

UNIVERSITEIT TWENTE.

ACCELERATING THE UT'S PREPAREDNESS

Report of the SCENARIOS project on the possible long-term impacts of the Coronavirus on the University of Twente and recommendations to navigate through these impacts.

19 October 2020

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PREAMBLE BY THE EXECUTIVE BOARD

26 October 2020

Dear colleagues,

The Executive Board would like to thank the SCENARIOs Project Team, and all participants of the project. Our colleagues have invested considerable time in this project. They did so because they felt that this would help our university in times of turbulence, ambiguity, and uncertainty. This is highly appreciated.

This project has resulted in interesting and valuable recommendations. It is particularly valuable that these are backed by such a wide variety of colleagues. The Executive Board is therefore happy to adopt the report as it is. However, adopting it does not imply that the UT will implement all of its recommendations.

We are aware that Covid-19 is currently shaping up the Higher Education and Research landscape. We are convinced that we should adequately respond if we want to stay a significant factor in higher education and research. We simply cannot afford to sit still and relax. That means we should focus on our efforts to strengthen our Community and Leadership, to strengthen our Networks, and to contribute to a much more Digital University. This is very much in line with the SCENARIOs recommendations.

Yet, the one recommendation that stands out for us is the one on deprioritising activities. Even though we are proud of how our colleagues have responded to Covid, we acknowledge this has resulted in a working pressure that is simply too high. This was also confirmed in the well-being study that we published last week.

The Executive Board has therefore kicked-off a process of prioritization. In the upcoming weeks we will identify approximately ten UT-wide priorities for 2021. This means that we deprioritise many other activities for 2021. We will present the outcomes of this process before the end of November. All priorities will be rooted in either Shaping 2030 or the SCENARIOs project. Together they are the focus of our work in the Executive Board for the upcoming year.























































On behalf of the Executive Board,

Victor van der Chijs

MANAGEMENT SUMMARY

The main goal of this report is to contribute to the strategic and operational decisions the UT will have to make in the wake of the Coronavirus pandemic and the related changes in Dutch and global higher education. We present three overarching statements and a total of six specific recommendations based on foreseeable developments described in two scenarios. The report is based on workshops with UT stakeholders and document reviews.

There is a broad consensus that a turbulent future awaits us. The higher education environment will see drastic changes in, inter alia, internationalisation, digitalisation, societal demands, and privatisation. To face up to intense work pressure, universities will have to operate effectively and efficiently. Professionalism, value proposition, and rational budget allocations are essential.

OVERARCHING STATEMENTS	UT strategy dimensions			Scenario dimensions				
	Shaping Society	Shaping Connections	Shaping Individuals	Value proposition	Need for professionalism	Budget cuts		
	Investments should follow focus							
	Education should meet critical mass							
	Lowering work pressure demands choices							
	RECOMMENDATIONS							
		Build a strong, integral, and operational lifelong learning proposition						
		Advance the UT's digital transformation and assess its impact on long-term housing plans						
		Strengthen institutional partnerships and stakeholder involvement						
		Define the UT's 'ideal future international classroom'						
Professionalize our organisation by setting up a joint leadership programme for higher management and increase staff mobility and flexibility								
Appoint five professors with a focus on education								

1 INTRODUCTION

1.1 Goals

The UT launched its new mission, vision and strategy *Shaping 2030* in early 2020. Several months later, the world was hit by the Coronavirus. The impacts that the Coronavirus will have on the world and on higher education and research are unknown and unprecedented. Though challenging, the University of Twente also sees opportunities to fast forward its mission as the ultimate people-first university of technology, where we empower society through sustainable solutions. Therefore, the Executive Board initiated the SCENARIOS project. Its goals are (a) to structure the possible long-term impact of the Coronavirus on the UT, and (b) to determine if and how this will impact our *Shaping 2030* strategy, our value proposition and/or our primary processes.

1.2 Methodology

Due to the nature of the questions, a specific scenario planning approach was used, i.e. the *Oxford Scenario Planning*¹ method. This method is neither probabilistic nor based on historical data, which makes it very well suited for dealing with Turbulent, Uncertain, Novel and Ambiguous (TUNA) circumstances that affect the university's environment. We structured the project in three consecutive work packages, and included a set of workshops with internal stakeholders, a document review and interviews. In total, over [80 colleagues and students](#) contributed to the project via workshops and interviews. This allowed the team to approach the questions from different perspectives: education, research, internationalisation, finance, student, operations and overall university strategy (see [Appendix 2](#)). Our work [built on insights from various ongoing projects](#) that are focussed on the impact of the Coronavirus in the short and intermediate term, including *inter alia* the VSNU's four "Impact Groups".

