



# Long-Term Strategic Housing Plan 2023 - 2032

## University of Twente

Public version

MARCH 2023

PROJECTNUMBER: B003064

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# 01 INTRODUCTION

# 01 INTRODUCTION

## 01.01 Explanation of decision-making process

You are looking at the new Long-Term Strategic Housing Plan (LTSH) 2023-2032 (March 2023). The policy plan with associated financial framework was adopted, as a final draft, by the UT Executive Board in December 2022 (as a intended decision). The Supervisory Board subsequently endorsed the plan subject to approval by the University Council (UC). The UC subsequently did approve the LTSH in December in terms of projects for 2023 in line with agreement on the UT budget for 2023. In doing so, the UC indicated that, before being able to give consent to the entire LTSH, two other policy documents should first be submitted to the UC for consent. These were two policy documents related to the LTSH that had not yet been finalised by December 2022. These were the following policy documents: 'Vision on Teaching & Learning' and 'Hybrid Way of Working'. UC consent was obtained on both these policy documents in February 2023, allowing final decision-making on the LTSH 2023-2032 to take place (May/June 2023).

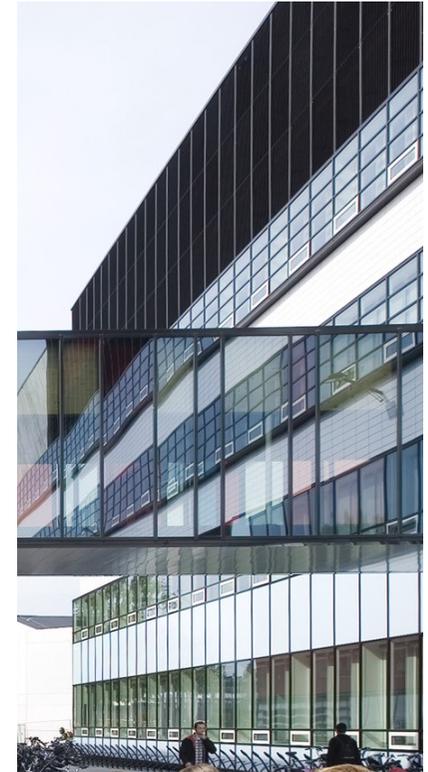
The following briefly explains how these policy documents have been incorporated into the LTSH. In particular, the Vision on Learning & Teaching relates to a number of principles in Chapter 2 ('Frameworks and principles', section 02.04), in Chapter 3 ('Analysis of current space supply-use', section 03.04) and finally in Chapter 4 ('Long-term housing needs', section 04.02). At the time the LTSH was written, the Vision on Learning & Teaching and Hybrid Way of Working, both in the process of being developed, were taken into account as best as possible. Nevertheless, the separate consideration of the mentioned two policy documents has provided additional insights. The content of the paragraphs mentioned above has been revisited on this. In particular, the topic of blended learning has been given more emphasis in the Vision on Learning &

Teaching. Real estate planning for the central education facilities will therefore take more account of a larger digital component in education. The outcome of the policy discussion regarding Hybrid Way of Working has particularly affected a number of policy frameworks in the LTSH, in particular described in Chapter 2 ('Frameworks and principles', section 02.04) and in Chapter 4 ('Long-term housing needs', section 04.04). In particular, the adjustment concerns the establishment and application of the so-called flex factor for workplaces in office spaces. It has been clarified that UT aims for customisation for the units on the basis of 'activity-based working'. At UT level, the ambition has been expressed to eventually arrive at a flex factor < 1.0 workplace per FTE.

Furthermore, the current situation is now beyond that described in the LTSH. In March 2023, it was decided to carry out the new building project the Cube for a substantially higher amount than budgeted in the LTSH. This was due to a disappointing tender result, reflecting the current situation and price trends in construction. As a result, the Kleinhorst project has been put 'on hold' for the time being. This increase in the budget for the Cube and, as a result, putting project the Kleinhorst 'on hold', have not been reflected in this version of the LTSH. The new Annual Plan LTSH for 2024 will further detail these adjustments along with the other updates. The financial frameworks presented in this LTSH therefore remain the same (compared to the December version). The total addition in square metres will incidentally decrease by 2,500 m<sup>2</sup> fno (functional useful area) after the aforementioned adjustment. This decrease will also be further processed in the Annual Plan 2024.

## 01.02 Background and motive

The University of Twente (hereinafter: UT) prides itself on being an



### 'Hybrid working' and 'blended education'

Since the words 'hybrid' and 'blended' are subject to different interpretations, they deserve clarification. Within the framework of this LTSH, the UT uses 'hybrid' to mean a combination of physical and digital participation (e.g. in meetings or at lectures). The word 'blended' has to do with the educational programme, and means that there is a mix of education on the campus and online. In this regard the UT expects the 'streaming and recording' of course materials to expand.

enterprising university that continuously anticipates change and quickly and effectively responds to it. Its credo is *High Tech, Human Touch*. The UT is an incubator of extraordinary ideas. Its teaching staff and professors are in constant interaction with authorities, businesses and knowledge institutes to generate ground-breaking research, and the campus forms an ecosystem for hundreds of spin-off companies. The green campus is an important instrument for the academic and personal growth of its students. Attractive accommodation for research, education and students helps the UT to attract and facilitate students, to continuously renew the education it provides, and to ensure that UT staff can work efficiently and effectively.

The UT also wants its campus to be a place where students, staff and visitors can meet one another and have innovative learning experiences. A place with space for entrepreneurship, new spin-offs, and joint ventures. A university that is inclusive and open, and where community comes first (see section 02.01). The UT has described these aims and challenges in *Shaping2030*. The ‘challenges’ in *Shaping2030* form the guiding principle for its education and research, in which the university is a front runner in the provision of unique programmes that combine the professional fields that society needs most. In doing so, the UT contributes to the innovation power of the region. This is further strengthened by its involvement in the Kennispark that links the UT campus with the Business and Science Park.

The UT must also anticipate the fact that the way a physical university generates added value is going to change. The digital transformation of society has also been reflected in changed forms of education and work, and this has thrown an entirely new light on

university education and research. Faced with this digitalization we have simultaneously seen the growing importance of community development – on campus, in the Kennispark, and elsewhere.

To make the campus future-proof, both quantitatively (in m<sup>2</sup>) and qualitatively, and to be able to support this aim with timely and well-founded property initiatives, the UT periodically draws up a long-term strategic property plan (*lange termijn strategisch huisvestingsplan*, hereinafter: LTSH) that serves as a framework for decisions on large-scale investment projects. The present 10-year LTSH defines this framework for the years 2023-2032 (hereinafter: LTSH 2032).

The main reasons for deciding to revise LTSH 2030 are that several of its first principles are no longer current; many of the plan’s intended developments have already been either achieved or overtaken by time. One of the most important reasons is the growth that the university is currently experiencing in terms of staff numbers and student numbers, and the resulting shortage of educational and research facilities. However, the university’s leisure facilities (Sports & Culture) are below par, in both quantitative and qualitative terms. As of 1 September 2022, about 13,000 students were registered with the UT. This number is already above that given in LTSH 2030 (for long-term property requirements in its core real estate portfolio, LTSH 2030 had assumed short-term growth and flattening to 12,000 students by 2030). Staff numbers have also grown faster than expected; as of 1 September 2022 this represented about 3,500 FTE. This, too, is above the amount given in LTSH 2030 (for long-term property requirements in its core real estate portfolio, LTSH 2030 had assumed about 3,300 FTE by 2030). All in all, then, the university is growing faster than had been foreseen in 2019. The principal



causes of this growth are the rising numbers of non-EU students and the Netherlands' sector plans ((see section 02.20). The COVID-19 period also prompted a new relationship between at-home and on-campus study and blended learning. In all probability this has affected the presence of staff and students on campus, and how its facilities are used. Finally, the UT's *Shaping2030* strategy also formed an important reason for preparing LTSH 2032. Chapter 2 describes which of these relationships have been included in the new LTSH 2032 as a result.

### 01.03 A brief look back at LTSH 2030

An important part of LTSH 2030 concerned the renovation of the Langezijds building. This renovation began in 2021 and is expected to continue until early 2023, after which it will be taken into use by the ITC faculty. A substantial departure from LTSH 2030 is the Kop van Langezijds; it had been intended to house Robotica here, but this plan has been dropped. In the future, Robotica will be housed with others in Carré and the Westhorst. The future use of Kop van Langezijds is currently under review; the broad direction being considered is as a general space open to use by several faculties, increasing exposure for its users. The Kop van Langezijds will be finished in the same style as the ITC and will deliver about 1,500 m<sup>2</sup> UFA (usable floor area) of multifunctional space. Another intended addition to the portfolio was the expansion of the ET workspace at the Horstring. At the end of 2022 work will begin on the construction of an integrated workspace already known as the 'Cube'. This will be delivered by late 2023 at the earliest.

The previous LTSH also devoted explicit attention to existing housing stock in the form of plans for large-scale renovation and improvements to the sustainability of part of the property portfolio,

including the Drienerburght buildings, the Paviljoen, the Citadel and the Boerderij. The renovation of Drienerburght has now been completed; University College Twente (UCT) has been housed here since the end of 2020, and all UCT programmes are provided from the Drienerburght. Besides spaces for education, projects and study, there is also housing for UCT students. Renovation of the Boerderij has begun and is expected to continue until early 2023. The Boerderij (the former location of the Faculty Club) will be renovated and become a new Contact Centre (mostly for M&C and CES). This will be a location where Dutch and international students, and in the future also PhDs, can bring their queries (including practical issues). The Contact Centre will also be a meeting place for students, which is a good fit with the UT's *Shaping2030* ambitions to support an open, inclusive and unifying mindset. Renovation of the Citadel was completed in the third quarter of 2022. CES, LISA, SBD and EEMCS will be housed there. The renovation plans for the Paviljoen are almost complete. Work is expected to begin in late 2022 or early 2023. During the renovation work CFM, the building's current user, will be temporarily housed in the formerly rented-out De Linde building.

The previous LTSH also planned for the disposal of the ITC building on the Hengelosestraat. This building has since been sold to the Central Government Real Estate Agency (*Rijksvastgoedbedrijf*). In the first half of 2023 the faculty will move to the Langezijds building on the UT campus.

### 01.04 The development of LTSH 2032

The preparation of this LTSH 2032 involved interviews with the five faculties, services, and other organizational components. Conversations were also held with the LTSH focus group, which



comprised the director CES, business operations portfolio holders, EEMCS and ITC, two members of the University Council and two directors of the Student Union.

The 'LTSH programme team' played a leading role in the creation of this revised LTSH. Brink Management / Advies (hereinafter: Brink) supported the university in several ways. The programme team comprised delegates from CFM, FIN, S&P and M&C in order to obtain full representation of all university services. An 'LTSH steering group' was also created, with delegates from CvB and the FIN, S&P and CFM services. For LTSH 2032 it was also agreed that the business operation portfolio holders of the five faculties would be structurally incorporated into the LTSH structure.

With respect to the expansion of the property portfolio, the emphasis in this version of the LTSH (LTSH 2032) is on education, research, sports and culture.

#### **01.05 Document structure**

The LTSH 2032 is a complete document and can be read independently. It draws distinctions between components that appear in the previous LTSH (where these are still relevant), components for which the decision-making process has already begun, and components that appear in this LTSH as part of planning process for the first time.

Chapter 2 examines the relevant frameworks, trends and developments that are decisive for the UT's future property situation and those which are based on the UT's ambitions for its campus and buildings. Chapter 3 analyzes the current property situation. Chapter 4 describes the UT's long-term space requirements, and Chapter 5

the aims of the UT's property portfolio, including the measures needed to attain them. Chapter 6 describes the financial consequences of LTSH 2032 on the UT's property holdings by reference to the long-term financial perspective. Finally, Chapter 7 summarizes the relevant decision-making processes and accompanying considerations. The structure of the LTSH is given in Figure 1 in diagrammatic form.



## LTSH STRUCTURE

### Chapter 1 **Introduction**

*Background and reasons for a revised LTSH; a brief overview of the previous LTSH.*

### Chapter 2 **Frameworks and first principles**

*UT vision spearheads and property ambitions, and relevant frameworks influencing the future property situation.*

### Chapter 3 **An analysis of current property and space use**

*Analysis at the campus, building, and functional levels.*

### Chapter 4 **Long-term property requirements**

*Developments, future populations, and spatial requirements translated into long-term property requirements.*

### Chapter 5 **Real Estate Strategy**

*Matching property demand with current supply; translating this into a strategy for allocating spatial requirements.*

### Chapter 6 **The housing plan in relation to the university's financial framework**

*The financial consequences of the property plan, and with respect to other UT frameworks.*

### Chapter 7 **Summary of decision-making process and considerations**

*Summary of the investment decision made on the basis of this LTSH, and the considerations employed.*

Figure 1: LTSH structure



## 02 FRAMEWORKS AND FIRST PRINCIPLES

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This chapter examines the frameworks surrounding the UT's property needs. It also describes the UT's vision spearheads and the property-related ambitions derived from them. These frameworks and first principles are valid for the long term, and some of them can also be found in the previous LTSH. This chapter will distinguish between frameworks and first principles that appear in the previous LTSH (where these are still relevant), frameworks and first principles that have been established since the previous LTSH, and supplementary (new) frameworks and first principles that appear in this LTSH for the first time.

### 02.01 UT's mission, vision, strategy, and property ambitions

#### *Shaping2030* in relation to LTSH 2032

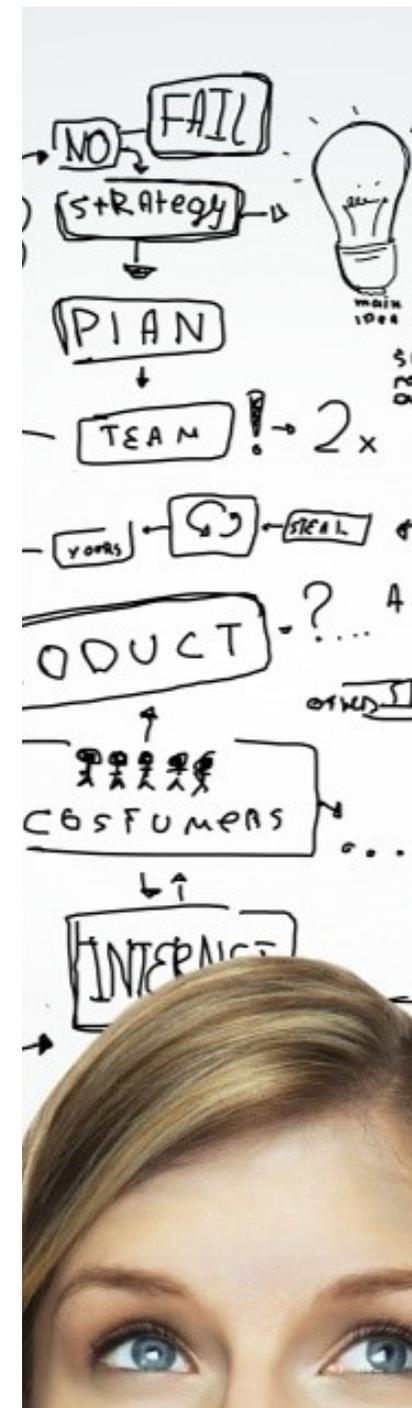
The UT's mission, vision and strategy as laid out in *Shaping2030* determines the university's course for the coming years. Its mindset is: entrepreneurial ('courage over comfort'), inclusive ('student over system'), and open ('community over campus'). The UT aims to distinguish itself from other universities still further. Its campus plays an important part in this distinction. Its ambition is that the campus continues to develop into an inspiring meeting place for national and international academics and students, and one that offers flexible spaces for new types of joint venture: a *hub*. The university also wishes to expand, alongside its existing partnership with VU University, to include two satellite locations in Apeldoorn and Zwolle. The Apeldoorn location has already been realized.

With regard to the campus, the vision spearheads in *Shaping2030* (with a few additions) can be summarized as follows (source: *Shaping2030*):

- *Hub*: the campus remains a centre that offers innovative learning experiences through collaboration;
- *Meeting*: inspiring meeting places for students and staff;
- *Open*: the UT is an 'open' university: inclusive, welcoming, global and approachable;
- *Sustainable*: the UT is a sustainable organization and will make its social impact sustainable;
- *Entrepreneurial*: there is plenty of space for innovation, daring and creativity in and around the campus;
- *Experience and experiment*: campus facilities contribute towards user experiences and offer space for experiment;
- *Inclusive*: every talent is unique. Our personal approach gets the very best out of our students: bespoke service for everyone;
- *International*: campus facilities meet the needs of its inclusive, (inter)national community and contribute towards the UT's international profile<sup>1</sup>;
- *Kennispark*: a campus that is integrated with the Kennispark;
- *Infrastructure*: a campus which invests in its digital infrastructure;
- *Facilitative campus*: the campus profile shows appropriate properties both for the organization of education and research and for the supporting services.

To achieve these vision spearhead aims, the UT's property portfolio for the period under consideration in this recalibrated LTSH (i.e. the period until 2032) will be subject to a number of changes. LTSH 2032 will help to analyze the demand and supply of UT property and to

<sup>1</sup> The UT population includes about 3,200 international students (as of 1 January 2019). In 2014 the UT drew up a new internationalization strategy, in line with the more sharply focused *Shaping2030* strategy. The UT's stronger emphasis on internationalization has increased the importance of a hospitable welcome and a pleasant stay, including accommodation, for international students and staff.



derive a plan on that basis. LTSH 2032 describes the intended changes in the university's property situation, and the way this can be achieved responsibly and within the university's current strategic and financial frameworks. LTSH 2032 forms a strategic document that will be recalibrated every three years. The UT will also annually recalibrate its concrete plans for campus development in its Annual Plan for real estate, and in its long-term budgeting it will respond to the planned property investments in the coming planning period within the LTSH frameworks. In this way current demand will be met while also allowing room for (unexpected) adjustments, both positive and negative and concrete insight will be provided in the projects to be implemented the following year.

The focus in this version of the LTSH 2032 is on the current university campus. The picture of the future in *Shaping2030* sketches a campus that comprises both virtual and physical locations, forming a network of living labs and meeting places. Moreover, by 2032 the university's physical locations will not be limited to the campus in Twente but will be present at several strategic locations. One such current development is the Centre for Security and Digitalization (*Centrum voor Veiligheid en Digitalisering, CVD*), a unique partnership between the Saxion knowledge institute, the Police Academy, the University of Twente, Apeldoorn City Council, and others. The Centre is housed at a prominent site near Apeldoorn's railway station and offers a modern and inspiring location for 'lifelong learning' (LLL). It focuses on education, research, network meetings and lectures in the field of digital security. The UT has also entered partnerships with VU University in Amsterdam and The European Consortium of Innovative Universities (ECIU). As co-founder, the UT has been working on a European University since 2019: ECIU University. Together with 13 consortium

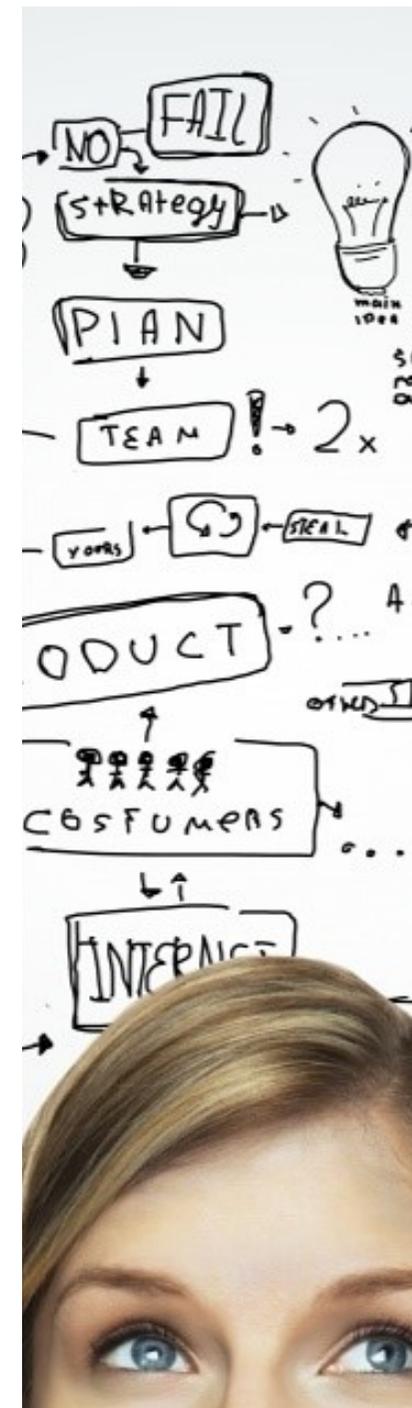
partners the UT is experimenting with new forms of education and research (source: *University of Twente, 2021 Annual Report*). An important spearhead is the ongoing development of LLL. Market research has shown that there is a demand, which may well amount to 7000 or 8000 students, for this type of education. The coming years will increasingly clarify what this signifies in organizational and physical terms. Since LLL students have different contact moments, for the LTSH this means at any rate that additional 'net' space will not need to be built. We will need to look carefully at the smart use of existing faculties, if possible in the form of a flexible shell.

