible for promoting an open culture in which any topic can be raised and administrators, staff and students feel free to hold each other to account. In addition, the board is responsible for creating an environment in which people of diverse backgrounds and orientations have the opportunity to develop fully, regardless of their views, ensuring a safe and inclusive culture together.

By carrying out the aforementioned surveys, Internal Audit meets a need and at the same time contributes to the ongoing constructive discussion about how universities should implement the established principles for good governance.

Finally, IT audits were carried out in 2022 and advice was provided around information security, the personnel and payroll process in AFAS HR and the internal controls built into various relevant applications. Internal Audit also reviewed the control activities that were in place for the data transfer from the old Oracle applications to the new U4ERP application. In investigations such as these, we always focus on both the applications' technical features and the human factor in the relevant processes. As these two facets cannot be viewed in isolation, IT audit results and recommendations are also discussed with behavioural auditors. The aim of this is to achieve cross-fertilisation between IT audits (which focus on systems and processes) and behavioural audits (which focus on culture and behaviour).

## **SUPERVISORY BOARD AUDIT COMMITTEE**

The Supervisory Board audit committee monitors our internal risk management and control system. In addition, the committee prepares Supervisory Board discussions on:

- Compliance with relevant legislation and regulations;
- Financial disclosure by the university and its subsidiaries;
- Compliance with recommendations and follow-up on feedback from the external auditor;
- Compliance with the university's investment and financing statutes;
- Financial disclosure (including the Spring Memorandum, budget and financial statements);
- UT's administrative organisation and underlying information systems.

## **EXTERNAL AUDITOR**

The external auditor is an important link in the internal risk management and control system. They check whether the financial statements are legitimate and accurate, issuing an audit statement based on their findings. The assurance provided by this statement is important for the discharge process and supports the Supervisory Board in fulfilling its responsibilities. In addition to the audit statement, the external auditor also provides an audit report and a report on their interim findings, known as the management letter. In these documents, the external auditor reports independently on the quality of the university's internal risk control and suggests improvements. The external auditor holds periodic meetings with the Supervisory Board audit committee, the Executive Board, Internal Audit, and the Finance and LISA service departments.

# DESCRIPTION OF THE MAIN RISKS AND UNCERTAINTIES (B2)

Whereas the previous section discussed the presence and functioning of the internal risk management and control system in general, this section looks at a number of risks specific to UT and how they are managed.

The table shows the risks, actions to be taken, KPIs and potential impact for each risk area. It also distinguishes between gross risk (risk if no control measures are taken) and net risk (risk after control measures are taken). The left column shows the gross risk, while the potential impact analysis is based on an estimate of the net risk.

## EDUCATION

Risk	Measures	KPIs	Potential impact
Student body shrinks, leading to lower market share and lower government funding.	<ul style="list-style-type: none"> <li>- Scenario analyses</li> <li>- Education targets part of P&amp;C cycle</li> <li>- Deploy additional marketing tools/recruitment activities</li> <li>- Further optimise application and enrolment process</li> <li>- Increase attractiveness of UT programmes</li> </ul>	<ul style="list-style-type: none"> <li>- Preliminary enrolments</li> <li>- Student applications</li> <li>- Intake market shares</li> <li>- Number of degrees awarded</li> <li>- Review, NSE scores, BA &amp; MA Keuzegids</li> <li>- Intake, dropout, switch and yield</li> </ul>	High
The bachelor's programmes have too many students compared to the master's programmes, which has a negative effect on UT as a research university in the medium and long term.	<ul style="list-style-type: none"> <li>- Further develop the master's portfolio</li> <li>- Use additional marketing tools/recruitment activities aimed at increasing master's intake</li> <li>- Optimisation of the bachelor's intake funnel, e.g. by instituting an application fee, matching and selection</li> </ul>	<ul style="list-style-type: none"> <li>- Preliminary enrolments</li> <li>- Student applications</li> <li>- Intake market shares</li> <li>- Number of degrees awarded</li> <li>- Review, NSE scores, BA &amp; MA Keuzegids</li> <li>- Intake, dropout, switch and yield</li> </ul>	High
Non-representative student body with regard to international background and inclusion. This could lead to a suboptimal learning experience for students, compromising one of the strategic goals.	<ul style="list-style-type: none"> <li>- Offer preparatory year (Twente Pathway College)*</li> <li>- Adapt marketing policy</li> <li>- Modify selection criteria and intensify matching</li> <li>- Use Diversity, Equity and Inclusion team</li> <li>- Use financial steering tools such as scholarships and tuition fee waivers</li> </ul>	<ul style="list-style-type: none"> <li>- Preliminary enrolments</li> <li>- Composition of student intake by nationality</li> <li>- NSE scores</li> <li>- BA &amp; MA Keuzegids</li> </ul>	Medium
Excessive growth in student numbers resulting in insufficient available capacity to provide small-scale, high-quality education.	<ul style="list-style-type: none"> <li>- Scenario analyses</li> <li>- Improve matching and programme selection</li> <li>- Adjust the visibility of the programmes in marketing communications</li> <li>- Scale up teaching capacity</li> </ul>	<ul style="list-style-type: none"> <li>- Preliminary enrolments</li> <li>- Student applications</li> <li>- Sector plan for science and technology education market share parameters</li> </ul>	Low

Risk	Measures	KPIs	Potential impact
Inadequate use of opportunities to facilitate LLD, leading to a drop in long-term social impact compared to other knowledge institutions.	<ul style="list-style-type: none"> <li>- LLD quartermaster team follows up on roadmap</li> <li>- Include LLD as a full-fledged pillar in education</li> <li>- Building LLD systems and infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>- LLD offering</li> <li>- Participate in LLD activities</li> </ul>	Medium

*1 Following the Minister of Education's parliamentary letter of 21 April 2022, there has been an ongoing national discussion on the future of the preparatory year at Dutch universities. Twente Pathway College will be the subject of administrative agreements between the universities and the Minister.*

## RESEARCH

Risk	Measures	KPIs	Potential impact
Limited research funding from indirect government and commercial funding, leading to reduced coverage of operations and investments, less scientific output and impact, and reputational damage. Negative impact on UT as a research university.	<ul style="list-style-type: none"> <li>- Periodic monitoring of research KPIs</li> <li>- Put risks on the agenda in various forums</li> <li>- Conduct management interviews</li> <li>- Hold Shaping Dialogues</li> <li>- Create and monitor business plans</li> <li>- Use sector plans for science and technology</li> </ul>	<ul style="list-style-type: none"> <li>- Scope/composition of research portfolio</li> <li>- Earning capacity percentage</li> <li>- Implement sector plans</li> <li>- PhDs awarded, PhD duration, dropout and yields</li> </ul>	High
Lower scores in international rankings than other Dutch universities, meaning UT fails to live up to its profile, possibly making it more difficult to attract talented students and staff.	<ul style="list-style-type: none"> <li>- Redefine position relative to these rankings</li> <li>- At the same time, strengthen and promote UT's own unique profile</li> <li>- Develop the UT impact portfolio</li> </ul>	<ul style="list-style-type: none"> <li>- Impact score citations</li> <li>- Other KPIs used in rankings, such as for reputation</li> <li>- External reports</li> </ul>	Medium
Occupancy rate of strategic infrastructure is too low, resulting in insufficient coverage of operations and available funds for long-term investments.	<ul style="list-style-type: none"> <li>- Leverage funding scheme opportunities (TOF, GWI, Growth Fund)</li> <li>- Incorporate use of and investment in strategic infrastructure into faculty research strategies</li> <li>- Improve lab work volume (user hours) in the coming years</li> </ul>	<ul style="list-style-type: none"> <li>- Occupancy rate of NanoLab, etc.</li> <li>- Size of shared infrastructure</li> <li>- Size of external financing resources for large-scale strategic infrastructure</li> </ul>	Low
Implementation or registration of projects is not compliant with complex grant conditions, leading to risk of grants being revoked and reputational damage.	<ul style="list-style-type: none"> <li>- Knowledge sharing and four-eye principle</li> </ul>	<ul style="list-style-type: none"> <li>- Number of findings from IA/ external auditors on grant conditions</li> </ul>	High

## COMMERCIAL KNOWLEDGE TRANSFER

Risk	Measures	KPIs	Potential impact
UTH's forecasting proves inadequate, resulting in UT being surprised by relatively large deviations from the budget and annual plan.	<ul style="list-style-type: none"> <li>- CFO and controller appointed</li> <li>- P&amp;C cycle in order and aligned with UT cycle</li> <li>- UTH quarterly reports to Executive Board</li> </ul>		Low

## PERSONNEL

Risk	Measures	KPIs	Potential impact
Difficulties with regard to attracting, retaining and developing human capital, talent management and related diversity and inclusion objectives for new activities with earmarked budgets, and finding successors for figureheads set to leave UT due to career change or retirement. This may jeopardise the continuity and quality of education and research and, by extension, employee engagement and commitment.	<ul style="list-style-type: none"> <li>- Strategic Personnel Planning (SPP)</li> <li>- Data-driven recruitment approach through employee journey</li> <li>- Use targeted approach and ensure optimal findability; monitor analytics to raise quality level</li> <li>- Transparent hiring policy</li> <li>- Staff talent development policy</li> <li>- Recognition &amp; reward</li> <li>- Continued commitment to mentoring and forward-looking leadership development</li> <li>- Assessment and development tooling</li> </ul>	<ul style="list-style-type: none"> <li>- Budgeted versus realised staffing</li> <li>- Percentage of women in senior positions</li> <li>- Vacancy percentage</li> <li>- Mobility percentage</li> <li>- Retention rate per position (only average/inflow/outflow)</li> </ul>	High
Increase in absenteeism among young employees specifically due to mental health complaints, jeopardising quality and continuity of primary and secondary processes.	<ul style="list-style-type: none"> <li>- Prevention approach: onboarding, communities, leadership and talent development, health &amp; wellbeing offering, commitment to DE&amp;I, clear information and improvement of support structures</li> <li>- Commitment to open and safe culture, dialogue and workload reduction (capacity management)</li> <li>- In the coming years, more focus on social controls and risk assessment, with human capital and talent management requiring attention</li> </ul>	<ul style="list-style-type: none"> <li>- Absenteeism percentage</li> <li>- Workload report</li> </ul>	High

## FINANCE

Risk	Measures	KPIs	Potential impact
It is uncertain by what percentage universities will be compensated for wage and price increases by the Ministry of Education. This percentage will be announced sometime in 2023, so for budgeting purposes we are relying on our own estimate.	<ul style="list-style-type: none"> <li>- Track external developments and take action accordingly</li> <li>- Participate in Ministry of Education, CFA, UNL and other networks</li> <li>- A calculated risk (wage/price index and reference estimate) has been taken by distributing more than the estimated government funding</li> </ul>	<ul style="list-style-type: none"> <li>- Analyses of government funding letters</li> </ul>	High
Insufficient forecasting and steering, resulting in budget not being met.	<ul style="list-style-type: none"> <li>- Periodic monitoring of financial KPIs</li> <li>- Put risks and mitigating measures on the agenda in various forums</li> <li>- Conduct management interviews</li> <li>- Hold Shaping Dialogues</li> <li>- Perform scenario analyses</li> <li>- Medium- to long-term investment agenda</li> </ul>	<ul style="list-style-type: none"> <li>- Budget realisation</li> <li>- Result forecast</li> <li>- Liquidity, solvency and resilience ratios</li> </ul>	Medium
Our estimate for direct government funding deviates from actual direct government funding, resulting in either a drain on UT's liquidity/reserve position or extra budget being available too late in the year for meaningful allocation, leading to insufficient budget control.	<ul style="list-style-type: none"> <li>- Track external developments and take action accordingly</li> <li>- Participate in Ministry of Education, CFA and UNL networks</li> <li>- A calculated risk (wage/price index and reference estimate) has been taken by distributing more than the estimated government funding</li> </ul>	<ul style="list-style-type: none"> <li>- Perform government funding scenario analyses</li> <li>- Analyses of government funding letters</li> </ul>	Medium
UT does not meet solvency and liquidity targets, creating risk of continuity problems and heightened Inspectorate of Education supervision.	<ul style="list-style-type: none"> <li>- Periodic monitoring of financial KPIs</li> <li>- Put risks and mitigating measures on the agenda in various forums</li> <li>- Conduct management interviews</li> <li>- Perform scenario analyses</li> <li>- medium- to long-term investment agenda</li> </ul>	<ul style="list-style-type: none"> <li>- Liquidity, solvency and resilience ratios</li> </ul>	Low
Adopted budgets for real estate and other investments are exceeded, resulting in additional demands on liquidity/reserve position and reputational damage.	<ul style="list-style-type: none"> <li>- Periodically monitor and report on real estate developments and investments</li> <li>- Any project overruns (e.g. due to tenders) are absorbed within the LTSH budget</li> </ul>	<ul style="list-style-type: none"> <li>- Housing ratio (housing costs/ total expenses)</li> <li>- Available annual LTSH budget</li> </ul>	Low

## ICT

Risk	Measures	KPIs	Potential impact
System vulnerabilities are exploited by malicious actors, disrupting institution-wide services.	- Take adequate IT measures	- Quarterly reports CERT-UT - Security management report	High
Unauthorised access to and disclosure of information, leading to misuse (e.g. access to personal data or intellectual property).	- Take adequate IT measures	- Privacy report - Quarterly reports CERT-UT - Security management report	High
Dependence on cloud services.	- Take adequate IT measures	- Security management report	High
The unwanted and/or unauthorised modification of data, making information less reliable.	- Take adequate IT measures	- Security management report	Medium
UT uses AFAS for its payroll processing. In the event of a prolonged system failure or internet outage, there could be a risk of not being able to create payment files or process payment files in the financial system, resulting in late payment of salaries.	- Contingency procedures adopted and tested by software supplier - Alternative payment procedure if financial system is unavailable	- AFAS SLA report - Security management report	Low
Assigning rights and roles incorrectly, allowing unauthorised people to access information.	- Take adequate IT measures		Low

## SAFETY

Risk	Measures	KPIs	Potential impact
Foreign interference in education, research and innovation, in decision-making or on academic freedom – soft influence that may create unwanted dependency and personal risks, and violate academic values.	- Establish an internal awareness and compliance programme - Incident reports and follow-up possible incidents - Communication and awareness plan - Informational videos and training courses - Incident response plan in place	In place: - Knowledge Safety Team - Communication and awareness plan - Training courses - Screening procedures - Incident response plan - File management and archiving of cases - Standardised procedures - Software for sanctions screening and export control	High

Risk	Measures	KPIs	Potential impact
<p>Sensitive data and technology originating from research infrastructure and shared facilities is compromised (including exfiltration and hostage-taking). This could lead to:</p> <ul style="list-style-type: none"> <li>• Damage to scientific standing</li> <li>• Breach of contract in relation to third-party IP</li> <li>• Reputational damage</li> <li>• Personal risks (harassment, pressure)</li> </ul>	<ul style="list-style-type: none"> <li>- Prepare plan and method for vulnerability analysis</li> <li>- Implement vulnerability analysis (2023) in consultation with integral security manager</li> <li>- Discuss vulnerabilities and take risk-mitigating measures</li> </ul>		High
<p>Increasing curtailment of institutional autonomy in NL and EU, which may limit UT's freedom of choice regarding collaborations, themes, recruitment, funding instruments, publications, etc.</p>	<ul style="list-style-type: none"> <li>- Constant attention to maintaining right balance with regard to knowledge security, non-discrimination and academic freedom in national and European networks</li> <li>- Active contribution to UNL discussions and European-level consultations around knowledge security</li> </ul>	<p>In place:</p> <ul style="list-style-type: none"> <li>- Give presentations calling attention to balance</li> <li>- Promote balance at national and European level</li> </ul>	High
<p>Unintentional knowledge leaks in relation to state-of-the-art technology, leading to the following risks:</p> <ul style="list-style-type: none"> <li>• Misuse of technology (see below)</li> <li>• National and international security</li> <li>• Reputational damage</li> <li>• Breach of contract in relation to third-party IP</li> </ul> <p>Violations of sanctions and export control measures may result in criminal or economic crime investigations.</p>	<ul style="list-style-type: none"> <li>- Establish an internal awareness and compliance programme</li> <li>- Develop and implement knowledge security policies</li> <li>- Integrate measures into the PDCA cycle</li> <li>- Communication and awareness plan</li> <li>- Training courses</li> <li>- Screening procedures</li> <li>- File management and archiving of cases</li> <li>- Incident response plan</li> <li>- Standardised procedures</li> <li>- Software for sanctions screening and export control</li> </ul>	<p>In place:</p> <ul style="list-style-type: none"> <li>- Knowledge Safety Team</li> <li>- Communication and awareness plan</li> <li>- Training courses</li> <li>- Screening procedures</li> <li>- Incident response plan</li> <li>- File management and archiving of cases</li> <li>- Standardised procedures</li> <li>- Software for sanctions screening and export control</li> </ul>	Medium
<p>Possible misuse of knowledge and research results by state and non-state actors for terrorist and criminal purposes, espionage or human rights violations, or the development, maintenance and distribution of weapons of mass destruction.</p>	<ul style="list-style-type: none"> <li>- Communication</li> <li>- Measures to raise awareness</li> <li>- Inclusion in survey and partner assessment tool</li> </ul>		Medium

Risk	Measures	KPIs	Potential impact
Violations of national and international legislation and regulations around knowledge security, constituting criminal offences or economic crimes. May lead to investigations, fines or criminal charges.	<ul style="list-style-type: none"> <li>- Launch awareness campaign</li> <li>- Targeted provision of training courses</li> <li>- Adjust procedures so that violations are prevented</li> <li>- Implement procedures to be used in case of violations</li> </ul>	<p>In place:</p> <ul style="list-style-type: none"> <li>- Knowledge Safety Team</li> <li>- Communication and awareness plan</li> <li>- Training courses</li> <li>- Screening procedures</li> <li>- Incident response plan</li> <li>- File management and archiving of cases</li> <li>- Standardised procedures</li> <li>- Software for sanctions screening and export control</li> </ul>	Medium
Feelings of stigmatisation, discrimination or hostility as a result of media coverage and/or as a result of knowledge security measures that make individual students or academics feel unwelcome and unwanted.	<ul style="list-style-type: none"> <li>- Consultation with integral security manager, DE&amp;I officer and support staff</li> <li>- Inform target groups about measures</li> <li>- Incident response plan for knowledge security</li> </ul>	<p>In place:</p> <ul style="list-style-type: none"> <li>- Knowledge Safety Team</li> <li>- Incident response plan for knowledge security</li> <li>- CERT UT incident response procedure</li> <li>- Direct relationships with Executive Board and relevant departments</li> </ul>	Medium
Lack of social safety due to externally imposed pressure or intimidation with the goal of obtaining knowledge and information.	<ul style="list-style-type: none"> <li>- Consultation with integral safety manager in the event of incidents, and with DE&amp;I officer</li> <li>- Consultation with relevant support staff, senior management and Executive Board</li> <li>- Inform target groups about measures</li> <li>- Incident response plan for knowledge security</li> <li>- Relationships with security services and police</li> </ul>	<p>In place:</p> <ul style="list-style-type: none"> <li>- Knowledge Safety Team</li> <li>- Incident response plan for knowledge security</li> <li>- CERT UT incident response procedure</li> <li>- Direct relationships with Executive Board and relevant departments</li> </ul>	Medium

## QUALITATIVE NOTES

### EDUCATION

There is a high potential impact for the education risk area. This is the result of increasing regulatory pressure from The Hague and developments regarding the intake of international students. The use of all additional education resources, such as the quality agreements and the sector plan for education, is subject to increasing accountability requirements.

One of UT's priorities is to continue developing its education portfolio while encouraging students in their personal and professional development. Meanwhile, we aim to increase the number of master's students (with different targets for each educational programme). The Future Student Population working group (formerly 'rebalance') is working on an overarching vision that still allows for a programme-specific approach. The working group's focus is on tools to manage student intake both in terms of numbers and the desired student profile.

As an international university, UT continues to be strongly committed to providing an international learning environment. In doing so, we also pay attention to the diversity of our student body, and we will make every effort to retain international students for the Twente region. In light of the ongoing national discussions on the importance of international students, we need to clearly explain our recruitment efforts and our desire to attract international students. The national discussion at the moment seems to be solely focussed on reducing international enrolments. As described in the Internationalisation section, UT would benefit from a more nuanced (regional) narrative in which intake could continue to increase for programmes whose graduates go on to find employment in sectors facing personnel shortages (such as engineering programmes).

In the years up to 2021, the student body saw small but steady growth due to increasing enrolments in our bachelor's programmes. In 2022, there was a slight decrease compared to 2021, partly due to the introduction of numerous *clausus* limits for a number of educational programmes. In 2023, we expect student numbers to remain roughly the same. However, given the margin of uncertainty there may be a small decrease or increase, with the reintroduction of the basic grant having a positive effect on enrolments and the current developments around internationalisation having a dampening effect.

Changes in intake varied between bachelor's programmes. A few programmes that once gain saw intake increase are taking measures to accommodate and manage the large numbers of new students. These include the Technical Computer Sciences, Psychology and Technical Medicine programmes. In managing student intake, UT is aware that the use of numerous *clausus* limits for certain educational programmes can lead to increased enrolments in related programmes.

Admissions to the master's programmes have been relatively stable in the past few years. Given the recent growth of the bachelor's programmes, however, we may now see an uptick as students choose to continue their studies at UT. On the other hand, due to the political developments around internationalisation, intake could also decrease in the coming years.

Meanwhile, the war in Ukraine is continuing to cause tensions worldwide, which may affect international student mobility. Non-EU students may be less inclined to travel to Europe, while students from Eastern European countries may be more motivated to move west.

UT will continue its efforts with regard to lifelong learning in the coming years. Last year, a programme management team fleshed out the 2021 roadmap's recommendations, creating a concrete set of activities. Moving forward, lifelong learning will become a full-fledged pillar of UT's education. The faculties and institutes will work on strengthening and expanding our lifelong learning offering while also developing the necessary systems and infrastructure. In doing so, UT will benefit from national developments. The higher education sector is increasingly encouraged to focus on lifelong learning and the flexibilisation of education, for instance through the digitisation boost and lifelong learning catalyst growth funds.

## **RESEARCH**

Despite the allocation of funds from the sector plan for science and technology, the potential impact for the research risk area is still high. The main reasons for this are the lack of sufficient government compensation for the sharp increase in student numbers, the restrictions imposed on the use of the Science & Engineering sector plan funds and the fact that these funds have been allocated temporarily for the time being. The available capacity in terms of staff and funding increasingly needs to be allocated to education.

Given the increasing level of competition for both national and international research resources, UT needs a decisive, flexible and effective research organisation. Turnover from second-stream and third-stream funding, a key indicator of UT's impact, has been under pressure for years. On a multiannual basis, we expect these revenue streams to increase across all faculties as a result of our growing impact due to the sector plan for science and technology. Uncertainty regarding this growth has increased as a result of the COVID-19 pandemic, however. The growth fund and sector plan proposals that are awarded funding will give a strong boost to education and research at UT. At the same time, uncertainty regarding structural funding for support, housing, infrastructure and

other facilities makes it difficult to optimise university-wide operations. This issue is also being addressed by UNL and 4TU. In addition, the long-term impact of the COVID-19 pandemic and the recent geopolitical developments on national and EU budgets, and thus on education and research funding, is uncertain. We expect that stable, integrated management of education, personnel and support at faculty level, in combination with our efforts to make our research organisation and strategy more flexible, will allow us to respond adequately to changes in science and society. The research strategy sets a course for research at UT and offers the flexibility we need to respond to challenges faced by science, businesses, governments, institutions, communities and individual citizens. On the basis of the above, the risk rating for research is high.

## **COMMERCIAL KNOWLEDGE TRANSFER AND KNOWLEDGE SECURITY**

UT performs its third core task, facilitating commercial knowledge transfer, through Novel-T (a collaboration between UT, Saxion University of Applied Sciences, the Province of Overijssel and the Twente municipalities), its subsidiary University of Twente Holding (UTH) and the Strategic Business Development (SBD) department.

UT-affiliated companies (subsidiaries) focussing on private commercial knowledge transfer activities have been brought together in UTH. UTH strives to foster these activities and ensure their continuity. Over the next several years, subsidiaries that facilitate commercial knowledge transfer are expected to generate a combined profit of between € 0.2 million and € 1.3 million. As universities only receive government funding for two of their three core statutory tasks – education and research – UTH continuously explores alternatives to generate structural income to match private activities. The fact that UT receives no government funding for this core task means that there is no structural funding, forcing the university to instead rely on second-stream and third-stream funding. This makes it difficult to establish public-private partnerships and reduces UT's desired – and perhaps necessary – impact. The university is allowed to spend government funding on private activities, provided the activities are in line with the policy rule for using public funds to invest in private activities, as well as other requirements. UTH has its own strategy and policy framework, which have broad support within the university. UTH's activities and accountability are explicitly embedded in the university's planning and control cycle.

The Strategic Business Development (SBD) team aims to increase UT's economic and social impact by connecting the university's excellent research capabilities with the market and society, both in the Netherlands and abroad. Looking back at 2022, SBD again achieved great results in various strategic innovation and funding programmes (such as the Growth Fund, LTP, etc.), through partnerships with companies and with regard to grant and subsidy acquisition. This was evident as well from SBD's self reflection report, in which it evaluated its services and activities in 2021 and 2022. This evaluation also included a customer satisfaction survey, which produced positive outcomes as well as concrete improvement suggestions, for instance with regard to SBD's internal visibility and the delineation of roles and services. For the future of SBD, there needs to be a UT-wide shift in mindset when it comes to creating impact. The lack of strategic portfolio choices and a clear funding model (Resource Allocation Model) also poses risks, which could have consequences for SBD's working methods, team composition, role and ambition. Overall, SBD has now clearly established itself as a new service department and is confident that it will continue to be of added value to UT and its community.

## **PERSONNEL**

Recruiting and retaining talented staff in a competitive international environment is essential to UT's success. Shaping2030, WSV funds, sector plans and tight labour market conditions have increased the need to strengthen our recruitment through excellent employer branding. In this context, last year's launch of our job website, [careers](#), marked an important milestone. The website, which is a direct result of UT's strategy to become an employer brand, allows us to specifically cater to potential employees. In the Netherlands, UT is the second university to have a careers site separate from the corporate site.

Universities are responsible for providing a safe, open and respectful work and study environment in which everyone can develop their talents. UT is committed to ensuring the social safety of students, staff and visitors. Sustainable employability and employee wellbeing are key to creating a healthy organisation and an attractive employer brand.

## **FINANCE**

Risk management takes place mainly through periodic monitoring and reporting with regard to budget realisation and results management. Due to the government's short-cycle funding policy, it is difficult to make long-term financial projections. Stable government funding is a prerequisite for maintaining the quality of our education and research. Grant providers and other financiers increasingly demand contributions from the university (matching). Much like the funding required for UT's commercial knowledge transfer task, this remains an area of concern. On the basis of the above, the risk rating for finance is medium. In arriving at this rating, specific attention was paid to the studies PwC and Berenschot conducted on behalf of the Ministry of Education (described elsewhere in this continuity section) on the scope and functioning of the government funding model.

UT conducts an annual risk analysis that focuses on both internal and external risks, including fraud. The main identified fraud risks are withdrawal of funds through unlawful payments (for instance as a result of identity fraud or cybercrime), misuse due to conflicts of interest, threats to the university's scientific integrity and staff letting their personal interests prevail over UT's interests (e.g. by accepting kickbacks). From a compliance perspective, the Executive Board and management consider data protection legislation, lawful use of funds and labour rights legislation to be most relevant topics in this context. We mitigate relevant fraud risks through our codes of conduct, Whistleblower Code and specific process controls, such as separation of roles, system-imposed controls, third-party screening and cybersecurity-related controls.

## **ICT**

Digitisation affects every part of the organisation. It is essential for UT's day-to-day operations, but also for realising many of our strategic ambitions. As our society becomes more and more digital, the use of ICT in education and research requires far-reaching and continuous adaptability on the part of UT. When launching strategic programmes, it is therefore important to pay attention to digitisation. Through the IT project portfolio, the value of implemented projects is maximised, and the deployment of people and resources is organised in the best possible way. In doing so, we make every effort to retain expertise within the organisation. UT's digital strategy will be reflected in a roadmap with four tracks: education, research, support and infrastructure. This roadmap will be based primarily on input from the faculties and institutes. In this context, digitalisation plays an important role in Shaping2030.

Due to the constant threat of cyber risks, cybersecurity is a key issue for UT. Our systems are protected by a strong in-house team, but we also work together with other institutions at the national level within SURF, and we rely on the services of market players.

## **RISKS NOT UNDER THE UNIVERSITY'S DIRECT CONTROL**

Risks resulting from external developments outside the university's direct sphere of influence can have a major impact.

Increasing political instability, the war in Ukraine, the earthquakes in Turkey and Syria, terrorist threats and the COVID-19 pandemic are just a few examples of external threats that have affected our students and staff.

Closer to home, it remains to be seen what impact new legislation and regulations will have on universities' operations and finances (introduction of the Flexibility Act, the Participation Act, privacy legislation, the policy rule for using public funds to invest in private activities and the Public Servants (Standardisation of Legal Status) Act (WNRA)).

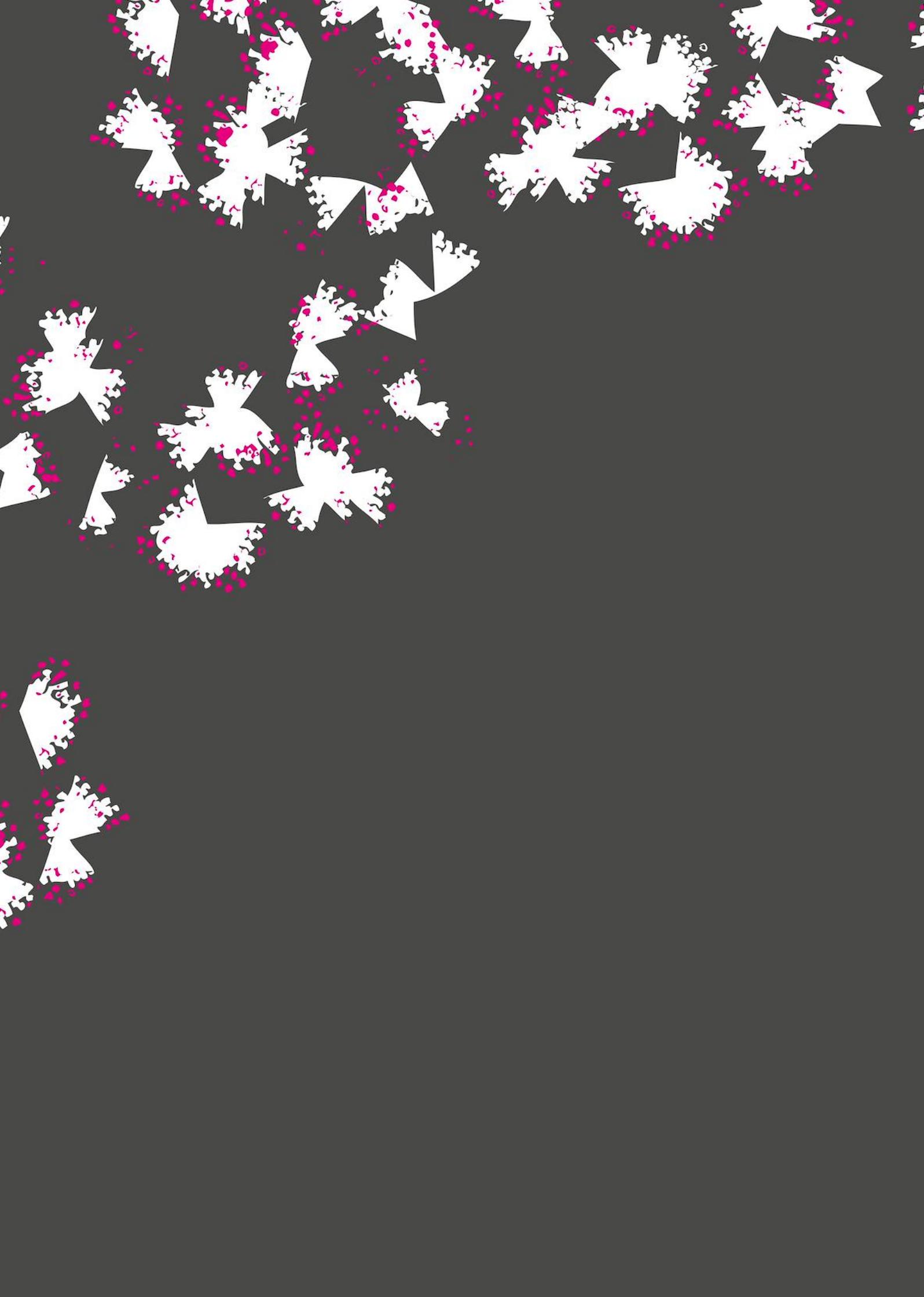
There is an ongoing nationwide debate about the impact of the updated policy rule for using public funds to invest in private activities. Currently, the principle of qualitative tolerance is still being used. Discussions on the consequences of the updated policy rule will be held in 2023.