1.3 Rationale

In this report we present two scenarios and a number of recommendations stemming from them. It is likely that several developments in the higher education environment will influence how every university must act. **Internationalisation** will be more volatile; **digitalisation** will grow; society and students will demand ever greater **accountability and transparency**; **private provision** is likely to become a competitive alternative to traditional public higher education. Both scenarios anticipate more turbulence and uncertainty in higher education and research. Therefore, whatever the ultimate future, the UT will face three inescapable developments which will require operational efficiency and agility:

- a) **A need to uphold academic and managerial professionalism within the organisation:** the UT's operations must evolve in line with the developments of the system, e.g. by having a shared construal of digital transformation in our educational provision;
- b) **A need to re-envision the university's value proposition** in light of the evolving relationships between higher education and the labour market. It is crucial that the UT secures a resilient position within its ecosystem particularly by showcasing a profile that is distinctive and fit for purpose. How the UT's thematic focus, its modalities of educational provision modalities, and its relevance will play out is bound to be revolutionized in the wake of the sweeping changes foreseen in the scenarios.
- c) **A reduction in available budget.** The workshops suggest that budget cuts are inevitable. Therefore, it is imperative to streamline the UT's operations and ensure its preparedness for a volatile future.

¹ Ramírez, R. and Wilkinson, A. (2016). Strategic Reframing: The Oxford Scenario Planning Approach. Oxford University Press

2 HIGHER EDUCATION IN 2030: TWO SCENARIOS

2.1 Scenario 1: Cooperating for survival and quality

Anno 2030

The aftermath of the Coronavirus led to **±15-20% cuts in public funding of higher education** in most OECD countries. The Dutch higher education system was hit relatively hard. The smartest and most entrepreneurial universities **re-envisioned their roles** in society. They joined forces in **networks or federations of universities**. They were actively encouraged to do so by successive Dutch governments and the European Commission. Mass digitalisation in both education and research eased this development. Small-scale experiments with micro-credentials proved successful, leading to more large-scale and global cooperation between universities. Networks provide researchers with **pooled complementary research infrastructures**. Hence, it is the degree of complementarity a network can demonstrate that defines its quality. Also for this reason, access to one or other network effectively shapes the reputation and position of the constituent universities.

Some of these networks are gradually becoming global university hub-spoke systems built around a primary global higher education powerhouse. By 2030, these networks are referred to as **Global University Networks (GUN)**. Their hubs are usually US- or China-based universities amongst the top-20 in prominent global rankings. Their prestige and their budgetary power make them attractive partners for smaller universities from across the world. In GUNs, most of the research and graduate education **takes place at the prestigious hub universities**, allowing for better economies of scale within the network. On the other hand, the subordinate spoke universities turned out to be excellent places particularly for undergraduate education, F2F activities, and ensuring links with regional ecosystems. In general, spoke universities focus on education. However, thanks to their availability of specific capacities and infrastructure some spokes universities are known for their unique research, which is recognized by a label of quality. Western European universities that are members of GUNs serve as **cathedrals for their regions**. Their close affiliation with the hub university has become a strong asset.

But not all European university joined GUNs. By 2030 dozens of other European universities have successfully built more balanced small-scale alliances known as **Proxim University Networks (PUN)**. Their raison d'être is often determined by proximity or by a complementary set of education and research capacities. Most PUNs have a dedicated research profile and invest according to joint roadmaps. Some