The physical locations to do with the strategic developments are therefore not limited to the campus in Twente, but (to a greater or lesser degree) will have consequences for the use of all the university's real estate properties. For instance, in consultation with its other users the Stall and the Blokhutten will be used for the VU-UT partnership. A close eye will therefore be kept on the developments surrounding the strategic dossiers, so that any consequences will be anticipated in good time (maintaining 'adaptive capacity').

## 02.02 Sectoral frameworks

### State contributions

Dutch universities are principally financed through public funding. The size of this budget varies from year to year, and also depends on student numbers. For each student the university receives an amount of funding that is set by government, the so-called 'state contribution' (*rijksbijdrage*). This per-student funding has fallen sharply in recent years; it was about €19,500 in 2002 but had dropped to €15,500 by 2021 (both figures given at 2020 price levels),



a reduction of no less than 20% (source: *VSNU.nl*). Following recommendations by the Van Rijn committee, the state contribution towards university funding has recently become less dependent on student numbers. As a technical university this is a favourable development for the UT; however, the latest coalition agreement has neutralized this relatively favorable effect.

### National Growth Fund (*Nationale Groeifonds*)

The National Growth Fund, which was introduced by the government in 2020, allows the Cabinet to invest in projects by public-private consortia that contribute towards future economic growth. Besides innovation, the fund supports educational renewal and lifelong learning. The UT is well represented in the Fund's proposals, but which projects will actually be accorded funding is as yet unknown. The same applies to the conditions to which this funding will be subject. We expect to gain a clearer picture of this in late 2022.

### Sector Plans

The government introduced Sector Plans with a view to strengthening the country's knowledge foundations by profiling universities in a balanced and mutually agreed way, so as to retain the Netherlands' academic excellence. The UT expects to be a beneficiary of these Sector Plans; so far it has been made known that the UT will receive about €[...] in subsidies and about €[...] through the Sector Plans. This has had an upward effect on staff numbers and also on investment headroom in terms of equipment and infrastructure. STEM Sector Plan funding will be divided between the physics, chemistry, mathematics and computer science sectors. For the UT this principally means extra research funding for the ET, TNW and EEMCS faculties. Funding which used to be devoted entirely to research can now also include indirect costs. The

UT will also be allocated Sector Plan funding next year, but the amounts are as yet unknown.

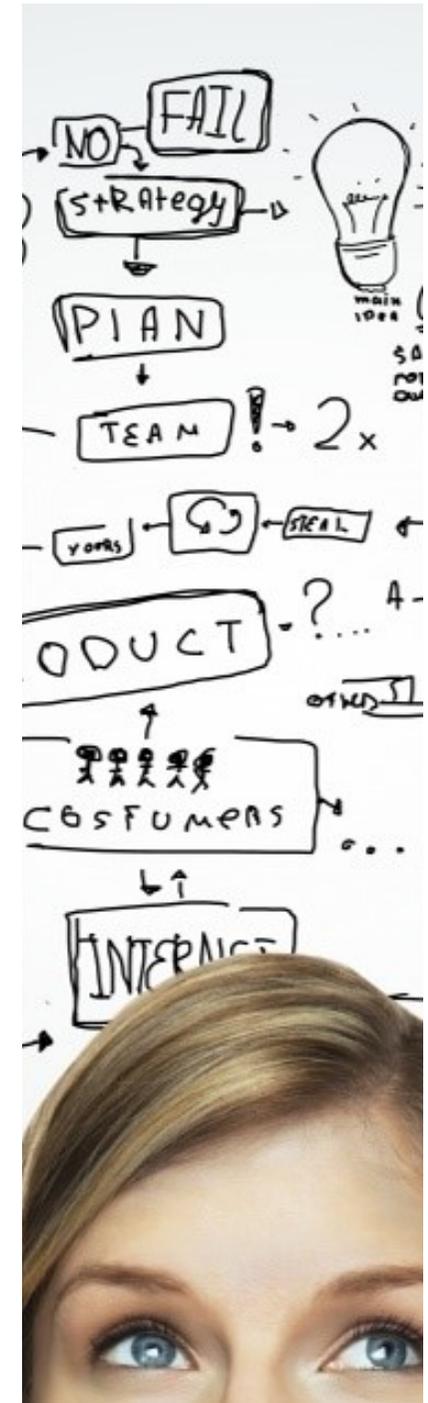
### Quality agreements

Finally, the UT has entered into quality agreements with the Ministry of Education, Culture and Science that apply to the period from 2019 to 2024 (inclusive) and which are therefore also relevant to this version of the LTSH. They are the result of an intensive process that was carried out by the programmes themselves, at faculty level. All the faculty boards were intensively involved in their faculty plans. These plans were then translated, at the organizational level, into five educational quality improvement programmes:

- Community building
- Learning facilities
- Teaching professionalization
- Student talent development
- Global Citizens

From a real estate perspective the first two of these programmes are the most relevant to LTSH 2032. In the 'Community building' programme it can be seen that many faculties regard a home base as an important element. The aim of the 'Learning facilities' programme is to improve the quality, but also the availability and use of physical and digital learning facilities. One result of this is the need for more space for small project groups and learning environments that offer opportunities for different learning forms.

The quality agreements currently constitute a separate funding stream, but will gradually become more part and parcel of the regular state contribution.



### 02.03 External factors

Several different external risk factors must be taken into account within the framework of LTSH 2032. There is currently a severe shortage on the job market; the real estate market is overheated; there are shortages of building materials and raw materials; (financing) interest rates are rising; and energy and fuel costs are rising. There is also uncertainty surrounding nitrogen. These factors are causing price rises, slowing down deliveries, and delaying the completion of projects. The UT's income is currently not rising as rapidly as its costs. This is having an effect on the UT's overall business operations, and may put the feasibility of LTSH 2032 under pressure.

### 02.04 Frameworks for campus development

This section formulates the frameworks that apply to future investment decisions affecting the UT campus. These are long-term frameworks and therefore correspond largely with the previous LTSH, but they have nevertheless been supplemented and tightened up in some areas. The principal frameworks for campus development are:

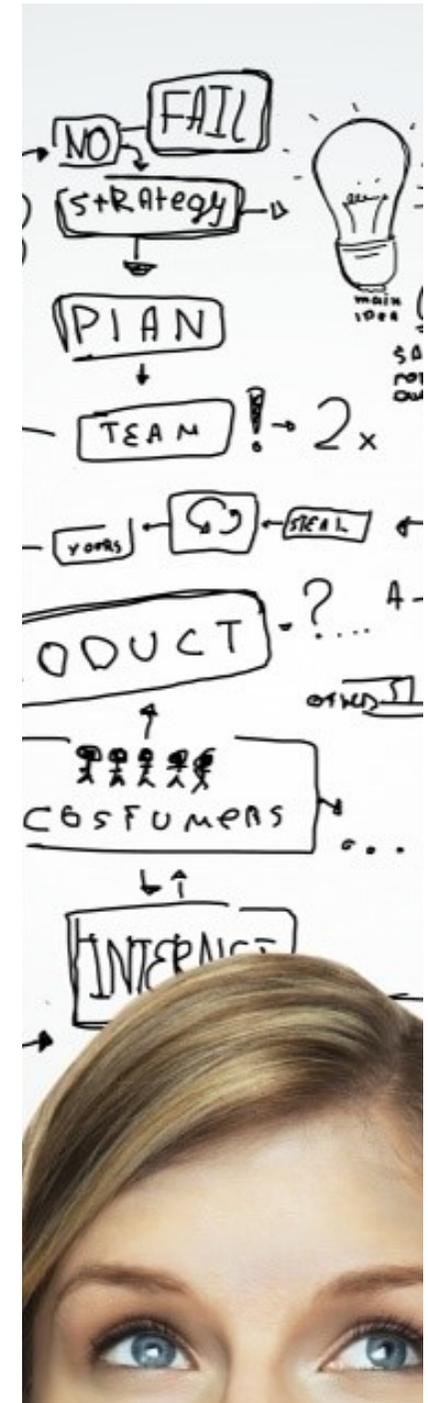
- Focus on quality, open innovation, and flexibility
- Focus on sustainability
- Proximity
- New ways of working and studying
- Digital transformation
- Kennispark

#### Focus on quality, open innovation, and flexibility

- Besides quality, a central issue in the (re)development of real estate is adaptive capacity. Real estate interventions will examine the extent to which buildings could be made amenable

to different functions (either simultaneously or sequentially) and to 'facility sharing'.

- Future renovations and new buildings must take account of the changed relationship between working from home and on campus. This will mean striking the right balance between facilitating concentrated (individual) and collective (group) work.
- At the portfolio level, the focus will be on the generality of buildings: meaning that all buildings possess the same basic level of provision.
- The UT's real estate must stimulate and facilitate collaboration between different organizational components and different partners.
- At the portfolio and building level all space types must be generically realized, whereby specific identities (appearance and experience) can be (sequentially) provided by different users.
- The future is uncertain and space needs are therefore dynamic. Real estate has a static character, and in practice this can lead to tensions between supply and demand. For the UT, space rental is clearly an option if the UT's currently available space no longer meets demand and this demand is unpredictable. When investing in a given property the UT also considers its internal and external marketability. Internal marketability indicates how desirable the building would be for UT users; this therefore determines its strategic value. External marketability indicates how desirable a building would be for third parties. Besides the building itself, location plays a crucial role, in the event that a contraction in university space requirements means that buildings have to be disposed of or rented out to third parties.



## Focus on sustainability

### Government policy

Building regulations have included stricter energy performance requirements since 2021. New constructions must be nearly zero-energy buildings (NZEB), in line with the European Energy Performance of Buildings Directive. From 2023, existing office buildings must meet at least Label C energy performance standards. No concrete energy performance demands have yet been set for other buildings; nevertheless, in concrete terms the built environment must have achieved a 49% reduction in CO<sub>2</sub> emissions by 2030 (compared to the reference year of 1990). By 2050 this reduction in CO<sub>2</sub> emissions must be at least 95% (compared to 1990). (Source: *Routekaart Energietransitie Universiteit Twente, 2020*)

### UT policy

Climate is an important theme at the UT and sustainability is a vision spearhead in *Shaping2030*, which specifies that by 2030 the UT aims to be a fully sustainable organization; by 2023 it already aims to have achieved a 15% CO<sub>2</sub> emissions reduction (compared to 2020) in the areas of food, water, waste, mobility and energy use. UT policy for sustainable operations is expressed through ten themes, including energy savings (both building-related and user-influenced) and CO<sub>2</sub> reduction through the use of materials having a small CO<sub>2</sub> footprint ('circular' products) (source: *utwente.nl*).

The UT has committed itself to improving the sustainability of its real estate properties, and has set high ambitions. The options, however, are naturally determined by market circumstances and the university's financial capacities. Following the previous LTSH the UT, supported by Royal HaskoningDHV, developed a UT Energy Transition Roadmap (*Routekaart Energietransitie Universiteit Twente*) (hereinafter: Roadmap). This Roadmap was completed in

late 2020, and for the UT's property portfolio gives insight into:

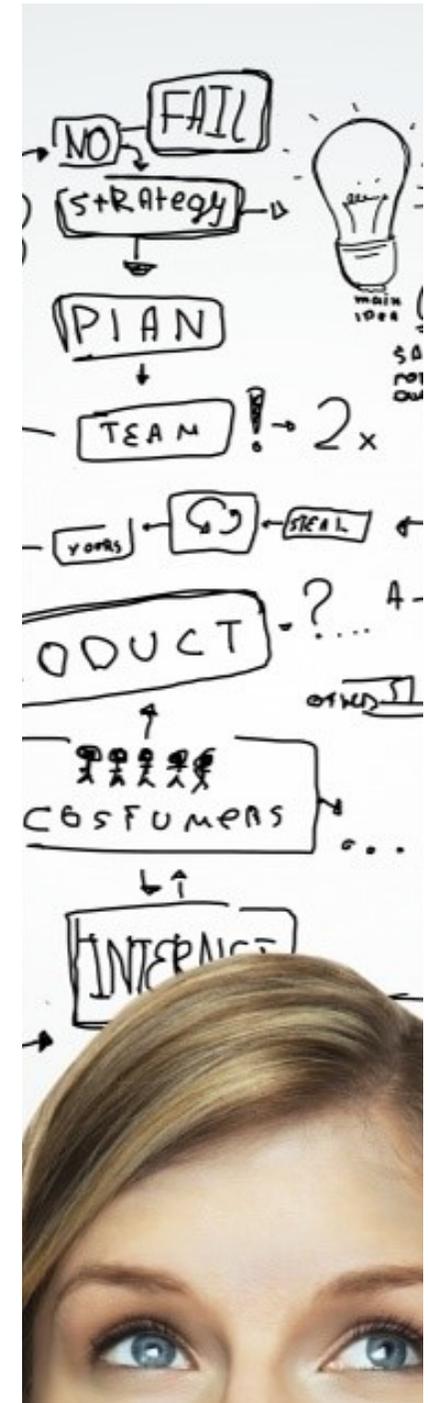
- possible energy-saving measures;
- local energy generation options;
- the contribution these would make towards the 95% CO<sub>2</sub> emission reduction aim.

Every present and future property initiative, whether this concerns new construction or existing stock, is held up against the Road Map and must be a fit with the UT's sustainability aims.

### Relationship between the Roadmap and LTSH 2032

The Roadmap has been brought up to date on a number of components for this LTSH. In this version of the LTSH, interventions in the property portfolio have been named from the perspectives of technical quality, functional quality, and sustainability. The Roadmap includes only those buildings that belong to the UT and have a utility function larger than 100 m<sup>2</sup> GFA (gross floor area) and that can be heated or cooled. All the measures already implemented under the original Roadmap have been included, along with the expected enlargement of the property portfolio (the Cube, a second satellite at the Horst, and expansion at the Es – see Chapter 05). It was also examined whether adequate budget had been included to cover CO<sub>2</sub> reduction measures for the Roadmap projects planned for the period 2025-2030.

This updating process showed that in the period 2020-2025 few reductions in energy demand will be realized. While existing property is made more sustainable in this period, the energy requirements of new buildings effectively cancel out the reduction in demand. Once all new building construction work is complete (in 2025), energy use reductions become more prominent. 2030 sees an



11.1% reduction in energy demand compared to 2020 (even though a considerable area of new building is still being added). In 2050 this reduction will reach 18.3% (see Figure 2). In comparison: the original Roadmap set these 2025 savings a little higher, 4.8%, because the new buildings had not been envisioned and because certain measures were implemented only later or not at all. Energy use reductions in 2030 and 2050 had been foreseen as 12.7% and 19.5% respectively.

In order to include the increasing sustainability of the Dutch electricity grid and the transition to sustainable energy sources in the comparison, the Roadmap also examines CO<sub>2</sub> reduction. It has been agreed with the Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland, RVO) that the calculation rules would incorporate the increased sustainability of the Dutch electricity grid in the institutional road maps. This increased sustainability means that every delivered kWh of electricity emits less CO<sub>2</sub>, through the use of more sustainable resources. This effect can clearly be seen in Figure 3.

CO<sub>2</sub> reductions will be 85% by 2030 and 91% by 2050 compared to 1990. In the original Roadmap these figures were also 85% and 91%. The difference in the absolute amount of CO<sub>2</sub> emissions is that in the recalibration about 32 tons less of CO<sub>2</sub> is emitted in 2030 compared to the original Roadmap. This is a marginal difference compared to the absolute emission of CO<sub>2</sub> in 1990, namely over 18,000 tonnes. In the recalibration, only 1 ton more CO<sub>2</sub> is emitted in 2050 than in the original Roadmap. This means that the intended 49% CO<sub>2</sub> reduction in 2030 is more than met, but that the 95% reduction aims for 2050 are not achieved.

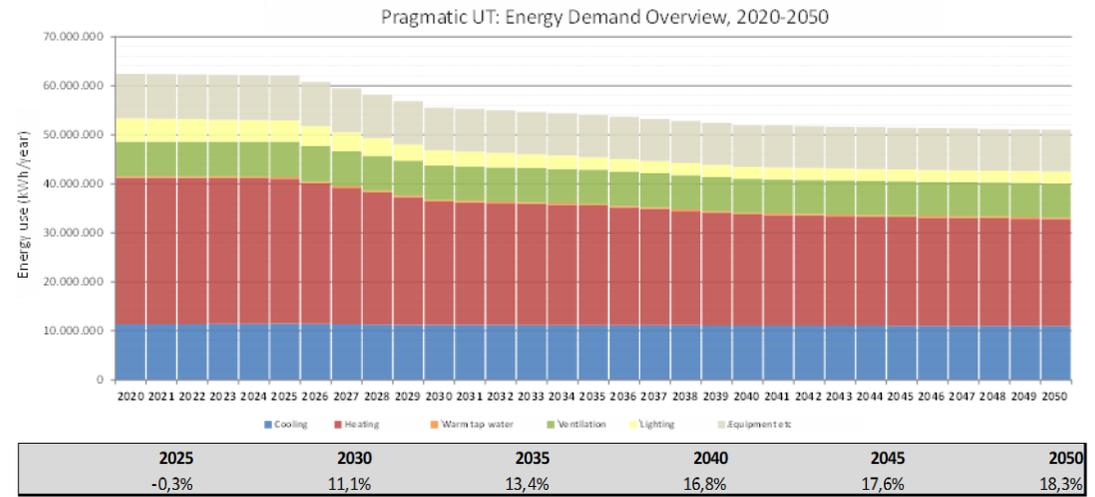


Figure 2: Energy demand overview, 2020-2050

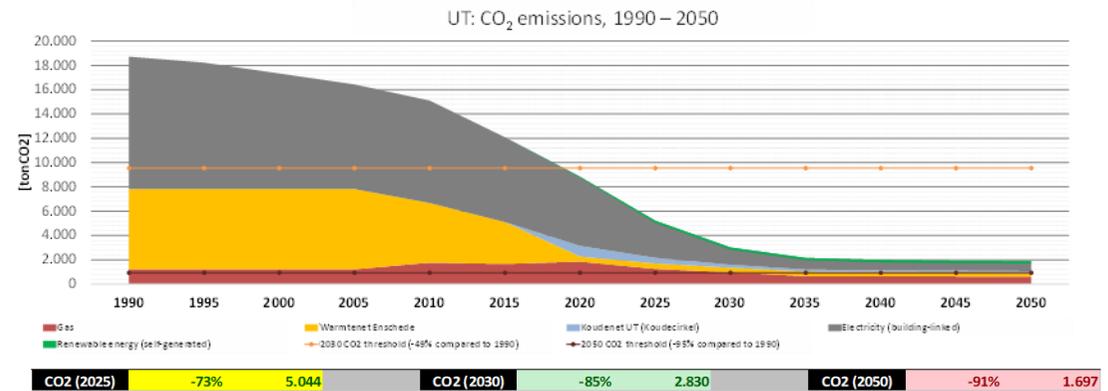


Figure 3: UT CO2 emissions, 1990-2050

The scope of the Roadmap ends in 2050, while this LTSH creates the framework for the period 2023-2032. Looking at recently executed projects and at those which form part of this LTSH (see Chapter 05), a significant part of the investment amounts named for this purpose in the Roadmap have already been secured in the project budgets of this LTSH.

With regard to the associated CO<sub>2</sub> reductions there are 85% reductions by 2030 and 91% by 2050, the same relative reductions as in the original Roadmap. This means that the UT is still on track in terms of sustainability improvement. Although the UT has included sufficient budget in the 2023-2032 LTSH, and is on track as far as improving the sustainability of its property is concerned, the 95% CO<sub>2</sub> reduction by 2050 target will not be achieved. One solution to this could be expanding the university's own generation capacity, for example by installing solar panels over car parking spaces. This matter deserves further study.

### Proximity

One of the strategic aims in *Shaping2030* is proximity ('outside in and inside out'). Besides its partnership with VU University the UT wishes to have two satellite locations in Zwolle and Apeldoorn (of which the Apeldoorn location has already been realized). This can lead to the shared use of buildings elsewhere. Each year about 150 VU students make use of educational space on the UT campus. In principle the UT then opts for temporary (e.g. rental) constructions, with short-term contracts. Only when it becomes clear that the need for this space is of a long-term nature does the UT consider purchasing property outside the campus. There may also be the partial use by partners of buildings on campus, or in the Kennispark, again with a view to the desired 'proximity'. The UT currently rents out several spaces to external renters, which entails a landlord's

risks. In practice, however, the UT can anticipate the departure of a renter in good time, by employing the space for its own purposes (and adapting the property plans accordingly) or by recruiting new renters, i.e. companies or institutes linked to the UT (source: *Shaping2030*).