The constant threat of cyber risks puts pressure on organisational continuity, which may also affect students and staff.

We try to get ahead of these uncertain developments by, for instance, seeking out external collaborations (to share risks) and by preparing scenario analyses for the possible creation of financial and other provisions.

# REPORT OF THE SUPERVISORY BODY (B3)

The Supervisory Board report has been included in the introduction of this annual report.

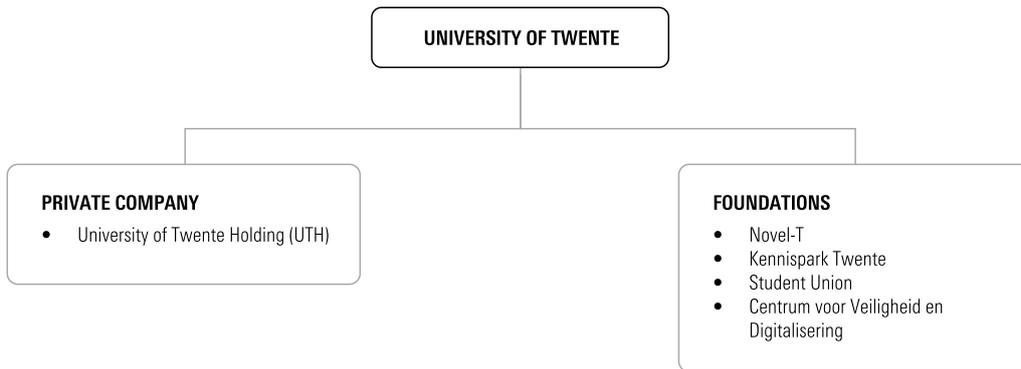


# ANNEXES

# ORGANISATIONAL STRUCTURE

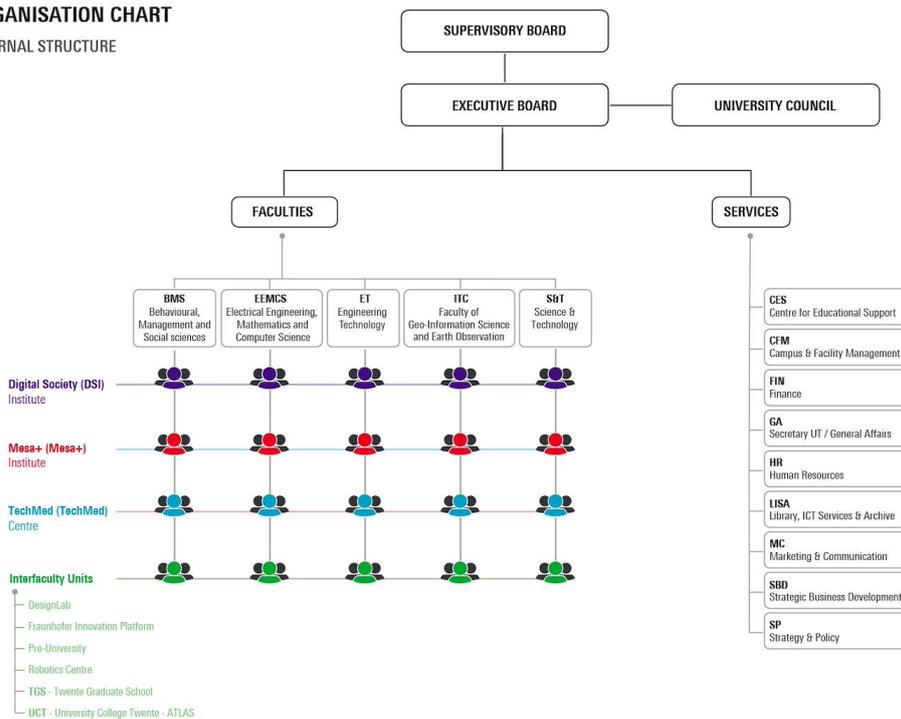
## ORGANISATIONAL CHART

### GROUP STRUCTURE: CONNECTED UNITS



### INTERNAL STRUCTURE

#### ORGANISATION CHART INTERNAL STRUCTURE



## FACULTIES

UT's educational and research activities are spread across five faculties:

- **Behavioural, Management and Social Sciences (BMS):** brings together humans and the capabilities of technology to create innovations that add value and help both humans and technology become better versions of themselves.
- **Electrical Engineering, Mathematics and Computer Science (EEMCS):** combines the latest knowledge and insights with strong personal competences to create real solutions for people and society.
- **Engineering Technology (ET):** generates fundamental knowledge in engineering technology to address societal challenges by applying its full potential to complex problems and training future generations of engineers and scientists.
- **Faculty of Geo-Information Science and Earth Observation (ITC):** ITC is amongst the world's top ten institutes for scientific education and research and technological development in the field of Earth observation and geo-information. It focuses on developing solutions for developing countries.
- **Science & Technology (S&T):** conducts pioneering research in areas such as nanotechnology, renewable energy and biomedical technology. Together with students, S&T also creates new companies.

## INSTITUTES

UT's research institutes link technology (high tech) to human behaviour and social relevance (human touch).

- The **Digital Society Institute (DSI)** conducts scientific research into technology that plays an essential role in digitisation. It investigates methods and techniques for integrating digital technology into our environment and explores how we can arrive at intelligent, well-informed decisions. DSI's research and technology focus on industrial and societal challenges.
- The **MESA+ Institute (MESA+)** is a research institute in the field of nanostructures, nanomaterials, nanosystems and nanodevices. Using a cross-disciplinary approach and benefiting from the NanoLab, its 500-strong staff conducts high-quality research. Application areas include health, ICT and sustainability.
- The **TechMed Centre (TechMed)** is an innovation hub in the health tech domain with state-of-the-art infrastructure ranging from research laboratories and preclinical testbeds to simulated hospital environments and the actual healthcare system. The TechMed Centre improves healthcare through research and development, education and collaboration within a global network.

## CONSULTATION STRUCTURES

UT has several consultation bodies, each with its own focus.

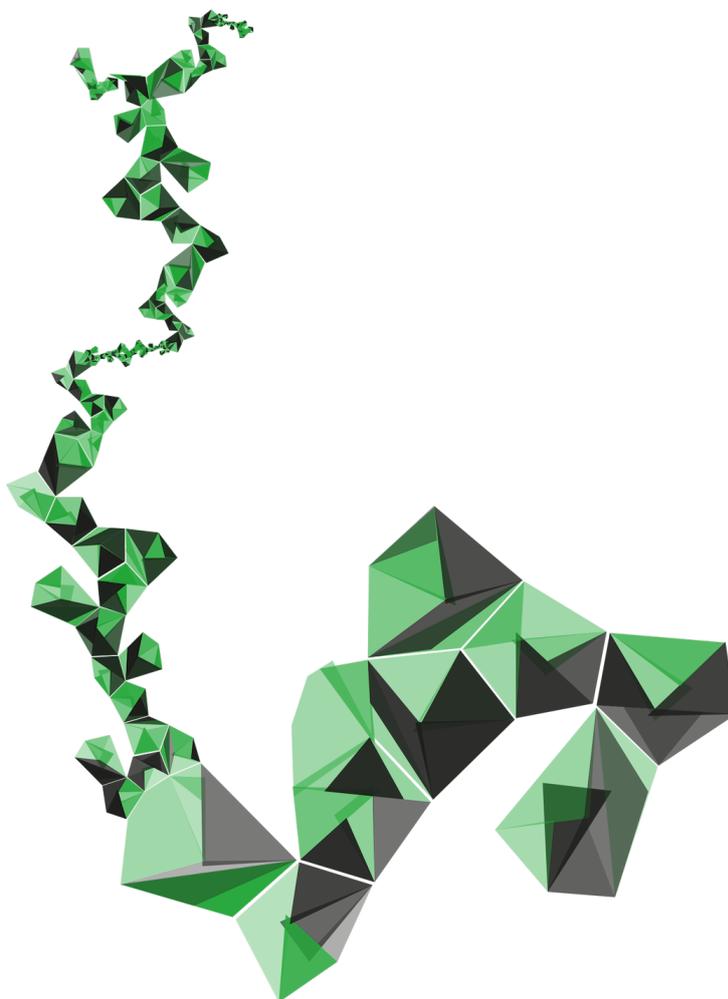
- The **Strategic Council (SB)** is comprised of the Executive Board, the secretary of the university, the faculty deans, the scientific directors of UT's research institutes and the Chief Development Officer. The Executive Board determines the university's strategic policy in close consultation with the SB.
- The Executive Board and the deans also form a separate consultation body, the **CvB-Decanenoverleg (CvB-D)**, which aligns, coordinates and prepares university policy.

The Executive Board is advised by four committees:

1. **University Education Committee (UCOW):** Rector Magnificus (chair), faculty education portfolio holders and two student members.
2. **University Research Committee (UCOZ):** Rector Magnificus (chair), faculty research portfolio holders and the scientific directors of the institutes.
3. **University Operations Committee (UCB):** vice-chair of the Executive Board (chair), secretary of the university, operations portfolio holders and service directors.
4. **University Innovation Committee (UCI):** Chief Development Officer (chair), business directors of the research institutes, chair of the Executive Board, SBD's head of impact development, S&P's head of research & knowledge transfer and two delegates from ITC and BMS.

The UCOW receives solicited and unsolicited advice on education and educational organisation from six platforms:

- Faculty Education Contacts Platform
- International Affairs Platform
- Quality Assurance Platform
- Educational Innovation Platform
- Student Guidance Platform
- Legislation and regulations platform



# ABBREVIATIONS AND DEFINITIONS

Abbreviation	Full name
1cHO	1 cijfer Hoger Onderwijs (1 Higher Education figure)
4TU	4TU.Federation
4TU.RSC	Responsible Sustainability Challenge
ABP	ABP pension fund
AC/FBZ	Trade union for academically trained healthcare professionals
AI	Artificial intelligence
AMW	Earth Sciences and Environmental Sciences
AOb	General Education Union
APS	American Physical Society
ATLAS	University College Twente
BHV	Emergency assistance
BKO	Basic Teaching Qualification
BMS	Faculty of Behavioural and Management Sciences
BSA	Binding education recommendation
BST	Biomaterials Science and Technology
CAO	Collective labour agreement
CBL	Challenge-based learning
CBR	Challenge-based research
CCT	Central Crisis Team
CDC	Career Development Centre
CDR	Centre for Disaster Resilience
CEE	Centre for Engineering Education
CELT	Centre of Expertise in Learning and Teaching
CEO	Chief Executive Officer
CEPHEI	Cooperative E-learning Platform for Higher Education in Industrial Innovation
CeQuInt	Certificate for ECA internationalisation
CES	Centre for Educational Support
CESAER	Conference of European Schools for Advanced Engineering Education and Research
CNRS	Centre National de la Recherche Scientifique
CNV	Christian National Trade Union Federation
COO	Chief Operating Officer

Abbreviation	Full name
CROHO	Central Register of Higher Education Study Programmes; transitioning to RIO
CS	Citizen Science
CvB	Executive Board
CvB-D	Consultation body formed by Executive Board and the deans ( <i>CvB-decanenoverleg</i> )
CVD	Centre for Security and Digitisation
CWI	Scientific Integrity Committee
DAS	De Ambitieuze Student (student party)
DCC	Digital Competence Centre
DEAN	Dutch Engineers Alumni Network
DIH-HERO	Digital Innovation Hubs in Healthcare Robotics
DPM	Data Management Plan
Dr	Doctor (degree)
Drs.	Master graduate
DSI	Digital Society Institute
EAPAA	European Association for Public Administration Accreditation
EB	Executive Board
ECA	European Consortium for Accreditation in Higher Education
ECIO	Expertise Centre for Inclusive Education
ECIU	European Consortium for Innovative Universities
ECTS	European Credit Transfer and Accumulation System
EEMCS	Faculty of Electrical Engineering, Mathematics & Computer Science
EEA	European Economic Area
ELAN	Institute for Teacher Training and Professional Development
EngD	Engineering Doctorate; formerly PDEng
ERC	European Research Council
ET	Faculty of Engineering Technology
EU	European Union
EZK	Ministry of Economic Affairs and Climate Policy
FFNT	Female Faculty Network Twente
FNV	Federation of Dutch Trade Unions
FOBOS	Financial Support for Students in Special Circumstances
FTE	Full-time equivalent
GEP	Gender equality plan

Abbreviation	Full name
HAN	HAN University of Applied Sciences
HAVO	Senior General Secondary Education
HBO	Higher Vocational Education
HR	Human Resources
HS	Holland Scholarship
HTSF	High Tech for a Sustainable Future
HTT	Holding Technopolis Twente
I&T	Individuals & Teams
ICT	Information and Communication Technology
IFY	International Foundation Year
IMCC	International Mobility Covid Committee
Ing.	Engineer (higher professional education degree)
Inno Ed	Innovation of Education
<i>Ir.</i>	Engineer (university degree)
ISB	International Student Barometer
ISO	Intercity Student Consultation
ISRIC	International Soil Reference and Information Centre
IT	Information Technology
ITC	Faculty of Geo-information Science and Earth Observation
KETs	Key enabling technologies
KIVI	The Royal Netherlands Society of Engineers
KNAW	The Royal Netherlands Academy of Arts and Sciences
KPMG	Klynveld Peat Marwick Goerdeler (auditor)
KTOs	Knowledge Transfer Offices
LGBTQ+	Lesbian, Gay, Bisexual, Transgender, Queer
LILa	Living Innovation Lab
LION	Leiden Institute of Physics
LLL	Lifelong learning
LNVH	Dutch Network of Women Professors
LOWI	National Board for Research Integrity
LSVb	Dutch Student Union
LTSH	Long-Term Strategic Housing
MBO	Senior Vocational Education
MESA+	MESA+ Institute

Abbreviation	Full name
SMB	Small and medium-sized enterprise
MOOC	Massive Open Online Course
Mr.	Master of Law
MSCA	Marie Skłodowska Curie Actions
NAE	National Alumni Survey
NERA	Netherlands Energy Research Alliance
NMO	Natuur en Milieu Overijssel
NPO	National Education Programme
NPOS	National Open Science Plan
NSE	National Student Survey
NVAO	Accreditation Organisation of the Netherlands and Flanders
NWO	Dutch Research Council
OBP	Administrative and support staff
OCW	Ministry of Education, Culture and Science
OIW	Design Engineering
OPUT	UT's consultative body for personnel
OSCT	Open Science Community Twente
OTS	Orange Tulip Programme
P&C	Planning & Control
PDCA	Plan-Do-Check-Act
PDEng	Professional Doctorate in Engineering; now Engineering Doctorate/EngD
PhD	Doctor of Philosophy
PITC	Photonic Integration Centre
Prof.	Professor
QS	Quality Scheme
R&D	Research & Development
R&R	Recognition & Reward
RDM	Research Data Management
RIO	Register of Institutions and Study Programmes; replaces CROHO
ROC	Regional Training Centre
RUG	University of Groningen
RvA	Advisory Board
RVO	Netherlands Enterprise Agency
RvT	Supervisory Board

Abbreviation	Full name
SAS	Student Ambassador Scholarship
SB	Strategic Council
SBD	Strategic Business Development
SDG	Sustainable Development Goal
SEG	Shaping Expert Group
SEP	Strategy Evaluation Protocol
SIPs	Strategic Impulse Programmes
SIS	Student Information System
SKO	Senior Teaching Qualification
SSH	Sector Plan for Social and Behavioural Sciences
S&T	Faculty of Science & Technology
SU	Student Union
TechMed	TechMed Centre
TGS	Twente Graduate School
THE	Times Higher Education Impact Ranking
TMF	Twente Mobility Fund
TNO	Netherlands Organisation for Applied Scientific Research
TOM	Twente Education Model
TTT	Thematic Technology Transfer
TU	Technical university
UB	University Library
UCB	University Operations Committee
UCI	University Innovation Committee
UCOW	University Education Committee
UCOZ	University Research Committee
UD	Lecturer
Ufonds	Twente University Fund
UHD	Senior lecturer
UNL	Universities of the Netherlands
UR	See URaad
URaad	UT University Council (central participation body)
UT	University of Twente
UTS	University of Twente Scholarship programme
VET	Vocational Education and Training

Abbreviation	Full name
VH	Netherlands Association of Universities of Applied Sciences
VMBO-T	Secondary Vocational Education – Theoretical Track
VU	VU University Amsterdam
VWO	Pre-university Secondary Education
WAB	Balanced Labour Market Act
WCM	Value creation model
WHW	Higher Education and Scientific Research Act
WNRA	Civil Servants (Normalisation of Legal Status) Act
WNT	Standards for Remuneration Act
WO	Academic Education
WOB	Government Information (Public Access) Act
WP	Academic staff
WRR	Scientific Council for Government Policy
WSV	Study Advance Funds Act

Abbreviation	Definition
4TU	Collaboration between four technical universities (Delft University of Technology, Eindhoven University of Technology, Wageningen University and Research, University of Twente)
AFAS	Applications for Administrative Solutions; payroll system
BSA	Binding recommendation students receive from their university on whether they can continue their studies. Every student receives this recommendation at the end of their first year. (Source: Rijksoverheid)
CBL	Challenge-based learning: teaching method based on integrating current social challenges into education.
CBR	Challenge-based research: conducting research together with societal partners aimed at helping them tackle challenges they face.
CS	Citizen science: research conducted in whole or in part by citizens or non-professional scientists.
CVD	Knowledge centre in Apeldoorn that focuses on digital security, fraud and detection. UT contributes to CVD's work.
DCC	UT centre of expertise for open science.
Kick-In	UT's freshers' week.
LLL	Lifelong learning is about proactively developing qualities based on motivation and opportunities to make a sustainable contribution to society, throughout your entire lifetime. By focusing on lifelong learning, people improve their work environment, health and happiness. (Source: Kennispunt MBO)
OBP	Makes up the university's workforce together with the academic staff.

Abbreviation	Definition
Pre-U	UT education track for primary and secondary school students.
Pro-U	UT professional development programme for primary and secondary school teachers.
SDGs	The 17 goals set by the United Nations as part of its development agenda for 2015-2030.
SEG	Founded based on Shaping2030. Groups of UT students and staff working together to link up a number of themes that are essential to achieving our objectives.
Shaping2030	Shaping2030 is UT's mission, vision and strategy for 2020-2030.
START	Novel-T bootcamp for new entrepreneurs.
SU	UT umbrella organisation for and by students.
Unit4ERP	Software that has replaced the Oracle financial package.

# OUR STAKEHOLDERS

The value creation model specifies how we create value together with our various stakeholders. The table below sets out who our stakeholders are and how we interact with them. The stakeholders have been classified based on a scientific framework, which is cited in the 'Stakeholder category' and 'Theory/constitutive groups' columns (Seres, Maric, et al.; IATED 2019). The overview was compiled from UT's institutional perspective and therefore has a high level of aggregation. It lists both internal and external stakeholders and aims to be a uniform starting point without striving for completeness.

#	Stakeholder category	UT/which parties are involved? (indicative, not complete (everywhere))	Theory/constitutive groups	Dialogue/how are we in contact?
1	Governing entities	Ministry of Education, Culture and Science	state government; governing board	Annual report; Accreditation; Research review; Performance and quality agreements; Transparency benchmark; also related ministries such as Economic Affairs and Climate Policy and through parties such as UNL.
2	University Management	EB, Faculty Boards, Supervisory Board	director (rector, dean); senior administrators	For UT internal coordination see the annex <a href="#">Organisational structure</a> .
3	Employees	Academic staff & support staff (dif.)	teaching and research staff; administrative staff; support staff	University Council (participation), OPUT, Academic Integrity Committee, staff research, staff portal, new staff meetings, networks such as P-nut, FFN, DJA.
4	Clients	Students (alumni, current, high school pupils), LLL-ers, students' parents, students at senior secondary vocational/higher vocational institutions, students at ECIU partners, companies and other (un)employed staff (LLL-ers)	students (former, current, potential); students' parents; family; tuition reimbursement providers; service and industry partners; employers; employment agencies;	Website, social media, <b>Alumni:</b> Campus journal, alumni portal, newsletter, meetings, UFonds, <b>Current:</b> University Council (participation), regular Executive Board-Student Union consultation, study associations, student portal, survey (results), Create Tomorrow, our partners' staff, ECIU XR Campus. <b>High school:</b> Pre-U, Open Days. <b>LLL-er etc:</b> annual report, Pro-U, our partners' staff.

#	Stakeholder category	UT/which parties are involved? (indicative, not complete (everywhere))	Theory/constitutive groups	Dialogue/how are we in contact?
5	Suppliers	High schools, alumni, other senior secondary vocational/higher vocational/academic institutions; ECIU partners, companies, food providers, insurance companies, utilities, contracted service providers, Ed Tech (e.g. Future learn), shared facilities providers (e.g. CERN)	high schools; alumni; other universities; food providers; insurance companies; utilities; contracted service providers;	See <b>High school</b> and <b>alumni</b> in 4; also website, social media, annual report, contact with UT/academic staff & support staff, Create Tomorrow, our partners' staff, ECIU XR Campus. Contact with providers through individual contacts.
6	Competitors	Other higher vocational/academic institutions, 4TU partners, Ed Tech providers, institutions offering LLL products	direct (private and public providers of post-secondary education); potential (distance higher education providers; new ventures); substitutes (company training programmes);	Administrative meetings, 4TU organisation, national platforms. Contact with providers through individual contacts.
7	Donors	Individuals (offering (non-)financial products, e.g. grants, volunteers) among which alumni	individuals (including directors (trustees), friends, parents, alumni, employees, industry foundations);	See <b>alumni</b> in 4; also contact with UT/academic staff & support staff, university fund, social media, annual report.
8	Communities	Local residents, neighbours, alumni, former employees, Young Academies, LNVH, Scientists4future, environmental voice (quadruple helix, e.g. Greenpeace).	neighbours; school systems; social services; special interest group;	See <b>alumni</b> in 4; also website, annual report, Open days, Open house, National neighbours day, Protocol for events on campus/information by letter, UT participation in networks and movements.
9	Government regulators	Individual politicians, political parties	ministry of education and research; buffer organisation; state financing agencies; research support bodies; fiscal authorities; social security; patent office;	Annual report, administrative meetings.
		Regional: Municipality, Province, Regional pact, Economic Board Twente		Annual report; Accreditation; Research review; Performance and quality agreements; Transparency benchmark.
		National: Ministry of Education, Culture and Science, Dutch National Research Agenda, Dutch Research Council, Royal Netherlands Academy of Arts and Sciences, Netherlands Enterprise Agency		Contact with UT/academic staff & support staff.
		International: EU, UN, governments of other counties		

#	Stakeholder category	UT/which parties are involved? (indicative, not complete (everywhere))		Theory/constitutive groups	Dialogue/how are we in contact?
10	Non-government regulators	NVAO, Ranking agencies (THE, Leiden), External commissions (e.g. SBT/Van Duijn)		foundations; accreditation bodies; supervisory institutions; sponsoring religious organisations;	Annual report, reviews, administrative meetings.
11	Intermediaries	Bank, scholarship providers, investors (e.g. Cottonwood), UNL, CESAER, KIVI, 4TU (lobby), Novel-T, Kennispark, Technologiekring Twente, company days		financial intermediaries (banks, funds); professional organisations and associations; business associations (chambers of commerce; business clusters, business incubators, science and technology parks, etc.); networks (Enterprise Europe Network, European Entrepreneurs Network, etc.)	SBD services, CES/SOIR, scholarships and grants via e.g. embassies, contact with UT/academic staff & support staff, administrative meetings.
12	Joint venture partners	Companies, other educational institutions, etc.	Regional: Demcon, Novel-T, ROC, Saxion, Roessingh, MST, Kennispark etc.	alliances and consortia; corporate co-sponsors of research and educational services;	Administrative meetings, annual report, website, collaboration with industry in education and research, company days, internships.
			National: ASML, 4TU, VU, Apeldoorn, Zwolle, other senior secondary vocational/higher vocational/academic institutions, Young Academies, LNVH (Dutch network of woman professors)		Administrative meetings, 4TU organisation, annual report, website, contact with UT/academic staff & support staff, cooperation with industry in education and research, company days, internships, conferences
			International: ASML, Canon, Thales, ECIU, CESAER, ISPs, other senior secondary vocational/higher vocational/academic partner institutions		Administrative meetings, website, contact with UT/academic staff & support staff, collaboration with industry in education and research, exchange and internships, conferences and trade fairs such as CES.
13	Other	Citizens (Citizen Science), society involved in our research (techniques/development) and testing it, start-ups/spin-offs, end-users of our results			SEG, Design lab, citizen science hub, test beds, through participation in research projects.

# GOVERNANCE AGREEMENT

<b>Objective 1: Strengthening the foundations.</b>	<b>How is this going at UT?</b>
Curiosity-driven research: indicator: Starter and incentive grants.	The aim of the grants is to promote curiosity-driven research and to reduce the workload and the pressure to apply for subsidies. Grants play an important role in creating peace and space and providing the right foundations. In 2022, the focus was on preparing for the implementation of the instrument.
Education quality: accountability for study advance funds.	UT has fleshed out its plans into five institution-wide programmes: Community building, Learning facilities, Teaching professionalisation, Global citizens and Talent development. In an appendix we account for the way in which the funds are being spent. See: <a href="#">Quality agreements</a> .
<b>Objective 2: Making space for talent.</b>	<b>How is this going at UT?</b>
Workload: indicator: Academic staff with a permanent appointment.	<a href="#">Our staff and their well-being</a> shows the growth, composition and development of the ratio of temporary/permanent appointments of academic staff. Rise in percentage of academic staff with a permanent appointment.
Social safety and inclusion: developments in the field of social safety and inclusion.	Social safety is a topical and important issue at our university, as it is in the rest of society. In 2022, several departments, including DE&I, integrated safety, HR, M&C and CES, as well as the Ombuds Officer and the student associations, joined forces to ensure that everyone who works, studies, plays sports, visits or lives on the UT campus feels safe – and knows where to get support if they do not. Read all about this in <a href="#">For an inclusive and safe environment</a> .
Diversity: indicator: Gender balance in appointments, transfers and departures (students and staff)	<a href="#">The student journey</a> gives the gender balance for bachelor's, pre-master's and master's students. <a href="#">Our staff and their well-being</a> does the same for staff. In the case of students, the ratio is fairly stable, despite our efforts to attract more female students. The picture nevertheless differs depending on the programme (in Social Sciences, for example, the percentage of women is much higher); these are averages. The proportion of women in the academic staff has risen (minimally). We are explicitly committed to recruiting female scientists.
<b>Objective 3: Increasing social impact.</b>	<b>How is this going at UT?</b>
Knowledge utilisation: In the transition to different and broader recognition and reward, universities will pay more attention to impact, including knowledge utilisation and an entrepreneurial attitude in business, and will report on progress in this regard in the annual report.	As an entrepreneurial university, UT has a long tradition of valorisation. We encourage students and researchers to be entrepreneurial; we help them to launch new start-ups and scale-ups by offering mentoring, programmes, facilities and a broad network that gives them access to growth capital and international markets, amongst other advantages. Read more about this in our <a href="#">Our foundations</a> , and in <a href="#">Impact and entrepreneurship</a> .

Knowledge utilisation: In the annual report the universities report to the Minister and to the Minister of Economic Affairs and Climate Policy on the practical implementation of improvements in the handling of intellectual property rights for start-ups and entrepreneurial researchers.

In Impact and entrepreneurship we describe how we generate impact from our academic base and how this translates into spin-offs, start-ups and scale-ups.

# MEMORANDUM ON CLARITY

Theme	Notes
<b>Theme 1: Outsourcing</b>	This does not take place in such a way that funded education is outsourced to another institution, whether funded or otherwise.
<b>Theme 2: Investing public resources in private activities</b>	No funding is used for private activities. In the context of student facilities, UT/CES does pay a fee to private and public institutions (i.e. rental organisations) to guarantee the timely availability of rooms for unfunded international students. This fee is paid from central funds. To a certain extent, this expenditure is related to the core 'education' activity, since accommodation is a precondition for international students to be able to come and study here in the Netherlands. International (non-EEA) students for whom UT does not receive government funding pay an institutional rate, the amount of which is determined annually and which at least covers the costs incurred for providing education to these international students.
<b>Theme 3: Granting of exemptions</b>	Exemptions are granted, but not to such an extent that hardly any work needs to be done to obtain a degree. The scope of exemptions is laid down in the education & examination regulations. In the 2022-2023 academic year, under certain conditions and because of COVID-19 delays, students who have not yet completed their bachelor's degree can be enrolled in the master's programme. This means the bachelor-before-master rule does not apply. The binding education recommendation norm is again 45 ECTS credits for the 2022-2023 academic year.
<b>Theme 4: Funding of international students</b>	In principle, international students from outside the EEA are not entitled to funding and pay a cost-covering institutional fee if they are enrolled in a funded bachelor's or master's programme. On the basis of certain residence permits, non-EEA students may nevertheless be eligible for funding from the Dutch government. All non-EEA students who are presented for funding are checked to verify eligibility. Distance learning: M-Spatial Engineering introduced an online pre-master's (transfer programme) in the 2022-2023 academic year. The student does not have to come physically to UT to take part. Pre-master's programmes are not funded by the government. There are no international students who are enrolled for a UT educational programme and largely study abroad for it. There are international students (EEA and non-EEA) who are enrolled in a foreign educational programme and institution and follow an internship or courses at UT. The exchange students can only come if there is an exchange agreement with their home institution. Based on this agreement, as many UT students can take courses at the foreign institution as can study at UT. These students are registered as non-regular students. UT participates in a number of international cooperation programmes in which students follow part of their programme at UT and part at an institution abroad. Depending on the agreement, students receive 1 certificate (joint degree) or 2 certificates (double degree). These students are enrolled at both institutions.
<b>Theme 5: Tuition fees not paid by the student</b>	UT has an emergency fund for students in financial need. It has clear guidelines and requirements that students must meet in order to qualify for financial assistance in the form of a loan. The student must repay this loan.

Theme	Notes
<b>Theme 6: Students follow programme modules</b>	Separate tracks in which modules lead to a CROHO/RIO-related certificate are not offered. Exchange students, course participants, students (including higher vocational) who come to take a minor or participate in a transfer minor receive a grade list, not a full (or partial) certificate. Pre-master's students also follow certain modules of a programme and are enrolled as regular students. However, they also receive no certificate for this, only proof that the pre-master's programme has been accomplished (or not). UT receives no funding for students who follow a pre-master's track.
<b>Theme 7: Students follow a programme other than the one in which they are enrolled</b>	Each enrolment is based on an enrolment request. A student is enrolled in the educational programme for which the request was submitted (after confirmation that the admission requirements have been met). If students follow a funded programme other than that for which they are registered, the subjects passed will be included as optional subjects in their initial programme. On the basis of the enrolment for the initial programme, the student is assigned an examination programme in the study progress system. All parts of the programme must be completed in order to complete the programme. Student advisers monitor progress
<b>Theme 8: Funding of tailor-made projects</b>	Not applicable
<b>Theme 9: Funding of art education</b>	Not applicable

# QUALITY AGREEMENTS

## INTRODUCTION

UT has adopted a programme-based approach and developed its plans within five institution-wide programmes: Community Building, Learning Facilities, Teaching Professionalisation, Global Citizens and Talent development. These programmes are related to the six quality themes defined by the Ministry of Education, based on the joint higher education agenda of student organisations LSVb and ISO, the Netherlands Association of Universities of Applied Sciences and UNL.

UT's quality agreements were established in 2018 and developed using a bottom-up approach. Under the five UT programmes, each faculty has drawn up plans describing how the study advance funds will be used to improve educational quality. In 2019, they created financial frameworks for these plans for 2019, 2020 and 2021. At the same time, they set out their long-term ambitions and corresponding financial projections for the period from 2022 to 2024.

UT's plans were assessed in 2019 by a panel of experts appointed by the Accreditation Organisation of the Netherlands and Flanders (NVAO). As a result of the positive outcome of that assessment, UT was awarded the study advance funds. Amongst other things, the panel noted that the plans were detailed and easy to follow. The panel also commended the way all internal stakeholders at all levels were closely involved in the creation of the plans from the very beginning, highlighting students' contributions to the process in particular. Furthermore, the panel expressed confidence in the governance model and monitoring tools, noting that these are adequate for keeping track of the progress made on the quality agreements and for making timely adjustments (Advisory report on plan assessment and quality agreements, 28 January 2020, NVAO).

The study advance funds are set annually, at the same time as the government contribution. In their annual plans, the faculties and service departments have included specific plans for the allocation of WSV funds in their annual cycles. These are set yearly as part of the regular planning and control cycle. Students are closely involved in this process, through formal participation bodies and specific student delegations set up for the allocation of study advance funds. The University Council has approved the plan for university-wide measures and has adopted it in its annual planning and control cycle. Students are involved in this as members of the Council. In addition, the central measures are evaluated annually in talks between the Rector Magnificus and a broad delegation of students.