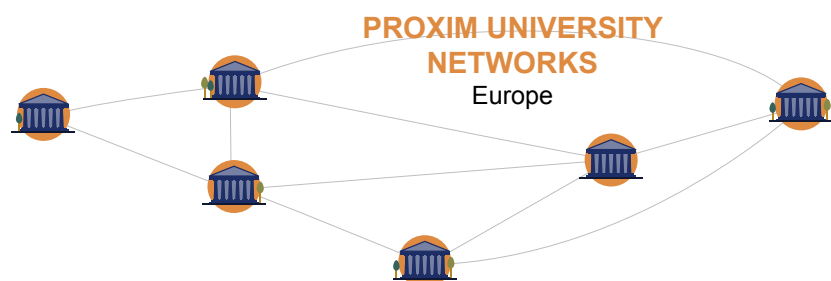
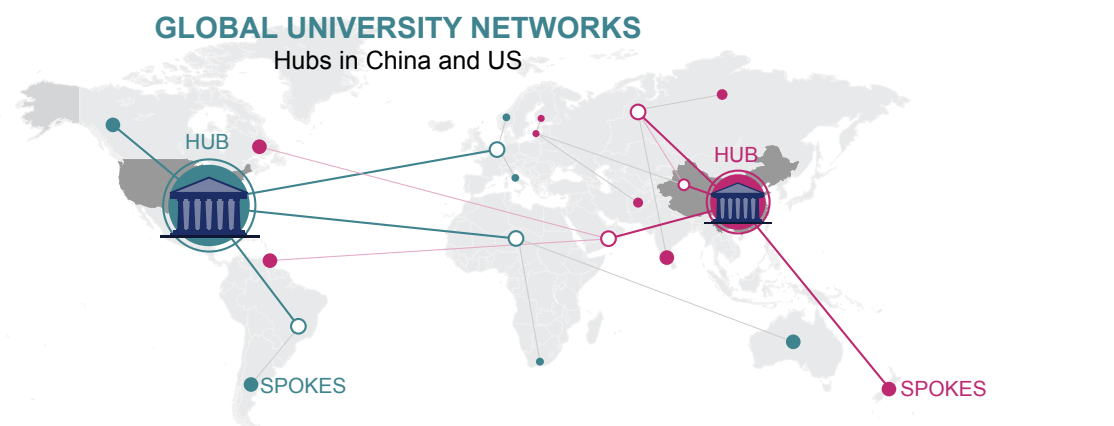
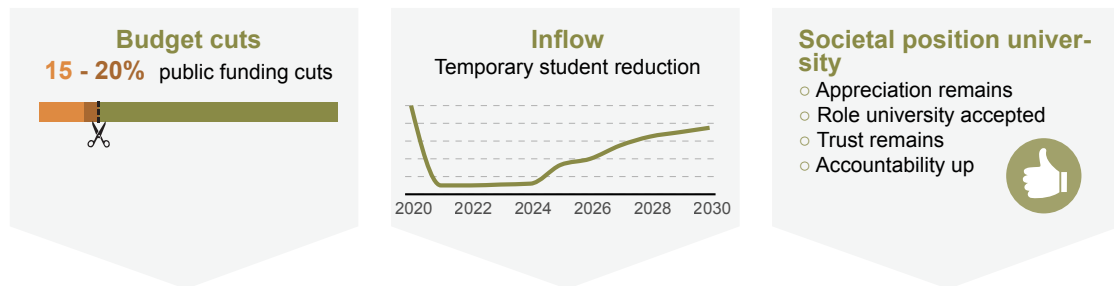
of these balanced networks try to use their joint power to become global and prestigious higher education powerhouses themselves and make it to the top-20 in global rankings. Other PUNs have a regional focus. They have fully adopted the smart specialisation strategies of their own regions or and build bridges with regional and local educational partners. These type of universities have also become regional cathedrals for their host regions, which consider them exceptional assets.

Inflow of staff and students from Africa and Asia dropped significantly. Only by 2024, incoming mobility from non-EEA countries saw gradual growth, but it never again reached its pre-2020 levels. By 2030, both **student and staff mobility has stabilised**, but confined almost entirely within networks or the new university alliances.

Looking back at the 2020s' decade, it is apparent that the Coronavirus caused not only budget cuts, but also **massive advancements in digitalisation**, with enormous impacts on both education and research. Between 2020 and 2030, access to networks, to data in the European Open Science Cloud (EOSC), and to High-Performance Computing (HPC) capacity became defining assets of research universities and their researchers. Thus, **acquiring data and AI skills** beside content related-knowledge is equally essential for both researchers as well as teachers.

In 2030, Society still **appreciates the value of academic liberty**, broad access, social responsibility, and institutional autonomy. Although funding has decreased, people have continued to accept the roles of universities in society. They are appreciated for educating both professionals and scientists. The value propositions of individual universities are largely based on their networks, and the graduate and post-graduate education that they can offer as part of these networks.

But the content of education, research, and institutional cooperation changed dramatically because universities are held accountable for their contributions to public welfare more than before.



2.2 Scenario 2: Industry-driven higher education

Anno 2030

The aftermath of the Coronavirus led to **±30-40% public funding cuts** in higher education budgets in most OECD countries. The Dutch higher education system was hit very hard. Between 2020 and 2030, the only priority of European governments was to get the economy back on track. Research funding is down in volumes and up the Technology Readiness Levels (TRL) ladder. By 2030, blue skies research (where "real-world" applications are not immediately apparent), is hardly funded. The very significant budget cuts caused both student and staff numbers and **student and staff mobility to decline**. This was reinforced by health and safety concerns induced by the coronavirus and reckless European responses to the virus, exceptional Chinese and Indian investments in their domestic higher education and research, and huge wins by xenophobe political parties in the Dutch parliamentary elections. By 2030, inflow has not yet recovered.