### New ways of working and studying

The UT recently formed a broad working group and drew up a policy memorandum on 'Hybrid working and studying' which considers the policy rules surrounding 'new working methods' or 'hybrid working' (source: *Policy-making memo hybrid way of working (and studying) at UT, 2023*). The memo includes elements of importance to this LTSH. These frameworks will be incorporated into current and future projects. Additional policies include:

- More open and shared use of facilities. Future office workspaces, study areas, meeting rooms and project spaces may be shared by everyone. Especially the "sharing" of office space does require clear more detailed "business rules" at an appropriate level of abstraction that can count on broad support within the organization.
- At least two things are needed for shared workstations: 1) implementing a cleandesk policy and 2) providing digital insight (see also points under digital roadmap) into the occupancy of a workplace and being able to book it.
- Labs and research facilities remain, however, for individual use.
- Each department effectively retains its own 'home base'; the difference is that it will be made easier for its facilities to be used by the rest of the UT.
- After a long period of home-based work and study during the COVID-19 pandemic, the need to meet each other on campus is stronger than ever. At the same time, staff and students have all



discovered the advantages of home-based work and study. In creating 'new ways of working' the UT will consider both home-based and on-campus work.

- Basically, UT does not choose to extend the opening hours, although it is investigating what would be needed should this be unexpectedly necessary. In specific cases, however, extended opening hours may help, for example for scheduling. Scheduling in the evenings too could increase capacity. For Lifelong Learning (LLL), this could play a significant role.

With a specific view to the digitalization of education, the following policy principles are relevant to the LTSH:

- A physical lecture is no longer the only self-evident way of passing on knowledge at a university. Students appreciate the convenience of following lectures in a time and place of their own choosing. This also reduces the pressure on property. Within this framework blended learning has considerable broad-based support.
- A great many members of the teaching staff, however, prefer to give physical lectures; for them the experience of a physical lecture plays an important role. Within this framework, physical working lectures are deemed more important and necessary.

From the 'Hybrid working and studying' working group, it is stated that UT wants to offer its employees flexibility in hybrid working. This fits well with the results of a survey conducted within the UT, which show that UT employees want to work at home or elsewhere for an average of two days. Because of the transition phase UT is in, it will have to take a close look at how the flex factor (number of workstations per FTE) is calculated and determined per unit. The LTSH projects will pay a lot of attention to this. This requires

customisation per unit ('activity-based working') rather than a generalistic approach. Nevertheless, the ambition to work more efficiently and effectively is endorsed across UT. At UT level, the aim is therefore to achieve an average flex factor of 1.0. An occupancy study can help in this process. Implementation time is also taken into account. In the coming period, the UT will develop policy on this and further detail the implementation of the flex factor.

#### Digital roadmap

The UT document 'Digitalization Roadmap' (2021) describes the most important digitalization initiatives per domain. A number of different themes can be discerned in the area of digitalization. The digitalization of education and research is explored in more depth in Chapter 04 of this LTSH. There is also mention of the digitalization of real estate, which offers opportunities for the more efficient and effective use of space. The UT seeks to have a property portfolio that is equipped with excellent digital facilities for education and research. The basic infrastructure (such as networks) for digital transformation already exists. Its expansion is expected to focus on sensors, data collection, the smart analysis of this data, and linking these to computerized (self-)service processes. Current and future properties will be increasingly digitalized. Depending on what is possible and feasible, applications will focus on the following:

- Measurements: at this moment, 'occupancy' is measured on the basis of timetabling or space reservations. Equipping a space with sensors allows us to measure whether a reserved space is actually used. Depending on the type of sensor it can also be determined how many people are actually present. This makes it possible to much more accurately determine the actual occupancy of a space compared to its potential capacity.
- Flexible use: on the basis of the actual use of spaces, fixed or



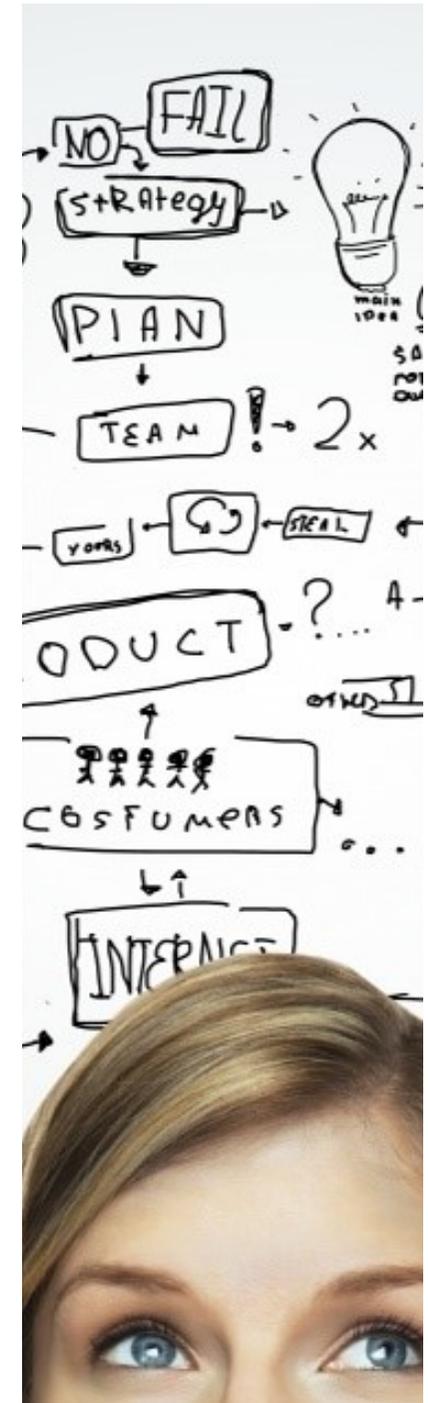
dynamic rules for this use can be set. Depending on the options offered by a space, its use functions can vary over time (e.g. switching between lecture hall, project space, independent study area, and meeting room). On the basis of business rules a reserved, but subsequently unused space can, after a certain number of minutes, be re-entered in the system as being available for others to book.

- Hybrid project spaces and meeting places: new ways of studying and working mean that spaces are required that can facilitate both physical and digital participants. Students and staff are then better able to plan to work at home or on-campus. This also stimulates the use of the campus, as it makes different working forms possible.
- Self-service: by providing up-to-date information on occupancy status through portals and/or apps, a space can then be re-booked by others. Designing this process as a self-service system means that empty space can be booked by users themselves, with no need for a reservation bureau. Naturally, business rules will be needed to ensure that spaces are allocated in accordance with the correct priorities. Experimenting with these rules will allow insight to be gained into possibilities and potentials.
- Availability of independent study areas: a variety of methods could be used to give students insight into the availability of independent study areas, varying from the congestion level of a given area to the real-time availability of individual seats.
- ‘Smart’ and ‘healthy’ buildings: besides human presence, parameters can be measured that contribute to a healthy work and study climate. The faculties are already doing research into ‘healthy buildings’. Linked experiments could be carried out (such as the Smart Library in the Vrijhof) and the learning outcomes applied elsewhere on campus. Sensors could be linked

to climate control systems, and this could also lead to energy savings. Such interventions could find wider application at the UT.

- Big data: sensor measurements yield large amounts of data. This data could be analyzed using innovative techniques (such as AI) in a collaboration between primary process and support services (CFM and LISA).
- Adaptive scheduling: a past doctoral candidate at the UT examined the possibility of ‘dynamic scheduling’, meaning for instance the allocation of lecture halls on the basis of the number of students expected to be physically present. Students and lecturers could then consult an app in the morning to see where their lecture would be held. This could also be useful should a room become unavailable, e.g. because of a technical issue. The UT’s existing scheduling platform does not meet the requirements of such a system, but this may become possible in the future.
- ‘Peak shaving’: lecture room capacity problems are most frequent at the start of a new quartile. These peaks could be absorbed using live streams, which could also be made available for later reviewing (streaming en recording).
- Digital ‘findability’: location apps could allow UT members of staff to see where their colleagues were at any given moment, enabling them to find each other quickly. This would expand the possibilities for flexible workplace concepts, and the diversification of workplace types appropriate to different types of work.

The effect of digitalization on the UT’s real estate ratios cannot yet be accurately quantified, but it holds promising and challenging potential. We therefore recommend that focus is given to deepening



our understanding of this issue by experimenting in mutual collaboration between the primary process and the support services (principally CFM, CES and LISA).

### Focus on efficient space use and the optimum use of existing stock

Compared to the principles set out in the previous LTSH, the following modifications/additions have been made:

- UT aims to use a flex factor for office space more efficiently and effectively on a customised basis but with an overall UT ambition of a flex factor (number of workstations per FTE) of <1.0.
- For current and future property initiatives the UT employs a guideline for the use of office space that specifies a bandwidth of between 10 and 12 m<sup>2</sup> UFA per workplace (including meeting rooms). The previous LTSH calculated from the same UFA, but per FTE, since at the time no flex factor was included. However, the UT has observed that empty workspaces are a frequent occurrence. Partly with a view to the university's sustainability goals, the guideline has switched to using UFA per workspace.

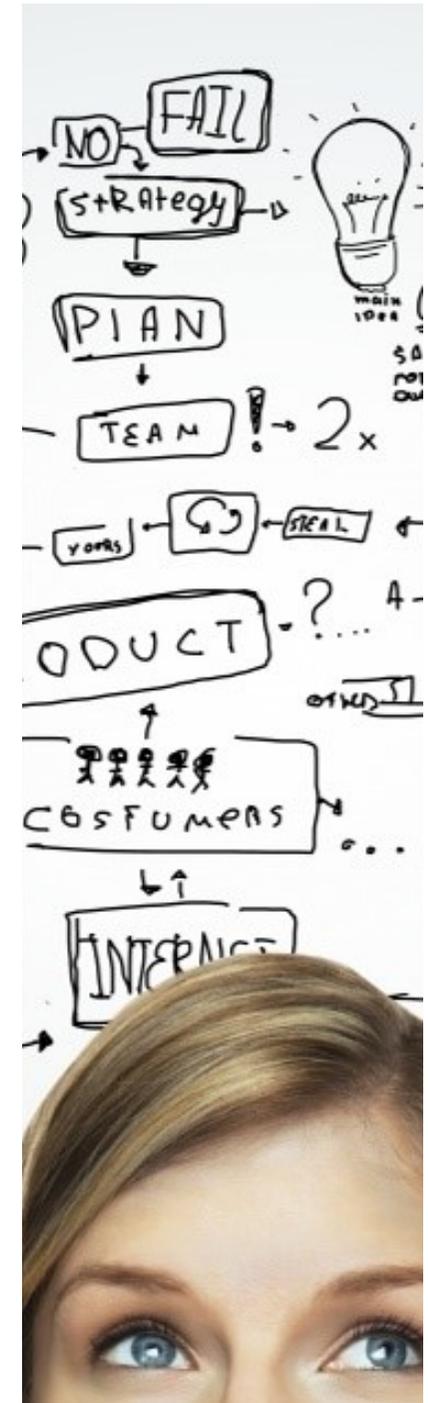
The UT intends to gain clearer insight into the actual occupancy of office workspaces, and to modify these principles, if necessary, as a result.

The following points are completely in line with the previous LTSH, since there are no indications that any changes need to be made:

- At the portfolio level the UT adheres to the guideline of a 3% vacancy in the total rentable stock. Where possible the UT tries to bundle vacancy so that entire buildings or parts of buildings can be reclassified or disposed of.
- General education spaces fall under the Central Education Facilities (*Centrale Onderwijs Voorzieningen*, COV). Labs fall

under the relevant faculty, and study areas are furnished by faculties and services in suitable areas. The UT focuses on supplying educational facilities that meet qualitative and quantitative demand. On the basis of the current supply of educational spaces (see Chapter 03) and the current student population (as of 1 September 2022), the parameter governing the need for educational space is about 1.95 m<sup>2</sup> UFA per student. This covers lecture rooms, labs, and supporting spaces (including project areas). It should be noted that this parameter is linked to current forms of education and the current make-up of the student population; changes in these as a result of, for example, blended learning will accordingly lead to changes in space requirements. Account must also be taken of differences between faculties. For instance, technical faculties generally need a larger than average amount of COV space because of the amount of practical lectures and projects. The 1.95 m<sup>2</sup> UFA per student parameter is therefore used principally as a reference framework.

- For educational spaces an average occupancy rate of 70%, measured over the whole academic year, is assumed to be the maximum feasible. The usual daytime class hours were assumed here. Where pressure on certain educational resources is experienced, it will first be examined what solutions are available through rescheduling, refurbishing existing spaces, or expanding the number of schedulable hours, before deciding to enlarge the supply of space. Another possibility is to extend lecture hours to evening hours. However, there is no policy for this now, but for LLL this is quite conceivable.
- There are opportunities in the 'community idea' through sharing spaces for more than one purpose.
- The UT will hire additional space only if no appropriate space



exists at that moment within its own stock and capacity falls short as a result. The aim is to employ the UT's own supply of space as effectively as possible.

### Non-primary provisions

Sports and culture facilities are provided in the first instance for students, and students therefore play an important role in the vision, organization and supply of the sports and culture facilities offered by the UT. Sports (especially grass-roots sports) and culture are also provided for the benefit of UT staff, and are cornerstones of national and international community building at the UT. The UT's values for its sports and culture facilities are laid out in its Sports & Culture Masterplan (source: *Onderzoek Huisvesting Sport & Cultuur 2030, 2021*). The existing situation is that about 0.72 m<sup>2</sup> UFA per student is allocated to sports and culture facilities. The threshold value is 1.04 m<sup>2</sup> UFA per student.

Retail, catering and service facilities also need to be in line with the UT's image and aims: adequately diverse, of a satisfactory quality, and operated by third parties. The UT's preference is for non-primary provisions to be sized, as far as possible, in line with the intended capacity of the campus.

### Property appearance in line with UT's strategic spearheads

The campus is an international study and work environment located in the Kennispark. Its properties are intended to promote encounters and connections, and to increase the visibility of the university's profile and strategic themes. The physical appearance of these properties forms a focus for the design processes in the follow-up phase. The external appearance of the campus buildings needs to mirror what happens inside them, and to be in line with the

spearheads adopted by the UT and the Kennispark.

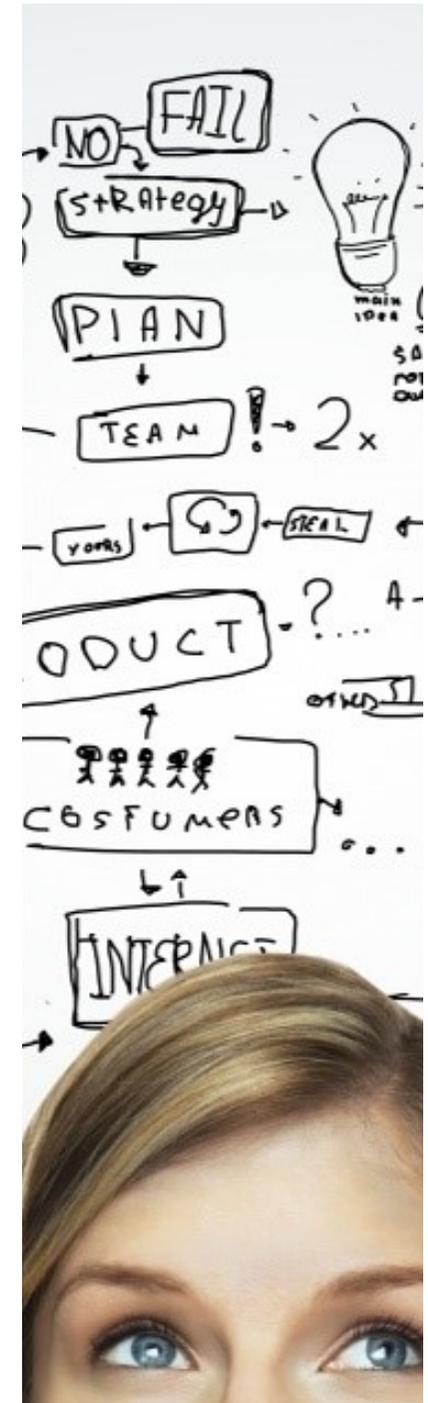
### In line with visual quality plan

New property initiatives must also be in line with the frameworks of the 'campus visual quality plan' that was drawn up by the UT in 2019. The visual quality plan is revised, in principle, every five years. The plan takes account of:

- the spatial aspects of the campus as a whole;
- the spatial aspects in the aesthetic sense;
- the allocation of plots and any necessary changes.

### Kennispark

At Kennispark Twente, entrepreneurs, authorities and knowledge institutes (including the UT) join forces to make the most of the region's potential and to secure the Kennispark's place on the international map. In the early years of the Business & Science Park, work focused on turning UT research into business activities. Since then the Kennispark has also become an important job generator for Enschede and Twente. Besides the UT, the Business & Science Park is home to over 400 high-tech companies and 900 spin-offs. Enschede City Council therefore invests in the Business & Science Park, together with housing corporations and other investors such as ASR. Development of the Kennispark is in full swing and the area is currently undergoing large-scale refurbishment. Over the next few years about €[...] in public and private investments will enable the latest innovations in areas such as medical, microprocessor, and battery technology. With their Kennispark partnership, the UT campus and the Business & Science Park form a single area. The UT does not itself make property investments in the Kennispark, but merely hires space. (Source: *kennispark.nl*)



### The governance of property and portfolio management

The previous LTSH described the governance surrounding property and portfolio management in detail; for the sake of completeness this is also described in Appendix 1 of this LTSH. To the previous LTSH is added the proviso that an overrun of 10% on the pre-determined annual budget, instead of previously at project level, has to be approved by the Supervisory Board. This has an accelerating and broadening effect.

#### 02.05 Financial frameworks

The financial supervision of education has been the responsibility of the Education Inspectorate (*Inspectie van het Onderwijs*) since 2008. An important aspect of its work is supervising the financial continuity of educational institutions: whether an organization is financially healthy, and can meet its financial obligations in the short and medium term. In performing this financial analysis, the Inspectorate makes use of three key figures, each of which is associated with a signalling value: solvability, current ratio, and cash reserves.

The UT also applies its own target values with regard to financial ratios. These target values are given, together with the Inspectorate's signalling values, in the Spring Memorandum 2023-2027. Table 1 gives an overview of the financial frameworks.

Ratios	Target value	Signaling value Inspectorate of Education
Solvency 1	35%	-
Solvency 2	35%	< 30%
Current ratio	1	< 0.75*
Liquidity	≥ 25 M€	≥ 2 M€
Housing ratio	12%	-
Resilience	≥ 5%	-
Profitability	3-year minimum 0,00% 2-year minimum -5% 1-year minimum -10%	-

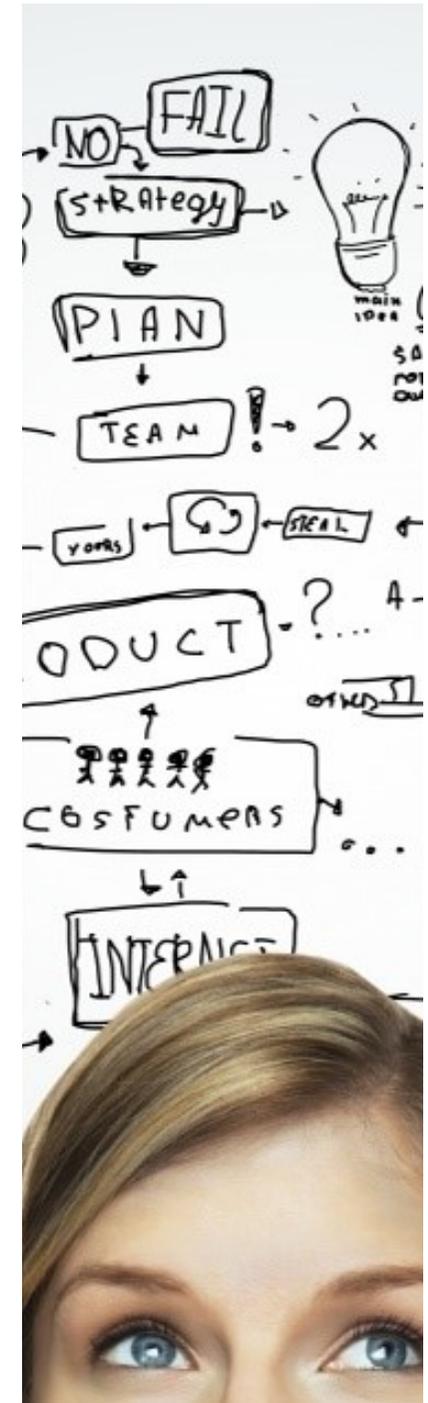
\* A discussion is currently taking place between the sector and the Inspectorate of Education regarding the change in the signaling value of the current ratio from 0.50 to 0.75.

Table 1: UT financial frameworks

The 'housing ratio' indicates the percentage of the UT's total expenditure that is related to property. The UT's target value for this figure is 12%. For the UT this has proved to be a realistic and sensible figure. A higher percentage would mean that excessive financial resources were being withheld from the primary process.