In 2022, UT conducted an internal interim evaluation (using data up to 2021) of six predefined indicators for the impact of quality funds. These indicators are centrally defined and represent student satisfaction (UT scores based on the National Student Survey (NSE)), UT's student-staff ratio, the percentage of staff with a Basic Teaching Qualification (BKO) and the graduation rate. All indicators show a small increase in satisfaction: NSE scores show that students are slightly more satisfied with the study facilities, amongst other things; the percentage of staff with a BKO has increased; the graduation rate for bachelor's students has been stable in recent years; the student-staff ratio has decreased, which is a positive sign as it benefits education intensity. Although the scores indicate a positive development, no conclusions about the impact of the WSV funds can be drawn on the basis of these results. The indicators have been defined at central UT level rather than plan level, and the university has invested more than just the WSV budget in aspects of education quality. Thus, the positive scores cannot be attributed solely to the investment of WSV funds.

In autumn 2022, the NVAO conducted an interim assessment of the implementation of the plan up to 2021, in accordance with the assessment protocol for quality agreements in higher education (May 2018). This assessment was based on the 2021 annual report and a reflection from the participation bodies. Taking into account the efforts made and the unforeseen circumstances UT was faced with, the NVAO concluded that the university has made sufficient progress in achieving its ambitions. It was also able to establish that the participation bodies and other relevant stakeholders were involved in the implementation of the plan.

In 2022, study advance funds were higher than anticipated in 2019. The additional funds, which were distributed amongst faculties and service departments in proportion to their student numbers, benefited existing plans. In the annual cycle, the faculty councils weighed in on and approved the fully fleshed out faculty plans. UT received over € 7 million in study advance funding last year. These funds were distributed internally and spent by faculties and service departments on measures to strengthen education. Below is the accountability for the 2022 quality agreements. The extent to which measures related to the UT programme have been realised is indicated for each Ministry of Education theme.

## EDUCATIONAL DIFFERENTIATION (K€ 635)

In 2022, many efforts were made at UT to further improve educational differentiation. The ET faculty made additional investments in study-related workshops for all students and extra tutoring activities in the evenings, organised by ET's study associations. ET also expanded its offering for education minors to provide more differentiation opportunities for students (k€ 19 in total). Moreover, the faculty has successfully implemented additional plans aimed at supporting students' international experiences. For example, a cultural awareness workshop was organised for all first-year students to promote the international classroom and improve cooperation between domestic and international students (k€ 30). At the S&T faculty, investments were made to strengthen educational differentiation by appointing additional staff to improve activities related to helping students develop soft skills (k€ 52 in total). BMS has several activities aimed at fostering internationalisation amongst students (k€ 190 in total). At the ITC faculty, activities were launched to support students' career development, with investments being made in various internship and careers events (k€ 4). In addition, ITC supported its staff in further developing insights on all dimensions of learning (k€ 11). Through the service departments, CES provides additional support to faculties in promoting international curricula and inclusive environments (k€ 50) and in setting up exchange programmes and international partnerships (k€ 100). CES also provided career advancement support to students (k€ 90).

UT programme (in k€)	Ambition	Department	2019	2020	2021	2022
Global citizens	Support degree programmes regarding international curriculum and inclusive environment	Service dep.	150	150	150	150
Talent development	All students are stimulated and have the possibility to create their own learning experiences	Service dep.	22	22	183	90
Global citizens	Students are global citizens that are familiar with an international working environment	ET			90	30
Talent development	Strengthen a small-scale and interactive learning environment for a diverse community that helps students to develop their talents	ET			79,5	119
Global citizens	Enable students to function well in an international context; Strengthening and enriching curricula by including the values of global social responsibility	BMS	110	184	237	190
Talent development	Prepare students for future career and strengthen relation between education and professional field	BMS		125	150	
Talent development	Further increase and align learning trajectories for soft (essential) skills	S&T	32	48	48	52
Global citizens	Achieve high standard in internationalisation in education; ATLAS Remain to be (of the most) internationally oriented programmes	ITC	2	2	31	
Talent development	Offer effective student support regarding further professional and academic development; ATLAS Further support students' development of skills and expertise beyond semester goals	ITC		11	27	4
Teaching professionalisation	Further strengthen integration of natural and social science in more theoretical (course settings)	ITC	8	8	8	

UT programme (in k€)	Ambition	Department	2019	2020	2021	2022
Global citizens	Development of international curriculum in our bachelor and master programmes	EEMCS	40	40	40	
<b>Total</b>			<b>364</b>	<b>590</b>	<b>1.043,5</b>	<b>635</b>

## EDUCATIONAL FACILITIES (K€1,444)

The S&T faculty improved and expanded both the facilities for practical classes (k€ 75) and the project rooms and study areas (k€ 168). It also recruited additional teachers to achieve more intensive education, including for students with specific learning needs (k€ 121). At the ET faculty, investments were made in facilities that enable small-scale education and encourage interaction. Besides its annual investments in additional teachers (2.5 FTEs for assistant professors), in learning spaces (ET-Homebase project) and e-learning specialists, ET invested in additional monitors for a number of student work spaces in 2022 (k€ 511 in total). In 2021, the faculty also appointed group coaches/student advisers to strengthen the sense of social cohesion amongst the student body. The goal is to ensure that all students feel part of at least one community made up of staff and fellow students. To achieve this, the coaches focus exclusively on group dynamics and inclusion through (international) group work. These activities continued in 2022 with resources from quality funds (k€ 126). The EEMCS faculty invested in modern tools to support learning, help students design their own learning experience and increase teacher accessibility. Specific investments were made in the development of micro-lectures (k€ 25) and in software to support education, timetabling, marking and quality assurance (k€ 100). The BMS faculty continued to invest in the BMS lab, which provides technology-based learning facilities that enable new forms of teaching and learning (k€ 240). Additional investments were made in educational facilities for students (k€ 63) and in an online platform that facilitates participation (k€ 24 including unforeseen costs). The ITC faculty invested in e-learning facilities to promote the use of more flexible forms of learning and examination formats (k€ 10). The implementation of the home base concept in the programmes is a key element when it comes to improving educational facilities. As planned, CES continued to expand the timetabling team in 2022 (k€ 30). It also invested in educational facilities, including digital teaching tools (adding Canvas features) to better support students in their learning process (k€ 20).

UT Programme (in k€)	Ambition	Department	2019	2020	2021	2022
Community building	Applying a home base concept in an efficient way to the degree programmes of the UT	Service dep.			30	
Community building	Increase capacity of Scheduling Team to accommodate home base scheduling	Service dep.				30
Learning facilities	Increase the quality, quantity and usage of learning spaces for individual study and teamwork; Improve guidance of the students' learning process by means of digital education tools; Explore how learning analytics can help students to improve their learning process; per 2022 also expend possibilities Canvas	Service dep.	172	192	387	20
Community building	All students feel part of at least one community formed by staff and fellow students; as of 2021 appointment of group coaches and additional study advisors	ET			50	126
Learning facilities	Create facilities that enable small-scale character of education and stimulate interaction; next to extra staff per 2022 also extra monitors	ET	39	67	192	511
Teaching professionalisation	Utilize modern technology oriented learning facilities that allow new types of teaching and learning (BMS-lab; group study areas)	BMS	162	162	162	240
Learning facilities	Online platform	BMS				18
Learning facilities	Well-equipped project rooms near the faculty and improve lab facilities; Support teachers in discovering and implementing tools and trends in E-learning	S&T	197	233	269	248

UT Programme (in k€)	Ambition	Department	2019	2020	2021	2022
Community building	Realise a physical environment that promotes interaction between students from different programs	S&T	98	152	207	116
Learning facilities	Utilize e-learning to enhance learning and to make education and learning more efficient; Atlas Facilitate hands-on learning to develop hands-on skills	ITC (ATLAS)	23	15	15	10
Learning facilities	Utilize modern tools to support student learning, to help students in designing their own learning experience, and to increase accessibility of lecturers	EEMCS	140	140	140	125
Community building	Create labs where students can study close to EEMCS academic research groups	EEMCS	280	200	200	
<b>Total</b>			<b>1.111</b>	<b>1.161</b>	<b>1.652</b>	<b>1.444</b>

## STUDENT GUIDANCE (K€ 177)

To improve student guidance, several existing initiatives were continued. The ITC faculty, for example, continued its Stimulating Teacher Evaluation and Professionalisation (STEP) activities and provided additional training for teachers on professional mentoring and coaching to better support students (k€ 5). EEMCS continued its additional training courses for mentors (as part of the Academic Skills line), which were first offered in 2021, and it approved proposals submitted by individual teachers for the development and testing of academic skills software. An academic skills coordinator was appointed at Electrical Engineering and teachers at Computer Science received additional training (k€ 82 in total). Meanwhile, the BMS faculty made significant investments in teacher professionalisation projects that also contribute directly to educational innovation (see Professional development for teaching staff). Projects within this framework also contribute to strengthening student guidance. As in 2021, CES appointed additional student psychologists as part of the UT Talent Development programme to increase student support (k€ 90).

UT Programme (in k€)	Ambition	Department	2019	2020	2021	2022
Talent development	All students are stimulated and have the possibility to create their own learning experiences; employ supportive activities regarding coaching; expending capacity study psychologists; per 2022 especially expending support mental health	Service dep.	13	110	148	90
Talent development	Strengthen a small-scale and interactive learning environment for a diverse community that helps students to develop their talents	ET	33	40	73,5	
Teaching professionalisation	Further professionalisation of the study advice; per 2022 further on initiative STEP	ITC		4	5	5
Talent development	Students are stimulated to develop their own talents; per 2022 academic skills line	EEMCS	40	40	40	82
<b>Total</b>			<b>86</b>	<b>194</b>	<b>266,5</b>	<b>177</b>

## INTENSIVE AND SMALL-SCALE EDUCATION (K€ 290)

The EEMCS faculty invested in intensive, small-scale education by allocating extra funds to programme coordination and targeted support for teachers. The goal of these investments is to ensure that teachers can devote more energy to their teaching duties and thus increase education intensity. Specifically, the faculty appointed e-learning specialists, module support staff and a Kick-In coordinator. Support was also reinforced for tasks related to quality assurance (k€ 290). The ET faculty made several investments (see Educational facilities) that indirectly contribute to intensive and small-scale education. BMS invested in various projects that contribute to the professional development of teachers and educational innovation, which also indirectly contribute to more intensive and small-scale education (see Professional development for teaching staff).

UT Programme (in k€)	Ambition	Department	2019	2020	2021	2022
Learning facilities	Create facilities that enable small-scale character of education and stimulate interaction	ET	248	248	248	
Talent development	Strengthen a small-scale and interactive learning environment for a diverse community that helps students to develop their talents	ET	12	17	25	
Learning facilities	Safeguard the small-scale characteristics and reduce staff workload	S&T	32	48	351	
Community building	Facilitate interaction between the diverse student populations, in particular across the domains	S&T	25	25	25	
Learning facilities	Utilize modern tools to support student learning, to help students in designing their own learning experience, and to increase accessibility of lecturers	EEMCS	120	120	120	290
<b>Total</b>			<b>437</b>	<b>458</b>	<b>769</b>	<b>290</b>

## PROFESSIONAL DEVELOPMENT FOR TEACHING STAFF (K€ 1.248)

The EEMCS faculty has successfully invested in the further professionalisation of its teachers. A number of individual proposals submitted by teachers after a targeted call were approved (k€ 100). Academic staff also successfully completed courses on teaching examination and honours programme teachers received additional training (k€ 50 in total). The BMS faculty set up the Teaching Academy, which supports the professional development of teaching staff and educational innovation (k€ 200). The Teaching Academy launched 21 innovation projects aimed at catalysing new educational developments (k€ 248), ranging from the development of a simulation game to the integration of innovative technologies into course content. In addition, a framework for the ongoing professional development of BKO-qualified teachers was set up (k€ 336). Resources were also allocated to support and expand the use of educational tools, and teachers were trained on how to use these tools. At the S&T faculty, more teachers participated in training courses for specific teaching qualifications (k€ 25). As in previous years, investments were also made in additional learning assistants (k€ 25) and tutor training (k€ 30). In 2022, the ET faculty continued to support staff participation in professionalisation activities, with four teachers and two programme directors receiving training. ET also invested in didactic training for staff in the workplace and didactic training for student assistants with teaching responsibilities (k€ 102 in total). Responding to demand from within the organisation for short courses, CELT developed and taught several training courses in 2022, as it did in 2021. Besides Senior Teaching Qualification (SKO) tracks, training courses for the Learning Assistant programme were developed (k€ 76). The service also provided customised activities to promote teacher professionalisation (k€ 56).

UT Programme (in k€)	Ambition	Department	2019	2020	2021	2022
Teaching professionalisation	Reward teaching achievement	Service dep.	127	147	147	
Teaching professionalisation	Learning ass programme; short customised course; additional SUTQ	Service dep.				132

UT Programme (in k€)	Ambition	Department	2019	2020	2021	2022
Teaching professionalisation	All teachers continuously improve their teaching and are competent in SDL & P-led E	ET	99,4	108,2	128	102
Teaching professionalisation	Stimulating continuous teaching professionalisation	BMS	264	294	780	784
Teaching professionalisation	Increase participation of teachers in training programs (e.g. UTO, SEQ, SUTQ, LOL); Student assistants are enabled and professionalised to engage in teaching and tutoring	S&T	146	171	171	50
Talent development	Further increase and align learning trajectories for soft (essential) skills	S&T	30	30	30	30
Teaching professionalisation	Reward teaching and offer more possibilities for teachers' professional development; Foster continuous development of skills that the unique approach to teaching and learning at ATLAS requires	ITC (ATLAS)	12	10	15	
Talent development	Students are stimulated to develop their own talents	EEMCS	10	10	10	
Teaching professionalisation	Stimulate professionalisation of teachers.	EEMCS	65	65	65	150
<b>Total</b>			<b>753,4</b>	<b>835,2</b>	<b>1.346</b>	<b>1.248</b>

All faculty perspectives on the quality agreements were published in [UT's annual report for 2021](#), on pp. 134-143 (Dutch). The University Council's letter is reproduced below.

### **UNIVERSITY COUNCIL REFLECTION ON SPENDING AND INVOLVEMENT WITH REGARD TO THE WSV BUDGET – APRIL 2022**

The allocation of WSV funds at UT is largely decided by the faculties. Plans are drawn up and implemented by the faculty boards together with the faculty councils, mostly in consultation with the programme directors and study programme committees. In 2021, however, while the implementation process continued based on the Plan-Do-Check-Act cycle, the COVID-19 pandemic shifted attention away from discussions about the spending of WSV funds. The main topic of conversation during the pandemic was how to provide the highest quality education possible given the far-reaching restrictions. Programmes, faculties and central management launched and implemented many initiatives to this end, which were essentially in line with the thinking behind WSV – how do we, as a university community, inspired by the dialogue between the Board and the participation bodies, improve the quality of education?

The University Council is the primary discussion partner when it comes to the allocation of central WSV resources. During the 2021 budget process, the University Council provided input to the Executive Board on the allocation of 20% of the WSV funds at the central level. This allocation was again linked to the realisation of central support targets agreed in 2019, especially in the area of ICT.

In 2021, the University Council, represented by its chair, met seven times with representatives of faculty councils and service councils to discuss issues of common interest. In June and December, the allocation of WSV funds and, in particular, the allocation process (through consultations between the Board and the participation bodies) were also discussed.

Attached are the reflections of the four faculty councils on the allocation of WSV funds in 2021. These are four of the five faculties that provide funded education. The fifth faculty, ITC, has limited claim to WSV funds due to its slim funded education offering. It has also indicated that it was involved in the decision-making process with regard to the adoption of measures to improve education during the pandemic and the allocation of resources, including WSV funds.

Enschede, April 2022



Herbert Wormeester  
Chair of the University Council, University of Twente

# PANDEMIC

## IMPACT

The COVID-19 pandemic has had an enormous impact on UT's education, research and operations in recent years. At the same time, it has also had a significant effect on the well-being of our staff, and even more so on that of our students. The SARS-CoV-2 virus mutated continuously, and in mid-December 2021 it became clear that the more infectious Omicron variant was gaining ground. Although much was still unclear at the time, the government announced what would end up being the last COVID lockdown on 18 December 2021 to limit the rapid spread of the virus. At the end of January 2022, the measures were swiftly relaxed and by the end of February most restrictions had been lifted.

Education was long exempted from the most severe measures, but this last lockdown had a significant effect on students' social lives. To somewhat reduce the impact of the restrictions around the Christmas holidays, study associations and other organisations were granted permission to organise social activities. After the measures were rolled back at the end of February, the impact of the pandemic was limited to infected staff and students. Unfortunately, some people who were infected still have health problems (long COVID). Given that a lot is still unclear about the long-term effects of COVID, we are closely monitoring developments with regard to research on long COVID.

## ORGANISATION

At the end of 2021, a political discussion started on the use of the digital COVID certificate in higher education, which was firmly opposed by UT. Besides practical concerns, the use of this tool would have imposed unnecessary restrictions on students and staff. Moreover, we want to be an open and inclusive university, and it was estimated that the measure would offer little extra protection because the bulk of our community had either been vaccinated or had already had COVID-19. At the end of February, it became clear that the use of the digital COVID certificate in higher education was no longer being considered.

In order to be prepared for a potential new wave of infections, UT created several contingency plans based on a number of scenarios drawn up by the government between June and October 2022. The University Council, the central participation body, and the Student Union were actively involved in this process. In developing the scenarios, consideration was given to the predictability of the measures and the well-being of staff and students. The plans that were drawn up, based on the occupational hygiene strategy, ensure that in-person education will continue for as long as possible and that space will be created to organise social activities.

The binding education recommendation for first-year bachelor's students was relaxed in 2022 to reduce stress amongst students who – possibly due to the COVID restrictions – were struggling to obtain the same number of credits they would have obtained under normal circumstances.

Throughout 2022, UT continued to monitor the developments around COVID-19, and these were regularly discussed by the Executive Board, the service directors and the deans.

# NATIONAL EDUCATION PROGRAMME

## FUNDING

- Extra student intake. Distributed across the organisation in accordance with the standard distribution model to benefit education and research.
- Halving of tuition fees. The 2021/2022 student cohort's tuition fees were reduced by 50%. Students who started in September 2022 pay regular tuition fees. The reduction for the 2021/2022 cohort has been included in the budget.
- 'COVID envelope'.

## SUBSIDY SCHEMES

- Extra help in the classroom. We used this subsidy to fund temporary FTEs to reduce the additional workload created by the switch to online education.

## RESEARCH FUNDING

- National Research Programme. Researchers received resources from the governance agreement on a support programme for research recovery and perspectives.

# COVID ENVELOPE

For the allocation of the COVID envelope funds, we prepared plans for the themes set out below. These plans were approved by the University Council (central participation body) in 2021, and implementation started in 2022. We will make full use of the funds in 2023, and we expect to allocate the last COVID envelope resources in 2024. We are also devoting attention to the implementation of measures in our regular operational management to ensure that sufficient time, funds and attention continue to be spent on the relevant themes after the subsidy period has ended.

Theme 1 Smooth recruitment and promotion

Theme 2 Well-being of students and social cohesion within the programmes

These themes have been integrated into a plan for:

- Additional student support staff
- Improving intake and matching
- Improving information provision
- Study association activities
- Student-2-student support

Theme 5 Study delays and dropout rates in teacher training programmes

Within this theme, there is a plan for:

- Appointing an internship and introduction coach
- Supporting early-career teachers in the remediation of learning deficits
- Purchasing additional hardware
- An online tool and related licences

We also contribute to joint national plans on these topics.

## THEME 1 SMOOTH RECRUITMENT AND PROMOTION & THEME 2 STUDENT WELL-BEING

Education at UT is founded on three pillars: Qualification, Socialisation and Subjectification. The COVID-19 pandemic has mainly impacted the latter two (as shown by several student well-being surveys). In our view, given our focus on student community building and student engagement, Themes 1 and 2 of the National Education Programme are inextricably linked. This is why we decided to cluster these two themes in developing the plan,

which we did in collaboration with the Student Well-being Improvement Programme (SWIP) steering committee. Input was gathered from the student community, representatives from the student guidance chain, internationalisation staff and vice deans of education. This input was weighed against a set of criteria, along with the results of an analysis of existing projects and infrastructures and the Ministry of Education's list of options. This eventually led to the plan with the above-mentioned components.

After a difficult start in 2021, project leadership positions were filled in early 2022 and a team was formed to kickstart the plans for Themes 1 and 2. This involved, for example, informing study associations about their role and method of accountability. The current initiatives are in line with the plans, with some reallocations. Meanwhile, plans for the participation bodies' involvement have been finalised. Spending got off to a strong start in 2022.

## THEME 5 STUDY DELAYS AND DROPOUT RATES IN TEACHER TRAINING PROGRAMMES

Our teacher training programmes train students to become qualified science teachers ready to begin teaching subjects including mathematics, physics, chemistry, computer science and engineering/design. Due to the pressing demand for teachers for these subjects in secondary education, it is vital that students do not fall behind in their studies, and that their transition to secondary education goes smoothly. We chose to allocate funds based on the four bullets mentioned above as this is the best way to contribute to solving specific COVID-related problems amongst teacher training students, which will continue to benefit us after 2023.

After the plans were drawn up in 2021, last year we began providing additional guidance for students, additional education opportunities and new digital solutions to expand practical experience. In the first half of 2022, new staff were hired and existing staff received extra hours to provide additional coaching to students, and to be able to contribute to projects that help students catch up after incurring study delays as a result of the pandemic. In addition, hardware was purchased and licences for ICT resources – mainly coaching tools and software to support students during their internships at secondary schools – were purchased or renewed.

National Education Programme accountability	Planned 2021	Spent 2021	Planned 2022	Spent 2022	Planned 2023 (running over into 2024)	Planned 2024	Total expenditure
Smooth recruitment and promotion	€ 497,500	€ 0	€ 445,000	€ 139,548	€ 802,952	tbd	€ 139,548
Student well-being	€ 497,500	€ 0	€ 445,000	€ 201,253	€ 741,247	tbd	€ 201,253
Teacher training programmes	€ 160,000	€ 0	€ 160,000	€ 126,419	€ 193,581	tbd	€ 126,419
Other items*	€ 82,000	-	€ 526,000	€ 490,353	€ 117,647	tbd	€ 490,353
To be determined	-	-	-	-	-	-	-
<b>Total</b>	<b>€ 1,237,000</b>	<b>€ 0</b>	<b>€ 1,576,000</b>	<b>€ 957,573</b>	<b>€ 1,855,427</b>	<b>tbd</b>	<b>€ 957,573</b>

\* The 'Other items' category includes: Extra help for class, project management and UT contribution to national plans. In terms of content, extra help for the class falls under theme 1. Project management and the national plans fall under theme 1 and theme 2 in terms of content.

## ADJUSTMENT AND MONITORING

Project management has been set up to oversee the implementation of the plans for Themes 1 and 2. This team will be responsible for monitoring progress both at the level of the institution and at the faculties, as well as the realisation of joint national plans. It will also ensure that the National Education Programme is embedded in existing projects and structures.

Any adjustments to the plan will be submitted to the faculty boards, which will consult with the faculty councils. The education portfolio holders will inform the project managers and other portfolio holders. Other adjustments are decided on by the Executive Board, which is advised in these matters by the University Education Committee (UCOW). The University Council will be informed about the progress and involved in any adjustments.

For Theme 5, a project leader has been appointed to oversee the project, link up the subprojects and make adjustments where necessary. Any necessary reallocation of resources takes place in coordination with the management team of the teacher development section, which the teacher training programme falls under.

## NATIONAL RESEARCH PROGRAMME

In 2022, researchers once again received resources from the governance agreement on a support programme for research recovery and perspectives. From 2021, a total of € 2.7 in National Research Programme funds has been made available for measures to compensate for the delays incurred by researchers due to the COVID-19 pandemic. The available resources were used to extend contracts, and costs were also incurred in relation to additional supervision provided by the scientific staff and unforeseen research expenses (allowance, fieldwork, insurance). Information about the allocation of National Research Programme funding has been shared with UT's staff participation body. After the completion of that consultative process, the information was also shared with the University Council. Over the course of 2022, a total of € xx million of the € 2.7 million in funding was spent. The unutilised funds will be allocated in 2023 as per the instrument guidelines.

National Education Programme	NP Educational resources	Own resources
Expenditure in euros	€ 1,581,459.00	N/A
Number of researchers assisted – unique persons	103	N/A

# EDUCATIONAL PROGRAMMES (CROHO/RIO)

Faculteit	Bacheloropleiding	Masteropleiding
<b>BMS</b>	Management, Society and Technology	Business Administration
	Industrial Engineering and Management	Communication Science
	International Business Administration	Educatie in de Mens- en Maatschappijwetenschappen
	Psychology	Educatie en communicatie in de bètawetenschappen
	Communication Science	Educational Science & Technology
		Environmental & Energy Management
		European Studies
		Industrial Engineering & Management
		Leraar VHO Mens en Maatschappij
		Philosophy of Science, Technology & Society Psychology
		Public Administration
<b>ET</b>	Industrial Design Engineering	Mechanical Engineering
	Civil Engineering	Industrial Design Engineering
	Mechanical Engineering	Civil Engineering and Management
	Idem nevenvestiging in Amsterdam	Construction Management and Engineering (4TU)
		Sustainable Energy Technology (4TU)
<b>ET &amp; EEMCS</b>		Robotics
<b>EEMCS</b>	Technical Computer Science	Applied Mathematics
	Applied Mathematics	Computer Science
	Electrical Engineering	Interaction Technology
	Business Information Technology	Electrical Engineering
	Creative Technology	Business Information Technology
	Idem nevenvestiging in Amsterdam	Embedded Systems (4TU)
		Systems and Control (4TU)
<b>S&amp;T</b>	Technische Natuurkunde	Applied Physics
	Advanced Technology	Chemical Engineering
	Technische Geneeskunde	Biomedical Engineering
	Chemical Science & Engineering	Technical Medicine
	Biomedische Technologie	Nanotechnology
	Gezondheidswetenschappen	Health Sciences
		Water Technology (Joint Degree)
<b>ITC</b>	University College Twente ATLAS	Cartography (Joint Degree)
		Geo-Information Sciences & Earth Observation (post-initieel)
		Spatial Engineering

\* Voor meer informatie zie [site van de Rijksoverheid](#).

# INAUGURAL LECTURES & FAREWELL SPEECHES

## INAUGURAL LECTURES

Date	Name and Title
22 April 2022	Barend van der Meulen (BMS)
	Professor of Hoger Onderwijs in de Digitale Samenleving
	<i>Title: Hoger Onderwijs in de Digitale Samenleving</i>
13 May 2022	Jeannette Hofmeijer (S&T), Professor of Translationele Neurofysiologie
	<i>Title: Van spanningsveld tot wisselwerking</i>
17 June 2022	Loes Segerink (EEMCS)
	Professor Biomedical Microdevices
	<i>Title: 'Vruchtbare samenwerking op kleine schaal'</i>
7 September 2022	Justine Blanford & Raoul Zurita Mila (ITC)
	Professor of Geohealth.
	<i>Title: Healty spaces: fit 4 the future.</i>
	Professor of Spatio Temporal Analytics.
9 September 2022	<i>Title: Space in, space out for everything there is a season.</i>
	Srirang Manohar (S&T)
	Professor Multi-Modality Medical Imaging (M3I)
23 September 2022	<i>Title: 'Imagination in Imaging'</i>
	Wieteke Willemen (ITC)
	Professor of Spatial Dynamics of Ecosystem Services
30 September 2022	<i>Title: 'Clearer from afar: views on nature and society'</i>
	Goos Laverman (EEMCS)
	Professor of Personalized Technology in Internal Medicine
6 October 2022	<i>Title: 'The Roaring Twenties'</i>
	Wim Brilman (S&T)
	Professor of CO2 Capture and Conversion
7 October 2022	<i>Title: CO2 Capture &amp; Conversion - Towards a carbon neutral society</i>
	Jai Prakash (S&T)
	Professor of Targeted Therapeutics
14 October 2022	<i>Title: Managing Microenvironments: Time to Engineer Medicines.</i>
	Esther Turnhout (BMS)
	Chair of science, technology, and society
19 October 2022	<i>Title: better knowledge is possible: transforming science and technology for justice, pluralism, and sustainability.</i>
	Mark van der Meide (ITC)
	Professor on 'Earth Structure and Dynamics'
	<i>Title: Imaging the Unseen</i>

Date	Name and Title
20 October 2022	Cees van Westen (ITC)
	Professor on 'Earth Structure and Dynamics'
	<i>Title: What impacts what? Disaster risk in a changing world</i>
21 October 2022	Norman Kerle (ITC)
	Professor of Geoinformatics for Disaster Risk Management
	<i>Title: It takes a village: technology and society in crisis response</i>
27 October 2022	Gert-Willem Römer (ET)
	Professor of Laser Processing
	<i>Title: The magic of light: light as a production tool</i>
3 November 2022	Fredrik Wurm (S&T)
	Professor of Sustainable Polymer Chemistry
	<i>Title: Sustainable Polymer Chemistry: Stepping into a Post-Petroleum Plastics Age</i>
4 November 2022	Bojana Rosić (ET)
	Professor of Applied Mechanics and Data Analysis
	<i>Title: Battling uncertainties in materials and systems: Return of the Jedi</i>
11 November 2023	Kim Schildkamp (BMS)
	Professor of "Data-informed decision making for learning and development"
	<i>Title: in dialogue with data in education</i>
1 December 2022	Edwin Zondervan (S&T)
	Professor of Process systems engineering
	<i>Title: process systems engineering in a changing world</i>

## FAREWELL SPEECH

Date	Name and Title
10 June 2022	Bart Nieuwenhuis (BMS)
	Professor at the Faculty of Behavioural, Management and Social Sciences
	<i>Title: My 50 years with the UT</i>
17 November 2022	Leo van Dongen (ET)
	Professor Maintenance Engineering en voorzitter van het departement Design, Production & Management.
	<i>Title: Van jonge ondezoeker tot asset manager: een spoor van techniek.</i>

# AWARDS, INDIVIDUAL GRANTS, MEMBERSHIPS AND EUROPEAN PROJECTS

## EXTERNAL AWARDS

Name external reward	Awarded to
KNAW Early Career Award	Annemieke Witteveen
John Desmond Bernal Prize	Arie Rip
Jong KNCV Spotlight prijs	Nienke van Dongen
Diversity & Inclusion Initiative Award	Project DEI4EAI geleid door Cristina Zaga
Enschede penning	Universiteit Twente
Stichting Physica Aanmoedigingsprijzen Natuurkunde en Technische Natuurkunde	Lotte Hof
ORTEC Aanmoedigingsprijzen Wiskunde en Technische Wiskunde	Mikuláš Vanoušek
KNVI/KIVI Aanmoedigingsprijzen Informatica en Technische Informatica	Victor-Adrian Alecu
Canon Aanmoedigingsprijzen Werktuigbouwkunde en Materiaalkunde	Stan Geerdink
Vaderlandsch Fonds/Dorus Rijckers Fonds Aanmoedigingsprijzen Civiele en Maritieme Techniek	Pepijn van Diggelen
KHMW Aanmoedigingsprijzen Biomedische Technologie	Diede van der Ham
KHMW Aanmoedigingsprijzen Chemische Technologie	Dan Lozovanu
Pfizer Prijzen voor Life Sciences, 1 <sup>e</sup> prijs	Laurens Spoelstra
Unilever Research Prize 2022	Leon Smook
KNCV Golden Master Award 2022	Leon Smook
Shell Afstudeerprijzen voor Natuurkunde, 2 <sup>e</sup> prijs	Fieke ten Kate
Lorentz Afstudeerprijs voor Theoretische Natuurkunde	Lumen Eek
Amazon European Esports Masters	Esports Team Twente
2022 UAS Challenge Media & Engagement Award	DroneTeam Twente
Comenius Senior Fellow	Jan Buitenweg
Comenius Senior Fellow	Klaasjan Visscher
Comenius Teaching Fellow	Xavier Pouwels
Nederlandse Hoger Onderwijspremie	Transdisciplinaire master-insert 'Shaping responsible futures' o.l.v. Klaasjan Visscher

## INTERNAL AWARDS

[Awards and scholarships](#) | [Awards and grants Overview](#) | [Twente University Fund](#).

[Output & quality](#) | [Awards and grants](#) | [Research](#).