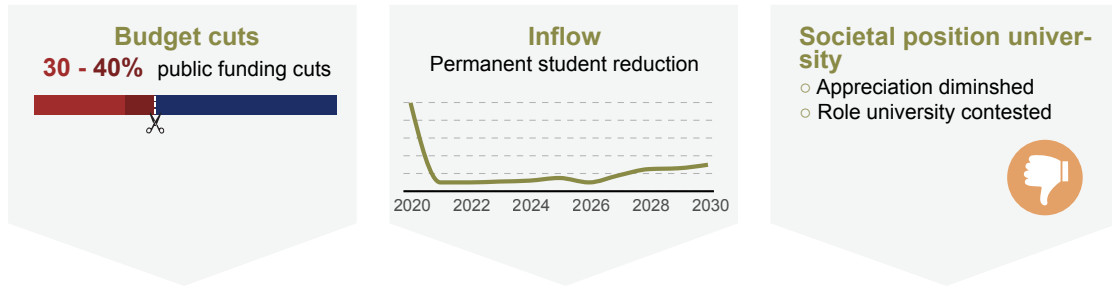
By 2030, **Society lost interest in the core academic values**. Access to higher education is still deemed relevant but values such as institutional autonomy and academic freedom are now considered irrelevant all over Europe. The general apathy regarding universities' academic value combined with budget cuts contributed to a historic restructuring in Dutch higher education. By 2025 The Netherlands abandoned its binary system. Moreover, budget cuts meant a shakeout of about 30% among Dutch universities between 2022 and 2030. The universities that did survive were those that saw the challenges coming and responded effectively. They did so by investing in close ties with society, in their **contract research capacities**, **lifelong learning**, and in educational innovation. In that way, they learned to generate cash flows and to make themselves indispensable in addressing societal challenges and contributing to economic growth.

Most of the research of the remaining universities takes place in **Joint Institutes of Technology (JIT)** with industry and other stakeholders. Governance of a JIT is largely industry-driven. Their research agendas are strongly aligned with needs of the industry, particularly in the region, and supported by (regional) governments. Although research activities by a JIT cover the whole TRL ladder, **universities perform mostly contract research** at the higher levels. This is due particularly to companies' short to medium-term horizon and limited R&D budgets. Like all research conducted in 2030, contract

research, too, is very data intensive. The positions that individual universities have in a JIT is largely defined by the data that they can bring to the IoT and the **data skills of their research staff**.

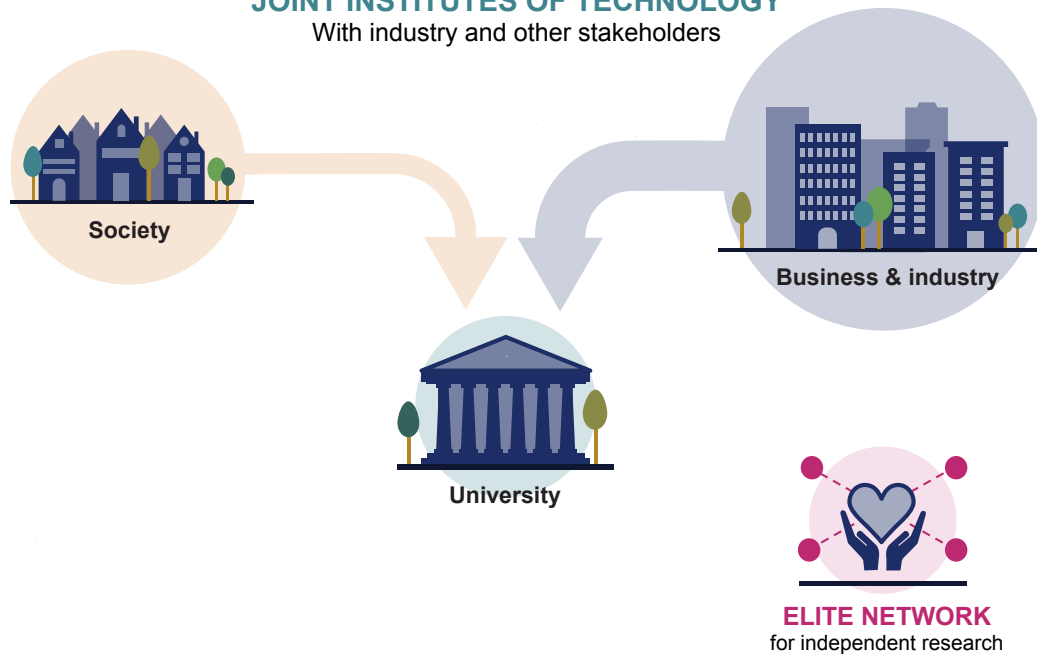
The university has become an integral part of the business system. The universities' value proposition is built primarily around the contract research of their JIT and their provision of scientific and professional education. By 2030, government and industry demand universities produce "**adaptive graduates**" and provide options for "**lifelong upskilling**". Large businesses hold sway. They evaluate student performance on-the-job and they define the learning outcomes. Ultimately, it is they who decide whether a university survives or falls into irrelevance. The distinction between learning and working disappears. Learners and industry determine what, when and how students learn. Therefore, higher education institutions must develop their entire offer according to market needs. In addition, universities cover Master education, particular modules in Bachelor programmes, or specialised fields of education. They do so together with big commercial learning platforms powered by some big publishers and Big Tech. So, by 2030, the remaining universities play important roles in matching the supply of skills and competences with the demand of individual businesses.