The property cost allocation system is unaltered from that used in LTSH 2030. It incorporates capital costs, maintenance costs, and regulatory burdens. Energy costs are calculated on the basis of actual energy use.

Chapter 06 describes the UT's financial principles and frameworks in more detail.



## **03** CURRENT PROPERTY ANALYSIS: SUPPLY AND USE

## 03 CURRENT PROPERTY ANALYSIS: SUPPLY AND USE

The UT's current stock of property and the uses to which it is put have been identified by means of quantitative and qualitative analyses at the campus and building levels. This involved identifying:

- the bottlenecks and development options on campus;
- the various functions and users of UT property.

This chapter presents the most important results of this analysis, together with the most important changes with regard to the previous LTSH. The analysis made use of data registered at the UT level (Planon, June 2022).

### 03.01 Completed projects from LTSH 2030

The following projects arising from the previous LTSH have since been completed:

- The renovation of Floor 3 in the Carré building;
- University College Twente (UCT) has moved to the former congress hotel, Drienerburgh;
- A team hall for student teams in Capitool 25: the Future Factory (a 5-year rental);
- Light renovation of the Vrijhof building;
- Renovation of the Hogeekamp and Drienerburgh squares;
- Making the campus a smoke-free zone;
- Transforming the campus into a 30kmh traffic zone;
- Anniversary artwork The Head at the entrance to the campus.

The impact of these projects on today's property supply and use has been incorporated into the analysis presented in this chapter.

### 03.02 Analysis at campus level

The UT is a classic campus university. The campus was built in the 1960s in a park-like area about 1 by 1.5 kilometre in size between

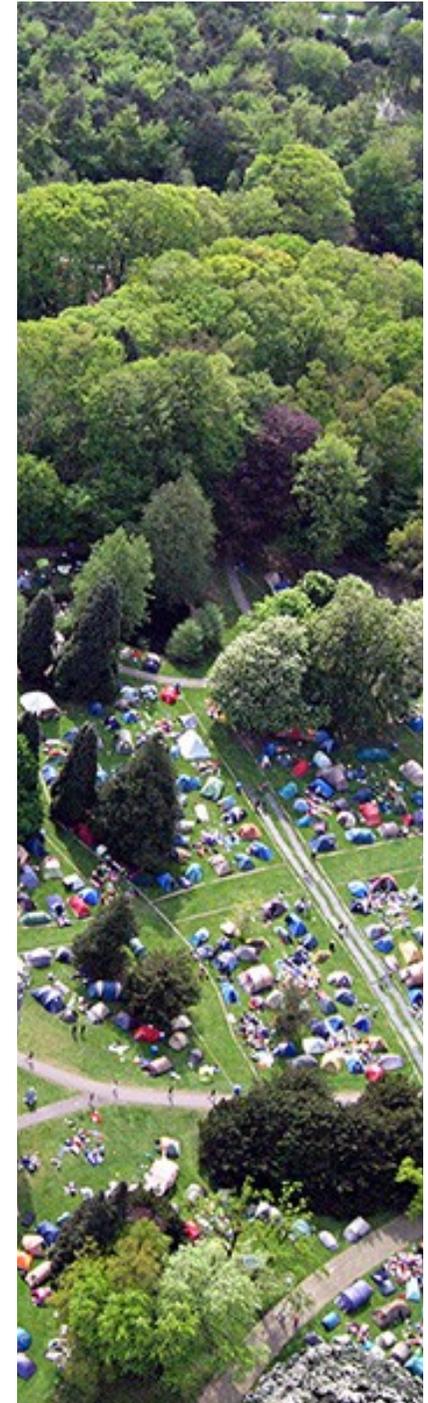
Enschede and Hengelo. It is where UT students and staff live, work and study. In the 60 years since the UT was built a great deal has changed and been rebuilt, but the most important original architectonic and urban design ideas have remained crucial to the campus. It is easily accessible by public transport or private car, and is quite open in character. It offers a wide variety of facilities, and is appreciated for its compact, green, and autonomous character. The campus also offers numerous opportunities for experiment (the 'Living Lab Campus').

#### Campus structure

The UT's visual quality plan, which has guided the university's real estate projects over the last ten years, is based on several area functions on campus, namely:

- education and research (*Onderwijs & Onderzoek, O&O*);
- housing and living (including sports and culture) (*Wonen & Leven, W&L*);
- catering facilities;
- business activities;
- the green heart.

In 2019, the UT's visual quality plan and structural concept were reviewed. The new visual quality plan (2019) and the new structural concept will implement the amendments and focus fully on improving the campus as a whole. In time the two most important areas, the O&O square and the W&L area, will be linked via an upgraded Oude Drienerloweg (for low-speed traffic). This axis will begin at the O&O square, in front of the newly built ITC faculty, and run via the renovated Drienerburgh to the new Hogeekamp Square. This axis will also form part of the 'innovation path', a low-speed



traffic route that starts at Kennispark station and ends at the UT's Boulevard.

Meanwhile a cultural-historical study was carried out in 2022 whose findings will be incorporated into a new version of the visual quality plan, against which future plans can be assessed.

Besides the Spiegel, space for additional business activity will be provided in the form of Business and Science for and by third parties, and links with the other side of the Kennispark will be improved. Various routes (including the innovation path) and campus sight lines will be linked with the other side of the Hengelosestraat (sources include *Kennispark Twente structuurvisie 2030*).

#### Total housing supply owned by the UT

Taken together the UT owns about 238,000 m<sup>2</sup> net surface area of property, both on-campus and off-campus. If the non-chargeable spaces (technical areas, sanitary areas, storage spaces and circulation space) are deducted, this leaves about 142,000 m<sup>2</sup> UFA, distributed between about 40 buildings. This includes the non-primary facilities of the U Parkhotel in the Hoge Kamp building (about 3,800 m<sup>2</sup> UFA) and the off-campus ITC hotel (about 6,700 m<sup>2</sup> UFA). Besides the ITC hotel the UT owns another three off-campus buildings: the ITC faculty at Hengelosestraat (about 12,000 m<sup>2</sup> UFA), the Watersport complex (about 1,400 m<sup>2</sup> UFA) and the Pakkerij (for student societies, about 1,300 m<sup>2</sup> UFA). The Hengelosestraat building has now been sold (its delivery scheduled for 2023) and for this reason this building is no longer included in the analyses of this LTSH. On the other hand the Langezijds building, which is still under construction, has been included in the analyses, since it is expected to come into use in early 2023. This represents (when including the Kop van Langezijds) about 10,000 m<sup>2</sup> UFA. The expansion of the

existing Horst complex, in the form of the Cube multifunctional workspace (of the ET faculty), has also been included in the property supply analyses. The realization of this expansion, representing about 3,000 m<sup>2</sup> UFA, is scheduled for late 2022.

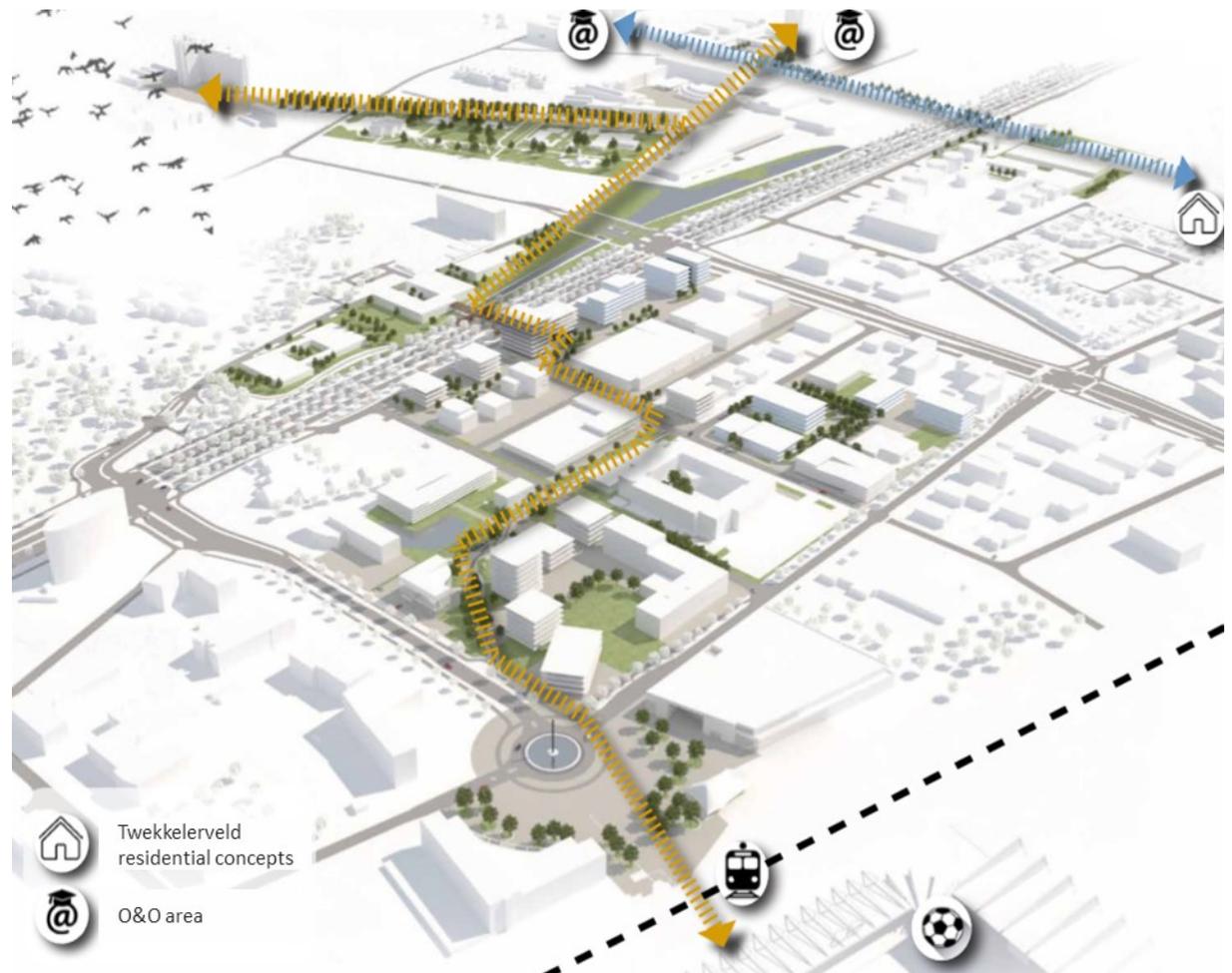


Figure 4: Kennispark – Campus links

Compared to the previous LTSH the UT's total housing supply in ownership has grown by about 2,400 m<sup>2</sup> UFA. Besides the above-mentioned changes to existing properties, the results of the analysis in the LTSH 2030 are the result of the addition of the Boerderij (1,152 m<sup>2</sup> UFA), De Linde (1,000 m<sup>2</sup> UFA) and the Hangar (826 m<sup>2</sup> UFA).

#### Rented-out spaces

None of the UT's buildings are rented out (except for the Student Union in the Bastille).

#### Repurposing and vacancy

In a variety of locations across the campus there are about 5,600 m<sup>2</sup> UFA of vacant property, or about 4% of the total property UT holds in ownership, across 12 buildings (as of June 2022). Part of this vacancy is artificial, in the sense that in practice these spaces are occasionally used. The 'lettable vacancy' is located principally in the Citadel buildings (at time of measurement still partly under reconstruction), Erve Holzik, and the Vrijhof.

#### Hired spaces

The UT hires about 3,500 m<sup>2</sup> UFA in the Gallery (Phase 1) via a long-term rental contract through its holding company (directly or indirectly via HTT). The Gallery contains a special lecture room, the 'lecture room of the future'. Another 2,000 m<sup>2</sup> UFA is used by the DesignLab. The Gallery also offers space to UT spin-offs and student entrepreneurs, thereby stimulating the university's entrepreneurial character. The UT also hires the examination space, Therm. This is about 1,500 m<sup>2</sup> UFA in size, is located near the campus, and is specially equipped for exam-taking purposes. At the Kennispark the UT rents about 2,900 m<sup>2</sup> UFA of office space in the Capitool 15

building, and another 1,700 m<sup>2</sup> UFA (about half of which is office space and the other half work space) in Capitool 25 for five university student teams. Finally, the UT hires about 1,700 m<sup>2</sup> UFA (about half of which is office space and the other half work space) in the Kennispark to house the Fraunhofer Innovation Platform for Advanced Manufacturing at the University of Twente (FIP-AM@UT). This space will be taken into use in early 2023.

#### Development possibilities for education and research

The spacious design of the campus offers many possibilities for development, should there be a need for this in the future. The Es (opposite the P2 parking area), for example, forms a location for large-scale expansion should the university experience substantial growth. Following the visual quality plan, the campus could be expanded to a total of 60,000 to 80,000 m<sup>2</sup> GFA of primary real estate property. The regulation of this potential expansion has also been included in the Kennispark zoning plan (source: *Beeldkwaliteitsplan UT Campus 2019*).

#### Development possibilities for residential property

The campus comprises several locations intended for the expansion of residential property. For three of these locations, residential units have either already been built or construction plans are currently being finalized. These locations are:

- the Witbreukseweg, where 230 temporary residences have been built. These will remain in place for at least seven years up to ten years;
- the Boulevard, where 90 and up to 110 residences will be built starting in 2023;
- the Verre Veld, where about 350 residences are expected to be built. These residences will also serve to replace the current ITC



hotel in the centre of Enschede.

A cooperation agreement (*samenwerkingsovereenkomst*, SOK) for this has been reached with Enschede City Council and two local housing corporations. Enschede City Council has also taken this into account in its Housing Vision.

#### Institutional investor

The UT is an enterprising university, but is neither able nor legally permitted to include business other than its primary process in its real estate portfolio. For this, collaboration with a third party is required. In 2019 the UT and the Enschede City Council launched a process that has led to a cooperation agreement with an institutional investor: ASR-Dutch Science Parks (ASR-DSPF). The Kennispark, which comprises the UT campus and the B&S, has an ambitious area strategy; a robust funding and risk-bearing market party is needed to make it happen together with the UT, the city council and the province. This investor will need to have a long-term focus, and expertise in science park development. Both the UT and Enschede City Council have land that the investor could develop for the purposes of the research, innovation, valorization, start-ups and scale-ups that supplement the UT's primary process. After all, the Kennispark's slogan reads: *Where science becomes business*.

There is also space for business property development on the plot between the Spiegel and the Hengelosestraat. This plot offers space for a development of about 28,500 m<sup>2</sup> GFA (indicative of about 14,000 m<sup>2</sup> UFA, assuming a UFA/GFA form factor of about 50%). The intention is to lease this plot to ASR as soon as a programmatic use has been determined. In principle this could concern functions unrelated to the UT's primary real estate property, but which are

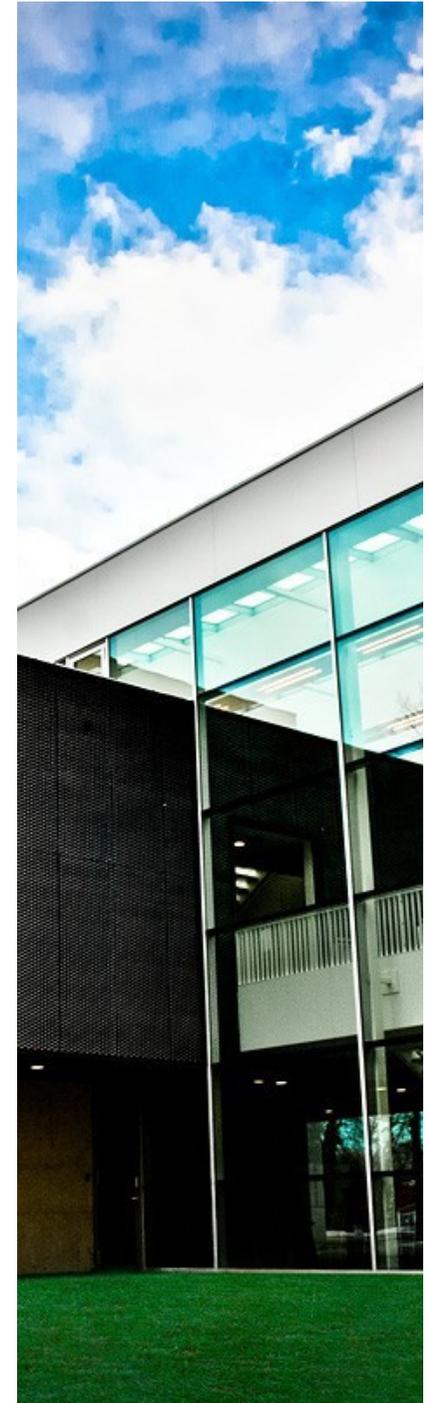
nevertheless allowed. Section 04.07 examines this matter in more detail.

#### 03.03 Analysis at building level

LTSH 2032 also gives explicit attention to the university's existing buildings. With the right maintenance (and any necessary replacement investments), the existing buildings will give good service for many years to come. For each of these buildings the university has drawn up a long-term maintenance plan directed towards this end. The level of maintenance of all the UT's buildings is therefore fundamentally adequate at this time. For the longer term LTSH 2032 assessed all UT buildings by reference to two important yardsticks in order to establish whether they needed to be included in the project plan for 2023-2032. In other words: were any of the buildings eligible for large-scale renovation? It was also examined which components, such as certain infrastructural objects, were in need of technical intervention.

The first yardstick concerned ascertaining whether the buildings were due for renovation from a technical and financial (depreciation) perspective. The technical assessment was carried out together with CFM, while the Finance department examined whether these buildings were eligible in relation to their depreciation. For the second yardstick, users were asked to estimate the functionality of their building on a scale of 1-5. We then looked at the technical relevance of a number of more infrastructural objects that were not so much dependent on a user assessment as indispensable. We also examined which buildings came into consideration for reasons of sustainability.

The results of this overall analysis are shown in the following Table 2.



It can be seen that when a building has a low technical score (1<sup>st</sup> column), in many cases it also has a low functional score (2<sup>nd</sup> column). If we then also look at objects of indispensable or necessary relevance (3<sup>rd</sup> column) and the sustainability aspect (4<sup>th</sup> column), the result is an overall list of 15 buildings/objects that are eligible for large-scale refurbishment in the next 10 years (5<sup>th</sup> column). Chapter 5 examines the issue of how these buildings/objects will actually be tackled through prioritization, and what this will look like in planning terms.

### 03.04 Analysis at functional level

To identify space use per function, an analysis was carried out of the different types of space in each building. This analysis made use of the real estate data held by UT (Planon, June 2022) and distinguished between the following types of space:

- educational;
- research;
- office;
- catering;
- sports and culture;
- residential;
- other (e.g. storage, general support space, etc.).

Compared to the previous LTSH there is about 3,000 m<sup>2</sup> UFA of additional research space and about 900 m<sup>2</sup> UFA additional residential space. Office space has also grown, by about 300 m<sup>2</sup> UFA. The other categories have slightly decreased in size (about 1,800

m<sup>2</sup> in all). Taken together there has been an overall increase of about 2,400 m<sup>2</sup> UFA. It should be noted that the new spaces in the Langezijds, the Kop van Langezijds and the Cube have not yet been definitively allocated function types, since these projects are still in development.

Figure 5 summarizes the overall supply of space per function. It includes only those buildings owned by the UT. From this figure it can be seen that office space makes up by far the largest proportion of the real estate portfolio (about 37%), followed by research space and education space (both about 19%). The total of UT is 141,720 m<sup>2</sup> UFA.

At the building level it is notable that the Horstcomplex (about 6,400 m<sup>2</sup> UFA), Langezijds (about 3,000 m<sup>2</sup> UFA), Technohal (about 3,200 m<sup>2</sup> UFA) and Carré (about 2,800 m<sup>2</sup> UFA) buildings together represent over half of the educational space available. Significantly, the supply of independent study workspaces is larger than the quantitative analysis of the space supply might suggest. Besides the registered study workspaces, unused catering areas and project spaces are being used as independent study spaces. Distributed across the campus there are also independent study spaces that cannot be scheduled (and which have not been included on a 1-on-1 basis in the current allocation system) and are situated, for instance, in 'dead' areas such as traffic zones. This last solution is being employed with increasing frequency, because of space shortages, but in consultation with CFM. This

Building	Technically/financially in 2022-2032 plan	Functional evaluation ≤ 3 (on a scale of 1-5)	Necessary infra/installation in 2022-2032 plan	Sustainability improvements in 2022-2032 plan	LTSH selection 2023-2032
Waste depot		✓	✓		
Athletics storeroom					
Bastille	✓		✓		
Cabins (incl. sanitary block)	✓				✓
BMC					
Boerderij (incl Schuur)	✓		✓	✓	✓
Boerderij Bosch	✓		✓	✓	✓
Boortoren					
Cube					
Carré					
Citadel					
Cubicus	✓	✓	✓	✓	✓
Drienerburght					
Erve Holzik					
Garage		✓			
Gasdrukregelstation					
Hangar					
Hogedruklab					
Hogekamp (U Parkhotel)					
High-voltage transformer building					
Horst Complex	✓		✓	✓	✓
ITC International Hotel					
Koelgebouw 1	✓	✓	✓	✓	✓
Koelgebouw 2					
Langezijds	✓		✓		✓
Linde	✓		✓		✓
Logica		✓			
Nanolab	✓		✓		✓
Pakkerij					
Paviljoen	✓		✓		✓
Pompstation	✓		✓		
Ravelijn					
Reinwaterkelder					
Rioolge maal					
Seinhuis					
Spiegel					
Sportcentrum	✓		✓		✓
Technohal					
Teehuis					
Tennispaviljoen					
Therm					
Vrijhof	✓	✓	✓		✓
Waaier			✓		
Watersportcomplex	✓	✓	✓		✓
Windpark					
Zilverling	✓	✓	✓		✓
Swimming pool	✓		✓		✓

Table 2: Analysis at building/object level

brings the total number of lecture room seats (about 6,800) and independent study spaces (about 4,400) on campus (excluding the current ITC building) to about 85% of the total number of students at the UT. The quality of the current education spaces is generally regarded as good.