Name internal reward	Rewarded to
Van den Kroonenbergprijs 2022	Jeroen Wissink
TGS Award	Laurens Spoelstra
UT Education Award	Nelly Litvak
UT Media Awards for students	Student team Electric Superbike Twente
UT Media Awards for PhD's	Rianne Bulthuis
UT Media Awards for social media	Pieter-Tjerk de Boer
UT Media Awards 1st prize	Maarten van Aalst
UT Media Awards 2nd prize	Azadeh Akbari
UT Media Awards 3rd prize	Marcel Boogers
Graduation Award ITC	Lorraine Oliveira
Graduation Award EEMCS	Claudia Libbi
Graduation Award ET	Luuk Barendse
Graduation Award BMS	Kimberly Morris
Graduation Award S&T	Nina Doorn
Student Union Full-time board of the year	Kick-In Committee 2022
Student Union Part-time board of the year	D.A.V. Kronos
Student Union Event of the year	Walk & Dance to Fight Cancer
Student Union Entrepreneurial student of the year	Rutger Visser
Student Union Active student of the year	Hannah Ottenschot



*More than a degree award activism*

## INDIVIDUAL GRANTS

Grant	Awarded to
ERC Starting Grant	Guillaume Lajoinie
ERC Starting Grant	Tim Segers
ERC Starting Grant	Chris Bäumer
ERC Starting Grant	Nienke Bosschaart
ERC Starting Grant	Sander Huisman
ERC Starting Grant	Saskia Kelders
ERC Consolidator Grant	David Marpaung
Veni	Eefje Hendriks
Veni	Francis Kalloor Joseph
Veni	Tom Kamperman
Veni	Anastasia Lavrenko
Veni	Lonneke Lenferink
Veni	Kirsten Pondman
Vidi	Jimmy Faria Albanese
Vidi	Roelof Rietbroek
Vici	Kerensa Broersen
Rubicon grant	Robbin Jan van Duijne
Demonstrator grant	Sarthak Misra
OTP subsidie NWO/TTW	Sissi de Beer
OTP subsidie NWO/TTW	Frieder Mugele

## MEMBERSHIPS

Name	Membership
Vinod Subramaniam	Council member AWTI
Sonia Garcia Blanco	Member of the board of stakeholders Photonics21
Deveraj van der Meer	Fellow American Physical Society

## NEW YOUNG ACADEMY @ UT MEMBERS

Name	Faculty
Julieta Paez	S&T
Annemieke Witteveen	EEMCS
Derya Demirtas	BMS

Name	Faculty
Anne Leferink	S&T
Christoph Baeumer	S&T
Sander Huisman	S&T
Nienke Bosschaart	S&T

## EUROPEAN PROJECTS

### ERASMUS+ PROJECTS STARTED IN 2022, ECHE 2021-2027

Key Action	Project title	Call	Action type	Grant in €
<b>UT as beneficiary</b>				
KA 1	Mobility of Higher Education student, staff and doctoral candidates with EU countries and third-countries associated to the programme	2022-1-NL01-KA131-HED-000053416	KA1 Learning Mobility for Individuals	€ 518.214,00
KA 1	Mobility of Higher Education student, staff and doctoral candidates with third-countries not associated to the programme	2022-1-NL01-KA171-HED-000073807	KA1 Learning Mobility for Individuals	€ 511.322,00
KA 2	CustMaS - Customer Management Skills in Digitalizing B2B Markets	2021-2-NL01-KA220-HED-000049082	KA 2 Cooperation partnerships in higher education	€ 378.521,00
KA 2	PRocurement Educational Consortium for Innovation-sourcing Using Sustainability	2021-2-NL01-KA220-HED-000049179	KA 2 Cooperation partnerships in higher education	€ 386.046,00
KA 2	Cultural Adjustment Project for Improving Relations in Europe	2022-1-NL01-KA220-HED-000085418	KA 2 Cooperation partnerships in higher education	€ 400.000,00
ERASMUS Lump Sum Grants	ECIU+/ ECIU University	EUROPEAN UNIVERSITIES (ERASMUS-EDU-2022-EUR-UNIV)	ERASMUS-LS ERASMUS Lump Sum Grants	€ 14.400.000,00
<b>UT as partner institution</b>				

Key Action	Project title	Call	Action type	Grant in €
ERASMUS Lump Sum Grants	European Platform for Vocational Excellence in Health Care	ERASMUS-EDU-2021-PEX-COVE	ERASMUS-EDU-2021-PEX-COVE	€ 3.557.775,00
KA 2	4D in the Digitalisation of Learning in Practice Placement	2021-1-ES01-KA220-HED-000027496	KA 2 Cooperation partnerships in higher education	€ 377.840,00
KA 2	Digital Citizen Science: Network, transForm, groW	2021-1-DE02-KA220-ADU-000035352	KA 2 Cooperation partnerships in higher education	€ 199.670,00

#### HORIZON 2020 AND HORIZON EUROPE PROJECTS STARTED IN 2022

Acronym	Title	Call identifier	UT EU Contribution
14ACMOS	14 Anstrom CMOS IC technology	HORIZON-KDT-JU-2021-1-IA	€ 290.500,00
ABraytCSPfuture	Air-Brayton cycle concentrated solar power future plants via redox oxides-based structured thermochemical heat exchangers/thermal boosters	HORIZON-CL5-2021-D3-03	€ 239.916,25
Adra-e	AI, Data and Robotics ecosystem	HORIZON-CL4-2021-HUMAN-01	€ 263.125,00
ALUVia	Aluminium oxide integrated photonic platform for applications in the ultraviolet (UV)	HORIZON-EIC-2022-TRANSITION-01	€ 1.694.062,50
BioRobot-MiniHeart	Engineering a living human Mini-heart and a swimming Bio-robot	HORIZON-EIC-2021-PATHFINDERCHALLENGES-01	€ 1.056.250,00
BioTisSeal	Bioactive Tissue Sealant for Enhanced Wound Repair	ERC-2022-POC1	€ 150.000,00
BIOTraCes	BIODIVERSITY AND TRANSFORMATIVE CHANGE FOR PLURAL AND NATURE-POSITIVE SOCIETIES	HORIZON-CL6-2022-BIODIV-01	€ 546.000,00
BoldJet	Skin micro-injector	ERC-2022-POC1	€ 150.000,00
CHIRALFORCE	Chiral separation of molecules enabled by enantioselective optical forces in integrated nanophotonic circuits	HORIZON-EIC-2021-PATHFINDEROPEN-01	€ 452.250,00
CONDUCTOR	Fleet and traffic management systems for conducting future cooperative mobility	HORIZON-CL5-2022-D6-01	€ 454.000,00

Acronym	Title	Call identifier	UT EU Contribution
CONNECT	Continuous and Efficient Cooperative Trust Management for Resilient CCAM	HORIZON-CL5-2021-D6-01	€ 285.393,75
euROBIN	European ROBotics and AI Network	HORIZON-CL4-2021-DIGITAL-EMERGING-01	€ 303.750,00
Flyflic	Flying companion for floating litter collection	HORIZON-MSCA-2021-PF-01	€ 187.624,32
FP1 - MOTIONAL	Europe's Rail Flagship Project 1 - MObility management multImodal enviroNment aNd digitAI enabLers	HORIZON-ER-JU-2022-01	€ 14.632,59
FP2 - R2DATO	Europe's Rail Flagship Project 2 - Rail to Digital automated up to autonomous train operation	HORIZON-ER-JU-2022-01	€ 49.752,00
FP4 - Rail4EARTH	Europe's Rail Flagship Project 4 - Sustainable and green rail systems	HORIZON-ER-JU-2022-01	€ 220.320,00
FP5 – TRANS4M-R	Europe's Rail Flagship Project 5 - Transforming Europe's Rail Freight	HORIZON-ER-JU-2022-01	€ 238.026,00
H2OforAll	Innovative Integrated Tools and Technologies to Protect and Treat Drinking Water from Disinfection Byproducts (DBPs)	HORIZON-CL6-2022-ZEROPOLLUTION-01	€ 346.250,00
HERMES	Highly Efficient Super Critical ZERO eMission Energy System	HORIZON-CL5-2021-D3-03	€ 574.700,00
HYBRAIN	Hybrid electronic-photonic architectures for brain-inspired computing	HORIZON-EIC-2021-PATHFINDEROPEN-01	€ 945.966,00
Interfaces at Work	Interface-sensitive Spectroscopy of Atomically-defined Solid/Liquid Interfaces Under Operating Conditions	ERC-2021-STG	€ 1.500.000,00
LactIns-and-outs	Pioneering methods to unravel lactation insufficiency	ERC-2021-STG	€ 1.500.000,00
LOLIPOP	Lithium NiObate empowered siLlcon nitride Platform for fragmentation free OPeration in the visible and the NIR	HORIZON-CL4-2021-DIGITAL-EMERGING-01	€ 690.000,00
MELTDYN	Understanding the melting dynamics in turbulent flows	ERC-2021-STG	€ 1.500.000,00
NEWGEN	New generation of HVDC insulation materials, cables and systems	HORIZON-CL5-2021-D3-02	€ 848.500,00
ONCHIPS	On-chip integration of quantum electronics and photonics	HORIZON-CL4-2021-DIGITAL-EMERGING-02	€ 798.125,00

Acronym	Title	Call identifier	UT EU Contribution
PARASOL	European Doctoral Network for Safe and Sustainable by Design Electromagnetic Shielding Material	HORIZON-MSCA-2021-DN-01	€ 503.012,40
PARATUS	Promoting disaster preparedness and resilience by co-developing stakeholder support tools for managing the systemic risk of compounding disasters	HORIZON-CL3-2021-DRS-01	€ 622.075,00
PET	Printing Electro-Tomography	ERC-2022-POC1	€ 150.000,00
PROCEDIN	Procurement Capability - Embedding and Driving Innovation	HORIZON-EIE-2021-CONNECT-01	€ 139.570,71
R2D2-MH	Risk and Resilience in Developmental Diversity and Mental Health	HORIZON-HLTH-2021-STAYHLTH-01	€ 334.120,00
REALM	Reusing Effluents from Agriculture to unLock the potential of Microalgae	HORIZON-CL6-2021-CIRCBIO-01	€ 299.202,50
RED 4 MARS	Rubber & Elastomer Development for MARTian environment applicationS	H2020-MSCA-IF-2020	€ 253.052,16
REGO	Cognitive robotic tools for human-centered small-scale multi-robot operations	HORIZON-CL4-2021-DIGITAL-EMERGING-01	€ 923.137,50
SHIPMENT	Sustainable and High Performance MEMbranes via iNTERfacial complexation (SHIPMENT)	ERC-2022-POC1	€ 150.000,00
SOFTWEAR	SOFT actuators for Wearables, Exoskeletons, and Augmenting Robotics	HORIZON-MSCA-2021-DN-01	€ 274.370,40
ThermoDust	A paradigm shift for the future's thermal management devices through radical innovation in new materials and additive manufacturing	HORIZON-EIC-2021-PATHFINDEROPEN-01	€ 699.925,00
TRIFFIC	Three-Dimensional Integrated Photonic-Phononic Circuit	ERC-2021-COG	€ 2.558.750,00
TRISTAN	Together for RISc-V Technology and ApplicatioNs	HORIZON-KDT-JU-2021-1-IA	€ 249.812,50
VeVuSafety	Artificial Intelligence for Traffic Safety between Vehicles and Vulnerable Road Users	HORIZON-MSCA-2021-PF-01	€ 187.624,32
<b>TOTAL</b>			<b>€ 22.643.795,90</b>

# ANCILLARY POSITIONS OF EXECUTIVE BOARD MEMBERS

The Executive Board members' ancillary positions are also [published elsewhere online](#) (Code of Good Governance for Universities 2020).

## ANCILLARY POSITIONS OF PROF. DR. VINOD SUBRAMANIAM (1967)

External activities related to the position of chair:

- Member of the Steering Group for Strategy, Public Affairs & Governance (SSPG) of Universities of the Netherlands (UNL)
- Chair of the 4TU.Federation
- Member of the Supervisory Board, PhotonDelta
- Member of the Twente Board
- Chair of founders, Novel-T
- Member of the UFonds
- Member of the Supervisory Board, Centre for Security and Digitisation



Other ancillary positions:

- Chair of the national advisory committee on diversity and inclusion in higher education (DIHOO)
- Chair of the Advisory Board, Leiden Institute of Physics (LION)
- Member of the Board, ECHO Expertise Centre for Diversity Policy (on behalf of UNL)
- Chair of the Supervisory Board, Rijksakademie van beeldende kunsten
- Parent member of the Supervisory Board, British School of Amsterdam
- Member of the Supervisory Board, Het Concertgebouw
- Chair of the external evaluation committee, Netherlands Scientific Council for Government Policy (WRR)
- Member of the Advisory Board, Excellence Initiative, University of Konstanz
- Member of the Scientific Advisory Board, Zukunftskolleg, University of Konstanz
- Member of the new members committee, AcTI
- Member of the value of science advisory committee, Royal Netherlands Academy of Arts and Sciences (KNAW)

## ANCILLARY POSITIONS OF PROF. DR. IR. TOM VELDKAMP (1963)

External activities related to the position of Rector Magnificus:

- Member of the general funds committee, University of Twente Funds Foundation
- Member of the Board of Rectors, Universities of the Netherlands
- Member of the General Management Board, 4TU.Federation
- Member of the management committee, 4TU.Education
- Member of the Board, NERA
- Member of the Supervisory Board, Wetsus
- Member of the steering committee, NPOS
- Member of the Board of Trustees, Centre for Dutch Studies, University of Münster



Other ancillary positions:

- Member of the Board, International Soil Reference and Information Centre (ISRIC) Foundation
- Chair of the GO evaluation committee
- Editor-in-Chief of Agriculture, Ecosystems & Environment
- Chair of the Supervisory Board, Stichting Natuur en Milieu Overijssel (NMO) (as of 1 February 2021)

## ANCILLARY POSITIONS OF DRS. MACHTELD ROOS (1975)

External activities related to the position of vice-chair:

- Statutory Director, Technopolis Twente Holding
- Member of the Supervisory Board, Stichting Gebiedsorganisatie Kennispark
- Member of the Board, Twente 2022 National Games Special Olympics Foundation
- Member of the 4TU.Federation Foundation
- Deputy member of the ERDF East Netherlands programme 2021-2027 monitoring committee



Other ancillary positions:

- Vice-chair of the Supervisory Board, Amarant
- Member of the Supervisory Board, HAN University of Applied Sciences

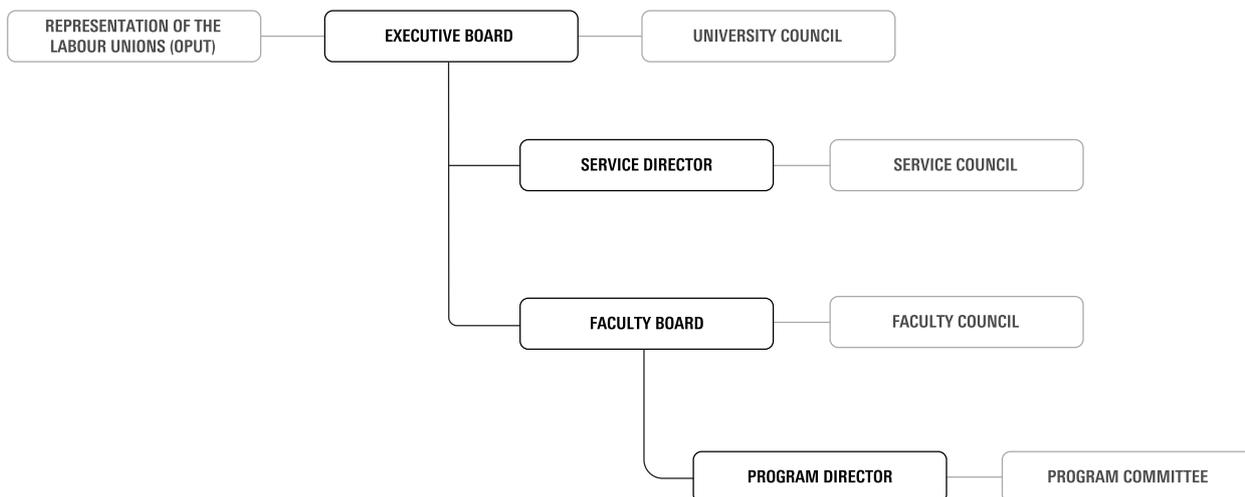
## EXPENSE CLAIMS EXECUTIVE BOARD

The overview includes the personal expenses of the members of the Executive Board, in accordance with UNL's accountability guide for board members' expense claims'. The accountability includes claims, credit card payments, invoices and the fixed monthly expense allowances. The amounts listed are the portions attributable to each Executive Board member.

AMOUNTS IN €	PROF. DR. V. SUBRAMANIAM	PROF. DR. IR. A. VELDKAMP	DRS. M. ROOS
	President	Rector Magnificus	Vice-President
	01-01-2022 to 31-12-2022	01-01-2022 to 31-12-2022	01-01-2022 to 31-12-2022
Representation expenses	2724	2724	2724
- of which fixed expense allowance	2724	2724	2724
Domestic travel expenses	15462	8443	6029
International travel expenses	22553	14700	1612
Other expenses	5185	1245	20643
<b>Total</b>	<b>45924</b>	<b>27112</b>	<b>31009</b>

# PARTICIPATION

The Executive Board is responsible for organising effective and transparent staff and student participation (Code of Good Governance for Universities 2020). UT has participatory bodies at various levels, each with its own remit:



At UT, four unions are united in the Consultative Body on Personnel Matters of the University of Twente (OPUT). In the Local Consultation, OPUT and the Executive Board discuss issues such as working conditions, safety, the redundancy plan, diversity and sustainable employability. OPUT has seven members and three advisers from three different national unions.

## OPUT MEMBERS

Union	Name	Position
FNV Overheid	Klaas Poortema	chair
	Ronald van 't End	chair until 31-12-2022
	Tanja Schrijver	advisor
General Education Union	Laura Franco-Garcia	member
	Karen Wever	member until 30-04-2022
	Ahmed Charifi	advisor
CNV Overheid	Manuela Fernandez-Fernandez	member until 2-12-2022
	Ronnie Harmelink	deputy member
	Michel Beukert	member until 31-05-2022
	Martin van Gessel	advisor
Other	Laila Tijink-Zinad	secretary
	Petra ter Brugge	secretary

The University Council is the central participation body and advises on policy at the organisational level. It represents students and staff from across the university and consults with the Executive Board. The term of office for members of the University Council runs from September to August. Student members are elected annually, staff members biennially. Both students and staff may be re-elected (with limitations).

#### STUDENTS AND STAFF UNTIL 31 AUGUST 2022

Students		Staff	
UReka	Tim Achterkamp	Campus Coalitie	Hanneke Becht
	Jeroen Assink		Pieter Boerman
	Sjoerd van den Belt		Emile Dopheide
	Jaime de Bruin		Cynthia Souren
	Atis Kazaferi		Petra de Weerd - Nederhof
	Imke Verschuren		Herbert Wormeester
DAS	Danique Damen	Lijst Weppelman	Jacqueline Weppelman - ter Meulen
	Bram van Uden	PvdUT	Dick Meijer
	Giel van Weezel	P-NUT	Anton Atanasov

#### STUDENTS AND STAFF FROM 1 SEPTEMBER 2022

Students		Staff	
UReka	Tim Achterkamp	Campus Coalitie	Hanneke Becht
	Jaime de Bruin		Pieter Boerman
	Milan Gomes		Roberto Cruz Martinez
	Sabin Kerwien Lopez		Wilma Dierkes
	Fridtjof Otto		Emile Dopheide
	Aarezo Sha		Frank Groot (ter vervanging tussen 10.2022 en 02.2023)
DAS	Sander van den Berg	Lijst Weppelman	Eline Marsman (afwezig tussen 10.2022 en 02.2023)
	Maartje van Delden		Cynthia Souren
	Robin van Zutphen		Herbert Wormeester
		Lijst Weppelman	Jacqueline Weppelman - ter Meulen

At the decentralised level, the university has faculty councils, service councils and study programme committees. These consult with the deans, the service director and the programme director, respectively.

For further information, see: [Participation bodies, participation](#). For the latest information on the University Council, see [University Council](#).

# SUPERVISORY BOARD

The tasks of the Supervisory Board consist of monitoring the management and administration of the university as a whole, ensuring compliance with relevant legislation and advising the Executive Board.

Name	Term of office
Ir. S. (Sylvia) Butzke, Chair [Remuneratiecommissie]	First term to 1 November 2024
Ir. N. (Nienke) Boersma MB [Auditcommissie]	First term to 1 October 2023
Ir. J. (Joep) van Beurden [Auditcommissie]	Second term to 1 January 2024
Prof. Dr. M. (Matthias) Wessling [Kwaliteitscommissie Onderwijs en Onderzoek, Remuneratiecommissie]	First term to 1 December 2024
J. (Jeroen) de Haas, member	Stepped down November 2022

Members of the Supervisory Board	Ancillary positions
Ir. S. (Sylvia) Butzke <i>COO at NLC (The European Healthtech Venture Building)</i>	Chair of the Supervisory Board of Inspire2Live ( <a href="https://inspire2live.org/">https://inspire2live.org/</a> ) Member of the Advisory Board of Bureau voor toegepaste filosofie ( <a href="https://wijsheidenimpact.nl/">https://wijsheidenimpact.nl/</a> )
Ir. N. (Nienke) Boersma MB <i>Director of Reporting at Achmea</i>	Member of the Supervisory Board of Adyen NV and chair of the nomination and remuneration committee ( <a href="https://www.adyen.com/nl_NL/">https://www.adyen.com/ nl_NL/</a> )
Ir. J. (Joep) van Beurden <i>CEO and Member of the Board of Directors of Kendrion</i>	Member of the Supervisory Board of Adyen NV and chair of the nomination and remuneration committee ( <a href="https://www.adyen.com/nl_NL/">https://www.adyen.com/ nl_NL/</a> ) Member of the Advisory Board of PlantLab Groep B.V.
Prof. Dr. M. (Matthias) Wessling <i>Professor of Chemical Process Engineering, RWTH Aachen University, Germany</i>	Member of the Scientific Directorate of DWI Leibniz Institute for Interactive Materials, Aachen, Germany Scientific Advisory Board of Leibniz Institute for Polymer Research, Dresden Scientific Advisory Board of Max-Planck Institute for Complex Technical Systems, Magdeburg

# LIST OF URLS (HYPERLINKS)

Chapter	Paragraph	Shortened name	Shortened hyperlink
<b>Our foundations</b>	Shaping2030	Shaping2030 strategy	<a href="https://ut.onl/Strategy">https://ut.onl/Strategy</a>
	Shaping2030	Shaping stories	<a href="https://ut.onl/story">https://ut.onl/story</a>
	Policy principles	bachelor	<a href="https://ut.onl/BSc-degree">https://ut.onl/BSc-degree</a>
	Policy principles	master	<a href="https://ut.onl/MSc-degree">https://ut.onl/MSc-degree</a>
	Policy principles	Challenge Based Learning	<a href="https://www.utwente.nl/en/cbl/">https://www.utwente.nl/en/cbl/</a>
	Policy principles	Twents Onderwijs Model (TOM)	<a href="https://www.utwente.nl/en/tom/">https://www.utwente.nl/en/tom/</a>
	Policy principles	lifelong learning	<a href="https://ut.onl/levenlo">https://ut.onl/levenlo</a>
	Policy principles	ECIU University	<a href="https://ut.onl/eciu">https://ut.onl/eciu</a>
	Policy principles	outreach	<a href="https://ut.onl/pre-uni">https://ut.onl/pre-uni</a>
	Policy principles	Master of Science in Cartography	<a href="https://cartographymaster.eu/">https://cartographymaster.eu/</a>
	Policy principles	Twente Pathway College	<a href="https://www.twentepathway.nl/">https://www.twentepathway.nl/</a>
	Policy principles	UTLC	<a href="https://ut.onl/utlc">https://ut.onl/utlc</a>
	Policy principles	Educational Module	<a href="https://ut.onl/edu-mod">https://ut.onl/edu-mod</a>
	Policy principles	Learning to Teach (Dutch)	<a href="https://ut.onl/minor-les">https://ut.onl/minor-les</a>
	Policy principles	report	<a href="https://ut.onl/bms-rapport">https://ut.onl/bms-rapport</a>
	Policy principles	computer science	<a href="https://ut.onl/computer-science">https://ut.onl/computer-science</a>
	Policy principles	Mathematics Research Review	<a href="https://www.uu.nl/sites/default/files/Research%20Review%20Mathematics%20July%202022.pdf">https://www.uu.nl/sites/default/files/Research%20Review%20Mathematics%20July%202022.pdf</a>
	Policy principles	ITC-evaluation report	<a href="https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:d8690b5c-9779-4c5b-86d0-b4c6aa9e9a2c">https://acrobat.adobe.com/link/review?uri=urn:aaid:scds:US:d8690b5c-9779-4c5b-86d0-b4c6aa9e9a2c</a>
	Governance	Code of Good Governance for Universities	<a href="https://www.universiteitenvannederland.nl/en_GB/code-good-governance.html">https://www.universiteitenvannederland.nl/en_GB/code-good-governance.html</a>
	Governance	2022 governance agreement (Dutch)	<a href="https://www.rijksoverheid.nl/documenten/kamerstukken/2022/07/14/bestuursakkoord-2022-hoger-onderwijs-en-wetenschap">https://www.rijksoverheid.nl/documenten/kamerstukken/2022/07/14/bestuursakkoord-2022-hoger-onderwijs-en-wetenschap</a>
Governance	Memorandum on Clarity (Dutch)	<a href="https://wetten.overheid.nl/BWBR0016272/2004-01-28">https://wetten.overheid.nl/BWBR0016272/2004-01-28</a>	
Governance	quality agreements (Dutch)	<a href="https://www.rijksoverheid.nl/onderwerpen/hoger-onderwijs/kwaliteitsafspraken-hoger-onderwijs">https://www.rijksoverheid.nl/onderwerpen/hoger-onderwijs/kwaliteitsafspraken-hoger-onderwijs</a>	
<b>Shaping in 2022</b>		final product	<a href="https://ut.onl/topics">https://ut.onl/topics</a>
<b>Shaping society</b>	Educating students for today's challenges	master of Robotics	<a href="https://ut.onl/master-robotics">https://ut.onl/master-robotics</a>
	Educating students for today's challenges	Teaching & Learning Fellows	<a href="https://ut.onl/tl-fellows">https://ut.onl/tl-fellows</a>
	Educating students for today's challenges	Working Group Developmental Technologies	<a href="https://www.wot.utwente.nl/en/">https://www.wot.utwente.nl/en/</a>
	Educating students for today's challenges	1.7 million views	<a href="https://ut.onl/diy-video">https://ut.onl/diy-video</a>
	Educating students for today's challenges	the article published	<a href="https://ut.onl/journal">https://ut.onl/journal</a>
	Educating students for today's challenges	EIT Digital Master School	<a href="https://masterschool.eitdigital.eu/">https://masterschool.eitdigital.eu/</a>
	Educating students for today's challenges	admission	<a href="https://ut.onl/admission">https://ut.onl/admission</a>
	Educating students for today's challenges	University of Twente in strong position once again in Keuzegids university ranking	<a href="https://ut.onl/position">https://ut.onl/position</a>

Chapter	Paragraph	Shortened name	Shortened hyperlink
	Educating students for today's challenges	University of Twente ranks near the top in new Keuzegids Masters ranking	<a href="https://ut.onl/ranking-master">https://ut.onl/ranking-master</a>
	Educating students for today's challenges	Opening Academic Year 2022	<a href="https://youtu.be/11PaaBC_G3A">https://youtu.be/11PaaBC_G3A</a>
	Research that makes a difference	Growth Fund proposals were honoured	<a href="https://ut.onl/national-growth">https://ut.onl/national-growth</a>
	Research that makes a difference	prevented	<a href="https://ut.onl/gravitation">https://ut.onl/gravitation</a>
	Research that makes a difference	report	<a href="https://biggareconomics.co.uk/economic-impact-of-the-4tu-federation">https://biggareconomics.co.uk/economic-impact-of-the-4tu-federation</a>
	Research that makes a difference	highest number	<a href="https://erc.europa.eu/projects-statistics">https://erc.europa.eu/projects-statistics</a>
	Demand-driven impact on society	Projects Geo Citizen Science	<a href="https://ut.onl/itc-projects">https://ut.onl/itc-projects</a>
	Demand-driven impact on society	UAV Centre	<a href="https://www.itc.nl/research/research-facilities/labs-resources/uav-centre/">https://www.itc.nl/research/research-facilities/labs-resources/uav-centre/</a>
	Demand-driven impact on society	Centre for Disaster Resilience	<a href="https://www.itc.nl/research/research-facilities/labs-resources/centre-for-disaster-resilience/">https://www.itc.nl/research/research-facilities/labs-resources/centre-for-disaster-resilience/</a>
	Demand-driven impact on society	Digital Twins	<a href="https://ut.onl/digital-twins">https://ut.onl/digital-twins</a>
	Demand-driven impact on society	Open Access week	<a href="https://ut.onl/open-access">https://ut.onl/open-access</a>
	Demand-driven impact on society	Where to find support	<a href="https://vimeo.com/776519665?embedded=true&amp;source=video_title&amp;owner=24139357">https://vimeo.com/776519665?embedded=true&amp;source=video_title&amp;owner=24139357</a>
	Contributing to the debate in society	preparing the recommendation	<a href="https://ut.onl/nature">https://ut.onl/nature</a>
	Contributing to the debate in society	an active role	<a href="https://ut.onl/rapport-ipcc">https://ut.onl/rapport-ipcc</a>
	Contributing to the debate in society	contributed	<a href="https://ut.onl/design-week">https://ut.onl/design-week</a>
	Contributing to the debate in society	Humanitarian Engineering	<a href="https://ut.onl/engineering">https://ut.onl/engineering</a>
	Contributing to the debate in society	Aanjagers van Technologie (Dutch)	<a href="https://www.4tu.nl/en/knowledge-valorisation/activities/">https://www.4tu.nl/en/knowledge-valorisation/activities/</a>
	Contributing to the debate in society	The Guardian	<a href="https://www.theguardian.com/commentisfree/2022/sep/26/elon-musk-iran-women-mahsa-amini-feminists-morality-police">https://www.theguardian.com/commentisfree/2022/sep/26/elon-musk-iran-women-mahsa-amini-feminists-morality-police</a>
	Contributing to the debate in society	UT Winners in the Media Prize 2022	<a href="https://ut.onl/media-award">https://ut.onl/media-award</a>
	Contributing to the debate in society	UT Annual Report 2021 (Dutch)	<a href="https://ut.onl/jaarverslag2021-online">https://ut.onl/jaarverslag2021-online</a>
	A sustainable institution	Green Talks	<a href="https://ut.onl/sustainability">https://ut.onl/sustainability</a>
	A sustainable institution	UT has only used green electricity and almost all our buildings are heated through a local heating network	<a href="https://ut.onl/gas-consumption">https://ut.onl/gas-consumption</a>
	A sustainable institution	Carbon footprint report	<a href="https://ut.onl/carbon-footprint">https://ut.onl/carbon-footprint</a>
	A sustainable institution	Appèl en Greendisch	<a href="https://ut.onl/greendish">https://ut.onl/greendish</a>
	A sustainable institution	The university will also get a water lab on Hogekamp plein (Dutch)	<a href="https://ut.onl/waterlab">https://ut.onl/waterlab</a>
	A sustainable institution	Billie Cup	<a href="https://ut.onl/billie-cup">https://ut.onl/billie-cup</a>
	A sustainable institution	pilot	<a href="https://ut.onl/waste-free">https://ut.onl/waste-free</a>
	A sustainable institution	UT promotes train travel with Train Zone Map	<a href="https://ut.onl/train-zone-map">https://ut.onl/train-zone-map</a>
<b>Shaping connections</b>	On and around the campus	new location of Geo-Information Science and Earth Observation at Langezijds	<a href="https://www.itc.nl/about-itc/Langezijds3D/app-files/">https://www.itc.nl/about-itc/Langezijds3D/app-files/</a>
	On and around the campus	to follow the progress being made	<a href="https://ut.onl/multimedia-studio">https://ut.onl/multimedia-studio</a>