In response a new **elite network of top researchers** is slowly emerging by 2030. Forming independent research alliances with the support of **private charitable foundations**, this allows for ground-breaking and creative research to be organised outside the industry pull. That research largely focuses on **climate change, global health and poverty reduction**. The limited government-funded blue skies research is increasingly coordinated by these elite networks.



JOINT INSTITUTES OF TECHNOLOGY

With industry and other stakeholders



3 RECOMMENDATION DECISIONS FOR THE UT

This chapter presents a set of recommendations for the University of Twente based on the two scenarios resulting from the workshops, interviews, and policy documents, as described in [section 1.1](#) and [Appendix 2](#) (methodology). The SCENARIOS team clustered this diverse input into a manageable number of recommendations and mapped them against the three core dimensions of the UT's strategy *Shaping 2030*, namely "shaping society", "shaping connections" and "shaping individuals".

3.1 Preamble: choices to improve academic excellence, job satisfaction, and efficiency

All agree that at the UT, just like at other universities, work pressure is too high. The coronavirus pandemic made this problem even more conspicuous. Excessive work pressure is undesirable and damages our organization. Not only it affects too many of our colleagues, but it also threatens the UT's resilience and its innovative capacity. The latter are vital to prevent further increases in work pressure if we face unexpected events such as corona. Therefore, reducing work pressure is of immediate concern and must be addressed convincingly. **The UT needs to learn to prioritize its activities.** What to pursue and what to discontinue should be clear. It should be based on the impact of our research and education and underpinned by a keen awareness of (and alignment with) the needs and values of those who benefit from our services.

Investments in new research capacity must strengthen the university academically, strategically and operationally. They should reflect the UT's research strategy whilst focussing particularly on MedTech, smart materials and sustainable environment, and intelligent devices – particularly AI. Added value and matching to the focus areas should be indisputable. The UT's mission (people-first, HTHT), vision (fair, digital and sustainable), and mindset (open, inclusive, and entrepreneurial) should be the prime guides in evaluating and supporting new activities.

Staff's efforts to innovate and deliver high quality education must be balanced by a minimal critical mass of students in educational programmes. It is primarily the number and skills of our graduates that determines the impact of our education. Thus, new Master programmes should be continued only if they achieve at least an intake of 40 students within three years. Existing Masters must also meet this requirement before the academic year 2024/25.

To reduce work pressure, we should dare to stop activities. The Executive Board, faculties, institutes and service departments should indicate explicitly in each Shaping Dialogue what activities and ambitions they prioritize. Articulating which activities have lower priority – or could even be terminated in due course – will help reduce work pressure and stress in the workplace. It will demonstrate the UT's commitment to being a people's first university where staff wellbeing and productivity go hand in hand.

3.2 Specific recommendations to improve *Shaping Society*

Shaping 2030 said the following on our relations with Society, and how we should fully mobilise our strengths around key societal challenges.

The university combines (cross-)disciplinary excellence with an explicit commitment to impacting society. We are recognised for our ability to bridge societal and academic challenges: societal challenges are appropriated in our academic pursuits, and we develop academic quests into creative, disruptive research insights that can truly improve the long-term well-being of society. The United Nations' Sustainable Development Goals (SDGs) are the reference point for our own sustainable development.

In keeping with this strategic goal, the SCENARIOS team makes the following recommendations.

3.2.1 Develop a lifelong learning proposition before 2023

Shaping 2030 calls explicitly for a strong, integral, and operational lifelong learning proposition for the UT. Both scenarios underpin the necessity of a robust and fully operational lifelong learning proposition. We recommend building it within two years. This could ideally be done by faculties, *Shaping Expert Group on Innovation of Education*, and service departments. As far as possible, the structure and administration should be centralized and professionalized. The *Shaping Expert Group Innovation of Education* should lead the process.

The scenarios showed the power and necessity of strong collaborations. This emphasizes also our *Shaping2030* ambition to not only work on a lifelong learning proposition, but to do so in collaboration with regional educational partners. To strengthen the Twente region, we recommend building at least two joint master programmes for lifelong learners with Saxion UAS before 2023. Initial exploration might be done in one of our [focus areas](#) (which ideally are also our challenge-based research domains).

Labour market demands for capable graduates in the fields of engineering and computing science are also considerations to be taken into account when setting up these joint programmes.