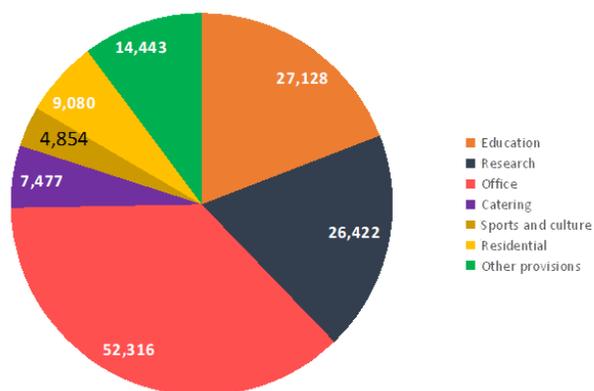


Figure 5: Supply of space per function (in m² UFA)

The current supply of sports and culture facilities per student was carefully tallied for the Sports & Culture Masterplan; it is 9,633 m² UFA (source: *Onderzoek Huisvesting Sport & Cultuur 2030, 2021*). This means that a number of sports and culture facilities in the UT's real estate data (Planon) were allocated a different spatial category, namely 'Other facilities'. The real estate data will be updated accordingly.

### Occupancy rates of educational spaces

The UT annually analyzes the use and occupancy (a space is occupied if it has been scheduled) of its schedulable educational spaces, including on the basis of its timetabling. Occupancy rates in the 2019 – 2022 academic years are not representative, because of

the effects of COVID-19. For this reason the analysis results that were used in the previous LTSH are the most representative. This shows the occupancy of educational space during office hours (40 hours per week) as between 30% and 90%. The total average occupancy of lecture rooms is about 58% on an annual basis. An academic year comprises 4 quartiles of 10 weeks each. The use of the various types of educational space changes over the course of the quartile: broadly speaking, lecture room occupancy is relatively high in the first weeks of a quartile, while that of project spaces and lab spaces is relatively low. Later on in the quartile this picture is usually reversed. For this reason, within higher education it is generally held that a 70% occupancy rate is the highest feasible average. Figures based on the experiences of other universities, and from the standpoint that the UT can take active steps to improve its scheduling efficiency, opportunities exist for improving the occupancy rates of schedulable education spaces. Combined with ever more reliable and advanced digitalization, the current circumstances are favourable for such improvements to be made.

### Research spaces

The UT campus also comprises a large number of research spaces: over 26,000 m² UFA across 15 buildings in all. This is about 3,000 m² UFA more than was reported in LTSH 2030, now that the Cube has been added. As for office space, much of this is dedicated to certain faculties and institutes. The TNW faculty possesses by far the most research space: over 12,000 m² UFA. The ET faculty ET (about 7,300 m² UFA) and ITC faculty (about 1,200 m² UFA) also possess dedicated research spaces. Most of these spaces are to be found in the Carré building (about 8,400 m² UFA) and the Horst Complex (about 7,900 m² UFA). Most of the other research spaces are divided between the Cube, Langezijds, Nanolab, Technohal and Zilverling locations.



Within research spaces, distinctions can be drawn between different high-tech and low-tech areas, depending on their need for technical facilities. Figure 6 shows this division according to type:

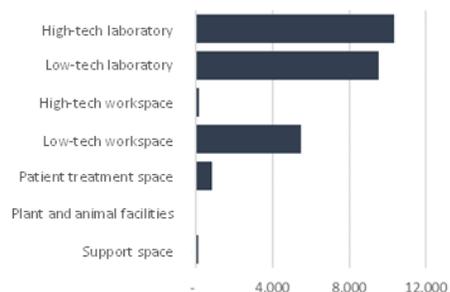


Figure 6: Research space types (in m² UFA)

### Office space

The UT's office spaces (including meeting rooms and office rooms) have an overall surface area of about 52,000 m² UFA, divided between 35 buildings. A large part of this office space is located in the Horst complex (11,200 m² UFA), Carré (6,300 m² UFA), Spiegel (4,750 m² UFA), Ravelijn (4,400 m² UFA), Zilverling (4,200 m² UFA), Langezijds (3,700 m² UFA) and Cubicus (3,500 m² UFA) buildings. In 2022, the UT drew up an inventory of existing workspaces (i.e. those with a height-adjustable table and an office chair). The campus houses about 2,100 office areas with about 4,925 office workspaces.

### Catering facilities

The UT's catering facilities are spread across the campus. They make up about 7,500 m² UFA in all, divided between 22 buildings. A large part of these facilities is located in the Bastille, Horst Complex, Boerderij, Pakkerij and Waaier buildings (about 4,100 m² UFA in all). They comprise Coffee Corners, canteens, and a few cafés. UT staff

and students can also make use of the restaurants in The Gallery and the U Parkhotel.

### Sports and culture facilities

The UT's sports facilities are characterized by a broad, functional supply for students, staff, and others. Part of this supply is due for renovation and/or quality improvement. Parts of the supply could also be deployed with more efficiency (which is not to deny their functionality). However, expansion is desired. For this reason, in 2021 the UT drew up a Sports & Culture Masterplan for bringing these facilities up to date. Since more students are now attending the university, the area per student of space devoted to sports and culture facilities has fallen. As student numbers are expected to rise still further, this downward trend will continue, and the pressure on sports and culture capacity will continue to increase.

The cultural facilities are in reasonably good technical condition, but their functionality, furnishing, and user experience are dated and obsolete. A step-change in quality is desired, including with regard to their sustainability and accessibility.

The sports facilities are generally in good technical condition, except for the indoor swimming pool and rooms SC 5 and SC 6. The indoor pool no longer meets sports and technical standards, and thought is currently being given to its future. Rooms SC 5 and SC 6 are displaying water damage and corrosion, and pose a risk in emergency situations. Accessibility for disabled people could be improved and needs consideration. More information on this can be found in the Sports & Culture Masterplan (2021).



### Residential units

Residential units at the UT are clustered on the western edge of the campus. The campus is home to about 2,700 students. Most of these units belong to the De Veste housing corporation; since September 2018 Camelot has provided about another 450 independent furnished units. In the former Drienerburgh hotel, about 60 non-independent units were realized as part of the residential concept for University College Twente (UCT). The UT also has about 60 staff residences on campus. Besides these residential units, the campus also provides short-term stay options. Seven cabins in the middle of the campus provide overnight accommodation for 105 people (15 per cabin). Through its holding company the UT also owns two hotels, the ITC International Hotel and the U Parkhotel (in Hogeekamp). The presence of residences on the campus makes an important contribution to its value; it cannot be a 'real' campus without them. The residences also provide a warm welcome for new students. The residences are of adequate technical quality, and there is adequate price differentiation. The De Veste housing corporation is currently looking into the renovation of part of its estate. In addition, within the framework of the SOK with the UT, the local council, De Veste and Domijn it is intended to add more residential units in the future (see also section 03.02).

### The campus environs

The campus is surrounded by the Kennispark Twente 'innovation campus', a dynamic location where entrepreneurs, authorities and knowledge institutes join forces. Kennispark gives the UT opportunities to make the most of the campus' added value and to put theory into practice; the UT was one of its founders.

### 03.05 Conclusions on current space supply and use

From this analysis of the current supply and use of space at the UT, the following summary conclusions can be drawn.

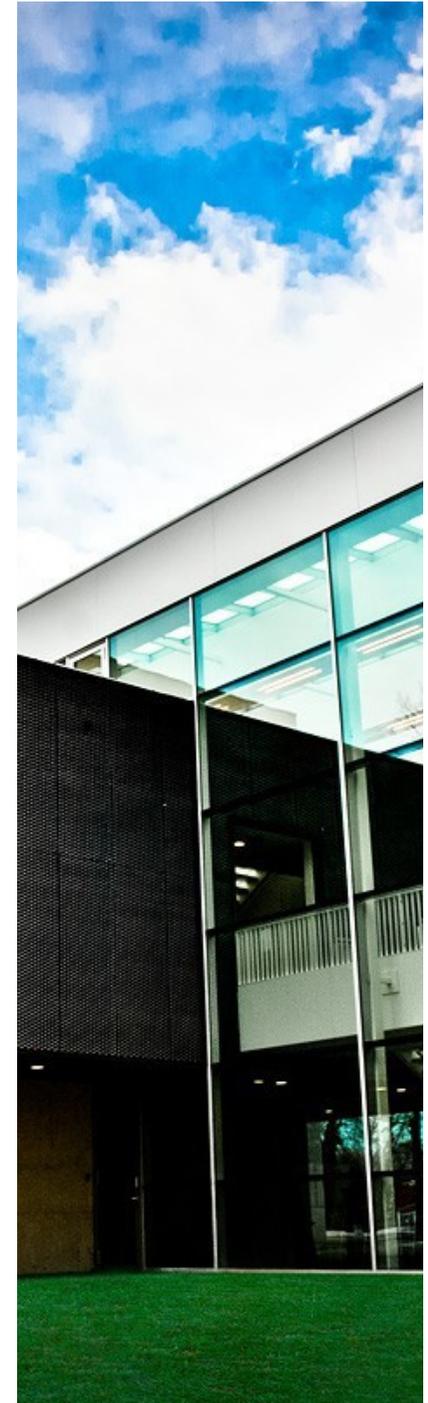
#### 'Core real estate portfolio' and 'flexible skin'

The campus offers a wide diversity of facilities, and is appreciated for its compactness and for its green and autonomous character. Qualitative assessment of the real estate portfolio has shown that that the buildings on campus are generally seen as good. Should developments at the UT diverge from current expectations, it is nevertheless important that a distinction be made between the 'flexible skin' and the 'core real estate portfolio' within this real estate portfolio. The 'flexible skin' refers to those buildings which – because of their location, functionality, strategic value and accounting value – can be used, where necessary, as flexible spaces; which are relatively easy to dispose of (rent out or sell) in the event of a structural drop in space requirements; or which can add space for new developments in the event that demand for such space grows. This applies in particular to the buildings at the edges of the campus, for example the Spiegel, or in the Kennispark. Temporary housing whether owned or not is also part of the flexible skin.

The other buildings then form the 'core real estate portfolio' within the UT's property portfolio.

#### The quality of primary provisions

The basic quality of primary provision buildings on campus (office, education, and research spaces) is up to standard. However, with a view to keeping these buildings future-proof we have examined which of them would be eligible for larger-scale renovation in the period 2023-2032, considering their technical, sustainability (also in connection with the sustainability roadmap),



financial (depreciation) and functional relevance (including attractiveness). This examination included a number of other objects which are necessary for the buildings to function but are less dependent on user assessments. This yielded a list of 15 buildings/ objects which warrant incorporation into the UT's project planning.

#### The quality of non-primary provisions

The UT's non-primary provisions (sports, culture, catering and residential) also make an important contribution to the campus' perceived value. Most of these facilities meet qualitative needs, but those projects due for renovation will need a full quality upgrade in order to make them future-proof. There also exists a pressing quantitative issue (that is explored in more depth in Chapter 04).

#### Quantity and flexibility

Opportunities exist for improving the occupancy and use of the UT's properties:

- Based on experiences at other universities, and from the standpoint that the UT actively focus on improving its scheduling efficiency, there are opportunities to improve the occupancy of schedulable education space. An average occupancy of 70% is regarded as feasible but has not yet been attained by the UT. For lecture rooms, for instance, occupancy is on average 58% (this is the result of the analysis in the previous LTSH; occupancy during the 2019 – 2022 academic years are not representative because of COVID-19, see also section 03.04). Combined with ever more reliable and pervasive digitalization, the near future also presents the circumstances to make these improvements possible. The eventual expansion of business hours also presents interesting possibilities, should a (temporary) shortage of educational space occur.

- A large part of UT's use of space consists of office space. Focusing on multiple use of space within office space and gradually introducing flexibility and a space standard for the use of office space can lead to a reduction in space requirements and more efficient and effective use. As an indication, assuming a flex factor of <1.0 (see Chapter 02) on around 3,500 FTE (the number of FTE as of 1 September 2022), around 3,500 office workstations are required in the current situation. In the current situation, there is a total supply on campus of approximately 4,925 office workplaces (see section 03.04). Since there is approximately 52,000 sq m fno of office space, the average amount of office space per workplace (including meeting rooms) at UT is about 10.6 sq m fno. There are thus more workstations present than are theoretically needed based on the space standard (taking into account the general flex factor). The average size of a workplace is within the bandwidth used by UT as a guideline for future accommodation initiatives (see section 02.04) ). Gradual introduction of a flex factor, taking into account customisation per unit (activity-based working), will yield structural savings and possibly investment scope (more quality in less m<sup>2</sup>) and therefore offers opportunities for growth in FTE as well as realisation of a more inspiring working, research and teaching environment, including an attractive range of other facilities.



# 04 LONG-TERM HOUSING NEEDS

## 04 LONG-TERM HOUSING NEEDS

This chapter translates the estimated future use of the university campus to its long-term space requirements, in both qualitative and quantitative terms.

This assessment of the T's long-term space needs makes use of the following space category definitions:

- *education-related spaces*: rooms and workspaces for education and independent study;
- *personnel-related spaces*: office and research areas;
- *other spaces*: residential units, catering facilities, sports and culture facilities, and other facilities.

For specific space categories, such as library space, for the time being current space use will be used as the basis for the assessment of long-term housing needs. In this assessment of the UT's current real estate administration (see Chapter 03), space needs are defined in terms of their 'useful floor area' (m<sup>2</sup> UFA). To clarify: those spaces whose costs cannot be allocated (technical spaces, sanitary spaces and circulation spaces) are ignored.

### 04.01 Scenarios

An important challenge in this LTSH 2032 is to strike a good balance between the future, with all its uncertainties, and the 'here and now', with available space under pressure. A number of developments have an immediate influence on the university's population (growth) and the resulting need for space. Future developments (different educational forms, digitalization, etc.), while uncertain, have a large potential impact on the quantitative and qualitative need for space. This is an area of dynamic tension that necessitates continuous anticipation and, where necessary, adjustment.

### Developments in student numbers

The UT is keen to retain its unique position of offering small-scale education and a close-knit student community, a unique position which is valued by all the university's stakeholders. At the UT, people matter. The size and composition of the student population is therefore an important topic in *Shaping2030*. In 2030 the student population will be diverse and inclusive. Student numbers have been growing in recent years, and the UT's overall student population has grown since the last LTSH, from about 12,500 in 2020 to about 13,000 in 2022. Figure 7 shows the development in new student numbers in recent years; it shows that the influx of foreign students has grown, while the numbers of Dutch students has fallen (source: *Universiteit Twente, Jaarverslag 2021*).

#### NUMBER OF NEW STUDENTS

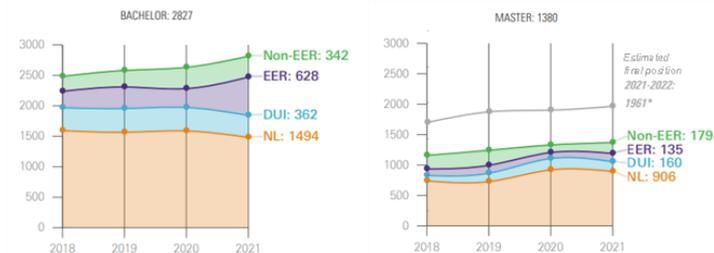
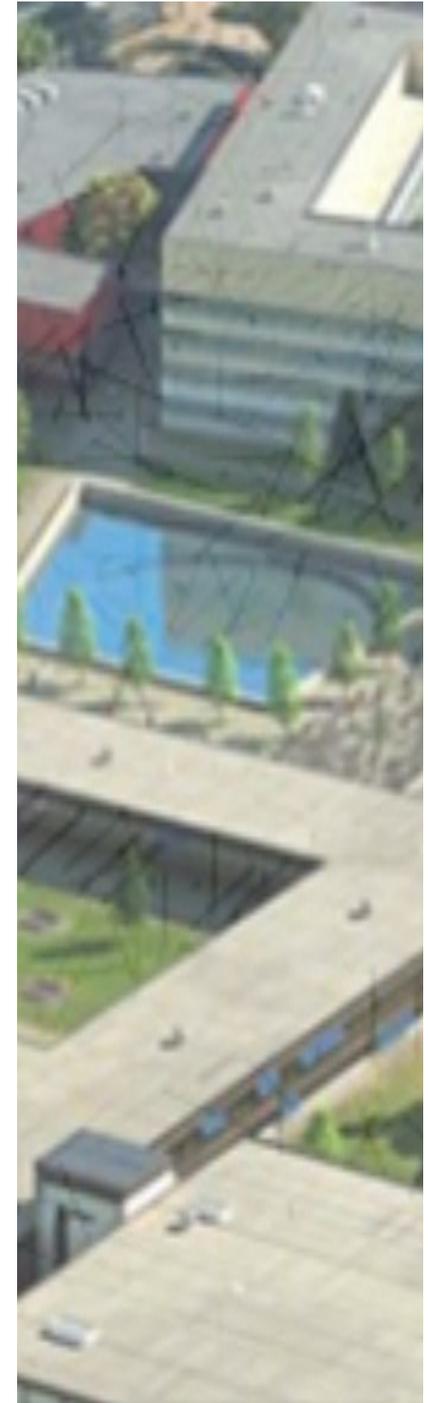


Figure 7: Developments new student numbers (source: University of Twente, 2021 Annual Report)

One of the ambitions in *Shaping2030* is that the university should strive to create a healthy balance between Dutch and foreign students by 2030. An indicative assumption for the maximum percentage of international students would be 40%. The

<sup>2</sup> For the LTSH, it is important to handle these space categories in this way. This does not preclude that, depending on the degree of flexibilization of space use, it is conceivable that, for example, certain office spaces could be used as project space in the future.



international population of the UT is currently about 1/3 of the total student population (source: *University of Twente, 2021 Annual Report*).

#### Prospective UT student numbers

The UT expects the rising trend in student numbers to continue, even though a slight decline in registrations was observed in 2022. There is a great need for scientific and academic staff to implement the various coming transitions (health, energy, sustainability, etc.). The UT has a societal role in this process. This means that the university's growth needs to be carefully managed. The number of students expected over the next few years is given in table 3, based on the Budget 2023-2027.

	2022	2023	2024	2025	2026	2027
Student numbers	13,000	13,500	13,900	14,400	14,700	14,900

Table 3: Prospective student numbers (Budget 2023-2027 prognosis, to nearest hundred)

On this basis, and taking account of the developments described in Chapter 02, within the framework of this LTSH 2032 the UT's total student population in 2032 is estimated as follows:

- growth scenario: 17,500 students
- baseline scenario: 16,000 students
- limited growth scenario: 14,500 students

Given the very many uncertainties, it is necessary to explore two more extreme variants in order to gauge the university's sensitivity to growth or contraction. The lower limit is the 'fallback scenario', and the upper limit examines what would happen if student numbers rose faster than expected on the basis of current knowledge: the 'peak scenario'.

- fallback scenario: 13,000 students
- peak scenario: 19,000 students

#### Developments in staff numbers

Staff numbers have also risen in recent years, from 3,611 (3,185 FTE) in 2020 to 3813 (3,362 FTE) in 2021. This is shown diagrammatically (in FTE) in Figure 8.