Chapter	Paragraph	Shortened name	Shortened hyperlink
	On and around the campus	home workplace	<a href="https://ut.onl/home-office">https://ut.onl/home-office</a>
	Regional impact	Dies Natalis (Dutch)	<a href="https://ut.onl/dies-natalis">https://ut.onl/dies-natalis</a>
	Regional impact	Dies Natalis after movie	<a href="https://youtu.be/-M0DDgAXGGU">https://youtu.be/-M0DDgAXGGU</a>
	Regional impact	op mensen getest	<a href="https://ut.onl/hydrogel1">https://ut.onl/hydrogel1</a>
	Regional impact	het bezoek van Robbert Dijkgraaf	<a href="https://ut.onl/educational-institutions">https://ut.onl/educational-institutions</a>
	Research that makes a difference	visit of MEP	<a href="https://ut.onl/heterogeneous">https://ut.onl/heterogeneous</a>
	Regional impact	Rob Jetten, Minister of Climate and Energy, visited the Future Factory (Dutch)	<a href="https://ut.onl/minister-studententeam">https://ut.onl/minister-studententeam</a>
	Regional impact	bezoekt door Mark Harbers (Dutch)	<a href="https://ut.onl/bezoek-minister">https://ut.onl/bezoek-minister</a>
	Regional impact	Connect Forward biedt Novel-T	<a href="https://novelt.com/en/?s=connect+forward">https://novelt.com/en/?s=connect+forward</a>
	National cooperation	4TU.VO platform (Dutch)	<a href="https://www.4tu.nl/vo/">https://www.4tu.nl/vo/</a>
	National cooperation	was launched	<a href="https://www.4tu.nl/en/news/news/spinoff-story-UniversityofTwente/">https://www.4tu.nl/en/news/news/spinoff-story-UniversityofTwente/</a>
	National cooperation	HTSF	<a href="https://www.4tu.nl/en/research/high-tech-for-a-sustainable-future/">https://www.4tu.nl/en/research/high-tech-for-a-sustainable-future/</a>
	International university network	working visit	<a href="https://ut.onl/partnership1">https://ut.onl/partnership1</a>
	International university network	visit by a UT delegation to the Tec	<a href="https://ut.onl/collaboration">https://ut.onl/collaboration</a>
	International university network	the next four years	<a href="https://www.eciu.eu/news/innovation-in-higher-education-continues-next-phase-of-eciu-university-granted">https://www.eciu.eu/news/innovation-in-higher-education-continues-next-phase-of-eciu-university-granted</a>
	International university network	EIT Digital	<a href="https://www.eitdigital.eu/">https://www.eitdigital.eu/</a>
	Digital transformation	EduTalks	<a href="https://ut.onl/podcast-telt">https://ut.onl/podcast-telt</a>
	Digital transformation	living labs	<a href="https://www.versnellingsplan.nl/en/Kennisbank/field-lab-for-professionalization/">https://www.versnellingsplan.nl/en/Kennisbank/field-lab-for-professionalization/</a>
	Digital transformation	hackaton	<a href="https://ut.onl/hackaton">https://ut.onl/hackaton</a>
	Digital transformation	crowned the winners	<a href="https://www.utwente.nl/onderwijs/pre-university/pro-u/activiteiten/Hackaton-winner-blog/">https://www.utwente.nl/onderwijs/pre-university/pro-u/activiteiten/Hackaton-winner-blog/</a>
	Digital transformation	toolkit voor blended learning	<a href="https://www.versnellingsplan.nl/en/Kennisbank/toolkit-blend-your-education/">https://www.versnellingsplan.nl/en/Kennisbank/toolkit-blend-your-education/</a>
<b>Shaping individuals</b>	The student journey	International Foundation Year	<a href="https://www.twentepathway.nl/">https://www.twentepathway.nl/</a>
	Student development and well-being	RoboTeam	<a href="https://www.roboteamtwente.nl/">https://www.roboteamtwente.nl/</a>
	Student development and well-being	vision for student well-being	<a href="https://ut.onl/studentenwelzijn">https://ut.onl/studentenwelzijn</a>
	Student development and well-being	Confidential Contact Persons for students	<a href="https://ut.onl/contact-persoon">https://ut.onl/contact-persoon</a>
	Student development and well-being	University Innovation Fellows	<a href="https://www.utwente.nl/en/uif/">https://www.utwente.nl/en/uif/</a>
	Our staff and their well-being	Learning Assistants	<a href="https://ut.onl/courses-lat">https://ut.onl/courses-lat</a>
	Our staff and their well-being	financial servicedesk	<a href="https://ut.onl/fin-helpdesk">https://ut.onl/fin-helpdesk</a>
	Development, reward and recognition	Recognition and Rewards	<a href="https://ut.onl/recognise-reward-talent">https://ut.onl/recognise-reward-talent</a>
	Development, reward and recognition	Educational Leadership Programme	<a href="https://ut.onl/brochure">https://ut.onl/brochure</a>
	Development, reward and recognition	Taste of teaching	<a href="https://ut.onl/taste-of-teaching">https://ut.onl/taste-of-teaching</a>
	Development, reward and recognition	Master-Insert 'Shaping Responsible Futures' (Dutch Higher Education Award)	<a href="https://youtu.be/Vj-JBkxC6t8">https://youtu.be/Vj-JBkxC6t8</a>

Chapter	Paragraph	Shortened name	Shortened hyperlink
	Development, reward and recognition	three prize winners	<a href="https://ut.onl/comenius-programme">https://ut.onl/comenius-programme</a>
	Development, reward and recognition	Key Enabling Technologies call	<a href="https://www.nwo.nl/en/news/eight-projects-awarded-within-kic-call-key-technologies">https://www.nwo.nl/en/news/eight-projects-awarded-within-kic-call-key-technologies</a>
	Development, reward and recognition	Open Technology Programme	<a href="https://ut.onl/wlinsntt">https://ut.onl/wlinsntt</a>
	Development, reward and recognition	ORC	<a href="https://ut.onl/wetenschapsagenda">https://ut.onl/wetenschapsagenda</a>
	Development, reward and recognition	KNAW Early Career Award	<a href="https://www.knaw.nl/en/fondsen-en-prijzen/knaw-early-career-award">https://www.knaw.nl/en/fondsen-en-prijzen/knaw-early-career-award</a>
	Development, reward and recognition	Diversity & Inclusion Initiative Award	<a href="https://ut.onl/dei4eai">https://ut.onl/dei4eai</a>
	Development, reward and recognition	Deveraj van der Meer werd verkozen tot fellow van de Americal Physical Society	<a href="https://www.utoday.nl/news/72043/devaraj-van-der-meer-elected-as-fellow-american-physical-society">https://www.utoday.nl/news/72043/devaraj-van-der-meer-elected-as-fellow-american-physical-society</a>
	Development, reward and recognition	Advisory Council for Science, Technology and Innovation	<a href="https://ut.onl/innovation-awti">https://ut.onl/innovation-awti</a>
	Development, reward and recognition	Antonio Franchi was named a 2023 IEEE Fellow	<a href="https://ut.onl/ieee-fellow">https://ut.onl/ieee-fellow</a>
	For an inclusive and safe environment	A sympathetic ear or acute escalation; the UT offers no middle ground	<a href="https://www.utoday.nl/news/71511/a-sympathetic-ear-or-acute-escalation-the-ut-offers-no-middle-ground">https://www.utoday.nl/news/71511/a-sympathetic-ear-or-acute-escalation-the-ut-offers-no-middle-ground</a>
	For an inclusive and safe environment	national disputes procedure	<a href="https://www.onderwijsgeschillen.nl/educational-disputes-alternative-dispute-resolution-in-education/">https://www.onderwijsgeschillen.nl/educational-disputes-alternative-dispute-resolution-in-education/</a>
	For an inclusive and safe environment	Opinion 2022-14 (Dutch)	<a href="https://lowi.nl/advies-2022-14/">https://lowi.nl/advies-2022-14/</a>
	For an inclusive and safe environment	Opinion 2022-16 (Dutch)	<a href="https://lowi.nl/advies-2022-16/">https://lowi.nl/advies-2022-16/</a>
	For an inclusive and safe environment	UNL's website (Dutch)	<a href="https://www.universiteitenvannederland.nl/wi-2022.html">https://www.universiteitenvannederland.nl/wi-2022.html</a>
	For an inclusive and safe environment	summary of the complaints	<a href="https://ut.onl/code-of-conduct">https://ut.onl/code-of-conduct</a>
<b>Annexes</b>	Our stakeholders	Seres, Maric, e.o.; IATED 2019	<a href="https://www.researchgate.net/publication/337548471_University_Stakeholder_Mapping">https://www.researchgate.net/publication/337548471_University_Stakeholder_Mapping</a>
	Quality agreement	UT jaarverslag 2021 (Dutch)	<a href="https://ut.onl/jaarverslag-2021">https://ut.onl/jaarverslag-2021</a>
	Ancillary positions of Executive Board members	published elsewhere online	<a href="https://ut.onl/membersEB">https://ut.onl/membersEB</a>
	Participation	Participation bodies, participation	<a href="https://ut.onl/participation">https://ut.onl/participation</a>
	Participation	University Council	<a href="https://www.utwente.nl/en/university-council/">https://www.utwente.nl/en/university-council/</a>

# FINANCIAL STATEMENTS

# CONSOLIDATED FINANCIAL STATEMENTS

## CONSOLIDATED BALANCE SHEET AS AT 31 DECEMBER 2022 (AFTER APPROPRIATION OF RESULT)

	Balance sheet as at 31 December (€m) (after appropriation of result) consolidated	2022	2021
1.1.2	Tangible fixed assets	296.0	270.1
1.1.3	Financial fixed assets	14.8	16.3
	<b>Total fixed assets</b>	<b>310.8</b>	<b>286.4</b>
1.2.1	Inventories	0.4	0.4
1.2.2	Receivables	60.0	46.9
1.2.4	Cash and cash equivalents	106.6	128.0
	<b>Total current assets</b>	<b>167.0</b>	<b>175.3</b>
	<b>Total assets</b>	<b>477.8</b>	<b>461.7</b>
2.1	Equity (excluding minority interests)	164.8	176.2
2.1.2	Minority interests	0.4	0.4
2.2	Provisions	9.9	11.0
2.3	Non-current liabilities	92.7	106.2
2.4	Current liabilities	210.0	167.9
	<b>Total liabilities</b>	<b>477.8</b>	<b>461.7</b>

The following notes form an integral part of the 2022 consolidated financial statements:

- general [notes](#)
- [notes](#) to the consolidated balance sheet as at 31 December 2022
- [notes](#) to the consolidated statement of income and expenses for 2022

# CONSOLIDATED STATEMENT OF INCOME AND EXPENSES FOR 2022

	Statement of income and expenses (€m) consolidated	Actual 2022	Budget 2022	Actual 2021
3.1	Central government funding	285.0	283.1	261.4
3.3	Tuition, course, lesson and examination fees	28.5	30.9	31.1
3.4	Income from work for third parties	86.8	98.3	88.3
3.5	Other income	31.9	27.7	21.0
	<b>Total income</b>	<b>432.2</b>	<b>440.0</b>	<b>401.8</b>
4.1	Personnel expenses	309.0	312.4	288.0
4.2	Depreciation and amortisation	24.0	28.3	26.2
4.3	Accommodation expenses	34.0	31.0	22.0
4.4	Other expenses	76.5	75.7	65.3
	<b>Total expenses</b>	<b>443.5</b>	<b>447.4</b>	<b>401.5</b>
	<b>Net income and expenses</b>	<b>-11.3</b>	<b>-7.4</b>	<b>0.3</b>
6.	Net financial income and expenses	0.0	-0.4	-0.5
	<b>Result from ordinary operations</b>	<b>-11.3</b>	<b>-7.8</b>	<b>-0.2</b>
8.	Result from participating interests	-0.1	0.0	-0.2
9.	Minority share in result	0.0	0.0	0.0
	<b>Net income</b>	<b>-11.4</b>	<b>-7.8</b>	<b>-0.4</b>

The following notes form an integral part of the 2022 consolidated financial statements:

- general [notes](#)
- [notes](#) to the consolidated balance sheet as at 31 December 2022
- [notes](#) to the consolidated statement of income and expenses for 2022

# CONSOLIDATED CASH FLOW STATEMENT 2022

Statement of cash flows (€m) consolidated		2022	2021
	<b>Net income and expenses</b>		<b>0.3</b>
	Adjustments for:		
4.2	- Depreciation and amortisation	24.0	26.2
2.2	- Movements in provisions	-1.1	-0.4
		22.9	25.8
	Movements in current assets and liabilities:		
1.2.1	- Inventories	0.0	0.0
1.2.2	- Receivables	-13.1	-1.8
2.4	- Current liabilities	42.1	-2.8
	Cash flow from operations:	29.0	-4.6
6.1	Interest received	0.5	0.2
6.2	Interest paid	-0.5	-0.7
		0.0	-0.5
	<b>Total cash flow from operating activities</b>	<b>40.6</b>	<b>21.0</b>
1.1.2	Investments in tangible fixed assets	-51.5	-38.0
1.1.2	Divestments of tangible fixed assets	1.6	0.0
1.1.3	Investments in participating interests and partnerships	0.5	-0.4
1.1.3	Newly granted long-term loans	0.0	0.0
1.1.3	Repayments of granted long-term loans	0.0	0.4
1.1.3	Change in receivables from other financial fixed assets	0.9	-1.0
	<b>Total cash flow from investing activities</b>	<b>-48.5</b>	<b>-39.0</b>
2.3	Newly contracted long-term loans	0.6	1.4
2.3	Repayment of long-term loans	-14.1	-5.4
	<b>Total cash flow from financing activities</b>	<b>-13.5</b>	<b>-4.0</b>
1.2.4	Change in cash and cash equivalents	-21.4	-22.0
1.2.4	<b>Net cash and cash equivalents 1 January</b>	<b>128.0</b>	<b>150.0</b>
1.2.4	<b>Net cash and cash equivalents 31 December</b>	<b>106.6</b>	<b>128.0</b>

The following notes form an integral part of the 2022 consolidated financial statements:

- general [notes](#)
- [notes](#) to the consolidated balance sheet as at 31 December 2022
- [notes](#) to the consolidated statement of income and expenses for 2022

# CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME 2022

The consolidated statement of comprehensive income is presented on this page in accordance with Article RJ 265.101.

Consolidated statement of comprehensive income (€m)	2022	2021
Consolidated net income after tax attributable to the legal entity	-11.4	-0.4
Revaluation of tangible fixed assets	0.0	0.0
Conversion differences for foreign participating interests	0.0	0.0
	<b>0.0</b>	<b>0.0</b>
Realised revaluation charged to equity	0.0	0.0
	<b>0.0</b>	<b>0.0</b>
<b>Total direct movement in equity of the legal entity</b>	<b>0.0</b>	<b>0.0</b>
<b>Comprehensive income of the legal entity</b>	<b>-11.4</b>	<b>-0.4</b>

The following notes form an integral part of the 2022 consolidated financial statements:

- general [notes](#)
- [notes](#) to the consolidated balance sheet as at 31 December 2022
- [notes](#) to the consolidated statement of income and expenses for 2022

# NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS 2022

## GENERAL INFORMATION

### PRINCIPAL ACTIVITIES

The University of Twente, having its registered office at Drienerlolaan 5, 7522 NB, Enschede, is a body governed by public law, established by the Act of 23 November 1961 amending article 15 of the University Education Act. The university's core activities consist of academic education, research and knowledge transfer. The university is registered in the commercial register of the Chamber of Commerce under the number 50130536.

These financial statements comprise the financial information of both the university and its consolidated participating interests. The scope of consolidation can be found in [the participating interests and related parties section](#).

The activities of the university and the group take place mainly in the Netherlands.

### REPORTING PERIOD

These financial statements relate to the 2022 financial year, which ended on the balance sheet date of 31 December 2022.

### APPLIED STANDARDS

The financial statements have been prepared in accordance with the Education Annual Reporting Regulations. These state that the provisions of Title 9, Book 2 of the Dutch Civil Code and the Guidelines for Annual Reporting (in particular RJ 660 Educational Institutions) apply subject to the exceptions indicated therein.

The university's single-entity financial statements form part of the university's consolidated financial statements. The accounting policies are based on historical cost, unless stated otherwise.

### CONTINUITY

These financial statements have been prepared on the basis of the going-concern assumption.

### CONSOLIDATION POLICIES

The consolidated balance sheet and statement of income and expenses include the University of Twente and its 100% subsidiary Universiteit Twente Holding B.V. (UTH) (including the consolidated participating interests of UTH) on a consolidated basis.

UTH has a 60% interest in the consolidated subsidiary UT International Ventures Holding B.V.

The consolidated financial statements comprise the financial data of the university and its subsidiaries in the group, other group companies and other legal entities that are controlled or centrally managed. Subsidiaries are participating interests in which the university (and/or one or more of its subsidiaries) can exercise more than half of the voting rights in the general meeting, or can appoint or dismiss more than half of the directors or members of the Supervisory Board. Group companies are participating interests in which the university has a majority interest, or whose policymaking can be influenced in another way. The determination of whether policymaking influence can be exercised takes account of financial instruments that contain potential voting rights and can be exercised directly, giving the university influence to a greater or lesser extent.

Interests held solely for disposal are not consolidated if there is already an intention to dispose of the interest at the time of acquisition, it is likely to be sold within one year and the other relevant indicators are met. These interests are included in current assets, under securities (held for disposal only).

The items in the consolidated financial statements are prepared in accordance with the group's uniform accounting policies.

Newly acquired participating interests are included in the consolidation from the time when policymaking influence can be exercised. Divested participating interests are included in the consolidation until the termination of such influence.

Reciprocal shareholdings, liabilities, receivables and transactions have been eliminated in the consolidated financial statements. The results of intragroup transactions have also been eliminated insofar as the results were not realised through transactions with third parties outside the group and there is no impairment loss. In a transaction in which the legal entity has a non-100% interest in the selling group company, the elimination from the group result is attributed pro rata to the minority interest based on the minority share in the selling group company.

The group companies are fully consolidated, with minority interests being stated separately. If the losses attributable to the minority interest exceed the minority interest in the equity of the consolidated company, the difference, plus any further losses, is charged in full to the majority shareholder. The minority interest in the result is deducted from the group result separately as the final item in the consolidated statement of income and expenses.

A list of consolidated group companies can be found under financial fixed assets.

## **ACCOUNTING POLICIES**

Assets and liabilities are carried at historical cost, unless stated otherwise in the accounting policies.

The accounting policies are based on historical cost. All assets and liabilities denominated in foreign currencies have been converted at the exchange rates prevailing at the end of the financial year. Exchange rate differences occurring during the year are credited or charged to the operating statement. The balance sheet shows the composition of assets after appropriation of the result.

An asset is recognised in the balance sheet when it is likely that future economic benefits will flow to the organisation and its value can be reliably measured. Assets that do not meet this requirement are not included in the balance sheet, but are treated as off-balance sheet assets.

A liability is recognised in the balance sheet when it is likely that its settlement will entail an outflow of resources embodying economic benefits and the amount can be reliably measured. Liabilities also include provisions. Liabilities that do not meet this requirement are not included in the balance sheet, but are accounted for as off-balance sheet liabilities.

An asset or liability recognised in the balance sheet remains on the balance sheet if a transaction (related to the asset or liability) does not lead to a material change in the substance of the asset or liability. Such transactions also do not give rise to the recognition of results. The assessment of whether a material change has occurred in the substance is based on the economic benefits and risks that are likely to materialise in practice and not on the basis of benefits and risks that cannot reasonably be expected to materialise.

An asset or liability is no longer included in the balance sheet if a transaction results in all or virtually all rights to economic benefits and all or virtually all risks associated with the asset or liability being transferred to a third party. Furthermore, an asset or a liability is no longer included in the balance sheet when the conditions determining the likelihood of future economic benefits and/or reliability of the valuation cease to be met. In that case the results of the transaction are recognised directly in the statement of income and expenses, taking into account any provisions required in connection with the transaction.

If the representation of the substance of the transaction leads to the inclusion of assets that are not legally owned by the university, this fact is recorded.

Income is recognised in the statement of income and expenses when an increase in the economic potential associated with an increase in an asset or a decrease in a liability has occurred and the amount thereof can be reliably determined. Expenses are recognised when a decrease in the economic potential associated with a decrease in an asset or an increase in a liability has occurred and the amount thereof can be reliably determined.

Income and expenses are allocated to the period to which they relate.

The financial statements are stated in millions of euros, the euro being the university's functional currency.

## **USE OF ESTIMATES**

The preparation of the financial statements requires the management to make judgements, estimates and assumptions affecting the application of accounting policies and the reported value of assets and liabilities and of income and expenses. The actual results may differ from these estimates. The estimates and underlying assumptions are continuously reviewed. Revisions of estimates are recognised in the period in which the estimate is revised and in future periods affected by such revisions.

In the management's opinion, the following accounting policies are the most critical for the presentation of the financial position and require estimates and assumptions:

- Measurement of work for third parties
- Measurement of provisions

## **TRANSACTIONS IN FOREIGN CURRENCIES**

Transactions denominated in foreign currencies are converted into the respective functional currencies of the group companies at the exchange rate prevailing on the transaction date. Monetary assets and liabilities denominated in foreign currencies are converted into the functional currency on the balance sheet date at the exchange rate prevailing on that date. Exchange rate differences arising from the settlement of monetary items, or from the conversion of monetary items into foreign currencies, are recognised in the statement of income and expenses in the period in which they occur.

## **FINANCIAL INSTRUMENTS**

Financial instruments include investments in stocks and bonds, trade and other receivables, cash, loans and other financing obligations, derivative financial instruments (derivatives), trade accounts payable and other payables. These financial statements include the following categories of financial instruments: loans granted, other receivables and other financial liabilities. The university has no derivative financial instruments (derivatives) embedded in contracts.

Financial assets and financial liabilities are recognised in the balance sheet when contractual rights or obligations arise in respect of such instruments. A financial instrument is no longer included in the balance sheet if a transaction results in all or virtually all rights to economic benefits and all or virtually all risks associated with the position being transferred to a third party. A financial asset and a financial liability are netted if the university has a sound legal instrument to settle the financial asset and the financial liability on a net basis and the firm intention to settle the balance on a net basis or simultaneously. If a financial asset that does not qualify for derecognition is transferred, the transferred asset and the associated liability are not netted.

Financial instruments (and individual components of financial instruments) are presented in the consolidated financial statements in accordance with the substance of the contractual provisions. They are presented on the basis of separate components as financial assets, financial liabilities or equity.

Financial instruments are initially recognised at fair value, with premiums and discounts and directly attributable transaction costs included in the initial recognition. However, if financial instruments are subsequently measured at fair value with changes in value recognised in the statement of income and expenses, directly attributable transaction costs are recognised directly in the statement of income and expenses on the initial measurement.

After initial recognition, financial instruments are measured in the manner described below.

## **LOANS GRANTED AND OTHER RECEIVABLES**

Loans granted and other receivables are measured after initial recognition at amortised cost based on the effective interest method, less impairment losses. The effective interest and any impairment losses are recognised directly in the statement of income and expenses. Purchases and sales of financial assets belonging to the category of loans granted and other receivables are recognised on the transaction date. Explanatory notes can be found in the accounting policies for financial fixed assets and receivables.

## **CURRENT AND NON-CURRENT LIABILITIES AND OTHER FINANCIAL LIABILITIES**

Current and non-current liabilities and other financial liabilities are measured after initial recognition at amortised cost based on the effective interest method. The effective interest is recognised directly in the statement of income and expenses. If there are no premiums, discounts or transaction costs, the amortised cost is equal to the nominal value of the debt. The repayment liabilities for the coming year in respect of non-current liabilities are included in current liabilities.

## **IMPAIRMENT OF FINANCIAL ASSETS**

A financial asset that is not measured at (1) fair value with value changes in the statement of income and expenses or (2) amortised cost or lower market value is reviewed at each reporting date to determine whether there are objective indications that the asset has been impaired. A financial asset is deemed to be impaired if there are objective indications that an event has occurred after initial recognition of the asset that has an adverse effect on the expected future cash flows of that asset and such effect can be reliably estimated.

Objective indications that financial assets are impaired include financial difficulties of the legal entity or debtor that issued the instrument, breach of contract such as non-performance of payment obligations and/or arrears with respect to interest or principal, restructuring of an amount due to the university under conditions that the university would not otherwise have entertained, indications that a debtor or issuer will go bankrupt or is likely to enter into financial reorganisation and the disappearance of an active market for a particular security. Subjective indicators are also considered in addition to objective indications of impairment. Examples include the disappearance of active markets in the case of listed financial assets, a deterioration of the creditworthiness of the other party, i.e. the legal entity or debtor of the issued instrument, or a fall in the fair value of a financial asset below cost or amortised cost.

Indications of impairment of receivables and investments measured by the university at amortised cost are taken into account both at the level of specific assets and at the collective level. Individually significant receivables and investments are reviewed to determine whether they are individually impaired. Individually significant receivables and investments that have not individually been found to be impaired and individual non-significant receivables are reviewed collectively to determine whether they are subject to impairment by combining receivables and investments with similar risk characteristics.

When assessing the collective impairment, the university uses historical trends with regard to the likelihood of default on payment obligations, the time period for collection and the amount of losses incurred. The results will be adjusted if the university's Executive Board believes that current economic and credit conditions are such that actual losses are likely to be higher or lower than historical trends suggest.

An impairment loss related to a financial asset measured at amortised cost is determined as the difference between the carrying amount and the present value of the expected future cash flows, discounted at the asset's original effective interest rate. Impairment losses are recognised in the statement of income and expenses. Interest on the impaired asset continues to be accounted for by accruing interest at the asset's original effective interest rate.

If the value of the impaired asset rises in a subsequent period and the recovery can be objectively related to an event that occurred after the recognition of the impairment loss, the amount resulting from the recovery (up to a maximum of the original cost) is recognised in the statement of income and expenses.

## **TANGIBLE FIXED ASSETS**

Tangible fixed assets are recognised in the balance sheet if it is likely that the future performance units related to that asset will accrue to the university and the cost of the asset can be reliably determined.

The buildings and grounds, inventory and equipment, tangible fixed assets under construction, advance payments for tangible fixed assets and tangible fixed assets not used in the process are measured at acquisition or manufacturing cost less accumulated depreciation and impairment losses. If significant components of a tangible fixed asset can be distinguished from each other and differ in terms of useful life or expected pattern of use, they are depreciated separately (component method).

If tangible fixed assets are acquired in exchange for a non-monetary asset, the cost of the tangible fixed asset is determined on the basis of its fair value insofar as the exchange transaction leads to a change in economic conditions and the fair value of the acquired asset or the asset given up can be reliably determined.

Investment subsidies are deducted from the cost of the assets to which they relate.

Buildings and grounds are depreciated on a straight-line basis as a percentage of the purchase price. Land, tangible fixed assets under construction and advance payments for tangible fixed assets are not depreciated.

The following depreciation periods are used for buildings:

Shell	60 years
Finishing	30 years
Installations	15 years
Technical installations	15 years
Major maintenance – elevator renovation	15 years
Major maintenance – roof renovation	20 years
Major maintenance – paintwork	8 years

The following depreciation periods are used for developments of grounds:

Site development	30 years
Sports pitches	10 years

Maintenance expenses are only capitalised if they extend the useful life of the asset and/or lead to future performance units related to the asset.

In the past, the purchase of homes was based on the appraisal report of the State property department. They were sold on to residents at a higher value (with a repurchase guarantee). Unsold homes are recognised in the balance sheet on the basis of the aforementioned appraisal report and depreciated over 30 years. The current purchase price is used as a basis for the valuation for homes sold and subsequently repurchased.

Assets no longer in use are measured at the lower of the carrying amount and recoverable amount.

The depreciation period of inventory and equipment is based on economic life. This is usually five to 15 years. The depreciation period for inventory and equipment purchased specifically for second- and/or third-stream funding projects may differ from this.

## FINANCIAL FIXED ASSETS

### PARTICIPATING INTERESTS WITH SIGNIFICANT INFLUENCE

Participating interests in which significant influence can be exercised on business and financial policy are measured using the equity method based on the net asset value.

If measurement at net asset value is not possible because the necessary information is unavailable, the participating interest is measured according to the visible equity. The determination of whether the university exercises significant influence on the business and financial policy of a participating interest takes account of all the factual circumstances and contractual relationships (including any potential voting rights).

The net asset value is determined in accordance with the university's accounting policies.

If the participating legal entity transfers an asset or a liability to a participating interest that is measured according to the equity method, the profit or loss resulting from such transfer is recognised in proportion to the relative interest of third parties in the participating interests (proportional determination of result). A loss resulting from the transfer of current assets or an impairment of fixed assets is nevertheless recognised in full. Results of transactions involving transfers of assets and liabilities between the university and its participating interests and between participating interests are eliminated insofar as they can be deemed to be unrealised. The unrealised profit is eliminated from the university's result. This adjustment is made by elimination in the result of the participating interest and deduction of such elimination from the value of the participating interest in the balance sheet.

The university realises the eliminated profit as a result of a sale to third parties, depreciation or recognition of an impairment loss by the participating interest concerned.

Participating interests with a negative net asset value are valued at zero. This measurement also includes long-term receivables from the participating interests that should actually be regarded as part of the net investment. This mainly concerns loans whose settlement in the near future is neither planned nor likely. A share in the profit of the participating interest in subsequent years is only recognised if and insofar as the accumulated unrecognised share in the loss has been recovered. However, if the university fully or partially guarantees the debts of a participating interest, or has the actual obligation to enable the participating interest to pay its debts (in respect of its share), a provision is recognised in the amount of the expected payments by the university on behalf of the participating interest. The provision is primarily formed as a charge against the non-current receivables from the participating interest that should actually be regarded as part of the net investment, and is otherwise stated under provisions.

## **PARTICIPATING INTERESTS WITHOUT SIGNIFICANT INFLUENCE**

Participating interests in which no significant influence is exercised are measured at the lower of acquisition cost or realisable value. If there is a firm intention to divest, the measurement is based on the lower expected sale value if applicable. If a legal entity transfers an asset or liability to a participating interest that is measured at acquisition cost or current value, the profit or loss resulting from such transfer is recognised immediately and fully in the consolidated statement of income and expenses, unless the profit on the transfer is essentially unrealised.

Loans to non-consolidated participating interests are recognised at amortised cost using the effective interest method, less impairment losses.

## **OTHER FINANCIAL FIXED ASSETS**

Receivables from non-consolidated participating interests are initially measured at fair value, plus directly attributable transaction costs. Subsequently they are valued at amortised cost using the effective interest method, less impairment losses.

The accounting policies for other financial fixed assets are included under Financial instruments.

## **IMPAIRMENTS OF FIXED ASSETS**

Tangible and financial fixed assets are reviewed at each balance sheet date to determine whether there are indications of impairment. If there are such indications, the realisable value of the asset is estimated. The realisable value is the higher of the value in use and the recoverable amount. If it is not possible to estimate the realisable value of an individual asset, the realisable value of the cash-generating unit to which the asset belongs is determined.

If the carrying amount of an asset (or cash-generating unit) exceeds its realisable value, an impairment loss is recognised for the difference between the carrying amount and realisable value. In the case of impairment loss on a cash-generating unit, the loss is attributed to the assets of the units in proportion to their carrying amounts.

A review is also conducted at each balance sheet date to determine whether there is any indication that an impairment loss recognised in prior years has decreased. If there is such an indication, the realisable value of the asset or cash-generating unit is estimated.

A previously recognised impairment loss is only reversed if there has been a change in the estimates used to determine the realisable value since the last impairment loss was recognised. In that case, the carrying amount of the asset (or cash-generating unit) is increased to its estimated realisable value, but no higher than the carrying amount that would have been determined (after depreciation) if no impairment loss had been recognised for the asset (or cash-generating unit) in prior years.

## **DISPOSAL OF FIXED ASSETS**

Available-for-sale fixed assets are measured at the lower of carrying amount and recoverable amount.

## **INVENTORIES**

Inventories are measured at the lower of cost and recoverable amount. The cost consists of the acquisition or manufacturing price, plus other costs to bring the inventories to their current location and condition. The recoverable amount is based on the most reliable estimate of the maximum amount that the inventories will yield, less costs still to be incurred.

Goods for resale are measured at acquisition cost. The acquisition cost comprises the purchase price and additional costs, such as import duties, transport costs and other costs that can be directly attributed to the acquisition of inventories. Trade discounts, rebates and similar payments received or to be received in relation to the purchase of inventories are deducted from the acquisition cost.

## **PROJECTS IN PROGRESS**

The projects in progress concern work for third parties and relate to second- and third-stream funding projects. These are projects in which scientific research is carried out by the university with funding from external parties.

The second-stream funding projects are mainly financed by the Dutch Research Council (NWO). The third-stream funding projects are mainly financed by EU government bodies and businesses.

Revenues from projects in progress are recognised on an individual agreement basis. In certain cases, however, they are recognised on the basis of the separately identifiable performance obligations under an agreement, in order to reflect the economic reality (where the goods or services promised in an agreement are separate performance obligations).

The project revenues are stated as part of the net revenues in the profit-and-loss account.

The projects in progress item consists of the balance of realised project costs, attributed profit, recognised losses and instalments already invoiced. It represents an amount receivable from the client (in the case of an asset) or an amount payable to the client (in the case of a liability) for work still to be performed or an amount received in advance. If the balance of the project in progress shows a:

- debit position, the net amount is recognised as an asset;
- credit position, the net amount is recognised as a liability;

The project in progress is stated separately in the balance sheet under current receivables if it has a debit position. The project in progress is stated separately in the balance sheet under current liabilities if it has a credit position.

The measurement of projects in progress includes the costs directly related to the project (such as personnel costs for employees working directly on the project, costs of construction materials, costs of land and grounds and depreciation of plant and equipment used during the execution of the project), the costs due to project activities in general and attributable to the project (including insurance costs, design and technical assistance costs and overheads of project activities and interest on debt attributable to the project over the period) and other costs that can be contractually attributed to the client.

The revenues, costs and profit-taking on projects in progress are allocated in proportion to the performance achieved in the execution of the work (percentage of completion method). The extent to which work has been performed on a project in progress is determined on the basis of the project costs incurred up to the balance sheet date relative to the estimated total project costs.

It is recognised as soon as a reliable estimate can be made of the result of a project in progress. If the result of a project in progress cannot be reliably estimated, the project revenue is recognised in the profit-and-loss account only up to the amount of the incurred project costs that are likely to be recoverable. The project costs are recognised in the profit-and-loss account in the period in which they are incurred.

Project revenues are defined as the revenues agreed in the contract plus any revenues resulting from contract variations, claims and fees. Revenues are recognised on the basis of the specified transaction price, which is the amount to which the company expects to be entitled in exchange for its performance. In the case of variable remuneration, the company estimates the amount in such a way that there is little probability of project revenues having to be reversed at a later date.

Expenditure related to project costs that result in work being performed after the balance sheet date is recognised as part of prepaid assets if it is likely to generate revenues in a subsequent period.