Based on the workshops it is safe to say that the Shaping Society part of *Shaping 2030* is a valid proposition today as it was prior to the coronavirus pandemic. Realising our Shaping Society ambitions for 2023 is crucial if the UT wants to be well-equipped for the 2030 scenarios. Accountability and strong ties with society are key. If acted upon, the recommendations grouped under "Shaping Society" will bolster the effectiveness of the UT's operations in several ways. For example, a clear demand-driven and understandable [thematic focus](#), identified together with the UT's core partners and leading to thematic prioritization in teaching and research, will make the university more effective. It will allow the UT to remain visibly relevant in the long term – both to society and to potential partners. It will make the UT a coveted partner in university and business networks. It will ensure the UT remains an attractive study destination for international students

3.2.2 Define the UT's 'ideal future international classroom'

In both scenarios internationalisation in higher education will change very significantly: mobility will likely decline, the composition of the student community will change, digitalisation will affect the modus of education and networks will play a larger role in shaping the content and skills taught in curricula. If the UT wants to maintain a reputation as an internationally attractive university in the long term, curricula need to be adapted and virtual mobility boosted in the medium term. We suggest that the UT proactively prepares by jointly developing a common understanding of how to implement the UT's "ideal future international classroom". This common understanding should include a clear indication on the balance between internationalisation at home, virtual mobility, and internationalised educational content – starting from the assumption that physical mobility will

dwindle. This should be a bottom-up process, with boundary conditions set by the EB and ready before 2022.

3.3 Specific recommendations to improve *Shaping Connections*

Shaping 2030 said the following about how we transform into a network of networks, teaming up with partners in science and society.

We can realise our ambitions only in close collaboration with our partners. (...) Our campus is a vibrant hub, where staff, students and stakeholders meet, brainstorm and experiment to solve today's problems together. (...). Digitalisation enables us to involve large numbers of citizens in new citizen science programmes, to ensure better access to research data, and to reach new potential students and colleagues. (...)

Shaping connections does not only mean inviting others to our campus; it also means stepping out and engaging with people and organisations on their own turf. (...) We encourage researchers, teachers, support staff and students to actively participate in off-campus connections with regional, national and international partners, either digitally or physically. We will expand and deepen our partnerships

This strategic goal is also reflected in the Dutch universities' motto in corona times: "On campus, if we can | Online, because we can". With this in mind, the SCENARIOS team recommends to:

3.3.1 Strengthen institutional partnerships and stakeholder involvement

Both scenarios clearly indicate that proximity, ecosystems, and partnerships are key assets for any university in 2030. At the institutional level we have several regional, national and international partnerships: *inter alia* the start-up of our three satellite locations in Zwolle, Apeldoorn and Amsterdam², and the ECIU University with our European ECIU partners³. Giving substance to such cooperation agreements will be existential in the new decade. Moreover, the UT is determined to strengthen its region by collaborating with other educational and research partners in Twente and, more broadly, extending towards Germany. Close cooperation with Saxion is a means to do that.

² This concerns the work done by DSI and EEMCS in Apeldoorn, by SP, FPC, Novel-T, and Designlab in Zwolle, and by three faculties in Amsterdam.

³ European Consortium of Innovative Universities (ECIU):
<https://www.utwente.nl/en/organisation/collaboration/eciu/>

We recommend that our educational programmes should consult regional representatives, including where possible local SMEs *as well as* known industry partners. That also goes for alumni. Alumni can contribute to the UT's position as a competitive employer, its lifelong learning proposition, its business development activities, and its portfolio of challenges. We recommend speeding up the activities to strengthen our alumni network in close collaboration with faculties, and thus benefit from the expertise and connections this network might bring.

3.3.2 Critically assess LTSH and ensure integration with the UT's digital transformation

Both long-term scenarios suggest that approaches to real estate might need to change significantly. After all, student populations will also visibly change, including in the way they learn. We recommend taking immediate steps to assess whether the current LTSH needs to be revised – including investments in further digital infrastructure in line with a new vision on the UT's digital transformation.

The “Shaping Connections” strategic goal is still commendable. However, the changes prompted by the coronavirus pandemic are unlikely to go away any time soon. The role of the UT campus will evolve in line with the “On campus, *if we can*, online *because we can*” mind-set. From this perspective, the UT's operational effectiveness is strengthened by developing a [strategy on digitalization](#) grounded in a common understanding of it. A detailed analysis and revision of our housing and infrastructure plans that takes stock of digital needs to ensure the UT remains a sustainable and flexible organisation supports this.

Regarding the latter, The Coronavirus forced us to speed up in our journey of digitalization, as our education quickly had to become digitally available. Several of our *Shaping 2030* ambitions also have digitalization components. These elements should be combined in a UT-wide view and concerted action plan on digital transformation, first focused on education but ultimately on all of the UT's operations. Future investments in housing should reflect this digital transformation, also in keeping with the *Shaping 2030* call to be a sustainable organisation.