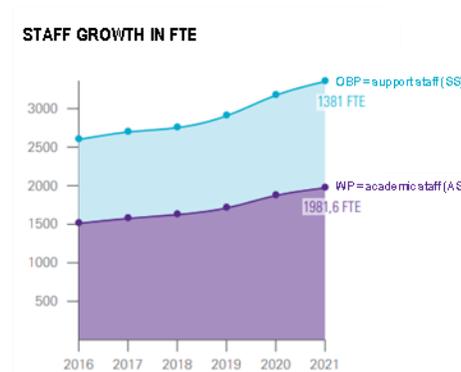
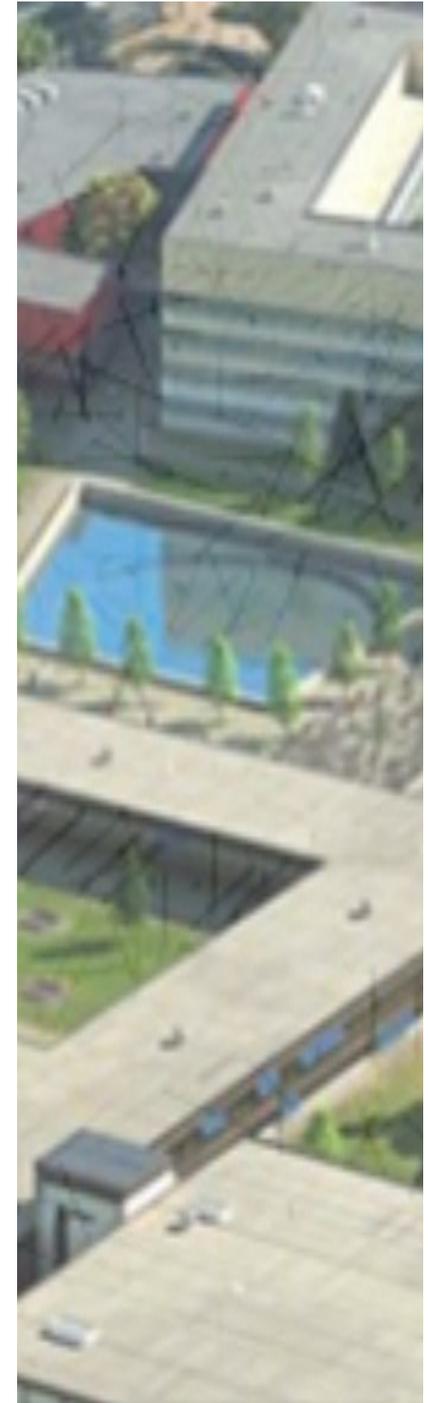


Figure 8: Developments in staff numbers (in FTE) (Source: *University of Twente, 2021 Annual Report*)

#### Prospective UT staff numbers

Principally as a result of government measures, staff numbers began undergoing significant change in the period 2020-2030. The UT expects its academic staff (hereinafter: AS) to necessarily grow in the coming years (source: *2021 UT Annual Report*). The prognosis for support staff (hereinafter: OBP) is comparatively stable. The expected development in the overall number of staff (in FTE) is shown in table 4, on the basis of the Budget 2023-2027.



	2022	2023	2024	2025	2026	2027
FTE	3,500	3,800	3,700	3,800	3,700	3,700

Table 4: Prospective staff numbers (Budget 2023-2027 prognosis, to nearest hundred)

On this basis, within the framework of this LTSH 2032, the UT's overall staff population in 2032 is estimated as follows:

- growth scenario: 2,900 FTE AS and 2000 FTE SS
- baseline scenario: 2,600 FTE AS and 1700 FTE SS
- limited growth scenario: 2,300 FTE AS and 1500 FTE SS

Given the large number of uncertainties, particularly in light of strong levels of international competition for academic staff, here too it is necessary to explore two more extreme variants in order to gauge the university's sensitivity to growth or contraction. The lower limit is the fallback scenario; this is set using twice the difference between the baseline scenario and the limited growth scenario. At the upper limit, we examine what would happen if the numbers rose faster than expected on the basis of current knowledge: the 'peak scenario'. This is set using growth at about twice the rate of the difference between the growth scenario and the baseline scenario.

- fallback scenario: 2,000 FTE AS and 1,200 FTE SS
- peak scenario: 3,200 FTE AS and 2,300 FTE SS

#### The scenario as the basis for future space needs (2032)

The future is uncertain, and for this reason space requirements are dynamic. Real estate, however, is static, and in practice this leads to tensions between supply and demand. In order to be able to react flexibly to future developments, and with a view to striking a structural balance between the benefits and burdens of real estate, for the long term we adopt a conservative estimate of space

requirements. In LTSH 2032 the baseline scenario forms the starting point from which to determine the university's 'core real estate portfolio' and the related capacity dimensioning of its permanent property. The growth and peak scenarios will exceed the UT's permanent housing capacity, and this excess will be met, after all existing capacity has been optimally exploited, through a 'flexible skin' made up of rented or temporarily realized property. In the event of contraction, vacancies will be avoided. Buildings within the flexible skin with strong external marketability will be earmarked for first disposition in the event of contraction, and put forward for third-party rental or, in extreme cases, sale.

For the purposes of the UT's long term housing needs, the LTSH 2032 has adopted the following departure points for the core real estate portfolio:

- number of students in 2032: 16,000
- number of FTE AS in 2032: 2,600
- number of FTE SS in 2032: 1,700

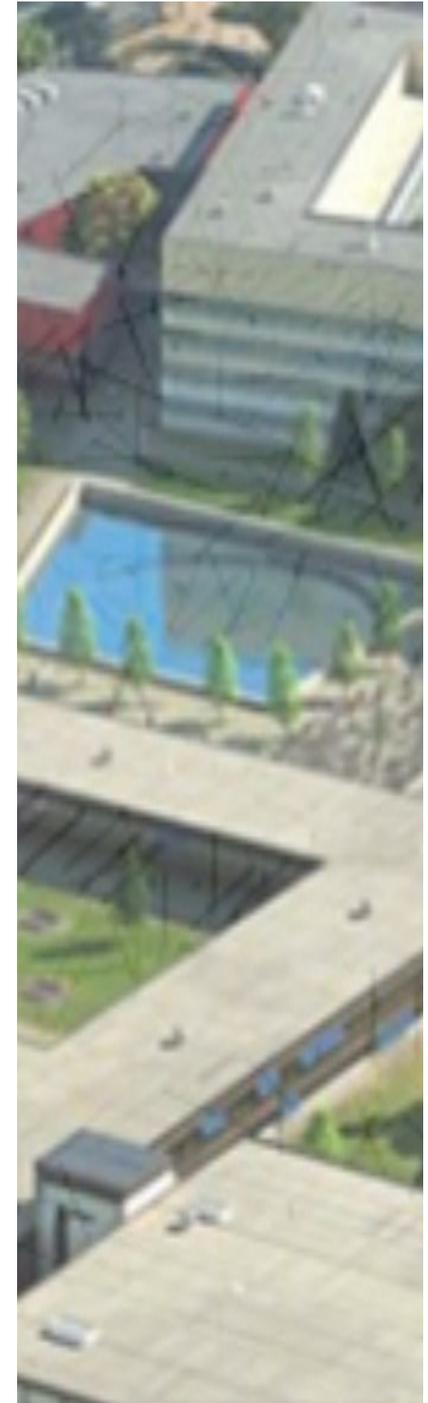
#### 04.02 The need for educational space

##### Relevant developments influencing the need for educational space

About the same time as the development of the LTSH, UT's educational vision is being developed. UT aims to have this in place by 2023. Following on from developments mentioned earlier in Chapter 02, the choices to be made in UT's educational vision may impact housing and the campus.

##### TOM

The Twente Education Model (*Twents Onderwijsmodel*, TOM) has a powerful influence on the university's need for educational space.



The bulk of the UT's Bachelor's degree programmes have been designed in accordance with this model. With TOM the UT helps its students become professionals having an entrepreneurial attitude together with research, design, and organizing skills. The TOM approach is characterized by the following elements: project-driven, modular education; student-driven learning; frequent feedback on the learning process; variation in lesson methods; and community forming. With regard to educational facilities, programmes therefore need an adequate number of project spaces and lecture spaces that facilitate interactive learning.

#### *The digitalization and flexibilization of education*

Digitalization is changing society at a rapid pace, this offers plenty of opportunities and possibilities. Especially to make education more flexible. At the same time, it is important to do this from a clear educational vision. For the LTSH and use of space, one sees a trend emerging within the UT in particular that traditional lectures in many cases lend themselves well to streaming and recording (blended learning). However, the UT does encourage attendance on campus and strives to enjoy physical education as much as possible. Due to practical circumstances, currently about 80% of the activities take place physically, but given the developments in the field of blended learning, it will have to be seen whether this will change again in the future. For the use of the COV, this has possible consequences (source: *Vision on teaching and learning, 2023, UT*).

Not so specifically UT also sees modularization and mixed forms of face-to-face and online education (sometimes provided by other institutions), are increasingly common. There is also a growing demand for 'micro-credentials', in which a programme is subdivided into smaller pieces that are certified separately (source: *Micro-credentials*

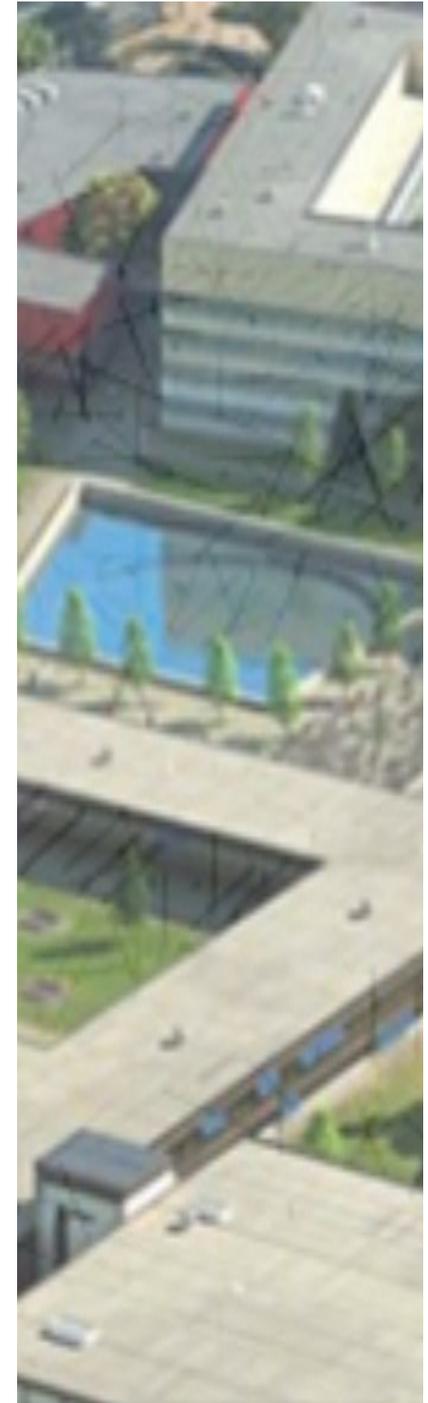
*white paper, 2021, ECIU*). A linked trend can be seen in which ever more organizations are offering training programmes that could take the place of part of the programme offered by the university. In the longer term, such developments may well have an impact, depending on what choices are made.

#### *Target group expansion*

The UT has the ambition to experiment with a digital framework of virtual lessons by 2030. This digital framework will form the basis of the future 'Online Campus' (source: *Shaping2030*). A digital framework makes it possible to offer education to many more students worldwide. If this looks positive based on the then current educational vision and experiments, there will be housing implications. In practice, that may in fact lead to a situation in which the university has many more registered students who spend only a limited part of the year actually on campus. Lifelong learning (LLL) forms another important part of *Shaping2030*. Knowledge transfer is not a one-off thing; it is a lifelong process. Both these developments lead to an expansion of the university's target group, and one that includes people outside the traditional age categories of the university.

#### *Community formation*

The digitalization developments just described make it possible to follow a programme from wherever you want, whenever you want, and in the form that suits you best. The UT is nevertheless convinced that direct contact, de social component, between teacher and student, interactions between students themselves, and the connections that students and teachers have with the university will continue to be vital. The campus plays an important role in community forming. The place on campus where students study



individually or work in groups on projects is also important. This is also regularly more outside the faculty, which is precisely why students need a "homebase" in the form of study workstations in close proximity to staff office space and the housing of their program's student union.

#### *Timely anticipation*

The UT aims towards the ideal combination of strategic investment in its physical environment and strategic investment within the framework of digital transformation. Digital transformation leads to the digitalization of education and research, and to disruptive changes both in the education and research market and in education and research products. It is still difficult to predict how fast these developments will occur, and exactly what impact they will have. The COVID-19 pandemic demonstrated that the transition can happen quickly. The UT is keeping a close eye on these developments, and is adopting a position that will allow the university to react quickly to any qualitative and/or quantitative changes in space needs. The UT can, and will, however, also anticipate the fact that the added value of a physical university is going to change fundamentally.

#### *Flexibility*

In a general sense it can be said that because of the rapidly changing nature of the demand for education there is a growing need for flexibility – both in terms of flexibly deployable spaces that are suited to a variety of educational approaches (or can be made so by means of simple interventions), and in terms of flexible housing solutions (rented, semi-permanent, or temporary real estate). The developments we have described have such a large potential impact on the need for housing that quantitative additions to the real estate

portfolio are by no means a self-evident solution.

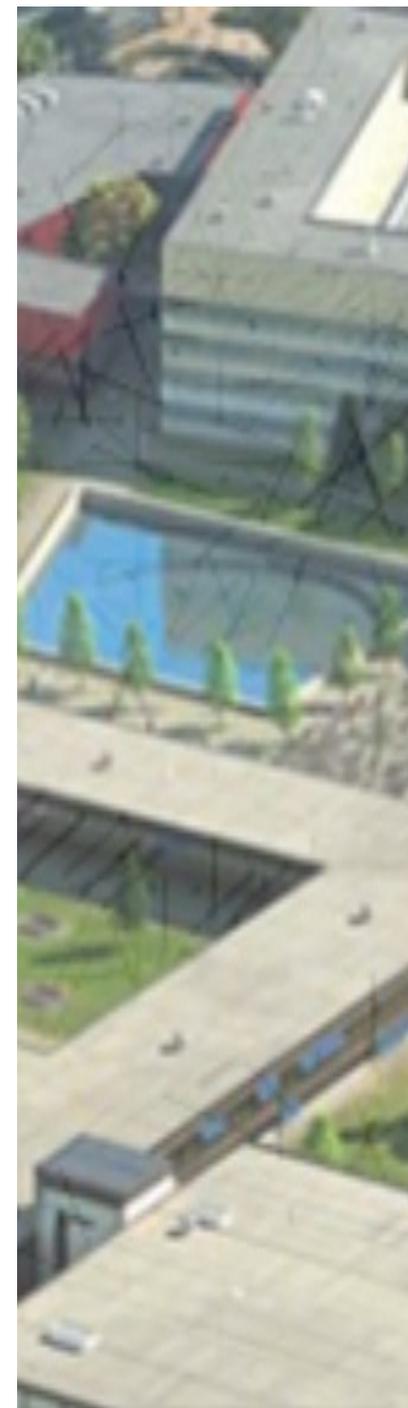
#### *The need for educational and independent study spaces, in concrete terms*

In recent years the CEF programme was launched, involving collaboration between the CES, LISA and CFM services. The CEF programme covers issues such as:

- a focus on optimal occupancy (this parameter indicates whether a space is used);
- a focus on optimal utilization (this parameter indicates what percentage of maximum capacity is actually used in a given period);
- better use of measurement data: counting actual students present vs. registrations;
- the optimal deployment of digital possibilities;
- the quality of spaces, including digital facilities;
- scheduling from the 'home base' idea (educational activities), within or close to the zone that is home to the programme;
- insight into user satisfaction with the use of spaces;
- space suitability;
- information on scheduling and timetables;
- ultimately, adaptive scheduling possibilities.

Opportunities also exist to improve the use of space on the basis of existing experiences and needs in education provision. In concrete terms, these needs are as follows:

- Growing student numbers are generating a demand for **more study workspaces**. The scale of this additional demand has not been measured within the framework of LTSH 2032, and therefore needs to be determined with more precision. Study workspaces can often be created in unused areas with relatively



little intervention. This leads to more efficient space use, with no loss to other spaces, and is therefore to be recommended.

- Students do need additional project space on campus. Occupancy analyses of the existing supply, however, show only a limited amount of pressure on existing facilities. In general, Tuesdays and Wednesdays are the busiest days, particularly between 11am and 1pm; in the busiest weeks, at these peak moments we see reservations rates of about 95%. Between 1pm and 4pm this falls to 90%, and after that it quickly falls to less than 40%. In the evening (after 5pm) the demand for space is limited (reservations are then at about 10% peak levels).
- There is also a desire to have **more permanent exam spaces on campus**. Occupancy analyses show a high rate of occupation of the current hired facilities off-campus (Therm). Moreover, the use of regular lecture spaces for examination purposes is rising. The concrete starting point for this need is a space with an area comparable to Therm – in all, about 1,150 m<sup>2</sup> UFA. There are additional demands for digital testing; this concerns about 1,000 m<sup>2</sup> UFA above the existing exam space. A possible combination of this need with the future expansion of sports facilities is currently under review.
- There is a need for **more large tutorial spaces (for about 100 people)**. These spaces generally show an occupancy rate above 75%. With regard to inflexible lecture rooms (with sloping tiers), the aim is to increase occupancy rates and not to add more spaces of this type.
- There appears to be a trend in which **lectures are gradually being replaced by practical tutorials**. If this trend continues there could be consequences for per-student space requirements, as the space required for a tutorial is about twice that required for a lecture. Time will tell how this trend is manifested; future developments or renovations can take

account of it if necessary.

- A final trend in blended learning is the use of so-called "**do-it-yourself-studios**". Here teachers record a 'course' that can later be played back via the Internet. The future space requirements in this have yet to be specified. These are relatively small spaces.

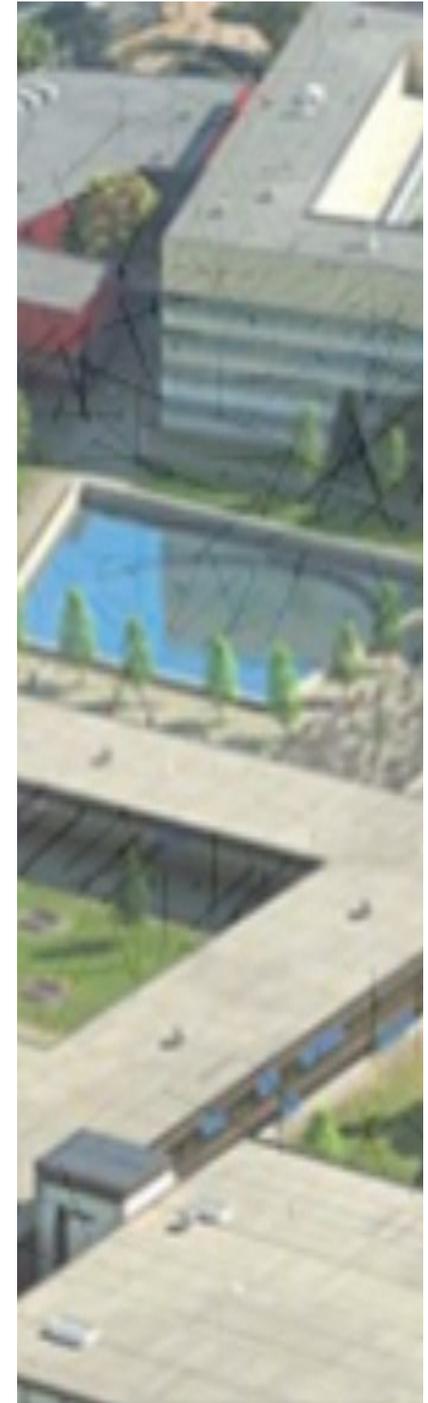
Taking account of the expected growth of the university, but also of opportunities for improving space occupancy and utilization, there is a need for about 4,250 m<sup>2</sup> UFA of additional educational space. This need comprises **about 1,500 extra workspaces and 25 extra project spaces**. With regard to the 1,500 workspaces, the focus will lie on tutorial and multifunctional spaces. **Extra study workspaces can mostly be situated in unused spaces**. Replacing the Therm and instating the desired expansion of conventional and digital examination spaces will require about 2,150 m<sup>2</sup> UFA of educational space on campus. Part of this (about 1,000 m<sup>2</sup> UFA) may be achievable in combination with the development of sports facilities. If the Therm is not replaced, the need for space on campus is about 1,150 m<sup>2</sup> UFA lower. Finally, there is a need for a yet-to-be-determined amount of do-it-yourself studios.

The **total additional need for educational space on campus is therefore about 6,400 m<sup>2</sup> UFA, including the replacement of the Therm** (of which about 1,000 m<sup>2</sup> UFA could possibly be provided as part of the development of the sports facilities).

#### 04.03 The need for research space

The UT's vision of 'the education of the future'

Within the framework of 'the education of the future', the following developments and scenarios are particularly relevant:



- As a result of the sector plans (see section 02.02) the UT expects research activities to grow.
- As a result of changes in university funding, and specifically the sector plans, the UT is expecting a substantial growth in staffing levels (source: *Annual Plan LTSH 2022, UT, 2021*).
- Research will become more domain-overarching, and innovations will arise at the interfaces between domains.
- Research is also becoming more important. The UT has to invest in innovative business models. An example of this is offering research in subscription form, whereby stakeholders with a research need approach the UT in exchange for a fixed price.
- In the area of research facilities the UT plays the role of broker, facilitating the research programme rather than owning the facilities. The speed of innovation demands close collaboration with other universities and companies.