The project costs are recognised in the profit-and-loss account when the performance in the project has been delivered and realised.

Expected losses on projects in progress are recognised immediately in the profit-and-loss account. The amount of the loss is determined regardless of whether the project has already been started, the stage of completion of the project or the amount of profit expected in other, unrelated projects. The company takes into account all performance obligations included in an agreement and the total expected project costs and project revenues.

## **RECEIVABLES**

The accounting policies are described under Financial instruments.

## **CASH AND CASH EQUIVALENTS**

Cash and cash equivalents are measured at nominal value. If cash and cash equivalents are not freely available, this is taken into account in the measurement.

Cash and cash equivalents denominated in foreign currencies are converted into the functional currency on the balance sheet date at the exchange rate prevailing on that date. Reference is also made to the pricing principles for foreign currency transactions.

Cash and cash equivalents that are not expected to be available to the university for more than 12 months are classified as financial fixed assets.

## **EQUITY**

General reserves and appropriated reserves are stated under equity. The general reserve consists of the reserve that is at the free disposal of the university. If the university has applied more restricted disbursement conditions, the part of the equity that has been consequently set aside is designated as an appropriated reserve.

A distinction is also made within equity between public and private resources.

## **MINORITY INTERESTS**

Minority interests are measured on the basis of the proportional share of third parties in the net value of the assets and liabilities of a consolidated company, determined in accordance with the university's accounting policies.

## **PROVISIONS**

A provision is recognised in the balance sheet for:

- a legal or constructive obligation resulting from a past event; and
- which can be reliably estimated; and
- where it is likely that an outflow of resources will be required to settle that obligation.

Rights and obligations arising from the same agreement are not recognised in the balance sheet if and insofar as neither the university nor the counterparty has performed. They are recognised in the balance sheet when the performance received or to be delivered and the consideration are not (or are no longer) in balance with each other and this has adverse consequences for the university.

If all or part of the expenditure necessary to settle a provision is likely to be reimbursed in whole or in part by a third party upon settlement of the provision, the reimbursement is stated as a separate asset.

If the time value of money is material and the period over which the expenditure is discounted exceeds one year, provisions are measured at the present value of the best estimate of the expenditure expected to be necessary to settle the liabilities and losses. The provisions are measured at nominal value if the time value of the money is not material or the period over which the expenditure is discounted does not exceed one year. The discount rate is the market interest rate (effective yield) on high-quality corporate bonds on the balance sheet date.

Additions to the provisions are charged to the statement of income and expenses. Withdrawals and releases are charged directly to the provision.

## **REORGANISATION PROVISION**

A reorganisation provision is recognised if a detailed reorganisation plan has been formalised on the balance sheet date and those affected by the reorganisation have a justified expectation before preparation date of the financial statements that the plan will be implemented. Such expectation is justified if the implementation of the reorganisation has begun, or if the main points have been disclosed to those who will be affected by it.

A reorganisation provision includes the necessary costs due to the reorganisation that are not related to the university's ongoing activities.

## **PROVISION FOR UNEMPLOYMENT OBLIGATIONS**

The university bears its own risk for the full unemployment benefits, including the non-statutory part. This provision is determined on the basis of available data from the university's payroll administration and information from the HR department.

## **PROVISION FOR INCAPACITY**

The university also bears its own risk under the incapacity Insurance Act and the Work and Income according to Labour Capacity Act. The incapacity benefits during the first five years of incapacity will therefore be borne by the university.

Since 2006, the university has borne its own risk under the Work and Income according to Labour Capacity Act (WIA), which means it bears the risk of paying benefits under the Return-to-Work Scheme for the Partially Disabled for a period of 10 years. An addition is made to the provision when it is anticipated that an employee will enter the WIA scheme.

## **PROVISION FOR TRANSITIONAL COMPENSATION**

The provision for transitional compensation was formed in respect of the Work and Security Act, which entitles employees to transitional compensation in the event of dismissal. This right also applies if a temporary contract is not renewed. The provision is calculated on the basis of the employee's years of service and appointment(s). The transitional compensation is based on one-third of the gross monthly salary per full year of service, calculated from the first working day of the employment contract.

## **ANNIVERSARY PROVISION**

The anniversary provision relates to payments made to employees based on the length of service and is largely long-term. The provision reflects the estimated amount of anniversary benefits to be paid out in the future. The calculation is based on commitments made, the likelihood of employees remaining in post and the time remaining until their state pension date.

## **PROVISION FOR SABBATICAL LEAVE**

The provision for sabbatical leave has been formed for the sabbatical of UT's rector magnificus. After the end of the appointment (which is for four years and may be extended by four years), they are entitled to a one-year sabbatical. The provision is calculated on the basis of the salary (including social security contributions) of the rector magnificus. The accrued sabbatical leave is intended to be taken in the period after the administrative work, when the rector has returned to their academic role.

## **PROVISION FOR ONEROUS CONTRACTS**

The provision for onerous contracts concerns the negative difference between the expected benefits from the performances to be received by the university after the balance sheet date and the unavoidable cost of meeting the obligations. The unavoidable cost is the minimum cost of terminating the agreement, being the lower of the cost of meeting the obligations on the one hand and the compensation or fines for non-compliance with the obligations on the other hand.

## **EU PROVISION**

The EU provision is recognised to cover possible financial adjustments required in the case of EU projects. The provision has been calculated as the best estimate of the expected costs for EU projects.

## **CURRENT AND NON-CURRENT LIABILITIES**

The accounting policies for current and non-current liabilities are described under Financial instruments.

Liabilities with a residual term of up to one year on the balance sheet date are classified as current. Liabilities are not netted against assets.

Amounts received in advance are amounts (including earmarked contributions) that have been made available for future years. The portion not yet disbursed is held in this item. Amounts are released to the statement of income and expenses in proportion to disbursements.

Accruals and deferred income comprise amounts still payable in respect of expenses attributable to a prior period.

## **REVENUE RECOGNITION**

### **CENTRAL GOVERNMENT FUNDING**

Core central government funding is recognised in full as income in the statement of income and expenses in the year to which the grant relates.

### **TUITION, COURSE, LESSON AND EXAMINATION FEES**

Tuition, course, lesson and examination fees are allocated to the year to which they relate, on the basis that regular education and research tasks are spread evenly over the academic year.

### **INCOME FROM WORK FOR THIRD PARTIES**

See the policies under 'Projects in progress'.

### **OTHER INCOME**

Other rental income is recognised in the statement of income and expenses on a straight-line basis over the term of the lease. Lease incentives are recognised as an integral part of total rental income.

Income from secondment is recognised in the statement of income and expenses as other income in proportion to the percentage of completion of the transaction on the reporting date. The percentage of completion is determined on the basis of assessments of the activities performed.

If the result of a particular secondment assignment cannot be reliably determined, the income is recognised up to the amount of the secondment expenses covered by the income.

### **SHARE IN THE RESULT OF PARTICIPATING INTERESTS**

The share in the result of participating interests includes the group's share in the results of such participating interests, determined on the basis of the group's accounting policies. Results of transactions involving the transfer of assets and liabilities between the group and the non-consolidated participating interests and between non-consolidated participating interests have not been recognised insofar as they can be regarded as unrealised.

The results of participating interests acquired or disposed of during the financial year are recognised in the group result from the time of acquisition or until the time of disposal.

# EXPENSES

Expenses are determined at historical cost and allocated to the reporting year to which they relate.

## EMPLOYEE REMUNERATION AND PENSIONS

### EMPLOYEE REMUNERATION

Employee remuneration is stated as an expense in the statement of income and expenses in the period in which the labour is performed and, insofar as it has not yet been paid, recognised as a liability in the balance sheet. If the amounts already paid exceed the remuneration due, the excess is recognised as an accrued asset to the extent that it will be reimbursed by the staff or offset against future payments by the university.

For remuneration involving the accrual of rights and sabbatical leave, the expected expenses during employment are taken into account. Contributions received in respect of life-course savings schemes are accounted for in the period for which such contributions are due. Additions to and releases of liabilities are charged or credited to the statement of income and expenses.

If remuneration is paid without accrual of rights (as in the case of continued payment in the event of illness or disability), the expected expenses are recognised in the period for which such remuneration is due. A provision is recognised for obligations existing on the balance sheet date to continue payment of remuneration to employees who, on the balance sheet date, are expected to remain fully or partially unable to perform work due to illness or incapacity.

The recognised liability is the best estimate of the amounts required to settle the respective liability on the balance sheet date. The best estimate is based on contractual agreements with employees (collective labour agreement and individual employment contract). Additions to and releases of liabilities are charged or credited to the statement of income and expenses.

In the case of insured incapacity risks, a provision is recognised for the part of the insurance premium payable in the future that is directly attributable to the university's individual claims history. If no reliable estimate can be made of the part of the insurance premiums payable in the future that can be directly attributed to the university's individual claims history, no provision is recognised.

The liability in respect of remuneration during employment is measured at the nominal value of the expenditure expected to be necessary to settle the liability. Unless the time value effect is material, the liability is measured at present value.

### DUTCH PENSION SCHEME

A pension scheme has been established for university staff and is administered by the ABP pension fund. The principle is that the pension expense recognised in the reporting period is equal to the pension contributions due to the pension fund in respect of that period. A liability is recognised for any due contributions remaining unpaid on the balance sheet date. If the contributions already paid on the balance sheet date exceed the due contributions, an accrued asset is recognised insofar the fund will effect a repayment or set-off against future contributions.

If a liability exists on the basis of the administration agreement with regard to a company or industry pension scheme on the balance sheet date, a provision is recognised if it is likely that a package of measures necessary to restore the funding ratio on the balance sheet date will lead to an outflow of resources of a size that be reliably estimated.

A provision is recognised in respect of adjustments to the entitlements accrued as at the balance sheet date arising from future salary increases that have already been promised as at the balance sheet date and are payable by the university.

A provision is recognised on the balance sheet date for existing additional liabilities to the fund and employees, if it is likely that an outflow of resources will occur to settle those liabilities and the size of the liabilities can be reliably estimated. The existence of any additional liabilities is assessed on the basis of the administration agreement with the fund, the pension agreement with the employees and other (explicit or implicit) commitments made to the employees.

The provision is measured at the best estimate of the present value of the amounts necessary to settle the liabilities on the balance sheet date. The pre-tax discount rate reflects the current market interest rate on the balance sheet date for high-quality corporate bonds/yields on government bonds. This does not include the risks that have already been taken into account when estimating future expenditure.

A receivable is recognised for a pension fund surplus that exists on the balance sheet date if the university has control of such surplus, it is likely that the surplus will flow to the university and the receivable can be reliably determined.

The risks to the fund assets due to wage developments, price indexation and investment returns may lead to future adjustments to the annual contributions to the pension fund. These risks are not reflected in a provision recognised in the balance sheet. The current pension rules require ABP to show a policy funding ratio of 126.3%. The policy funding ratio is determined by calculating the average funding ratio over the past 12 months.

At the end of 2022, ABP's policy funding ratio was 118.6% (end of 2021: 102.8%). This means that at the end of 2022 it was above the minimum requirement of 104.4%. At the end of 2017, ABP drew up a recovery plan based on the policy funding ratio at that time in order to reach the then required level of 128% within 10 years.

## **TERMINATION BENEFITS**

Termination benefits are remuneration for termination of employment. A termination benefit payment is recognised as a liability and an expense if the university has demonstrably given an unconditional commitment to award termination benefits. If the termination benefits are part of a reorganisation, the cost of the termination benefit is included in a reorganisation provision. The accounting policies can be found under Provisions.

Termination benefits are measured taking into account the nature of the benefit. If the termination benefit it is an improvement to post-employment benefits, it is measured according to the same policies as those applied to pension schemes. Other termination benefits are measured as the best estimate of the amounts necessary to settle the liability.

A termination benefit payment is recognised as a liability and an expense if the university has demonstrably given a commitment to terminate the employment of one or more members of staff before the usual pension date or to pay a benefit to encourage voluntary redundancy. The university has demonstrably given a commitment to pay redundancy benefits if a detailed plan (or scheme) has been formally drawn up and can no longer be reasonably withdrawn. The plan/scheme specifies the locations involved, as well as the position and the estimated number of employees who will be made redundant, the redundancy payment for each position (or group of positions) and the implementation period of the plan. In the case of payments for voluntary redundancy, the liabilities and the expense are calculated on the basis of the number of employees expected to accept the offer.

Redundancy payments payable more than 12 months after the balance sheet date are measured at present value. The discount rate is the market interest rate (effective yield) on high-quality corporate bonds on the balance sheet date.

## **LEASING**

The university may enter into finance and operating leases. A lease agreement in which the advantages and disadvantages associated with the ownership of the leased asset are wholly or almost wholly borne by the lessee is classified as a finance lease. All other lease agreements are classified as operating leases. The lease classification is determined by the substance of the transaction rather than the legal form. The lease is classified at the time of entering into the relevant lease agreement.

### **OPERATING LEASES**

If the university acts as a lessee in an operating lease, the leased asset is not capitalised. Remuneration received as an incentive to enter into a lease agreement are recognised as a reduction of the lease costs over the lease term. Lease payments and fees for operating leases are charged or credited to the statement of income and expenses on a straight-line basis over the lease term, unless a different allocation system is more representative of the pattern of benefits to be obtained from the leased asset.

### **FINANCE LEASES**

If the university acts as lessee in a finance lease, the leased asset (and the associated liability) is recognised in the balance sheet at the start of the lease term at the lower of the fair value of the leased asset and the present value of the minimum lease payments. Both values are determined at the time of entering into the lease agreement. The interest rate used in calculating the present value is the implicit interest rate. If this interest rate is impossible to determine in practice, the marginal interest rate is used. The initial direct costs are recognised in the initial measurement of the leased asset. The policies for subsequent measurement of the leased asset are described under Tangible fixed assets.

## **FINANCIAL INCOME AND EXPENSES**

Interest income and expenses are recognised on a time-proportionate basis, taking into account the effective interest rate of the relevant assets and liabilities. In accounting for interest expenses, no account is taken of transaction costs recognised on loans received.

Premiums, discounts and redemption premiums are recognised as an interest expense in the period to which they relate. The allocation of this interest expense and the interest payment on the loan is the effective interest that is recognised in the statement of income and expenses. The balance sheet includes the amortisation value of the debt(s). The amounts of the share premium not yet recognised in the statement of income and expenses and the redemption premiums already recognised in the statement of income and expenses are recognised as an increase in the debt(s) to which they relate.

The amounts of the discount not yet recognised in the statement of income and expenses are recognised as a reduction of the debt(s) to which they relate.

## **TAXES**

Taxes comprise the payable and deductible income taxes and deferred taxes for the reporting period. The taxes are recognised in the statement of income and expenses, except where they relate to items recognised directly in equity, in which case the tax is recognised in equity, or to acquisitions.

The tax payable and deductible for the financial year is the tax that is expected to be payable on the taxable profit for the financial year, calculated using tax rates that have been adopted or decided upon as at the reporting date, and any adjustments to tax payable in respect of prior years.

Temporary differences exist when the carrying amounts of assets and liabilities for financial reporting purposes differ from their tax bases. A provision for deferred tax liabilities is recognised for taxable temporary differences.

A deferred tax asset is recognised for deductible temporary differences, available loss carry-forwards and unused tax offsets, but only to the extent that it is likely that taxable profits will be available for set-off or carry-forward in the future. Deferred tax assets are reviewed at each reporting date and reduced insofar as it is no longer likely that the associated tax benefit will be realised.

Deferred tax liabilities and deferred tax assets are measured on the basis of the tax consequences of the manner in which, on the balance sheet date, the company intends to realise or settle its assets, provisions, liabilities and accrued liabilities. Deferred tax assets and liabilities are measured at nominal value.

## **CASH FLOW STATEMENT**

The cash flow statement has been prepared on the basis of the indirect method. The cash in the cash flow statement consists of the liquid assets that can be converted into cash without restrictions and without material risk of impairment as a result of the transaction.

Interest income and expenditure is included in cash flow from operating activities.

The acquisition cost of the acquired group company is included in cash flow from investing activities, insofar as payment was made in cash. The cash available in the acquired group company is deducted from the purchase price.

Transactions that do not involve an exchange of cash are not included in the cash flow statement.

Cash flows in foreign currencies are converted into euros using the weighted average exchange rates for the relevant periods.

## **DETERMINATION OF FAIR VALUE**

The fair value of a financial instrument is the amount for which an asset can be traded or a liability settled between knowledgeable, willing and independent parties in a transaction.

The fair value of unlisted financial instruments is determined by discounting the expected cash flows at a discount rate equal to the prevailing risk-free market interest rate for the remaining term plus credit and liquidity surcharges.

## **RELATED PARTIES**

Transactions with related parties (see [this page](#) for the identified related parties) are disclosed insofar as they have not been entered into under normal market conditions. For these transactions, the nature and size of the transaction is disclosed together with other necessary information.

## **SUBSEQUENT EVENTS**

Events that provide further information on the actual situation on the balance sheet date and arise up to the date of preparation of the financial statements are included in the financial statements.

Events that do not provide further information on the actual situation on the balance sheet date are not included in the financial statements. If such events are significant for the judgement of users of the financial statements, their nature and estimated financial consequences are disclosed in the financial statements.

# NOTES TO THE CONSOLIDATED BALANCE SHEET AS AT 31 DECEMBER 2022

## ASSETS

### TANGIBLE FIXED ASSETS

1.1.2		1.1.2.1	1.1.2.2	1.1.2.3	1.1.2.4	1.1.2.5	1.1.2.6	
Tangible fixed assets (€m) consolidated		Land and buildings	Grounds	Inventory and equipment	Other tangible fixed assets	In progress and prepaid	TFA not used in the process	Total
Purchase price 1 January 2022	a	511.9	44.3	56.6	1.6	18.3	17.0	649.7
Accumulated depreciation, amortisation and impairment 1 January 2022	b	-327.4	-16.0	-23.6	-1.2	0.0	-11.4	-379.6
<b>Carrying amount 1 January 2022</b>	<b>c=a+b</b>	<b>184.5</b>	<b>28.3</b>	<b>33.0</b>	<b>0.4</b>	<b>18.3</b>	<b>5.6</b>	<b>270.1</b>
Investments 2022	d	7.2	1.6	6.9		35.7	0.1	51.5
Capitalisation of work in progress 2022	e	2.4	1.8			-4.2		0.0
Acquisition cost of divestments 2022	f	-2.6		-2.3			-0.2	-5.1
Depreciation and amortisation 2022	g	-15.8	-1.6	-6.1	-0.1		-0.4	-24.0
Depreciation and amortisation of divestments 2022	h	1.5		1.9			0.1	3.5
<b>Purchase price and reversal of impairment loss 31 December 2022</b>	<b>i=a+d+e+f</b>	<b>518.9</b>	<b>47.7</b>	<b>61.2</b>	<b>1.6</b>	<b>49.8</b>	<b>16.9</b>	<b>696.1</b>
<b>Accumulated depreciation, amortisation and impairment 31 December 2022</b>	<b>j=b+g+h</b>	<b>-341.7</b>	<b>-17.6</b>	<b>-27.8</b>	<b>-1.3</b>	<b>0.0</b>	<b>-11.7</b>	<b>-400.1</b>
<b>Carrying amount 31 December 2022</b>	<b>k=i+j</b>	<b>177.2</b>	<b>30.1</b>	<b>33.4</b>	<b>0.3</b>	<b>49.8</b>	<b>5.2</b>	<b>296.0</b>
<b>Depreciation and amortisation percentages (in %)</b>		<b>0 - 12.5</b>	<b>3.3 - 10</b>	<b>6.7 - 50</b>	<b>6.7 - 20</b>	<b>0.0</b>	<b>6.7 - 20</b>	

### COLLATERAL PROVIDED

The following collateral has been provided for the State of the Netherlands: as of 1 January 2010, the right of first mortgage on part of the real estate as collateral for the loans contracted, up to the amount of the outstanding debt.

WOZ and insured value of buildings and grounds (€m) consolidated	2022
WOZ value of buildings and grounds	237.6
Insured value of buildings	850.5

The above values in accordance with the Valuation of Immovable Property Act (WOZ) have a reference date of 1 January 2021 and apply to the 2022 tax year. The insured value of the buildings is the indexed value on the policy as at 1 July 2022.

## FINANCIAL FIXED ASSETS

1.1.3		1.1.3.2	1.1.3.8	
Financial fixed assets (€m) consolidated		Other participating interests	Other receivables	Total
Acquisition cost 1-1-2022	a	9.7	7.2	16.9
Accumulated depreciation and amortisation and impairment losses 1-1-2022	b		-0.6	-0.6
Accumulated impairment losses 1-1-2022	c			0.0
<b>Carrying amount 1 January 2022</b>	<b>d=a+b+c</b>	<b>9.7</b>	<b>6.6</b>	<b>16.3</b>
Investments and loans	e	1.4	0.9	2.3
Divestments and repayments	f	-2.0	-1.4	-3.4
Result from participating interests	g	-0.1		-0.1
Depreciation and amortisation and impairment losses	h		-0.4	-0.4
Impairment losses	i			0.0
<b>Purchase price 31 December 2022</b>	<b>j=a+e+f+g</b>	<b>9.1</b>	<b>6.7</b>	<b>15.8</b>
<b>Accumulated depreciation and amortisation and impairment losses 31 December 2022</b>	<b>k=b+h</b>	<b>0.0</b>	<b>-1.0</b>	<b>-1.0</b>
<b>Accumulated impairment losses 31 December 2022</b>	<b>l=c+i</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Carrying amount 31 December 2022</b>	<b>m=j+k+l</b>	<b>9.1</b>	<b>5.7</b>	<b>14.8</b>

## OTHER PARTICIPATING INTERESTS

This item comprises the measurement of participating interests in which the university holds a minority of the shares. A list of the minority participating interests can be found in [the participating interests and related parties section](#).

## OTHER RECEIVABLES

The balance of other receivables at the end of 2022 was € 5.7 million. This mainly consists of receivables from leases (€ 4.7 million), issued Proof of Concept loans (€ 0.5 million) and issued TOP loans (€ 0.5 million).

The current portion of the aforementioned receivables (<1 year) has been reclassified under current assets.

Finance leases have been entered into based on the equipment funds of High Tech Fund B.V. and Med Tech Fund. The High Tech Fund B.V. leases have a term of five to eight years and an interest rate between 6% and 8%.

UTI B.V. has entered into various Proof of Concept loan agreements. The term of loans under such agreements is eight years and the interest rate on the outstanding loans is 6% or 11%. No repayments or interest are due for the first five years. The interest is added to the loan annually. Since this concerns early-stage financing with a high risk, a bad debt provision has been recognised for part of this interest. Repayment is due after five years, in years six, seven and eight. As collateral for the loans granted, liens have been obtained on the assets and sureties provided by the borrowers.

Since 2018, the management of the TOP loans has been entrusted to UTI B.V. As at the end of 2022, UTI had issued TOP loans and TOP light loans amounting to € 0.5 million. As collateral for the loans granted, liens have been obtained on the assets and sureties provided by the borrowers. The TOP loans were largely financed by the university. The university acts as a guarantor if the receivable is irrecoverable.

## CURRENT ASSETS

### INVENTORIES

1.2.1	Inventories (€m) consolidated	31 December 2022	31 December 2021
1.2.1.2	Consumer goods	0.4	0.4

The cost price method used for inventory measurement is FIFO (first in, first out).

## CURRENT RECEIVABLES

1.2.2	Current receivables (€m) consolidated	31 December 2022		31 December 2021	
1.2.2.1	Debtors		24.2		17.7
1.2.2.2	Receivable from Ministry of Education, Culture and Science		0.0		0.4
1.2.2.7	Receivables from students/participants/course participants		0.1		0.1
1.2.2.8	Other government bodies		2.4		2.5
1.2.2.9	Valuation of projects in progress		24.2		16.0
	Expenses of work for third parties	92.0		76.1	
	Instalments invoiced and received in advance	-67.8		-60.1	
1.2.2.10	Other receivables:		0.5		0.2
	Current receivables in respect of financial fixed assets	0.2		0.2	
	Other receivables	0.3		0.0	
1.2.2.11	Taxes		0.4		0.7
1.2.2.12	Prepayments		6.6		6.5
1.2.2.15	Accrued assets:				
	Amounts not yet received		2.1		3.0
	Subtotal of current receivables		60.5		47.1
1.2.2.16	Provision for bad debts		-0.5		-0.2
	<b>Total current receivables</b>		<b>60.0</b>		<b>46.9</b>

The above statement of receivables does not include any items with a residual term of more than one year. The carrying amount of the recognised receivables approximates the fair value, given the short-term nature of the receivables and the fact that bad debt provisions have been recognised where necessary.

The movements in bad debt provisions are as follows:

1.2.2.16	Provision for bad debts (€m) consolidated	2022	2021
	<b>Balance as at 1 January</b>	<b>-0.2</b>	<b>-0.1</b>
	Withdrawal	0.0	0.1
	Release	0.2	0.0
	Allocation	-0.5	-0.2
	<b>Balance as at 31 December</b>	<b>-0.5</b>	<b>-0.2</b>

## CASH AND CASH EQUIVALENTS

1.2.4	Cash and cash equivalents (€m) consolidated	31 December 2022	31 December 2021
1.2.4.1	Cash	0.1	0.0
1.2.4.2	Bank account credit balances	20.2	8.2
1.2.4.3	Current account credit balance with Treasury banks	86.3	119.8
	<b>Total cash</b>	<b>106.6</b>	<b>128.0</b>

Cash and cash equivalents include deposits that can be withdrawn on demand. The full amount of cash and cash equivalents is freely available to the university.

## LIABILITIES

### EQUITY

2.1	Equity (€m) consolidated	Balance as at 1 January 2022	Result	Other movements	Balance as at 31 December 2022
2.1.1.1	General reserve	162.5	-20.0	0.0	142.5
2.1.1.3	Appropriated reserve (private)				
	Universiteit Twente Holding B.V.	13.7	8.6	0.0	22.3
2.1.2	Minority interests	0.4			0.4
	<b>Total equity</b>	<b>176.6</b>	<b>-11.4</b>	<b>0.0</b>	<b>165.2</b>

Pursuant to article 2.9(4) of the Higher Education and Academic Research Act, the negative result for the 2022 financial year of € 11.4 million has been withdrawn from the reserves.

2.1	Equity (€m) consolidated	Balance as at 1 January 2021	Result	Other movements	Balance as at 31 December 2021
2.1.1.1	General reserve	162.9	0.2	-0.6	162.5
2.1.1.3	Appropriated reserve (private)				
	Universiteit Twente Holding B.V.	13.7	-0.6	0.6	13.7
2.1.2	Minority interests	0.4			0.4
	<b>Total equity</b>	<b>177.0</b>	<b>-0.4</b>	<b>0.0</b>	<b>176.6</b>

**APPROPRIATED RESERVE (PRIVATE)**

The appropriated reserve formed as of 31 December 2022 for the affiliated company Universiteit Twente Holding B.V. (formerly Holding Technopolis Twente B.V.) represents the financial position of this company and is intended to cover possible future deficits of the company.

**MINORITY INTERESTS**

This balance sheet heading includes the minority interest of third parties, representing the share of third parties in the equity of the group company UT International Ventures Holding B.V.

## PROVISIONS

2.2	2.2.1	2.2.4	
Provisions (€m) consolidated	Personnel provisions	Other provisions	Total provisions
<b>Balance as at 1 January 2022</b>	<b>10.8</b>	<b>0.2</b>	<b>11.0</b>
Allocations	3.2	0.0	3.2
Withdrawals	-1.7	0.0	-1.7
Release	-2.4	-0.2	-2.6
<b>Balance as at 31 December 2022</b>	<b>9.9</b>	<b>0.0</b>	<b>9.9</b>
Breakdown of balance 31 December 2022:			
<1 year	3.1	0.0	3.1
1-5 years	4.6	0.0	4.6
>5 years	2.2	0.0	2.2
Total	9.9	0.0	9.9

2.2	Provisions - analysis (€m) consolidated	Balance as at 1 January 2022	Allocations	Withdrawals	Release	Balance as at 31 December 2022
<b>2.2.1</b>	<b>Personnel provisions</b>					
	Own risk under Act on Resumption of Work for Partially Disabled Persons	2.7	0.9	0.3	0.7	2.6
	Unemployment Act and Civil Code-Unemployment Act	1.4	0.9	0.3	0.8	1.2
	Transitional compensation	2.4	1.2	0.7	0.3	2.6
	Sabbatical leave	0.1	0.1			0.2
	UT anniversaries	3.6		0.3	0.5	2.8
	Extra-statutory Unemployment Scheme for Dutch Universities Old Age Pension shortfall	0.1			0.1	0.0
	Reorganisation of service departments	0.5	0.1	0.1		0.5
	Subtotal of personnel provisions	10.8	3.2	1.7	2.4	9.9
<b>2.2.4</b>	<b>Other provisions</b>					
	EU	0.2			0.2	0.0
	Subtotal of other provisions	0.2	0.0	0.0	0.2	0.0
	<b>Total provisions</b>	<b>11.0</b>	<b>3.2</b>	<b>1.7</b>	<b>2.6</b>	<b>9.9</b>

## **PERSONNEL PROVISIONS**

A general explanation of the personnel provisions can be found in the accounting policies. More specifically, the following explanatory notes are provided for a number of these provisions.

### **PROVISION FOR SOCIAL POLICY, REORGANISATIONS AND OTHER LEGAL POSITIONS**

The purpose of the reorganisation provision is to cover liabilities of post-termination benefits.

The amount of the reorganisation provision is based on an estimate of the future liabilities (e.g. outplacement and redundancy) involving a future outflow of resources.

### **ANNIVERSARY PROVISION**

This provision has been formed for future payments in connection with 12.5-year, 25-year and 40-year anniversaries. The calculation of the provision takes into account the level of gross salary plus holiday pay, collective labour agreement increases and the outflow percentage. The collective labour agreement increases are based on the expected inflation for private sector contract wages in 2023 supplied by CBP Netherlands Bureau for Economic Policy Analysis. The outflow percentage used is the average of the actual outflow over the past two years.

### **OTHER PERSONNEL PROVISIONS**

This provision has been formed for future payments in connection with the state pension shortfall under the Non-statutory Unemployment Scheme for Dutch Universities (BWNU).

### **OTHER PROVISIONS**

Notes on the other provisions can be found in the accounting policies.

## NON-CURRENT LIABILITIES

2.3	2.3.3	2.3.5	2.3.7	2.3.7	
Non-current liabilities (€m) consolidated	BNG	Ministry of Finance	Subsidy funds	Other items	Total
Nominal value of contracted loans 1 January 2022	3.3	150.0	10.7	2.9	166.9
Accumulated repayments 1 January 2022	-1.2	-52.7	-1.2	0.0	-55.1
<b>Balance as at 1 January 2022</b>	<b>2.1</b>	<b>97.3</b>	<b>9.5</b>	<b>2.9</b>	<b>111.8</b>
Contracted loans			0.6		0.6
Repayments	-0.1	-5.3			-5.4
Impairment losses + provision			-8.7		-8.7
<b>Balance as at 31 December 2022</b>	<b>2.0</b>	<b>92.0</b>	<b>1.4</b>	<b>2.9</b>	<b>98.3</b>
Current portion of non-current liabilities 31 December 2022	0.2	5.3	0.0	0.1	5.6
<b>Balance of non-current liabilities as at 31 December 2022</b>	<b>1.8</b>	<b>86.7</b>	<b>1.4</b>	<b>2.8</b>	<b>92.7</b>
Breakdown of total balance as at 31 December 2022					
Term 1-5 years	0.7	21.2	0.7	0.6	23.2
Term >5 years	1.1	65.5	0.7	2.2	69.5

The current portion (<1 year) of the stated liabilities is included in current liabilities.

In accordance with RJ 290.937, the fair value of the outstanding liabilities has been determined as at 31 December 2022, on the basis of a discount rate of 2.8% per annum. The calculated fair value of the liabilities is as follows:

2.3.3 BNG: € 1.7 million

2.3.5 Ministry of Finance: € 74.0 million

2.3.7 Subsidy funds: € 1.4 million

2.3.7 Other items: € 2.2 million

The table below presents the contracted loans, annual repayments and interest payable:

Loan consolidated	Nominal value	End-date	Repayment per year	Interest	Fixed interest up to and including year
Bank Nederlandse Gemeenten	€3.3 million	24-12-2028	€0.2 million	3.70%	2028
Ministry of Finance loan 1	€90.0 million	3-1-2039	€3.2 million	0.71%	2025
Ministry of Finance loan 2	€25.0 million	3-1-2039	€0.9 million	0.10%	2039
Ministry of Finance loan 3	€35.0 million	2-1-2041	€1.2 million	0.10%	2041
Netherlands Enterprise Agency	€1.9 million	31-12-2038	€0.1 million	0.00%	N/A

The High Tech Fund equipment fund, Proof of Concept subsidy funds and the MedTech Fund equipment fund are accounted for under item 2.3.7 'Subsidy funds'.

At the end of 2022, the liability relating to the High Tech Fund equipment fund lapsed and the outstanding liability of € 8.3 million was credited to income.