3.4 Specific recommendations to improve *Shaping Individuals*

In keeping with what *Shaping 2030* said about how we efficiently navigate the changing academic landscape and act as a testing ground for innovations, the SCENARIOS team makes the following recommendations.

(...) Individual learning continues to be more spread out over time and space. (...) We go beyond established work structures and individual fields of expertise. We continuously adapt and refine our educational reward system, which includes both traditional diplomas and learning credits. (...) Our staff, supporting staff and students are owners of their learning (...). We are entrepreneurial, open and inclusive, and cultivate these same courageous qualities in our education.

3.4.1 Set up leadership programmes for higher management, flexibility and staff mobility

The Coronavirus crisis showed that decisiveness, ownership, communication and building trust are essential aspects of strong leadership. Though the UT is seldom faced with crises, the world of higher education is always turbulent. Navigating and pioneering in this world, implementing a new *Shaping 2030* way of working and kickstarting the digital transformation of the UT require more calibration in leadership styles of the UT's higher management (faculty and institute boards, MTs of the service departments, EB). We therefore recommend that higher management takes a joint leadership course to make it easier to come to concerted actions when needed. In addition to that, rigid staff positions make us vulnerable for future developments. It is therefore recommended that all of the UT staff contracts should allow more flexibility, i.e. in terms of internal transition between units and in terms of combined positions for both WP and OBP.

3.4.2 Appoint five professors with a focus on education

The scenarios, in particular Scenario 2, foresee that a university's educational capabilities will be even more important in the future than they are today. At UT our staff are often both researcher and teacher. This is one of the defining elements of a university. Yet, through the *Shaping Expert Group Teams & Individuals*, as well as *Erkennen en waarderen* ("recognize and value") we start to ensure that teaching is better appreciated and enables viable career paths. This is crucial to strengthening the UT's educational footprint. We recommend appointing at least five professors with a focus on education before 2022 connected to the UT's thematic foci and/or its challenge-based research. Recruitment should be based primarily on educational capacities and track record. Recent experiences in ITC will offer inspiration.

The university's operational effectiveness is also boosted by measures aimed at *Shaping Individuals*. For example, the proposed joint leadership programme for higher management has the potential to smooth out decision-making in uncanny times. The coronavirus pandemic uncovered the need to adapt decision making processes and styles to produce concerted actions in completely new contexts.

Similarly, while talk of internal (position) flexibility might be "old news", without question the scale of change the scenarios foresee will require staff to adapt, learn, and change positions and roles far more than before. This is necessary to enable the university to continue its path of success and maintain effective operations in an uncharted context.

APPENDIX 1: ABBREVIATIONS

Acronym/abbreviation	Meaning
AI	Artificial Intelligence
CVB-D	College van Bestuur-Decanen
EB	Executive Board
ECIU	European Consortium of Innovative Universities
EEA	European Economic Area
EOSC	European Open Science Cloud
GUN	Global University Network
HPC	High-Performance Computing
HR	Human Resources
ITC	Faculty of Geo-Information Science and Earth Observation
JIT	Joint Institutes of Technology
LISA	Library, ICT-Services & Archive
LLL	Lifelong learning
LTHP	Long Term Housing Plan [see LTSH]
LTSH	Lange Termijn Strategisch Huisvestingsplan
OECD	Organisation for Economic Co-operation and Development
OBP	Ondersteunend- en Beheerspersoneel
PIA	Platform of International Affairs
PLD	Learning Development Centre
PUN	Proxim University Network
PwC	PricewaterhouseCoopers
Q&A	Question and Answer
R&D	Research and Development
SBD	Strategic Business Development
SEG	Shaping Expert Group
SMART	Specific Measurable Achievable Relevant Time-bound
TRL	Technology Readiness Level
UAS	University of Applied Sciences
UCB	Universitaire Commissie Bedrijfsvoering
UC-Ow	Universitaire Commissie Onderwijs
UC-Oz	Universitaire Commissie Onderzoek
UT	Universiteit Twente
VSNU	Vereniging van Universiteiten
VU	Vrije Universiteit Amsterdam
WP	Wetenschappelijk Personeel

APPENDIX 2: METHODOLOGY

The SCENARIOS project was structured in 3 consecutive work packages. In the first, the project team identified the drivers of change by means of a set of interviews with experts from various fields within the UT. A first round of workshops was held to then assess how the Coronavirus might affect the direction and weight of 140 identified drivers of change. Using the Mentimeter interactive software, participants were asked to vote on the most important drivers. The impact of the Coronavirus on the resulting top 5-7 drivers of change (depending on time) was then discussed. This was done from different perspectives, based on the participants of the workshop: education by members of the UC-Ow, research by the UC-Oz, internationalisation by PIA, finance by the business controllers, student perspective by the students of the Student Union, and overall perspective by the CvB-D and the SCENARIOS project team. The perspective of digitalisation was discussed within the running project 'Digitalisation Trend Radar' of LISA.