(Source: *Intermediate report Universiteit Twente, Duval Union consulting, 2019*).

#### The need for research space, in concrete terms

The current supply of research space largely meets the qualitative demand. Within the research institutes, however, the nature of this demand is changing. Smaller demands are generally being provided for within the regular exploitation of faculty space (this concerns housing issues to only a limited degree).

Within the framework of the developments surrounding the Es and the Horst (see Chapter 05), in recent years the ET and TNW have implemented a variety of plans. Research carried out within the framework of expansion at the Es (source: *presentatie Nieuwbouw de Es, Draaijer+Partners, May 2022*) has shown that TNW has expressed the need for about 2,200 m<sup>2</sup> UFA of supplementary research space. The Masterplan underlying ET's developments in the Horstcomplex (source: *Eindrapport Masterplan huisvesting De Horst, faculteit ET, Kleissen, 2021*) revealed a need for about 2,500 m<sup>2</sup> UFA of supplementary research

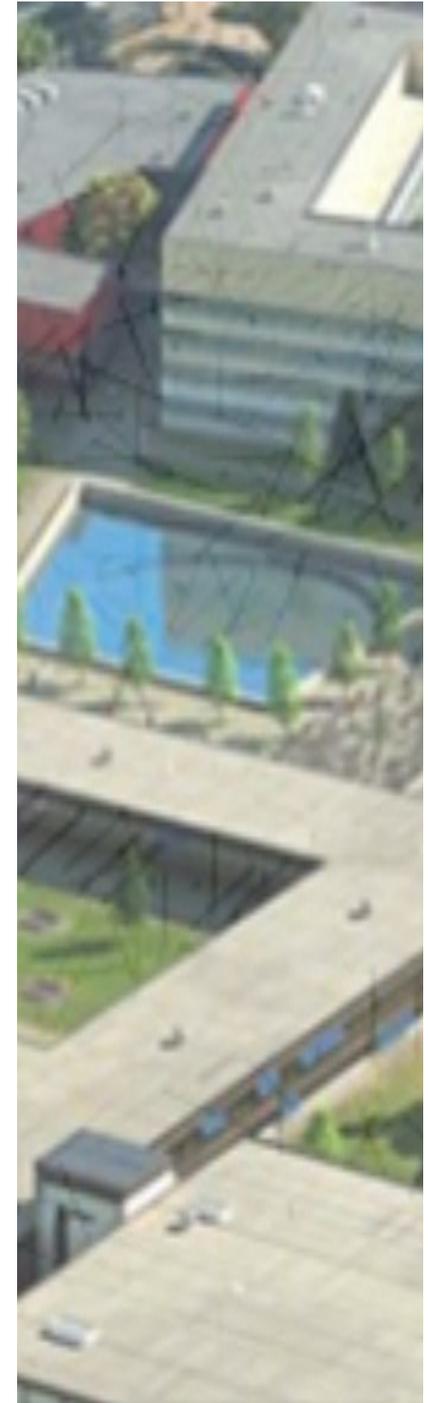
space after delivery of the Cube at the Horst. EEMCS also needs another space for practical experiments of about 400 m<sup>2</sup> UFA. The total **additional need for research space and space for practical experiments on campus is therefore about 5,100 m<sup>2</sup> UFA.**

#### 04.04 The need for office space

With regard to the future need for office space, the following developments are particularly relevant:

- In line with the principles from the policy making memo hybrid way of working (and studying) at UT working group 'Hybrid working and studying'<sup>1</sup> (source: *Besluitvormende notitie hybride werken en - studeren, 2022*), an ambition of an average flex factor (number of workplaces per FTE) of 1.0 is taken into account in the context of this LTSH (see also section 02.04). This is an average flex factor for the entire UT. However, the most important starting point is customisation based on activity-based working, customisation per department remains possible. There is also time and space to implement the transformation.
- The UT also employs a guideline for the use of office space: 10 to (a maximum of) 12 m<sup>2</sup> UFA per workspace. This guideline is being introduced step by step, when an organizational division moves to new premises and/or during the modification of buildings through renovation or large-scale functional adaptation.

The analysis of the UT's current supply and use of space (see Chapter 03) has shown that there are more office workspaces present on campus than are theoretically required on the basis of the space norm (taking account of the flex factor). Despite this there is a need for about 1,600 m<sup>2</sup> UFA of additional office space in the form of supporting spaces close to the new research facilities.



The total **additional need for (supporting) office space is therefore about 1,600 m<sup>2</sup> UFA.**

#### 04.05 The need for residential units

There is a need for more residential units on campus. It is important that the campus offers an adequate number of affordable residences of good quality. Finding proper accommodation is crucial to attracting international talent. The UT seeks to be the most hospitable university possible, and therefore offers support in finding accommodation for international and Dutch students, staff, and visitors at the UT.

The student accommodation market has been overheated in Enschede since 2021. The UT is not currently constructing any student residences, and has therefore reached agreements with Enschede city council and the De Veste and Domijn housing corporations to create 497 residential units in the Kennispark and to replace another 422. Another 230 temporary residential units have been placed in the Witbreukseweg. These will remain there for at least seven years.

#### 04.06 The need for other non-primary provisions

There is a need for a Contact Centre / Meeting Centre (chiefly as part of CES). This is a perfect fit with the *Shaping2030* vision, which focuses on openness, encounters, so on. The Contact Centre will be housed in the 'Boerderij', which is expected to open in early 2023.

In 2021 a Sports & Culture Masterplan was drawn up which provides insight into the university's future space needs for these facilities.

The plan made it clear that:

- Non-primary provisions make an important contribution towards

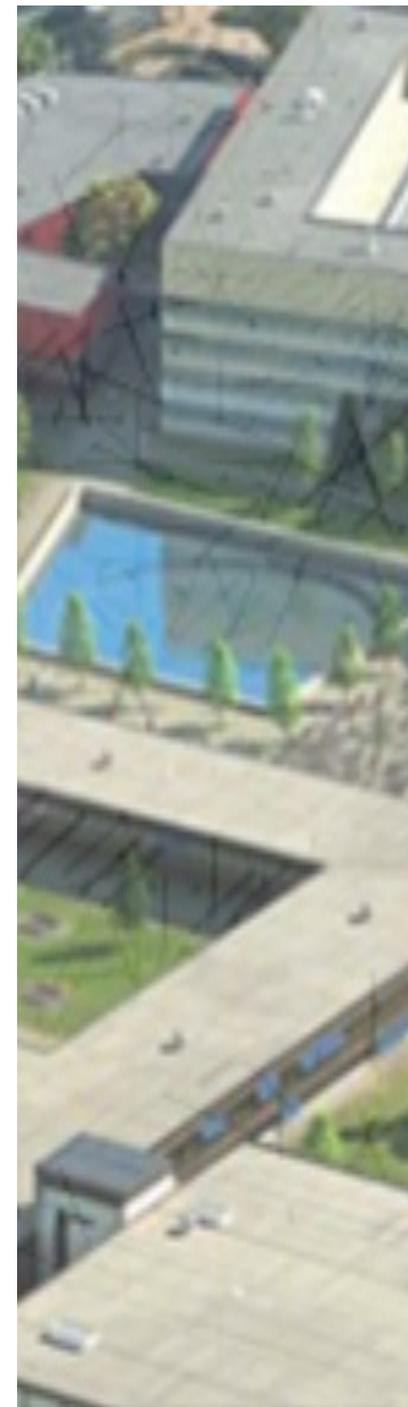
the UT's strategic spearheads: encounters, entrepreneurship, internationalization, experience and experiment on campus.

- Despite their extensive opening hours, sports and cultural facilities on campus are experiencing user pressure – demand is exceeding supply;
- In concrete terms, there is an immediate temporary need for the following:
  - temporary housing for a dance hall, air-supported structure and fitness area, about 1,930 m<sup>2</sup> UFA in all.
- There is also a permanent need for the following, in order of importance:
  - dance space in combination with other individual sports, about 2,600 m<sup>2</sup> UFA
  - adaptation of the Watersports complex
  - expansion of the Sports Centre by about 2,400 m<sup>2</sup> UFA
  - expansion of the padel courts
  - renovation of the Sports Centre
  - renovation of cultural facilities in the Vrijhof
  - expansion of cultural facilities by about 1,000 m<sup>2</sup> UFA
  - a variety of outside sports activities, including a skate park and a tennis pavilion

On the basis of the Sports & Culture Masterplan there is a **need for an additional 6,000 m<sup>2</sup> UFA of permanent sports and cultural facilities** in order to reach the limiting value (the minimum required). CFM Sport, CFM Culture and the Student Union together prioritized these needs.

#### 04.07 Other ambitions

In conversations with the various organizational components of the UT, other ambitions were mentioned besides the need for space



described here. The need for supplementary space applies principally to real estate aimed at the primary process. Besides this, a number of significant infrastructural adaptations will be carried out on campus in the coming years. Some of these will take place as a result of adaptations to real estate; others are intended to make the campus a better and safer place to live and work. There will also be future developments from the ecosystem idea that provide more space for activity such as start-ups.

#### Paviljoen area

The Paviljoen area has space for smaller-scale developments. It is conceivable that part of the Sports & Culture facilities could be realized here. Besides this, upgrading the Oude Drienerlolaan to a full-fledged low-speed traffic link between the O&O and W&L areas is desired. This path is also part of the Kennispark ‘innovation path’, an important artery for the university.

#### Modifications consequent on building developments

A number of buildings are situated adjacent to a square or car parking facility. Within this framework, the most significant renovation will be in the space surrounding the new ITC over the course of 2023. The university is also considering the area around the whole of the O&O square as a possible bicycle park location. The expansion of the *Koudecirkel* cooling facility is necessary for real estate expansion; a larger Koelgebouw will be built in 2023.

#### Expansions of facilities for business activity (start-ups)

Section 03.02 mentioned that UT has entered into a partnership with an institutional investor. This investor may in the future develop buildings on campus and rent them to UT start-ups or scale-ups, for example. These are not so much LTSH investments, but

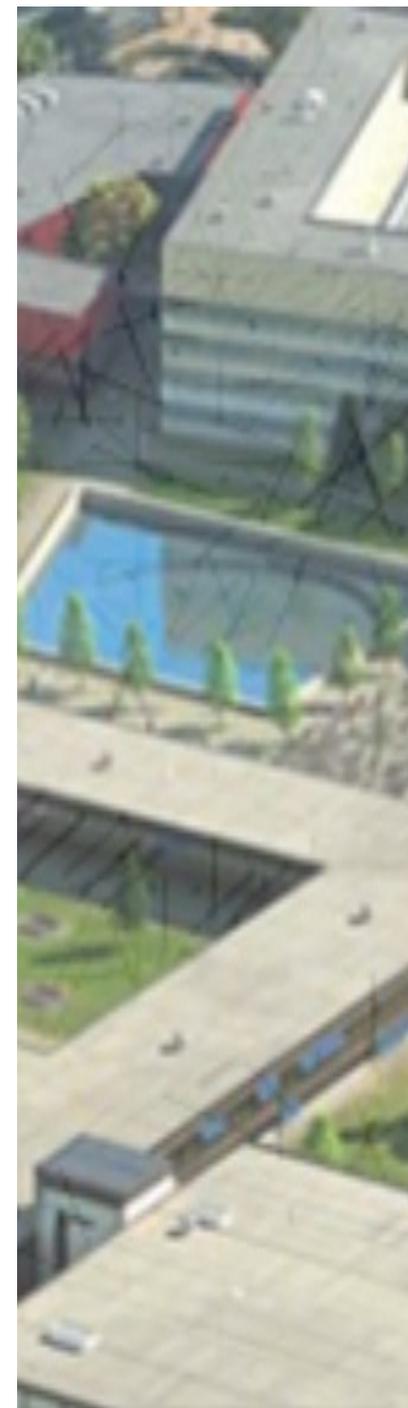
because they do involve campus development, they are important. However, it may become of interest if the future destination of the High Tech Factory (HTF) is examined. The HTF is owned by UT’s holding company and houses some companies that originated at UT. Functions that will preferably end up in institutional investor real estate in the future. The Nanolab is also increasingly being used by small companies while this facility is primarily intended for research. There is a need for a similar facility but for business activity.

#### 04.08 Conclusions on long-term housing needs

The analysis of the university’s long-term housing needs yields the following summary conclusions.

##### The need for flexibility

- An important challenge in the LTSH is striking a good balance between future prospects and the ‘here and now’. A number of developments are having a direct influence on the university’s population (growth) and the consequent need for space. Future developments (flexible student inflows, other forms of education, digitalization, etc.) are uncertain, but have a large potential impact on the qualitative and quantitative need for space. This is an area of dynamic tension that warrants continuous anticipation and, where necessary, adjustment.
- In a general sense it can be said that because of the rapidly changing nature of the demand for education there is a growing need for flexibility – both in terms of flexibly deployable spaces that are either suited to a variety of educational approaches (lectures and practical tutorials, project-based learning, independent study in groups) or which can be made so by means of simple interventions.

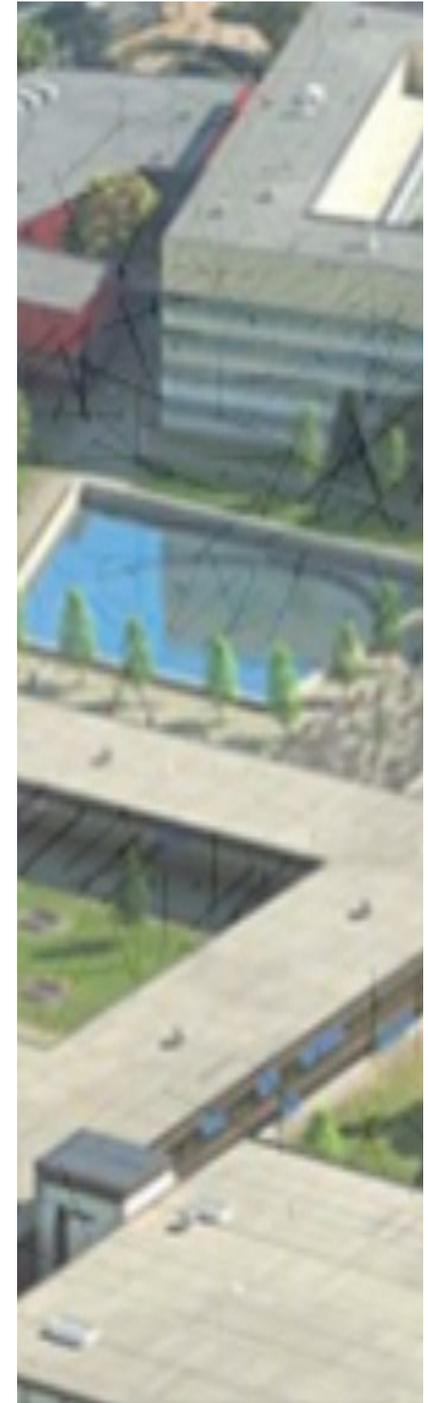


### The growing need for space as a result of university growth and sector plans

- The student population of the UT has grown considerably in recent years, and the university expects this population to grow more in the coming years. In order to estimate future numbers of students and staff, the UT's future perspective was examined and a number of scenarios elaborated.
- To be able to respond flexibly to future developments, and with a view to a structural balance between the benefits and burdens of real estate, for the long term we adopt a conservative estimate of space requirements. In LTSH 2032 the baseline scenario forms the starting point from which to determine the university's 'core real estate portfolio' and the related capacity dimensioning of its permanent property.
- In concrete terms, the growth of the university has meant that there is a need for an additional **4,250 m<sup>2</sup> UFA of educational space** (including 25 extra project spaces) on campus. The replacement of the Therm and the desired expansion of conventional and digital examination areas has created a **need for about 2,150 m<sup>2</sup> UFA examination space** on campus, part of which (about 1,000 m<sup>2</sup> UFA) may be realizable within the development of the UT's sports facilities. If the Therm is not replaced, this space need is about 1,150 m<sup>2</sup> UFA smaller. Finally, there is a need for more study spaces. Many of these can be realized in currently unused areas through relatively minor interventions, which leads to more efficient space use and is not at the cost of other spaces.
- The UT's growth has also meant that there is a need for about **5,100 m<sup>2</sup> UFA of additional research space** and about **1,600 m<sup>2</sup> UFA of supporting office space** near the research facilities.

### Other ambitions

- There is a need to expand the supply of residential units on campus, and to widen the available choices (diversity in type and price). The elaboration of this residential programme will be in close collaboration with Twente authorities, housing corporations, and any other partners.
- The UT's non-primary provisions make an important contribution to its strategic spearheads: encounters, entrepreneurship, internationalization, experience and experiment on campus. Despite extensive opening hours, some of these campus facilities are experiencing user pressure; demand is exceeding supply. Working with an external advisor, CFM and the Student Union have developed a Sports & Culture Masterplan which identifies a need for **about 6,000 m<sup>2</sup> UFA of additional permanent sports and cultural facilities**, all according to a prioritization plan. This includes additional need for a multifunctional dance space and the expansion of indoor sports facilities. Until a permanent solution has been built, there is an immediate need of **about 1,930 m<sup>2</sup> UFA of temporary and sport and culture facilities**.
- Take into account future developments with an institutional investor on campus, with facilities for business activity especially complementary to developments from the LTSH.



# 05 REAL ESTATE STRATEGY

## 05 REAL ESTATE STRATEGY

Based on the insight gained in Chapter 04 by comparing future demand and current supply in quantitative terms, this chapter outlines a solution direction for accommodating space needs with space supply. A real estate strategy has been developed for this purpose. Several real estate plans have already been examined and developed in recent years, in cooperation with various faculties. This has been included in this. Extensive attention has also been paid in this chapter to the existing stock of buildings that need technical and functional improvement over the next ten years. Finally, all other requirements have also been inventoried and described. The outcome of this chapter is a total plan of projects. The implementation of the housing strategy depends on favorable market conditions such as the level of building cost increases and having sufficient human capacity.

### Real estate strategy in general terms

It is important to emphasize that the LTSH 2032 outlines and therefore also outlines the housing strategy. During the further elaboration of each 'project', the parties involved will discuss how best to give substance to the necessary (temporary) rehousing and the new construction or renovation/maintenance plans and what functional as well as spatial program this will entail.

### Periodic review LTSH

As a result of uncertain future developments, the LTSH is a dynamic strategic document. This means that the envisioned LTSH must be able to move with future developments. The strategy outlined in this chapter is based on the current situation and expected developments. If reality differs from this, the LTSH will have to be adjusted accordingly. The LTSH (10-year outlook) is set periodically (every 3 years) and recalibrated annually in the Annual Plan (5-year outlook, in line with the scope budget).

### 05.01 Strategic and sustainable expansions and renovations

Based on the analyses done in previous chapters, the new LTSH 2032 focuses on housing for education, research, sports and culture. To provide some overview, three main categories are distinguished for in-house real estate developments in this LTSH:

- A. Sustainable new construction/growth
- B. Renovation/sustainability of existing property
- C. Sports and culture

This section will first provide an overall view of all the projects included in the LTSH 2032, after which further explanation will follow. Figure 9 shows the three main categories and their corresponding projects, in terms of developments in UT's own real estate.

All own real estate developments are divided based on these three main categories in Table 5, under the heading "developments own real estate. In addition, the table also includes all other LTSH 2032 projects/items in the following categories:

- 'Infrastructure';
- 'Developments real estate third parties';
- 'Investments in maintenance';
- 'Work out in further detail'.