The Proof of Concept funds concern a subsidy of € 2 million, € 0.9 million of which had been obtained from the Ministry of Economic Affairs and the Province of Overijssel as of the end of 2022. The subsidy is to be used to provide Proof of Concept loans for young businesses. A subsidy requirement is that the fund is revolving, which means the resources that flow back must be reused for the same purpose. The Province of Overijssel has imposed a subsidy requirement that these funds must at all times be used for the specified purpose, failing which they must be repaid.

The MedTech Fund equipment fund concerns a subsidy of € 3.5 million to be received from the Province of Overijssel and Twente Board Development. This subsidy will be paid in tranches up to and including 2026. An amount of € 0.6 million had been received as at the end of 2022. The subsidy is to be used as a lease facility, with MedTech companies in Twente being able to submit a proposal to lease production equipment if they do not have the liquidity to purchase such equipment outright. A subsidy requirement is that the equipment fund is revolving, and the resources that flow back must be reused for the same purpose.

Two items are accounted for under 2.3.7 'Other items'.

In 2016, the university concluded an agreement with the Netherlands Enterprise Agency regarding a Future Fund Credit for Research Facilities (TOF credit). This loan is used to finance investments in the NanoLab. At the end of 2022, an amount of € 1.9 million had been received. The repayment to the Netherlands Enterprise Agency has been postponed for a year and will begin in 2023. The outstanding debt at the end of 2022 will be repaid in 15 annual instalments.

De Hogekamp B.V. entered into a long lease agreement with the University of Twente in 2018 with a term of 99 years. A fee of € 1.1 million was agreed for a period of 50 years. This amount was offset against the purchase price on the repurchase of the part of the building redeveloped into U-Parkhotel as of 1 September 2018 from Van Wijnen Projectontwikkeling Oost (VWPO). This amount changes annually due to the release of long lease instalments. The balance at the end of 2022 was € 1.0 million.

#### **COLLATERAL PROVIDED**

The following collateral has been provided for the State of the Netherlands: as of 1 January 2010, the right of first mortgage on part of the real estate as collateral for the loans contracted, up to the amount of the outstanding debt.

A surety has been lodged with Bank Nederlandse Gemeenten for High Tech Factory B.V. The total amount of the loan from Bank Nederlandse Gemeenten at the end of 2022 was € 2.0 million (2021: € 2.1 million).

## CURRENT LIABILITIES

2.4	Current liabilities (€m) consolidated	31 December 2022		31 December 2021	
2.4.3	Credit institutions 1)		0.2		0.2
2.4.5	Liabilities to Ministry of Finance 1)		5.3		5.3
2.4.7	Project instalment invoiced in advance		63.5		49.5
	Instalments invoiced and received in advance	162.7		145.0	
	Expenses of work for third parties	-99.2		-95.5	
2.4.8	Creditors		14.1		14.9
2.4.9	Taxes and social security contributions		15.5		16.2
	Payroll tax	10.5		10.2	
	Sales tax	1.6		2.5	
	Social security contributions	3.3		3.4	
	Other taxes	0.1		0.1	
2.4.10	Pension liabilities		4.1		3.8
2.4.11	Liabilities in respect of work for third parties		0.3		4.4
2.4.12	Other current liabilities		6.9		7.7
2.4.13	Tuition fees received in advance		19.0		13.4
2.4.14	Ministry of Education, Culture and Science subsidies received in advance		0.0		0.2
2.4.16	Amounts received in advance		45.2		23.2
2.4.17	Holiday leave/bonus		28.3		23.8
2.4.19	Accrued liabilities		7.6		5.3
	<b>Total current liabilities</b>		<b>210.0</b>		<b>167.9</b>

1) 'Credit institutions' and 'Liabilities to the Ministry of Finance' include the current portion (<1 year) of the non-current liabilities.

The above overview of current liabilities does not include any items with a residual term of more than one year.

## MODEL G

**G1 SUBSIDIES IN WHICH ANY UNUSED PORTION CAN BE SPENT ON OTHER FUNDED ACTIVITIES PROVIDED THAT THE ACTIVITIES HAVE BEEN FULLY IMPLEMENTED.**

Description	Allocation		The activities were carried out in full and completed at the end of the reporting year in accordance with the subsidy decision
	Reference	Date	Y/N
Subsidy scheme for additional help for class	COHO21-20026	7-okt-21	Y

**G2 SUBSIDIES THAT CAN ONLY BE USED FOR THE PURPOSE FOR WHICH THEY WERE AWARDED**

**G2.A EXPIRING AT END OF REPORTING YEAR**

Allocation reference	Allocation date	Amount of the allocation	Received up to and including previous reporting year	Total subsidisable costs up to and including previous reporting year	Balance as at 1 January of reporting year	Received in reporting year	Subsidisable costs in reporting year	To be settled as at 31 December 2022

**G2.B CONTINUING INTO A SUBSEQUENT REPORTING YEAR**

Project description	Allocation reference	Allocation date	Amount of the allocation	Received up to and including previous reporting year	Total subsidisable costs up to and including previous reporting year	Balance as at 1 January of reporting year	Received in reporting year	Subsidisable costs in reporting year	Balance as at 31 December 2022
<b>Total</b>			<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

## FINANCIAL INSTRUMENTS

### GENERAL INFORMATION

In its normal business operations the university uses financial instruments that are recognised in the balance sheet, such as receivables and liabilities. The university is exposed to market, currency, interest rate, cash flow, credit and liquidity risks through these instruments or balance sheet positions. To manage these risks, the university has drawn up a policy to limit the risks of unpredictable adverse developments in the financial markets and hence the financial performance of the university. If a counterparty fails to meet payments due to the university, any resulting losses will be limited to the market value of the instruments concerned.

### CREDIT RISK

The trade receivables are amounts due from subsidy providers and other debtors.

The outstanding receivables as at the balance sheet date amount to € 60.0 million (2021: € 46.9 million \*). The credit risk on the outstanding receivables at the end of 2022 was reviewed and a provision was recognised if necessary. The outstanding receivables mainly concern subsidies paid by the EU, the Dutch government or research institutions. The credit risk is generally limited.

*\*) This amount differs by € 22.6 million from the final 2021 financial statements and was incorrectly stated in the 2021 financial statements. In accordance with RJ 150.205 this disclosure error has been corrected and the correct amount has been included in these financial statements. This correction has no impact on the balance sheet, the statement of income and expenses and the ratios for 2021.*

## **INTEREST RATE RISK AND CASH FLOW RISK**

The interest risk is limited to possible changes in the market value of the loans taken up and issued. The loans taken up have an interest rate that is fixed for a number of years, with interim interest rate reviews for each loan component. Information on the interest rate and the fixed-interest period is included under non-current liabilities. The loans are maintained until maturity, as stated under non-current liabilities.

## **LIQUIDITY RISK**

The university monitors the liquidity position by means of subsequent liquidity budgets. The board ensures that the university always has access to sufficient liquidity to meet its obligations and that sufficient financial headroom remains available under the available facilities to remain at all times within the loan covenants.

## **FAIR VALUE**

The fair value of the financial instruments recognised in the balance sheet under bank account balances, current receivables and current liabilities approximates their carrying amount.

## **OFF-BALANCE SHEET ASSETS AND LIABILITIES**

### **TAX POSITIONS**

#### **CORPORATION TAX**

The University of Twente conducts the annual corporation tax test (activity test and funding test) on the basis of the most recent financial statements to determine whether it is liable to corporation tax for that year. Up until now the university has been permitted to apply the corporate income tax exemption annually.

The companies Universiteit Twente Holding B.V., Technopolis Twente Onroerend Goed B.V., Congres- en Studiecentrum Twente B.V., High Tech Factory B.V., High Tech Fund B.V., United Twente Innovation B.V., ITC International Hotel B.V., De Hogekamp B.V., EMI Twente B.V. and VVI B.V. jointly constitute a tax entity for corporation tax purposes. The parent company Universiteit Twente Holding B.V. assumes the tax expenses and tax benefits of the entire tax entity on the basis of RJ 272.803d.

#### **SALES TAX**

For sales tax purposes, the University of Twente and ITC International Hotel B.V. are included in the University of Twente tax entity. Based on the standard conditions, the University of Twente and ITC International Hotel B.V. are each jointly and severally liable for the sales tax owed by the combination.

For sales tax purposes, Universiteit Twente Holding B.V. is included in the Universiteit Twente Holding B.V. tax entity with De Hogekamp B.V. and Congres- en Studiecentrum Twente B.V. Based on the standard terms and conditions, Universiteit Twente Holding B.V. and its affiliated companies are each jointly and severally liable for the sales tax owed by the combination.

## TAX RECEIVABLE

Discussions have been taking place with the tax administration for several years about a refund of sales tax based on the pro rata sales calculation in accordance with the Supreme Court judgement of 23 February 2018. This concerns a calculation without having to take into account the deduction limit based on central government funding. The tax administration does not share the University of Twente's view that the full central government funding can be adjusted in the calculation of the pro rata percentage. In 2021, the tax administration agreed to a refund of sales tax based on pro rata sales, including the deduction limit. Constructive consultations are taking place with the tax administration on the level of the deduction limit to be applied in the pro rata calculation. These are expected to be finalised in the 2023 calendar year.

## CLAIMS

At the end of the financial year there were no potential material claims

## LIABILITY AND GUARANTEES

### GUARANTEES

- Universiteit Twente Holding B.V. has made commitments to three funds, namely: Twente Technology Fund B.V. (€ 3.0 million), Cottonwood Technology Fund B.V. (€ 2.0 million) and Innovation Industries Fund Cooperatief U.A. (€ 1.5 million). € 6.4 million of the committed amount of € 6.5 million has already been transferred. A liability of € 65,000 remains outstanding.
- In 2022, Universiteit Twente Holding B.V. also gave a commitment to the funds IMEC.ISTART FUND NL (€ 0.5 million) and MedTechFund (€ 0.5 million). As at 31 December 2022, an amount of € 0.5 million of both funds was still outstanding.
- For accommodation for student teams, the university entered into a lease for the Capitool 25 building with Print Partners Ipskamp Beheer B.V. This lease was entered into on 15 June 2020 for a term of five years, which will be automatically extended for successive periods of five years unless the tenant or landlord gives notes of termination at least twelve months before the expiry date. As of 2021, the rent is paid by Stichting Student Teams Twente. The university guarantees all the liabilities of this foundation (and fulfilment thereof) under the lease. The annual rent at the inception of the lease is € 0.1 million and is indexed annually.

### SURETIES

A surety has been lodged with Bank Nederlandse Gemeenten for High Tech Factory B.V. The total amount of the loan from Bank Nederlandse Gemeenten at the end of 2022 was € 2.0 million (2021: € 2.1 million).

## LONG-TERM FINANCIAL OBLIGATIONS

Unconditional long-term obligations have been entered into with regard to construction activities and rent. The residual term can be analysed as follows:

Long-term financial obligations (€m) consolidated	Construction activities	Lease obligations	Total
Up to 1 year	4.7	2.4	7.1
Between 1 and 5 years	0.0	9.1	9.1
Longer than 5 years	0.0	3.3	3.3
<b>Total long-term financial obligations</b>	<b>4.7</b>	<b>14.8</b>	<b>19.5</b>

## CONSTRUCTION ACTIVITIES

At the end of 2022, the current liabilities in connection with the construction activities amounted to approximately € 4.7 million (2021: approximately € 33.2 million). The decrease in the balance at the end of 2022 compared to the end of 2021 is due to liabilities of approximately € 31.0 million at the end of 2021 for new construction work for the ITC faculty. Most of this was completed in 2022 and the associated liabilities were invoiced.

## RENTAL COMMITMENTS

- A lease was signed with M7 EREIP V Dutch PropCo 4 B.V. on 1 April 2022 for the rental of additional office space in the Capitool 15 building. The lease was initially entered into for a term of five years and eight months. The rent is € 0.5 million per year. The lease can be renewed annually by one year after the expiry of the lease term on 1 December 2027.
- An agreement was concluded with Snelder Zijlstra Bedrijfshuisvesting on 1 August 2014 for the lease of the Capitool 40 building for permanent examination space. The annual rent is € 0.1 million. Every year the lease is renewed automatically for a further year.
- As of 1 February 2023, the university entered into an agreement with High Tech Centre Enschede B.V. for the lease of the building at Hengelosestraat 701 to house the Fraunhofer Innovation Platform for Advanced Manufacturing. The lease was initially entered into for a term of 10 years with an annual rent of € 0.45 million. After the initial lease term, the university can extend the lease for a further five years.
- VVI B.V. has entered into a lease for an indefinite period with ASR Dutch Science Park Fund for the rental of space in The Gallery building. The total annual amount for rent and additional costs in 2023 is € 1.4 million.

## LONG LEASE LIABILITIES

In the early 1990s, residential properties on long leases were sold to university staff members. The leaseholder of the homes is entitled to offer the property to Technopolis Twente Onroerend Goed B.V. by registered letter. In such cases the company is obliged to buy the property. The purchase price for the home will be determined by agreement between the two parties. The long lease rights acquired on the sale of the homes were measured at the present value at that time. This value was reduced annually by the amount of the invoiced lease payments relating to the homes sold. The financial value of zero was finally reached in the 2013 financial year. The long lease right remains in force, however, although it is no longer a financial fixed asset of value.

## CONTINGENT LIABILITIES

### PROCUREMENT

For purchases of goods and services, the university entered into financial obligations at the end 2022 amounting to approximately € 14.2 million (2021: approximately € 10.6 million). The liabilities expire in full within one year. No collateral has been provided for these.

## **MAINTENANCE**

The university entered into financial obligations for the year 2022 up to an amount of € 1.4 million (2021: € 1.7 million) for the maintenance of buildings and grounds.

# NOTES TO THE CONSOLIDATED STATEMENT OF INCOME AND EXPENSES FOR 2022

## INCOME

	Statement of income and expenses (€m) - Revenue consolidated	Actual 2022			Budget 2022 *)	Actual 2021		
3.1.1	Central government funding from Ministry of Education, Culture and Science			285.0	283.1			261.4
3.3.4	Tuition fees academic education sector			28.5	30.9			31.1
3.4	Income from work for third parties			86.8	98.3			88.3
3.4.1	Contract teaching		1.0				1.8	
3.4.2	Contract research		84.0				83.6	
3.4.2.1	International organisations	23.8				20.3		
3.4.2.2	National governments	11.8				11.3		
3.4.2.3	Dutch Research Council	27.1				29.0		
3.4.2.5	Other non-profit organisations	3.4				4.5		
3.4.2.6	Businesses	17.9				18.5		
3.4.5	Other income from work commissioned by third parties		1.8				2.9	
3.5	Other income			31.9	27.7			21.0
3.5.1	Rental		5.4				5.2	
3.5.2	Personnel secondment		3.0				1.0	
3.5.4	Sponsorship		0.1				0.0	
3.5.6	Extraordinary income		8.3				0.0	
3.5.9	Catering revenue		1.8				1.2	
3.5.10	Other income - other		13.3				13.6	
	<b>Total income</b>			<b>432.3</b>	<b>440.0</b>			<b>401.8</b>

\*) budget figures are not available at the same level of detail as that of the financial statements.

3.5.10	Other income - other (€m) consolidated	Actual 2022	Actual 2021
	Courses and conferences	0.9	2.6
	Contribution to student facilities	0.8	1.0
	Recharging of energy costs	2.6	1.0
	Knowledge valorisation etc.	9.0	9.0
	<b>Total other income</b>	<b>13.3</b>	<b>13.6</b>

### CENTRAL GOVERNMENT FUNDING

As a result of a higher-than-budgeted wage/price compensation, the income from the central government funding is € 1.9 million higher.

Compared to 2021, the central government funding received has increased by € 23.6 million. This increase is mainly explained by the increase in the number of students over the past few years, which has an impact on funding. The annual indexation, income from the National Education Programme and wage/price compensation also contribute to this increase.

### TUITION FEES

Income from tuition fees in 2022 were € 2.4 million lower than budgeted. The main cause of this is a lower intake of students in the academic year 2022-2023 than anticipated. This is also the cause of the € 2.6 million decrease in income compared to 2021.

The income from tuition fees can be broken down between the statutory rate and the institutional rate as follows:

Breakdown of tuition fees (€m)	Actual 2022	Actual 2021
Statutory rate tuition fees	14.3	17.0
Institutional rate tuition fees	14.2	14.1
<b>Total tuition fees</b>	<b>28.5</b>	<b>31.1</b>

### REVENUES FROM WORK FOR THIRD PARTIES

Revenues from work commissioned by third parties were € 11.5 million lower than budgeted. This decrease is due to a lower number of projects started in previous years and lower-than-anticipated acquisition of new projects to be started in 2022. Revenues are also lower due to delays and underspending on current projects.

Compared to 2021, revenues decreased by € 1.5 million to € 86.8 million. Other revenues from work commissioned by third parties decreased by €1.1 million, partly because there was € 0.5 million less income from conferences and courses in 2022 compared to 2021 and no amounts were released from provisions for work for third parties in 2022 (2021: € 0.5 million). In addition, the income from contract teaching decreased by € 0.8 million due to lower income from the master's programmes of the BMS faculty. These decreases are offset by a rise in income from contract research of € 0.4 million.

## OTHER INCOME

Other income increased in 2022 to €31.9 million (2021: €21.0 million). The table below provides a more detailed analysis:

	Other income (€m) consolidated	Actual 2022		Actual 2021	
3.5.1	Real estate leasing		5.4		5.2
3.5.2	Personnel secondment		3.0		1.0
3.5.4	Sponsorship		0.1		0.0
3.5.6	Extraordinary income		8.3		0.0
3.5.9	Catering revenue		1.8		1.2
3.5.3	Other items		13.3		13.6
	- Subsidy schemes, courses and conferences	0.9		2.6	
	- Contribution to student facilities	0.8		1.0	
	- Recharged energy costs	2.6		1.0	
	- Services, target subsidy, teaching materials	9.0		9.0	
	<b>Total other income</b>		<b>31.9</b>		<b>21.0</b>

The other income was € 4.2 million higher than budgeted. This includes € 8.3 million in non-recurring income from Universiteit Twente Holding B.V. due to the release of a subsidy obligation carried on the balance sheet at the end of 2021. Increased energy prices also resulted in the energy costs to recharged by the university to third parties being € 1.6 million higher than budgeted.

Compared to 2021, other income increased by € 10.9 million. This increase is mainly due to non-recurring income of UTH amounting to € 8.3 million. Income from recharged energy costs also rose by € 1.6 million due to the extreme rise in energy prices in 2022. Catering income increased by € 0.6 million due to the lifting of COVID-19 restrictions. Income from property rental and secondment of personnel also rose.

## EXPENSES

Statement of income and expenses (€m) - Consolidated expenses		Actual 2022		Budget 2022 *)	Actual 2021	
4.1	Personnel expenses		309.0	312.4		288.0
4.1.1	Wages and salaries		289.6			266.8
4.1.1.1	Gross wages and salaries	224.9			206.7	
4.1.1.2	Social security contributions	29.1			27.0	
4.1.1.5	Pension contributions	35.6			33.1	
4.1.2	Other personnel expenses		19.4			21.2
4.1.2.1	Release from / Allocations to personnel provisions	0.8			1.7	
4.1.2.2	External personnel	8.0			8.3	
4.1.2.3	Other items	10.6			11.2	
4.2	Depreciation of tangible fixed assets		24.0	28.3		26.2
4.3	Accommodation expenses		34.0	31.0		22.0
4.3.1	Rental		1.3			1.1
4.3.2	Insurances		0.6			0.5
4.3.3	Maintenance		6.8			5.4
4.3.4	Energy and water		16.1			5.0
4.3.5	Housekeeping		3.9			4.4
4.3.6	Levies		2.3			2.2
4.3.8	Other items		3.0			3.4
4.4	Other expenses		76.5	75.7		65.3
4.4.1	Administration and management expenses		24.1			19.5
4.4.2	Inventory and equipment		8.1			10.2
4.4.4	Release from / Allocations to other provisions		-0.2			0.0
4.4.5	Other expenses - other		44.5			35.6
	<b>Total expenses</b>		<b>443.5</b>	<b>447.4</b>		<b>401.5</b>

4.1	Average establishment (FTE) consolidated	Actual 2022	Budget 2022	Actual 2021
	Academic staff	2,015	2,094	1,936
	Administrative and support staff	1,469	1,416	1,380
	<b>Total establishment</b>	<b>3,484</b>	<b>3,510</b>	<b>3,316</b>

The following auditor's fees are charged to the university, as referred to in article 2:382a (1) and (2) of the Dutch Civil Code.

4.4.1	Breakdown of auditor's fees (€k)	Actual 2022	Actual 2021
	Fee for financial statement audit	379.0	289.0
	Fee for other audit engagements	123.1	105.0
	Fee for tax advice	0.0	5.0
	Fee for other non-audit services	195.9	175.0
	<b>Total auditor's fees</b>	<b>698.0</b>	<b>574.0</b>

The fees for the audit of the financial statements stated in the table relate to the total fees for the audit of the financial statements for the respective financial year.

4.4.5	Other expenses - other (€m) consolidated	Actual 2022	Actual 2021
	Books and journals	3.4	3.3
	Technical materials, printed matter etc.	11.2	10.1
	Raw materials	0.7	0.4
	Other costs of affiliated companies	0.0	0.4
	Travel and accommodation costs	8.2	2.5
	Outsourced work	15.4	14.3
	Fairs	1.3	1.3
	Rental, maintenance of equipment etc.	4.3	3.3
	<b>Total other expenses</b>	<b>44.5</b>	<b>35.6</b>

## PERSONNEL EXPENSES

At € 309.0 million, the actual personnel expenses were € 3.4 million lower than budgeted. This was due to lower growth in FTEs than budgeted. On the other hand, € 3.5 million was added to the liability for leave due to growth in FTEs and less leave taken.

Compared to 2021, personnel expenses rose by € 22.8 million. The number of employees of the university rose by 5% in 2022. A new collective labour agreement also came into force in 2022 with a structural wage increase of 4%, as well as a one-off gross payment.

The social security and pension contributions payable were € 4.6 million higher than in 2021. This is mainly due to the increased gross wage bill. The social security contribution rates rose only slightly, while the contribution rate for pensions remained the same.

## DEPRECIATION AND AMORTISATION

The depreciation and amortisation expense in 2022 was € 4.3 million lower than budgeted and € 2.2 million lower than in 2021. These decreases are both a result of delays in the delivery of real estate and renovations in 2021 and 2022 and postponed purchases of inventory and equipment.

## ACCOMMODATION

Actual accommodation costs were € 3.0 million higher than budgeted. This was mainly caused by the enormous increase in energy prices in 2022.

The increase in energy prices in 2022 also explains the € 12.0 million increase in accommodation expenses compared to 2021. Maintenance expenses were also higher due to increased prices.

The consolidated buildings ratio was 12% (2021: 10%), below the 15% level that the university applies as a standard.

## OTHER EXPENSES

The actual € 76.5 million of other expenses is in line with the budget of € 75.7 million.

Compared to 2021, other expenses rose by € 11.2 million. As a result of the phasing out and lifting of COVID-19 restrictions, more activities took place again in 2022, resulting in, amongst other things, an increase in travel costs (€ 5.9 million) and refreshments (€ 1.9 million). Licence expenses also increased (€ 1.1 million) and more work was outsourced (€ 1.0 million).

6	Financial income and expenses (€m) consolidated	Actual 2022	Budget 2022	Actual 2021
6.1	Interest income	0.5	0.1	0.2
6.2	Interest expenses	-0.5	-0.5	-0.7
	<b>Total financial income and expenses</b>	<b>0.0</b>	<b>-0.4</b>	<b>-0.5</b>
8	<b>Result from participating interests</b>	<b>-0.1</b>	<b>0.0</b>	<b>-0.2</b>
9	<b>Minority share in result</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

## RELATED PARTY TRANSACTIONS

Related party transactions occur when there is a relationship between the university and a natural person or entity associated with the university. These include the relationships between the university and its participating interests, the directors and executives in key positions. Transactions are deemed to mean a transfer of resources, services or obligations, regardless of whether an amount has been charged.

There were no transactions with related parties on that were not conducted on an arm's length basis.

# SINGLE-ENTITY FINANCIAL STATEMENTS

## SINGLE-ENTITY BALANCE SHEET AS AT 31 DECEMBER 2022 (AFTER APPROPRIATION OF RESULT)

	Balance sheet as at 31 December (€m) (after appropriation of result) single-entity	2022	2021
1.1.2	Tangible fixed assets	284.9	256.7
1.1.3	Financial fixed assets	32.3	23.7
	<b>Total fixed assets</b>	<b>317.2</b>	<b>280.4</b>
1.2.1	Inventories	0.4	0.4
1.2.2	Receivables	60.4	47.8
1.2.4	Cash and cash equivalents	92.8	122.1
	<b>Total current assets</b>	<b>153.6</b>	<b>170.3</b>
	<b>Total assets</b>	<b>470.8</b>	<b>450.7</b>
2.1	Equity	164.8	176.2
2.2	Provisions	9.9	11.0
2.3	Non-current liabilities	88.5	93.8
2.4	Current liabilities	207.6	169.7
	<b>Total liabilities</b>	<b>470.8</b>	<b>450.7</b>

The following notes are an integral part of the 2022 single-entity financial statements:

- general [notes](#)
- [notes](#) to the single-entity balance sheet as at 31 December 2022
- [notes](#) to the single-entity statement of income and expenses for 2022

# SINGLE-ENTITY STATEMENT OF INCOME AND EXPENSES FOR 2022

Statement of income and expenses (€m) single-entity		Actual 2022	Budget 2022	Actual 2021
3.1	Central government funding	285.0	283.1	261.4
3.3	Tuition, course, lesson and examination fees	28.5	30.9	31.1
3.4	Income from work for third parties	86.8	98.3	88.3
3.5	Other income	19.0	18.0	17.6
<b>Total income</b>		<b>419.3</b>	<b>430.3</b>	<b>398.4</b>
4.1	Personnel expenses	307.5	310.0	287.0
4.2	Depreciation and amortisation	22.9	27.3	25.0
4.3	Accommodation expenses	33.4	26.2	21.3
4.4	Other expenses	75.7	74.1	64.6
<b>Total expenses</b>		<b>439.5</b>	<b>437.6</b>	<b>397.9</b>
<b>Net income and expenses</b>		<b>-20.2</b>	<b>-7.3</b>	<b>0.5</b>
6.	Net financial income and expenses	0.2	-0.5	-0.3
<b>Result from ordinary operations</b>		<b>-20.0</b>	<b>-7.8</b>	<b>0.2</b>
8.	Result from participating interests	8.6	0.2	-0.6
<b>Net income</b>		<b>-11.4</b>	<b>-7.6</b>	<b>-0.4</b>

The following notes are an integral part of the 2022 single-entity financial statements:

- general [notes](#)
- [notes](#) to the single-entity balance sheet as at 31 December 2022
- [notes](#) to the single-entity statement of income and expenses for 2022

# NOTES TO THE SINGLE-ENTITY FINANCIAL STATEMENTS 2022

## GENERAL INFORMATION

The single-entity financial statements form part of the university's 2022 statutory financial statements. The university's financial data have been incorporated in the university's consolidated financial statements.

Insofar as no detailed disclosures are provided below concerning items in the single-entity balance sheet and the single entity statement of income and expenses, reference is made to the notes to the consolidated balance sheet and statement of income and expenses.

## ACCOUNTING POLICIES

The accounting policies are the same as those for the consolidated balance sheet and statement of income and expenses, except for the following:

## PARTICIPATING INTERESTS IN GROUP COMPANIES

In the single-entity balance sheet, participations in group companies are measured according to the equity method based on the net asset value. For further details, see the accounting policies for financial fixed assets in the consolidated financial statements.

## RESULT FROM PARTICIPATING INTERESTS

The share in the result of legal entities in which participating interests are held comprises the university's share in the results of these participating interests. Results of transactions involving transfers of assets and liabilities between the university and its participating interests and between participating interests have been eliminated insofar as they can be regarded as unrealised.

# NOTES TO THE SINGLE-ENTITY BALANCE SHEET AS AT 31 DECEMBER 2022

## ASSETS

### TANGIBLE FIXED ASSETS

1.1.2		1.1.2.1	1.1.2.2	1.1.2.3	1.1.2.5	1.1.2.6	
Tangible fixed assets (€m) single-entity		Land and buildings	Grounds	Inventory and equipment	In progress and prepaid	TFA not used in the process	Total
Purchase price 1 January 2022 *)	a	484.6	44.3	53.1	18.3	13.0	613.3
Accumulated depreciation, amortisation and impairment 1 January 2022 *)	b	-309.3	-16.0	-21.5	0.0	-9.8	-356.6
<b>Carrying amount 1 January 2022 *)</b>	<b>c=a+b</b>	<b>175.3</b>	<b>28.3</b>	<b>31.6</b>	<b>18.3</b>	<b>3.2</b>	<b>256.7</b>
Investments 2022	d	7.6	1.6	6.7	35.7		51.6
Capitalisation of work in progress 2022	e	2.4	1.8		-4.2		0.0
Acquisition cost of divestments 2022	f	0.0		-2.3			-2.3
Depreciation and amortisation 2022	g	-15.1	-1.6	-5.9		-0.3	-22.9
Depreciation and amortisation of divestments 2022	h	0.0		1.9			1.9
<b>Purchase price and reversal of impairment loss 31 December 2022</b>	<b>i=a+d+e+f</b>	<b>494.6</b>	<b>47.7</b>	<b>57.5</b>	<b>49.8</b>	<b>13.0</b>	<b>662.6</b>
<b>Accumulated depreciation, amortisation and impairment 31 December 2022</b>	<b>j=b+g+h</b>	<b>-324.4</b>	<b>-17.6</b>	<b>-25.5</b>	<b>0.0</b>	<b>-10.1</b>	<b>-377.7</b>
<b>Carrying amount 31 December 2022</b>	<b>k=i+j</b>	<b>170.2</b>	<b>30.1</b>	<b>32.0</b>	<b>49.8</b>	<b>2.9</b>	<b>284.9</b>
<b>Depreciation and amortisation percentages (in %)</b>		<b>0 - 12.5</b>	<b>3.3 - 10</b>	<b>6.7 - 50</b>	<b>0.0</b>	<b>0 - 12.5</b>	

### COLLATERAL PROVIDED

The following collateral has been provided for the State of the Netherlands: as of 1 January 2010, the right of first mortgage on part of the real estate as collateral for the loans contracted, up to the amount of the outstanding debt.

WOZ and insured value of buildings and grounds (€m) single-entity	2022
WOZ value of buildings and grounds	225.7
Insured value of buildings	816.0

The above values in accordance with the Valuation of Immovable Property Act (WOZ) have a reference date of 1 January 2021 and apply to the 2022 tax year. The insured value of the buildings is the indexed value on the policy as at 1 July 2022.

## FINANCIAL FIXED ASSETS

1.1.3	Financial fixed assets (€m) single-entity	Carrying amount 1 January 2022	Investments and loans granted	Divestments and repayments	Result for 2022 *)	Change in reclassification	Carrying amount 31 December 2022
	Universiteit Twente Holding	13.7			8.6		22.3
<b>1.1.3.1</b>	<b>Participating interests in group companies</b>	<b>13.7</b>	<b>0.0</b>	<b>0.0</b>	<b>8.6</b>	<b>0.0</b>	<b>22.3</b>
	OostNL	1.4					1.4
	52° North	0.0					0.0
<b>1.1.3.2</b>	<b>Other participating interests</b>	<b>1.4</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.4</b>
	Universiteit Twente Holding B.V.	4.8		-0.5			4.3
	De Hogekamp B.V.	3.1		-0.1			3.0
	ICSC/U Park hotel	0.9					0.9
	United Twente Innovations B.V.	0.5					0.5
	Reclassification 1)	-0.7				0.6	-0.1
<b>1.1.3.3</b>	<b>Receivables from group companies</b>	<b>8.6</b>	<b>0.0</b>	<b>-0.6</b>	<b>0.0</b>	<b>0.6</b>	<b>8.6</b>
	Receivables from Ministry of Education, Culture and Science	0.4		-0.4			0.0
	Reclassification 1)	-0.4				0.4	0.0
<b>1.1.3.5</b>	<b>Receivables from Ministry of Education, Culture and Science</b>	<b>0.0</b>	<b>0.0</b>	<b>-0.4</b>	<b>0.0</b>	<b>0.4</b>	<b>0.0</b>
	PC loans	0.1					0.1
	Emergency fund	0.1					0.1
	Study trip committee	0.0					0.0
	Reclassification	-0.2					-0.2
<b>1.1.3.8</b>	<b>Other receivables</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
	<b>Total financial fixed assets</b>	<b>23.7</b>	<b>0.0</b>	<b>-1.0</b>	<b>8.6</b>	<b>1.0</b>	<b>32.3</b>

1) The reclassification concerns the reclassification of other receivables with a term of less than one year to current assets.

### RECEIVABLES FROM GROUP COMPANIES

A new loan agreement between the university and Universiteit Twente Holding B.V. was concluded in 2020 with a maximum amount of € 6.5 million and a term of 20 years. At maturity, the principal will be repaid in a single amount. Annual interest of 1.5% is payable on the outstanding amount of the loan. The total outstanding loan from Universiteit Twente Holding B.V. amounted to € 4.3 million at the end of 2022. The € 0.5 million temporarily drawn at the end of 2021 was repaid at the beginning of 2022.