In the second work package the goal was to build scenarios⁴. The value proposition, mobility, finances and digitalisation were considered key drivers of change. As these drivers are not necessarily independent⁵, a set of 7 challenging stories were developed which made different combinations of these drivers. For this, the project team was also inspired by:

- A HolonIQ study⁶ 'Education in 2030: Five scenarios for the future of learning and talent' (2018).
- A PwC study⁷ 'Workforce of the future: the competing forces shaping 2030' (2018).

During sessions with the students and with the project team the stories were discussed, and their usefulness and distinctiveness were assessed. A restructuring resulted in two distinctive scenarios for higher education in 2030.

In a second series of workshops, the CvB-D, UC-Ow, UCB, UC-Oz and Business Controllers were asked to reflect on the impact of each scenario on the UT. Then each individual participant was invited to provide specific outcomes for their own faculty and/or portfolio. This was done in terms of strengths, vulnerabilities and possible recommendations⁸.

The third and final stage of the SCENARIOS project was to write the report with final recommendations to the Executive Board. This was primarily done by a 3-day pressure cooker with the writing team. During this pressure cooker a final finetuning of the scenarios along an induced structure was done. Based on a further analysis and elaboration of the strengths and vulnerabilities that result from these scenarios, the suggested recommendation decisions were strengthened in the form of SMART-formulated recommendations for the short and intermediate term. During the pressure cooker the other project team members were invited for critical Q&A sessions to prevent tunnel-vision and unreasonable self-validation. A session with Shaping2030 experts helped align the project results with the UT's new mission, vision and strategy. The 80% version of the report after the pressure cooker was further finetuned and edited during the summer.

⁴ A scenario is a plausible (note: we don't use the word probable) and coherent set of developments in the context of the UT, that may directly or indirectly impact the UT.

⁵ On p117 in *Strategic Reframing: The Oxford Scenario Planning Approach* this is called an inductive method. As opposed to a deductive method where the drivers are independent and with the framework of the scenario then often being a 2x2 matrix.

⁶ <https://www.holoniq.com/wp-content/uploads/2020/01/HolonIQ-Education-in-2030.pdf>

⁷ <https://www.pwc.com/gx/en/services/people-organisation/workforce-of-the-future/workforce-of-the-future-the-competing-forces-shaping-2030-pwc.pdf>

⁸ Recommendations respond to identified strengths and/or address established vulnerabilities in line with Shaping2030 and/or with minimal risks and/or guaranteed pay-off and/or with minimal effort (either in terms of costs, time or people).

APPENDIX 3: PARTICIPANTS IN THE SCENARIO WORKSHOPS

Wouter	Assink	Jan-Laurens	Laonder
Lisa	Aukema	Nicole	Letteboer
Ciano	Aydin	Marloes	Letteboer
Olof	Baltus	Tom	Loran
Runchi	Banal	Anne Wil	Lucas
Jaap	Beernink	Stephan	Maathuis
Nieck	Benes	Han	Oeloff
Jana	Bergmann	Bas	Olde Hampink
Sanne	Berns	Marthe	Oldenhof
Miranda	Bohnke	Thom	Palstra
Inge	Boomkamp	Janneke	Rademaker
Maurice	Bouwens	Guus	Rijnders
Mirjam	Bult	Jeroen	Rouwkema
Tim	Bussmann	Saikiran	Samudrala
Steven	De Jong	Christy	Schoonheijt
Isa	De Ruiters	Roy	Schrijver
Mathijs	De Ruiters	Jan	Schut
Daniël	De Vries	Ruud	Slot
Geert	Dewulf	Wiendelt	Steenbergen
Karin	Dirksen	Marijke	Stehouwer
Marjolein	Dohmen	Alfred	Stein
Jelle	Ferwerda	Haico	Te Kulve
Pim	Fij	Lisa	Timmermans
Derek Jan	Fikkers	Ratna	Toering
Ellen	Giebels	Theo	Toonen
Mariska	Giesen	Renee	Torenvliet
Lucia	Hans	Albert	Van den Berg
Jennifer	Herek	Victor	Van der Chijs
Stephanie	Hessing	Freek	Van der Meer
Stephanie	Hessing	Stephan	Van Gils
Janneke	Hoedemaekers	Inge	Van Haare
Myrna	Hofman	Maarten	Van Steen
Wouter	Hottenhuis	Mark	Van Vuuren
Lakshna	Kalpoe	Dennis	Van Zijl
Marion	Kamp	Nico	Verdonschot
Atila	Kerpisci	Mike	Verkouter
Marc	Knoop	Mascha	Weijers
Joost	Kok	Suanne	Wichman
Roy	Kolkman	Fred	Wolters
Bart	Koopmans	Lisette	Woud
David	Korringa		