A loan agreement was concluded with De Hogekamp B.V. in 2020 for a principal amount of € 3.25 million with a term of 40 years and annual repayments. The first repayment took place on 31 December 2020. Early full repayment of the loan and additional repayments of at least € 50,000 are permitted without penalty. De Hogekamp B.V. is required to pay annual interest of 2% on the principal or outstanding part thereof. The total outstanding loan at the end of 2022 decreased to € 3.0 million, of which € 0.1 million was of a short-term nature.

A loan agreement was concluded with Congres- en Studiecentrum Twente B.V. for the U-Park hotel for a maximum of € 1 million, which was available to be drawn no later than 31 December 2022. No additional amount was drawn under the loan agreement in 2022, so the outstanding amount at the end of 2022 remained € 0.9 million. The loan will be repaid in 15 equal instalments beginning on 1 January 2023. An amount of € 0.1 million was therefore of a short-term nature at the end of 2022. Annual interest of 2% is payable on the loan amount or the outstanding part thereof.

At the end of 2020, a € 535,000 overdraft agreement was entered into between the university and United Twente Innovations B.V. to support the TOP programme. The two parties have found a third party willing to take over the financing of the TOP programme. If this third party refinances a TOP loan or if United Twente Innovations B.V. receives a direct payment under a TOP credit, this amount will be transferred to the university. The agreement between the university and United Twente Innovations B.V. was entered into for an indefinite period and no interest is charged on outstanding amounts. There was no movement in this loan in 2022.

## CURRENT ASSETS

### INVENTORIES

1.2.1	Inventories (€m) single-entity	31 December 2022	31 December 2021
1.2.1.2	Consumer goods	0.4	0.4

The cost price method used for inventory measurement is FIFO (first in, first out).

## CURRENT RECEIVABLES

1.2.2	Current receivables (€m) single-entity	31 December 2022		31 December 2021	
1.2.2.1	Debtors		23.5		17.1
1.2.2.2	Receivable from Ministry of Education, Culture and Science		0.0		0.4
1.2.2.4	Receivables from group companies		1.7		2.4
1.2.2.7	Receivables from students/ participants/course participants		0.1		0.1
1.2.2.8	Other government bodies		2.4		2.5
1.2.2.9	Valuation of projects in progress		24.2		16.0
	Expenses of work for third parties	92.0		76.1	
	Instalments invoiced and received in advance	-67.8		-60.1	
1.2.2.10	Other receivables:		0.5		0.2
	Current receivables in respect of financial fixed assets	0.2		0.2	
	Other receivables	0.3		0.0	
1.2.2.11	Taxes		0.4		0.6
1.2.2.12	Prepayments		6.1		6.3
1.2.2.15	Other accrued assets:				
	Amounts not yet received		2.0		2.4
	<b>Subtotal of current receivables</b>		<b>60.9</b>		<b>48.0</b>
1.2.2.16	Provision for bad debts		-0.5		-0.2
	<b>Total current receivables</b>		<b>60.4</b>		<b>47.8</b>

The above statement of receivables does not include any items with a residual term of more than one year. The carrying amount of the recognised receivables approximates the fair value, given the short-term nature of the receivables and the fact that bad debt provisions have been recognised where necessary.

The movements in bad debt provisions are as follows:

1.2.2.16	Provision for bad debts (€m) single-entity	2022	2021
	<b>Balance as at 1 January</b>	<b>-0.2</b>	<b>-0.1</b>
	Withdrawal	0.0	0.1
	Release	0.2	0.0
	Allocation	-0.5	-0.2
	<b>Balance as at 31 December</b>	<b>-0.5</b>	<b>-0.2</b>

## CASH AND CASH EQUIVALENTS

1.2.4	Cash and cash equivalents (€m) single-entity	31 December 2022	31 December 2021
1.2.4.1	Cash	0.1	0.0
1.2.4.2	Bank account credit balances	6.4	2.3
1.2.4.3	Current account credit balance with Treasury banks	86.3	119.8
	<b>Total cash</b>	<b>92.8</b>	<b>122.1</b>

Cash and cash equivalents include deposits that can be withdrawn on demand. The full amount of cash and cash equivalents is freely available to the university.

## LIABILITIES

### EQUITY

2.1	Equity (€m) single-entity	Balance as at 1 January 2022	Result	Other movements	Balance as at 31 December 2022
2.1.1.1	General reserve	162.5	-20.0		142.5
2.1.1.3	Appropriated reserve (private)				
	Universiteit Twente Holding B.V.	13.7	8.6		22.3
	<b>Total equity</b>	<b>176.2</b>	<b>-11.4</b>	<b>0.0</b>	<b>164.8</b>

Pursuant to article 2.9(4) of the Higher Education and Academic Research Act, the negative result for the 2022 financial year of € 11.4 million has been withdrawn from the reserves.

The difference in equity as at the balance sheet date between the consolidated and single-entity figures is caused by the minority interest arising from the figures of Universiteit Twente Holding B.V.

2.1	Equity (€m) single-entity	Balance as at 1 January 2021	Result	Other movements	Balance as at 31 December 2021
2.1.1.1	General reserve	162.9	0.2	-0.6	162.5
2.1.1.3	Appropriated reserve (private)				
	Universiteit Twente Holding B.V.	13.7	-0.6	0.6	13.7
	<b>Total equity</b>	<b>176.6</b>	<b>-0.4</b>	<b>0.0</b>	<b>176.2</b>

### APPROPRIATED RESERVE (PRIVATE)

The appropriated reserve formed as of 31 December 2022 for the affiliated company Universiteit Twente Holding B.V. (formerly Holding Technopolis Twente B.V.) represents the financial position of this company and is intended to cover possible future deficits of the company.

### PROVISIONS

2.2	2.2.1	2.2.4	
Provisions (€m) single-entity	Personnel provisions	Other provisions	Total provisions
<b>Balance as at 1 January 2022</b>	<b>10.8</b>	<b>0.2</b>	<b>11.0</b>
Allocations	3.2	0.0	3.2
Withdrawals	-1.7	0.0	-1.7
Release	-2.4	-0.2	-2.6
<b>Balance as at 31 December 2022</b>	<b>9.9</b>	<b>0.0</b>	<b>9.9</b>
Breakdown of balance 31 December 2022:			
<1 year	3.1	0.0	3.1
1-5 years	4.6	0.0	4.6
>5 years	2.2	0.0	2.2
Total	9.9	0.0	9.9

<b>2.2</b>	<b>Provisions (€m) - analysis single-entity</b>	<b>Balance as at 1 January 2022</b>	<b>Allocations</b>	<b>Withdrawals</b>	<b>Release</b>	<b>Balance as at 31 December 2022</b>
<b>2.2.1</b>	<b>Personnel provisions</b>					
	Own risk under Act on Resumption of Work for Partially Disabled Persons	2.7	0.9	0.3	0.7	2.6
	Unemployment Act and Civil Code-Unemployment Act	1.4	0.9	0.3	0.8	1.2
	Transitional compensation	2.4	1.2	0.7	0.3	2.6
	Sabbatical leave	0.1	0.1			0.2
	UT anniversaries	3.6		0.3	0.5	2.8
	Extra-statutory Unemployment Scheme for Dutch Universities Old Age Pension shortfall	0.1			0.1	0.0
	Reorganisation	0.5	0.1	0.1		0.5
	Subtotal of personnel provisions	10.8	3.2	1.7	2.4	9.9
<b>2.2.4</b>	<b>Other provisions</b>					
	EU	0.2			0.2	0.0
	<b>Subtotal of other provisions</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.2</b>	<b>0.0</b>
	<b>Total provisions</b>	<b>11.0</b>	<b>3.2</b>	<b>1.7</b>	<b>2.6</b>	<b>9.9</b>

## NON-CURRENT LIABILITIES

2.3	2.3.5	2.3.7	
Non-current liabilities (€m) single-entity	Ministry of Finance	Other items	Total
Nominal value of contracted loans 1 January 2022	150.0	1.9	151.9
Accumulated repayments 1 January 2022	-52.7	0.0	-52.7
<b>Balance as at 1 January 2022</b>	<b>97.3</b>	<b>1.9</b>	<b>99.2</b>
Contracted loans	0.0	0.0	0.0
Repayments	-5.3	0.0	-5.3
<b>Balance as at 31 December 2022</b>	<b>92.0</b>	<b>1.9</b>	<b>93.9</b>
Current portion of non-current liabilities 31 December 2022	5.3	0.1	5.4
<b>Balance of non-current liabilities as at 31 December 2022</b>	<b>86.7</b>	<b>1.8</b>	<b>88.5</b>
Breakdown of balance as at 31 December 2022:			
Term 1-5 years	21.2	0.5	21.7
Term >5 years	65.5	1.3	66.8

The current portion (< 1 year) is included in current liabilities.

The table below presents the contracted loans, annual repayments and interest payable:

Loan single-entity	Nominal value	End-date	Repayment per year	Interest	Fixed interest up to and including year
Ministry of Finance loan 1	€90.0 million	3-1-2039	€3.2 million	0.71%	2025
Ministry of Finance loan 2	€25.0 million	3-1-2039	€0.9 million	0.10%	2039
Ministry of Finance loan 3	€35.0 million	2-1-2041	€1.2 million	0.10%	2041
Netherlands Enterprise Agency	€1.9 million	31-12-2038	€0.1 million	0.00%	N/A

Item 2.3.7 'Other items' includes an agreement with the Netherlands Enterprise Agency regarding a drawn Future Fund Credit for Research Facilities (TOF credit). The university concluded this agreement with the Netherlands Enterprise Agency in 2016. The loan is used to finance investments in the NanoLab. At the end of 2022, an amount of €1.9 million had been received. This amount will be repaid to the Netherlands Enterprise Agency in 15 annual instalments with effect from the 2023 financial year.

## COLLATERAL PROVIDED

The following collateral has been provided for the State of the Netherlands: as of 1 January 2010, the right of first mortgage on part of the real estate as collateral for the loans contracted, up to the amount of the outstanding debt.

## CURRENT LIABILITIES

2.4	Current liabilities (€m) single-entity	31 December 2022		31 December 2021	
2.4.1	Liabilities to group companies		0.1		4.8
2.4.2	Liabilities to other participating interests		0.0		0.0
2.4.5	Liabilities to Ministry of Finance 1)		5.3		5.3
2.4.7	Project instalment invoiced in advance		63.5		49.5
	Instalments invoiced and received in advance	162.7		145.0	
	Expenses of work for third parties	-99.2		-95.5	
2.4.8	Creditors		13.4		14.1
2.4.9	Taxes and social security contributions		15.3		16.1
	Payroll tax	10.5		10.1	
	Sales tax	1.6		2.5	
	Social security contributions	3.3		3.4	
	Other taxes	-0.1		0.1	
2.4.10	Pension liabilities		4.1		3.8
2.4.11	Liabilities in respect of work for third parties		0.3		4.4
2.4.12	Other current liabilities		6.9		7.6
2.4.13	Tuition fees received in advance		19.0		13.4
2.4.14	Ministry of Education, Culture and Science subsidies received in advance		0.0		0.2
2.4.16	Amounts received in advance		44.1		22.1
2.4.17	Holiday leave/bonus		28.2		23.7
2.4.19	Accrued liabilities		7.4		4.7
	<b>Total current liabilities</b>		<b>207.6</b>		<b>169.7</b>

1) Liabilities to the Ministry of Finance include the current portion (<1 year) of the long-term debt.

The above overview of current liabilities does not include any items with a residual term of more than one year.

## **OFF-BALANCE SHEET ASSETS AND LIABILITIES**

These are explained in the notes to the consolidated financial statements.

# NOTES TO THE SINGLE-ENTITY STATEMENT OF INCOME AND EXPENSES FOR 2022

## INCOME

	Statement of income and expenses (€m) - Income single-entity	Actual 2022		Actual 2021	
3.1.1	Central government funding from Ministry of Education, Culture and Science		285.0		261.4
3.3.4	Tuition fees academic education sector		28.5		31.1
3.4	Income from work for third parties		86.8		88.3
3.4.1	Contract teaching		1.0		1.8
3.4.2	Contract research		84.0		83.6
3.4.2.1	International organisations	23.8		20.3	
3.4.2.2	National governments	11.8		11.3	
3.4.2.3	Dutch Research Council	27.1		29.0	
3.4.2.5	Other non-profit organisations	3.4		4.5	
3.4.2.6	Businesses	17.9		18.5	
3.4.5	Other income from work commissioned by third parties		1.8		2.9
3.5	Other income		19.0		17.6
3.5.1	Rental		2.5		2.7
3.5.2	Personnel secondment		3.3		1.1
3.5.4	Sponsorship		0.1		0.0
3.5.9	Catering revenue		0.3		0.1
3.5.10	Other income - other		12.8		13.7
	<b>Total income</b>		<b>419.3</b>		<b>398.4</b>

3.5.10	Other income - other (€m) single-entity	Actual 2022	Actual 2021
	Subsidy schemes, courses and conferences	0.9	2.6
	Contribution to student facilities	0.8	1.0
	Recharging of energy costs	3.4	1.3
	Knowledge valorisation, other	7.7	8.8
	Result from sale of participating interests	0.0	0.0
	<b>Total other income</b>	<b>12.8</b>	<b>13.7</b>

## EXPENSES

	Statement of income and expenses (€m) - Expenses single-entity	Actual 2022		Actual 2021	
4.1	Personnel expenses		307.5		287.0
4.1.1	Wages and salaries		288.2		265.5
4.1.1.1	Gross wages and salaries	223.7		205.7	
4.1.1.2	Social security contributions	28.9		26.8	
4.1.1.5	Pension contributions	35.6		33.0	
4.1.2	Other personnel expenses		19.3		21.5
4.1.2.1	Release from / Allocations to personnel provisions	0.8		1.7	
4.1.2.2	External personnel	8.0		8.4	
4.1.2.3	Other items	10.5		11.4	
4.2	Depreciation of tangible fixed assets		22.9		25.0
4.3	Accommodation expenses		33.4		21.3
4.3.1	Rental		3.0		2.5
4.3.2	Insurances		0.6		0.5
4.3.3	Maintenance		5.9		4.3
4.3.4	Energy and water		15.6		4.6
4.3.5	Housekeeping		3.7		4.2
4.3.6	Levies		2.2		2.1
4.3.8	Other items		2.4		3.1
4.4	Other expenses		75.7		64.6
4.4.1	Administration and management expenses		24.3		19.4
4.4.2	Inventory and equipment		8.1		10.1
4.4.4	Release from / Allocations to other provisions		-0.2		0.0
4.4.5	Other expenses - other		43.5		35.1
	<b>Total expenses</b>		<b>439.5</b>		<b>397.9</b>
<b>4.1</b>	<b>Average establishment (FTE) single-entity</b>			<b>2022</b>	<b>2021</b>
	Academic staff			2,015	1,936
	Administrative and support staff			1,429	1,346
	<b>Total establishment</b>			<b>3,444</b>	<b>3,282</b>

4.4.5	Other expenses - other (€m) single-entity	Actual 2022	Actual 2021
	Books and journals	3.4	3.2
	Technical materials, printed matter etc.	10.5	10.1
	Raw materials	0.3	0.2
	Travel and accommodation costs	8.6	2.7
	Outsourced work	15.3	14.3
	Fairs	1.3	1.3
	Rental, maintenance of equipment etc.	4.1	3.3
	<b>Total other expenses</b>	<b>43.5</b>	<b>35.1</b>

## FINANCIAL INCOME AND EXPENSES

6	Financial income and expenses (€m) single-entity	Actual 2022	Actual 2021
6.1	Interest income	0.6	0.2
6.2	Interest expenses	-0.4	-0.5
	<b>Total financial income and expenses</b>	<b>0.2</b>	<b>-0.3</b>

## RESULT FROM PARTICIPATING INTERESTS

8	Result from participating interests (€m) single-entity	Actual 2022	Actual 2021
	Universiteit Twente Holding B.V.	8.6	-0.6
	<b>Total result from participating interests</b>	<b>8.6</b>	<b>-0.6</b>

# PARTICIPATING INTERESTS AND RELATED PARTIES

## MAJORITY INTERESTS FULLY INCLUDED IN THE CONSOLIDATION

		% participation	Equity (€m) *	Operat. Res. (€m) *	Revenues (€m)	Declaration re Article 2:403 of the Civil Code
Name	Universiteit Twente Holding	100%	24.2	9.3	10.5	no
Legal form	B.V.					
Registered office	Enschede					
Activity	Other items					

\*) The figures of Universiteit Twente Holding B.V. are fully consolidated in the financial statements of the university.

The minority interests below are not included in the university's consolidation.

## MINORITY INTERESTS OF THE UNIVERSITY OF TWENTE

Name	Legal form	Registered office	Activity	% participation
52° North	GmbH	Münster	Contract research	26%
Ontwikkelingsmaatschappij Oost Nederland	N.V.	Arnhem	Other items	2%

## RELATED PARTIES OF UNIVERSITEIT TWENTE HOLDING (SCOPE OF CONSOLIDATION)

Name	Legal form	Registered office	Activity	% participation
Technopolis Twente Onroerend Goed	B.V.	Enschede	Real estate	100%
United Twente Innovation	B.V.	Enschede	Contract research	100%
De Hogekamp	B.V.	Enschede	Real estate	100%
Congres- en Studiecentrum Twente	B.V.	Enschede	Other items	100%
ITC International Hotel	B.V.	Enschede	Other items	100%
VVI	B.V.	Enschede	Other items	100%
High Tech Fund	B.V.	Enschede	Other items	100%
High Tech Factory	B.V.	Enschede	Other items	100%
EMI Twente	B.V.	Enschede	Other items	100%
New Origin	B.V.	Enschede	Other items	100%
UT International Ventures Holding	B.V.	Enschede	Contract research	60%

Name	Legal form	Registered office	Activity	% participation
- UT International Ventures	B.V.	Enschede	Contract research	60%
- UTIVH - VC Holding	B.V.	Enschede	Contract research	60%
- UTIVH - VyCAP	B.V.	Enschede	Contract research	10%
- PA Imaging Holding	B.V.	Enschede	Contract research	25%
- PA Imaging R&D	B.V.	Enschede	Contract research	25%
- U-Needle Holding	B.V.	Enschede	Contract research	7%

#### OTHER INTERESTS OF UNIVERSITEIT TWENTE HOLDING

Name	Legal form	Registered office	Activity	% participation
Encytos	B.V.	Enschede	Other items	60%
Flow Beams	B.V.	Enschede	Contract research	60%
NociTrack	B.V.	Enschede	Contract research	53%
LC Founders	B.V.	Enschede	Contract research	31%
Micronit	B.V.	Enschede	Contract research	28%
Semen Refinement	B.V.	Enschede	Contract research	27%
ScarTec Therapeutics	B.V.	Enschede	Contract research	27%
Nederlands-Duitse Internet Exchange	B.V.	Enschede	Other items	25%
Foamprint 3D	B.V.	Enschede	Other items	25%
Superlight Photonics	B.V.	Enschede	Other items	25%
Aluvia Photonics	B.V.	Enschede	Other items	25%
Panthera Group	B.V.	Enschede	Contract research	23%
Lionix International Dutch Participation	B.V.	Amstelveen	Other items	21%
Machnet Holding	B.V.	Groningen	Contract research	21%
Mercury Lab	B.V.	Enschede	Contract research	20%
Twente Technology Fund	B.V.	Enschede	Contract research	20%
4Silence	B.V.	Enschede	Contract research	19%
Flux Robotics	B.V.	Enschede	Other items	18%
Dutch Student Investment Fund	B.V.	Enschede	Other items	17%
Gable Systems	B.V.	Hengelo	Contract research	15%
Ramani	B.V.	Soerendonk	Other items	15%
ReCarbn	B.V.	Enschede	Other items	15%
Materiomics	B.V.	Bilthoven	Contract research	15%

Name	Legal form	Registered office	Activity	% participation
MyLife Technology	B.V.	Enschede	Contract research	12%
Hy2Care	B.V.	Enschede	Contract research	11%
Ames Europe Enschede	B.V.	Enschede	Other items	10%
Locus Positioning	B.V.	Enschede	Other items	10%
Smart Signs Holding	B.V.	Enschede	Contract research	10%
PHIX	B.V.	Enschede	Other items	9%
20Med Therapeutics	B.V.	Hengelo	Contract research	9%
Escens	B.V.	Lelystad	Contract research	8%
IamFluidics	B.V.	Enschede	Contract research	8%
Photix	B.V.	Enschede	Contract research	8%
Qurin	B.V.	Enschede	Contract research	7%
Soltice Pharmaceuticals	B.V.	Enschede	Contract research	5%
QuiX	B.V.	Enschede	Contract research	5%
Eurekite Holding	B.V.	Enschede	Other items	3%
Sirius Medical Systems	B.V.	Eindhoven	Contract research	3%
Innovation Industries UA	Cooperative	Enschede	Other items	2%
River BioMedics	B.V.	Enschede	Contract research	2%
20Face	B.V.	Enschede	Contract research	1%
Encapson	B.V.	Enschede	Contract research	1%
NX Filtration Holding	B.V.	Enschede	Contract research	0%
Shift Invest Coöperatief III	Cooperative	Amstelveen	Other items	0%
Innovation Industries II UA	Cooperative	Amsterdam	Other items	0%
ForwardOne	Cooperative	Amstelveen	Other items	0%

#### LIMITED PARTNERSHIPS

Name	Legal form	Registered office	Activity	% participation
CCP ClearFlight	Limited partnership	Enschede	Contract research	27%
CCP Eurekite	Limited partnership	Enschede	Contract research	23%
CCP SoundEnergy	Limited partnership	Enschede	Other items	22%

# REMUNERATION OF DIRECTORS AND MEMBERS OF THE SUPERVISORY BOARD

For 2022, the sector-related income standard for academic education under the Act on the Standardisation of the Remuneration of Senior Executives in the Public and Semi-Public Sector amounted to € 216,000. This was calculated in proportion to the duration and/or extent of the employment relationship. Since 1 January 2016, a different standard has applied to senior executives without an employment contract for the first 12 calendar months, in terms of both the duration of the assignment and the hourly rate. No senior management executives were employed at the University of Twente without an employment contract in the 2022 calendar year.

The remuneration of the individual members of the Executive Board, the Supervisory Board and non-senior executives was as follows and in line with the accountability obligation under the Education Annual Reporting Regulations.

**SENIOR EXECUTIVES (EXECUTIVE BOARD) / FORMER SENIOR EXECUTIVES WITH EMPLOYMENT CONTRACT**

Amounts x €1	Mr V. Subramaniam	Ms M. Roos	Mr A. Veldkamp
Details of position	President	Vice-President	Rector Magnificus
Beginning and end of appointment in 2022	1/1 – 31/12	1/1 – 31/12	1/1 – 31/12
Extent of employment (as part-time factor in FTE)	1.0	1.0	1.0
Employment relationship?	yes	yes	yes
Remuneration:			
Remuneration plus taxable expense allowances	190,723	190,723	190,312
Remuneration payable in long term	24,264	24,264	25,588
<b>Subtotal</b>	<b>214,987</b>	<b>214,987</b>	<b>215,900</b>
Individually applicable maximum remuneration	216,000	216,000	216,000
-/- Unduly paid amount and amount not yet refunded	N/A	N/A	N/A
<b>Total remuneration 2022</b>	<b>214,987</b>	<b>214,987</b>	<b>215,900</b>
Amount of excess	N/A	N/A	N/A
Reason why excess is or is not permitted	N/A	N/A	N/A
Notes on receivable due to undue payment	N/A	N/A	N/A
<u>Details 2021</u>			
Start and end of appointment	1/9 – 31/12	1/9 – 31/12	1/1 – 31/12
Extent of employment (as part-time factor in FTE)	1.0	1.0	1.0
Employment relationship?	yes	yes	yes
Remuneration:			
Remuneration plus taxable expense allowances	59,012	59,012	184,819
Remuneration payable in long term	7,977	7,977	24,081
<b>Subtotal</b>	<b>66,989</b>	<b>66,989</b>	<b>208,900</b>
Individually applicable maximum remuneration	69,858	69,858	209,000
<b>Total remuneration 2021</b>	<b>66,989</b>	<b>66,989</b>	<b>208,900</b>

## SENIOR SUPERVISORY OFFICERS

Amounts x €1	Ms S. Butzke	Ms S. Butzke	Ms N. Boersma
Details of position	Chair	Member	Member
Beginning and end of appointment in 2022	1/1 – 31/12		1/1 – 31/12
Remuneration			
Total remuneration	24,758		16,250
Individually applicable maximum remuneration	32,400		21,600
-/- Unduly paid amount not yet refunded	N/A		N/A
<b>Total remuneration 2022</b>	<b>24,758</b>		<b>16,250</b>
Amount of excess	N/A		N/A
Reason why excess is or is not permitted	N/A		N/A
Notes on receivable due to undue payment	N/A		N/A
<u>Details 2021</u>			
Start and end of appointment	1/8 – 31/12	1/1 – 31/7	1/1 – 31/12
Remuneration			
<b>Total remuneration 2021</b>	<b>7,813</b>	<b>7,292</b>	<b>12,500</b>
Individually applicable maximum remuneration	13,141	12,139	20,900

**SENIOR SUPERVISORY OFFICERS (CONTINUED)**

<b>Amounts x €1</b>	<b>Mr J. van Beurden</b>	<b>Mr M. Wessling</b>	<b>Mr J. de Haas</b>
<b>Details of position</b>	<b>Member</b>	<b>Member</b>	<b>Member</b>
Beginning and end of appointment in 2022	1/1 – 31/12	1/1 – 31/12	1/1 – 9/10
Remuneration			
Total remuneration	16,622	16,250	12,188
Individually applicable maximum remuneration	21,600	21,600	16,688
-/- Unduly paid amount not yet refunded	N/A	N/A	N/A
<b>Total remuneration 2022</b>	<b>16,622</b>	<b>16,250</b>	<b>12,188</b>
Amount of excess	N/A	N/A	N/A
Reason why excess is or is not permitted	N/A	N/A	N/A
Notes on receivable due to undue payment	N/A	N/A	N/A
<u>Details 2021</u>			
Start and end of appointment	1/1 – 31/12	1/1 – 31/12	1/8 – 31/12
Remuneration			
<b>Total remuneration 2021</b>	<b>12,500</b>	<b>12,500</b>	<b>5,208</b>
Individually applicable maximum remuneration	20,900	20,900	8,761

## REMUNERATION OF NON-SENIOR EXECUTIVES

Amounts x €1			
Details of position	Full professor	Full professor	Full professor
Beginning and end of appointment in 2022	1/1 - 31/12	1/1 - 31/12	1/1 - 31/12
Extent of employment (as part-time factor in FTE)	1.0	1.0	1.0
Remuneration			
Remuneration plus taxable expense allowances	242,291	202,100	202,100
Remuneration payable in long term	25,887	24,561	24,561
<b>Total remuneration 2022</b>	<b>268,178</b>	<b>226,661</b>	<b>226,661</b>
Individually applicable remuneration threshold	216,000	216,000	216,000
Mandatory justification for exceeding the individually applicable remuneration threshold	see 1)	see 2)	see 3)
<u>Details 2021</u>			
Details of position	Full professor	Full professor	Dean
Start and end of appointment	1/1 – 31/12	1/1 – 31/12	1/1 – 31/12
Extent of employment (as part-time factor in FTE)	1.0	1.0	1.0
Remuneration			
Remuneration plus taxable expense allowances	234,852	196,074	199,210
Remuneration payable in long term	25,425	24,107	24,197
<b>Total remuneration 2021</b>	<b>260,277</b>	<b>220,181</b>	<b>223,407</b>

- 1). The remuneration was agreed with an academic of extremely high standing in order to compete internationally and to retain this academic for our university. Excess due to pension compensation for 2022 + allowances.
- 2). Excess due to pension compensation for 2022 + allowances.
- 3). Excess due to pension compensation for 2022 + allowances.

# **SUBSEQUENT EVENTS**

No events have occurred after the balance sheet date that have a significant impact on the results and equity of the university.

The financial statements were adopted by the Executive Board and approved by the Supervisory Board of the University of Twente at Enschede on 21 June 2023.

.....  
Prof. Dr. V. Subramaniam  
(President of the Executive Board)

.....  
Ir. S. Butzke  
(Chair of the Supervisory Board)

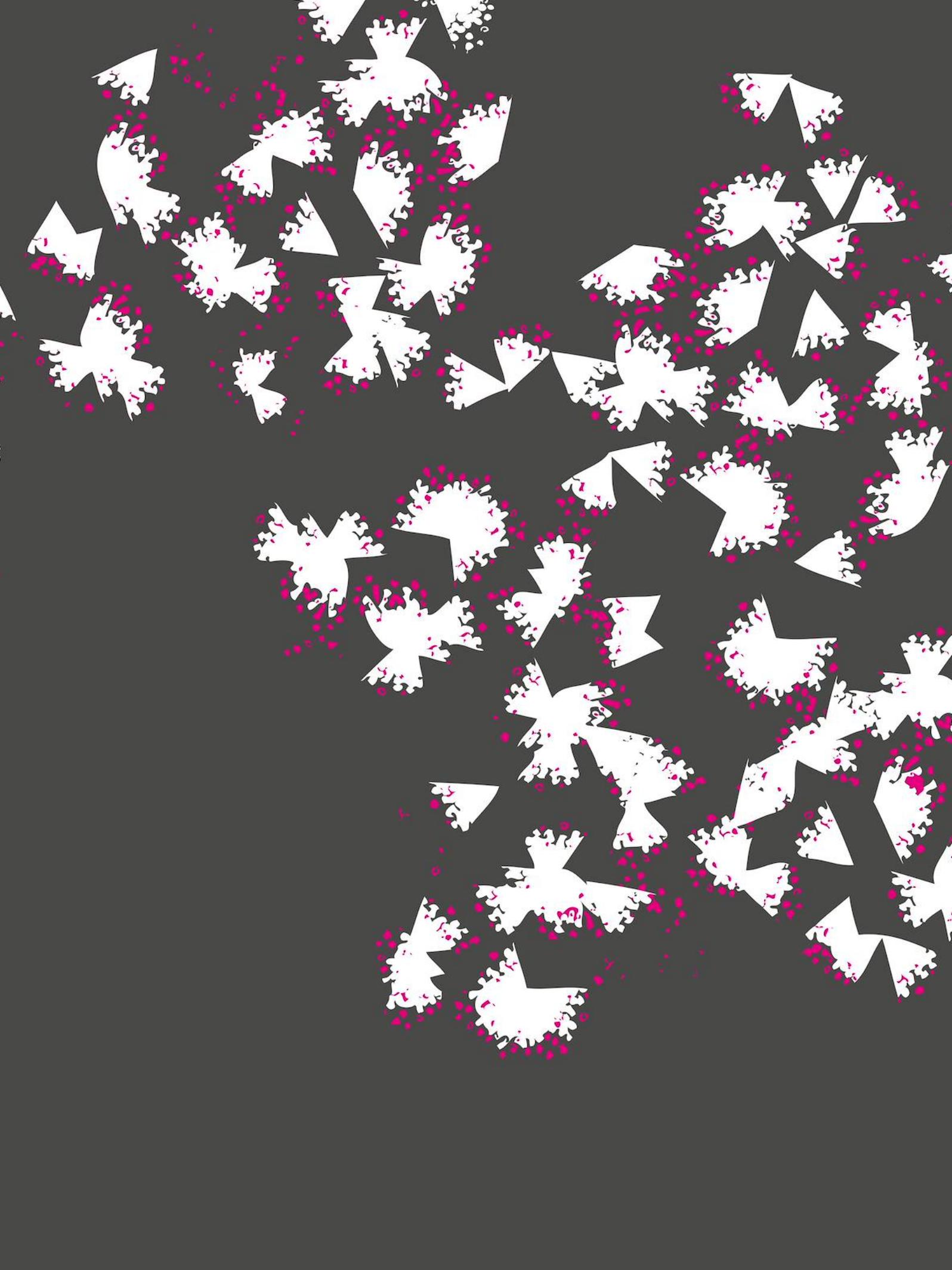
.....  
Prof. Dr. Ir. A. Veldkamp:  
(Rector Magnificus)

.....  
Ir. N. Boersma  
(Member of the Supervisory Board)

.....  
Drs. M. Roos  
(Vice-President of the Executive Board)

.....  
Ir. J. van Beurden  
(Member of the Supervisory Board)

.....  
Prof. Dr. Ing. M. Wessling  
(Member of the Supervisory Board)



# OTHER INFORMATION

## **LEGAL BASIS FOR APPROPRIATION OF THE RESULT**

Pursuant to article 2.9(4) of the Higher Education and Academic Research Act, the result for the reporting year has been charged to the university reserves. The negative single-entity result for the 2022 reporting year of €11.4 million is being withdrawn from the university's equity.

# INDEPENDENT AUDITOR'S REPORT

The auditor's report was issued for the Dutch version of the annual report. In case of discrepancies between the original text and the English translation, the Dutch version therefore prevails.