In this table, the projects on which decisions have already been taken prior to this LTSH are highlighted in blue (these are projects on which implementation has already started or where there is already approval for the implementation phase). Projects on which decisions have yet to be made are not highlighted. In the table, the first column (Budget LTSH 2032 Total) shows the amounts over the entire duration of the projects. The second column (Budget 2023-2032



**STRATEGIC AND SUSTAINABLE EXPANSIONS AND RENOVATIONS**  
DEVELOPMENTS OWN REAL ESTATE

**REAL ESTATE STRATEGY**

LTSH 2032 - DEVELOPMENTS OWN REAL ESTATE

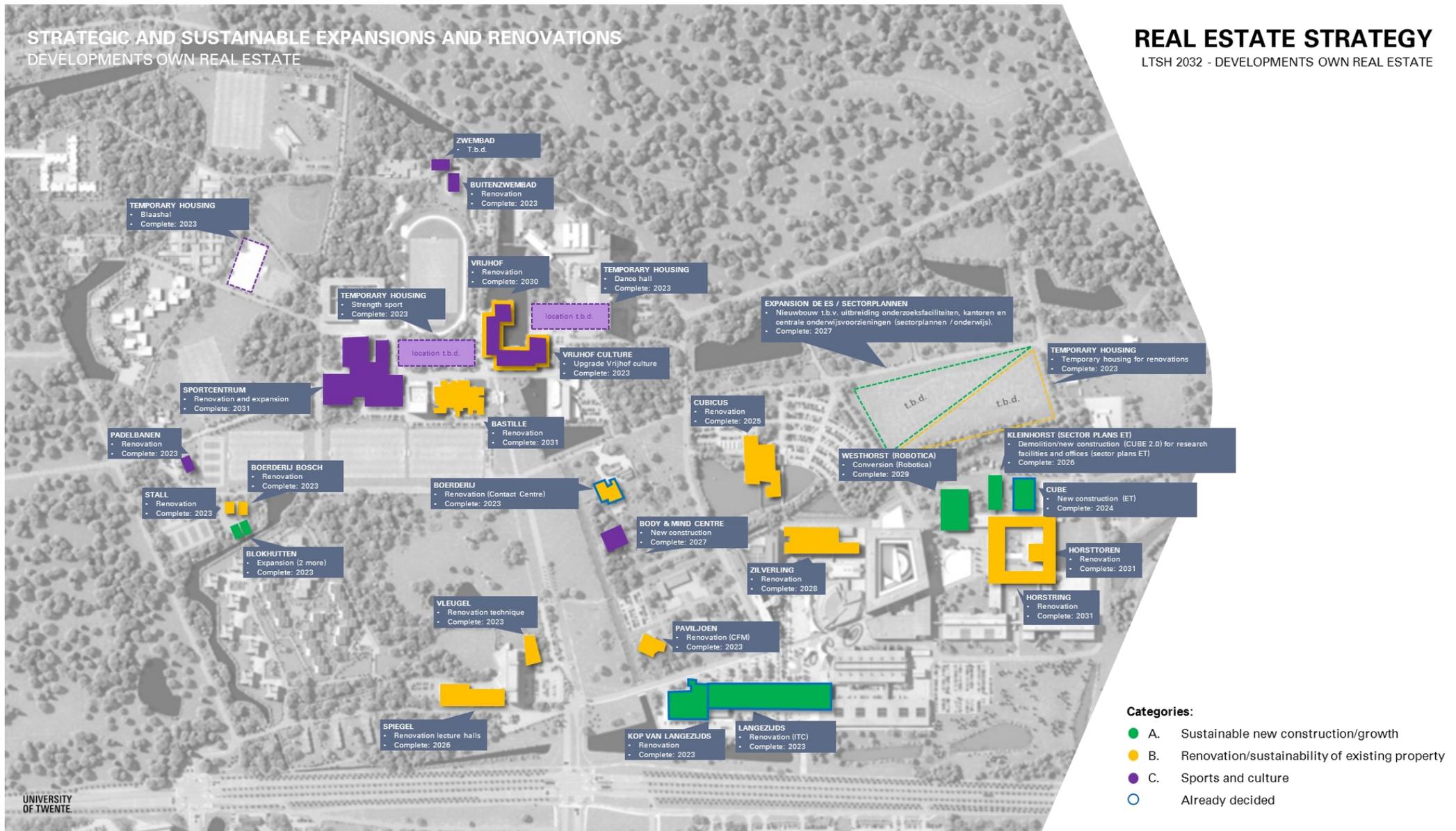


Figure 9: Overview of projects by main categories (developments own real estate UT).

Duration) shows the amounts of planned expenditures over the duration of this LTSH. The difference is the amount already spent before 2023.

The tables in this section show indexed numbers. A construction cost increase of 8% per year, decreasing to 4% and a realization factor of 90% (see 06.02 for further explanation of realization factor) has been taken into account. After this exercise, the total budget to 2032 closes at approximately €[...]. Projects with a size in the period 2023-2032 of approximately €[...] (excl. realization factor) have already been decided upon. The structure of the total budget is further explained in this section for each main category.

In Table 5, the first column shows the expected total amount of the project, the second column shows the portion of the investment amount falling in the period 2023-2032.

Project Renovation Bastille is not listed because this project is planned beyond the term of the 2032 LTSH. Project Renovation Vrijhof, while not listed, will be considered with the sports center in due course.

## 1. Developments own real estate

### Category A: Sustainable new construction/growth

Due to the higher than expected influx of students and employees, UT is expanding, which calls for additions to UT's real estate portfolio. The emphasis here is on research education and sports & culture facilities. Over the next ten years, UT expects to complete approximately

25 projects as part of sustainable new construction/growth of the university. UT's total supply of m<sup>2</sup> UFA will increase by approximately 11,000 m<sup>2</sup> UFA after realization of these Category A projects. Of this, **approximately 4,300 m<sup>2</sup> UFA will be added to teaching spaces, approximately 5,100 m<sup>2</sup> UFA to research spaces, approximately 1,600 m<sup>2</sup> UFA to office space and approximately 100 m<sup>2</sup> UFA to residential units.** The remainder will benefit other facilities. The expansion to Sports and Culture is separately named under category C.

*Sustainable new construction/growth of own property*  
ITC's relocation will be finalized circa the end of 2022.

The renovation of Langezijds (including the Kop, approximately 10,000 m<sup>2</sup> UFA) will then be complete. This will house the ITC on campus. The old building in the center of Enschede has been sold. The multifunctional workshop the Cube for the ET faculty will be completed in 2024. The Cube is an extension to the existing Horst complex and includes approximately 3,000 m<sup>2</sup> of UFA research space. As articulated in Section 03.02, these mutations have already been incorporated into the analysis of current space supply and use (in that sense, there is no expansion here in the context of this LTSH). No final interpretation has yet been given to the Head of Langezijds. UT prefers a party that provides external exposure or general use. This infill will be investigated further.

At the existing log cabin, there is a desire to build two additional log cabins. This will add approximately 100 m<sup>2</sup>

Project	Budget LTSH 2032 Total	Budget 2032- 2032 Term
<b>1. Developments own real estate</b>		
<b>Indexed amount</b>		
● <i>A. Sustainable new construction/Growth</i>		
ITC Langezijds		
Kop Langezijds		
Cube		
Blokhutten (2 extra)		
Uitbreiding De Es / sectorplannen		
Sectorplannen ET (Kleinhorst)		
Robotica (Westhorst)		
● <i>B. Renovation/sustainability of existing property</i>		
Paviljoen renovatie		
Boerderij renovatie (Contact Centre)		
Stall ontmoetingsruimte		
Boerderij Bosch		
Vleugel (alleen techniek)		
Spiegel bgg collegezalen		
Cubicus renovatie		
Zilverling renovatie		
Horststoren en -ring renovatie		
Tijdelijke huisvesting t.b.v. renovaties		
● <i>C. Sport and Culture</i>		
<i>Masterplan sport &amp; cultuur</i>		
Tijdelijke huisvesting: blaashal		
Tijdelijke huisvesting: danszaal		
Tijdelijke huisvesting: krachtsport		
Upgrade Vrijhof cultuur		
Uitbreiding / renovatie Sportocentrum		
Zwembad		
Buitenzwembad (incl. pompstation)		
Body & mind centrum (Paviljoen zone)		
Watersportcomplex renovatie full		
Padelbanen		
<b>Total</b>		
<b>2. Infrastructure</b>		
Uitbreiding koelgebouw 2		
O&O plein + ITC plein		
Plein Kop Langezijds		
Fietsparkeren O&O		
Oude Drienerloweg		
<b>Total</b>		
<b>3. Developments real estate third parties</b>		
Uitbreiding onderwijsruimten		
Studentenhuisvesting Boulevard		
Uitbreiding kantoorruimte Capitool 15		
<b>Total</b>		
<b>4. Investments in maintenance</b>		
Investments in maintenance		
<b>Total</b>		
<b>5. Work out in further detail</b>		
Home base		
General unforeseen		
Projects to be decided		
<b>Total</b>		
<b>TOTAL</b>		
<b>After realisation factor</b>		

Table 5: Projects UT 2023-2032 (the blue highlighted projects have already been decided)

UFA. Each log cabin can accommodate approximately 15 people. Part of the log cabins is intended for the VU-UT students. The expected plans will be finalized and are expected to be implemented in 2023.

From the sector plans and education, expansion will take place at De Es. De Es is expected to be completed in 2027 or 2028. The users of the research facilities are expected to be at least the faculties TNW and EEMCS, this decision will be made in the near future. The required space will depend on this. Depending on the users, approximately 4,300 m<sup>2</sup> UFA of teaching spaces (including project spaces) will be added and approximately 2,600 m<sup>2</sup> UFA of research spaces (including lab space), with 1,600 m<sup>2</sup> UFA of supporting office space. The intention is for The Es to become a general UT building, where facilities can be used as flexibly as possible and it is not difficult to change tenants and functions. It is also conceivable that one or more do-it-yourself studios could come here as part of digitization from LISA. This represents a small addition of meters at this location to be determined.

The expansion as a result of the sector plans ET will take place at the current location of the Kleinhorst. This concerns an addition of approximately 2,500 m<sup>2</sup> UFA of research space. Completion is steadily scheduled for 2025 or 2026.

Robotics will be housed in the existing Westhorst and Carré. For this purpose, the Westhorst will be emptied and remodeled for these users. The part in Carré will not change much. This renovation is expected to be completed in mid-2028 / 2029.

As yet, it is unclear whether the Therm's current lease can be

renewed. If the Therm needs to be replaced, UT will look for another solution.

For the period 2023-2032, this category is expected to have a size of approximately €[...] (excl. realization factor). Some of these projects with total investment costs in the period 2023-2032 of approximately €[...] (excl. realization factor) have already been decided upon, namely ITC Langezijds, Kop van Langezijds and the Cube.

#### *Category B: Renovation/sustainability of existing property*

Some of UT's real estate is in need of renovation. In addition, UT is committed to making its real estate more sustainable. Through 2032, UT expects to renovate and/or make 9 buildings more sustainable. Renovating and making the existing property more sustainable means that this property cannot be used temporarily (or only partially). For this reason, a "sliding puzzle" is required: the buildings being renovated will be housed in a vacant, temporary or newly acquired building.

#### *Renovations (2023-2032)*

Renovations for the Pavilion will begin in late 2022/early 2023. The last user CFM is temporarily housed in The Linde during the renovations. The Farm is being renovated and will open in early 2023. In 2023, the Wing's technology will also be renovated and Farm Bosch and Stall will be addressed. The lecture halls in the Spiegel are expected to be renovated in 2026. The lecture halls are aging and deteriorating.

There are three major renovation projects in the next few years. Starting in 2023/2024, the Cubicus will be renovated. Once this



building is completed, the Zilverling will be renovated starting around 2025. Then, expected starting in 2028, the Horst Tower/Ring will be renovated starting in mid-2026. Doing these renovation projects sequentially will minimize additional housing needs. This works by first relocating the Cubicus users to the temporary location. Once the renovation is complete, these users return. Then the next renovation project can move here.

The Vrijhof is a building that actually needs to be renovated as well. The timing and extent to which the Vrijhof can be renovated remains to be determined. The Vrijhof will be part of an integrated consideration with the budget ultimately spent on the Sports Center. The Bastille is outside the term of the 2032 LTSH.

#### *Temporary solutions first phase (2022-2026)*

Research and support office space is needed for the ET, EEMCS and TNW faculties between now and four years. In addition, some major renovations are planned for the next decade, as outlined above.

Until Cubicus is renovated, Capitol 15 can be used as overflow space for various users. However, Capitol 15 is too small to accommodate space needs during the renovations of the Zilverling and De Horst.

For this reason, additional temporary office space is expected to be needed. Therefore, for now, the assumption is that approximately 3,000 m<sup>2</sup> UFA of semi-permanent spaces (temporary housing) will be realized. At the request of the faculties, this will be on campus (probably at the De Es location).

From the second half of 2023, the Cube will be realized, freeing up the Hangar of approximately 1,000 m<sup>2</sup> UFA and the Westhorst of approximately 800 m<sup>2</sup> UFA. Both spaces may or may not be used temporarily for other purposes, think Robotics or the relocation of other units from the Westhorst.

If current user CFM returns to the Pavilion, De Linde will become available after 2023. This building (approximately 1,500 m<sup>2</sup> UFA) can then also be used as temporary office space.

Renovating and making the existing property more sustainable will involve approximately €[...] (excl. realization factor) in the period 2023-2032. Decisions have already been made on the renovation of the Boerderij, where the Contact Centre will be housed (with investment costs of approximately €[...] (excl. realization factor) for the period 2023-2032).

#### *Category C: Sport and Culture*

The LTSH 2032 explicitly includes Sports and Culture. Sport and Culture is inseparable from the experience of the campus. The LTSH 2032 uses the developed Sports and Culture Master Plan as a starting point. The expected growth in students means that sports and cultural facilities must be expanded and renewed. Until 2032, the UT expects to renew or renovate the sports & culture complexes through 7 projects. No decisions have yet been made on these projects.

As a result, **approximately 5,000 m<sup>2</sup> UFA will be added to sports and cultural facilities**. In addition, a large part will be renovated. **Temporary housing of 1,930 m<sup>2</sup> UFA will also be added** (3 parts) to the portfolio. For prioritization, see section 04.06. The desired expansion of Culture by approximately 1,000 m<sup>2</sup> UFA (see section 04.06) is not financially realizable within the term of this LTSH. As a result, the LTSH contains 1,000 m<sup>2</sup> UFA less than the desired space requirement, which totals 6,000 m<sup>2</sup> UFA. If all plans proceed, the following projects will be implemented in order:

- A smaller upgrade to the Vrijhof will be completed in 2023.



- Around 2023, the padel courts will also be expanded.
- The outdoor pool including the pump station will be renovated around 2023.
- The Aquatic Sports Complex will be renovated around 2024
- In the period 2025-2027, the new Body & Mind center of about 2,600 m<sup>2</sup> UFA (Pavilion Zone) will be built. For this reason, two spaces will be built as temporary facilities in 2023: the dance hall and a space for strength sports. It is assumed that the dance hall will be rented. For this reason, no investment costs have been included for this.
- In 2031, the expansion and renovation of the Sports Center is expected to be completed. This will add approximately 2,400 m<sup>2</sup> UFA to the real estate portfolio. As a temporary facility, a bladder hall will be purchased in 2023 for the indoor season. The further upgrade/renovation of the Sports Center will be integrally weighed against the renovation needs of the Vrijhof in due course. This is to provide a balanced investment in both Sports and Culture.

The future plans for the indoor swimming pool are not yet included in this overview and need to be further investigated. For this reason, no investment costs have been included for the indoor pool for the time being. For the total plan Sport and Culture is expected to involve approximately €[...] (excl. realization factor) in the period 2023-2032. Decisions have already been made about the temporary housing of the bladder hall, dance hall and power sports (with investment costs of approximately €[...] (excl. realization factor) for the period 2023-2032).

## 2. Infrastructure

Besides investments in real estate, there are also needed

investments in infrastructure. This includes: an expansion of the cooling building, the layout of the O&O square, ITC square and the square at the Kop van Langezijds. In addition, the approach to bicycle parking (O&O) and Oude Drienerloweg has been taken into account. This is expected to involve approximately €[...] (excl. realization factor) in the period 2023-2032. The expansion of the cooling building, the layout of the O&O square, ITC square and the square at the Kop van Langezijds and the approach to bicycle parking (O&O) have already been decided (investment costs in the period 2023-2032 of approximately €[...], excl. realization factor).

## 3. Developments real estate third parties

### *Sustainable new construction/third party growth*

The third category in Table 5 concerns third-party real estate developments. The UT, together with the municipality and other stakeholders, has made a strong commitment to the Kennispark. To accelerate developments and strengthen the ecosystem, the Fraunhofer Innovation Platform is being developed at Kennispark. Completion is expected in late 2022 and amounts to approximately 1,700 m<sup>2</sup> UFA. Therefore, this project is no longer included in the LTSH 2032 investment overview.

A maximum of 110 student housing units will be built on the Boulevard starting in 2023. These will be permanent and independent units owned by housing corporation De Veste. Another 200 units will be developed at Kennispark by Domijn and De Veste. The latter has no financial impact for UT.

In the cooperation with the institutional investor, this may still lead to small-scale investments, for example, in construction and housing



preparation costs or, on the other hand, on the campus grounds. This is because UT's policy is not to sell land. It is insufficiently clear at this time what investments this will lead to, but are mentioned for the sake of completeness.

Research spaces are difficult to rent in the current real estate supply. However, office space is rented for overflow and as spare space for renovations (this is explained in more detail under category B). In Capitol 15, approximately 3,500 m<sup>2</sup> of rentable floor space will become available in early 2023 (expected to be approximately 3,000 m<sup>2</sup> UFA) which can be used as (temporary) office space. For UT, this is expected to involve approximately €[...] (excl. realization factor) in the period 2023-2032. One of these projects, with total investment costs in the period 2023-2032 of approximately [...] (excl. realization factor), has already been decided upon. This concerns Capitol 15.

#### 4. Investments in maintenance

Maintenance investments in UT's real estate are part of the LTSH. This is expected to involve approximately €[...] (excl. realization factor) in the period 2023-2032.

#### 5. Workout in further detail

The last category in Table 5 concerns projects that have yet to be worked out in further detail. This includes Homebase, but also includes, for example, a general contingency item. For the period 2023-2032, this category is expected to have a size of €[...] (excl. realization factor).

### Summary additions (in m<sup>2</sup> UFA)

#### Additions to the property portfolio property (in m<sup>2</sup> UFA):

- Housing ITC in Langezijds (pre-existing project, total approximately 9,000 m<sup>2</sup> UFA).
- Kop Langezijds (pre-existing project, approximately 1,000 m<sup>2</sup> UFA).
- Cube at the Horstring (pre-existing project, approximately 3,000 m<sup>2</sup> UFA).
- Cube 2.0 at the Horstring (approximately 2,500 m<sup>2</sup> UFA).
- Developments on the Es (approximately 8,500 m<sup>2</sup> UFA).
- Block houses (approximately 100 m<sup>2</sup> UFA).
- Sports and cultural facilities (approximately 5,000 m<sup>2</sup> UFA).

**Total:** 29,700 m<sup>2</sup> UFA property. Of this, 13,000 m<sup>2</sup> UFA is already part of an existing project and for this reason already included in the analysis of current space supply and use (see Chapter 03). The strategy thus leads to a net **addition of approximately 16,100 m<sup>2</sup> UFA property.**

#### Additions to portfolio rent (in m<sup>2</sup> UFA):

- Fraunhofer Innovation Platform (pre-existing project approximately 1,700 m<sup>2</sup> UFA).
- Capitol 15 (pre-existing project approximately 3,000 m<sup>2</sup> UFA).

**Total: addition of approximately 4,700 m<sup>2</sup> UFA rent.**

#### Spatial implications (owned on campus, in m<sup>2</sup> UFA)

Current situation:

- In use: 141,720 m<sup>2</sup>
- Available: 5,600 m<sup>2</sup>



After strategy:

- In use: 157,820 m<sup>2</sup>  
(excluding 3,000 m<sup>2</sup> temporary/flexible)
- Available: 5,600 m<sup>2</sup>  
(note: at the time of measurement the renovation of the Citadel was still in progress, after completion, these meters will be used again).

### Timeline

Figure 10 provides a schematic representation of the (intended) projects, plotted in time. It thus shows the global timeline for the next 10 years.

## 05.02 Follow-up and process

### Further analysis and elaboration

In this LTSH 2032, starting points have been used for the (re)housing of various organizational units and expansion of the offerings to accommodate future staff and student growth. In the coming years, there are a few points that will be further elaborated to fit the housing strategy.

Supply and demand of teaching spaces requires continuous attention. In addition to increasing capacity in the coming years, the consequences of digitalization (blended learning) and expansion of the educational offering as a result of LLL will have to be considered in the scheduling. This includes possible adjustments in educational programming, spreading out and accommodating peak moments and expanding timetables. There is also an expectation that physical lectures may decrease while physical work lectures and practicals may increase.

When it comes to workstations, the UT strives for more flexible use. See the boxes in Chapter 02 for this. In addition to a workstation census, further analysis will follow into occupancy rates. On the basis of careful data and making sound agreements about the other way of working and use of space, a transition can be set in motion within the UT. The expectation is that within the projects this can be accelerated, while within other existing real estate for which there are no plans this will be somewhat slower. It is also being investigated how workplaces can be realized as flexibly as possible, if possible in combination with project spaces / study areas.

### Further analysis of projects and budgets greater uncertainty

In the process of creating the LTSH 2032, all possible initiatives and housing ambitions were estimated as best as possible in order to arrive at a representative budget. An external cost estimation consulting firm was used in part for this purpose. During the actual development of projects, PoAs are further explored and budgets may be tightened. This may lead to a change in the numbers. This can be better than expected and this can be worse than expected. In the latter case, this requires an interim adjustment to tighten up projects or further prioritize them. The market conditions at the time are always of great influence.

## 05.03 Risk Paragraph

In this LTSH 2032, sound assumptions have been made and careful assumptions have been named. However, real estate has a static nature; real estate investments weigh on the university's budget for a long time. It is therefore important to identify risks (those matters over which UT has no or limited influence), estimate the impact of the occurrence of these risks and determine what management measures exist to mitigate the impact of these risks. This section



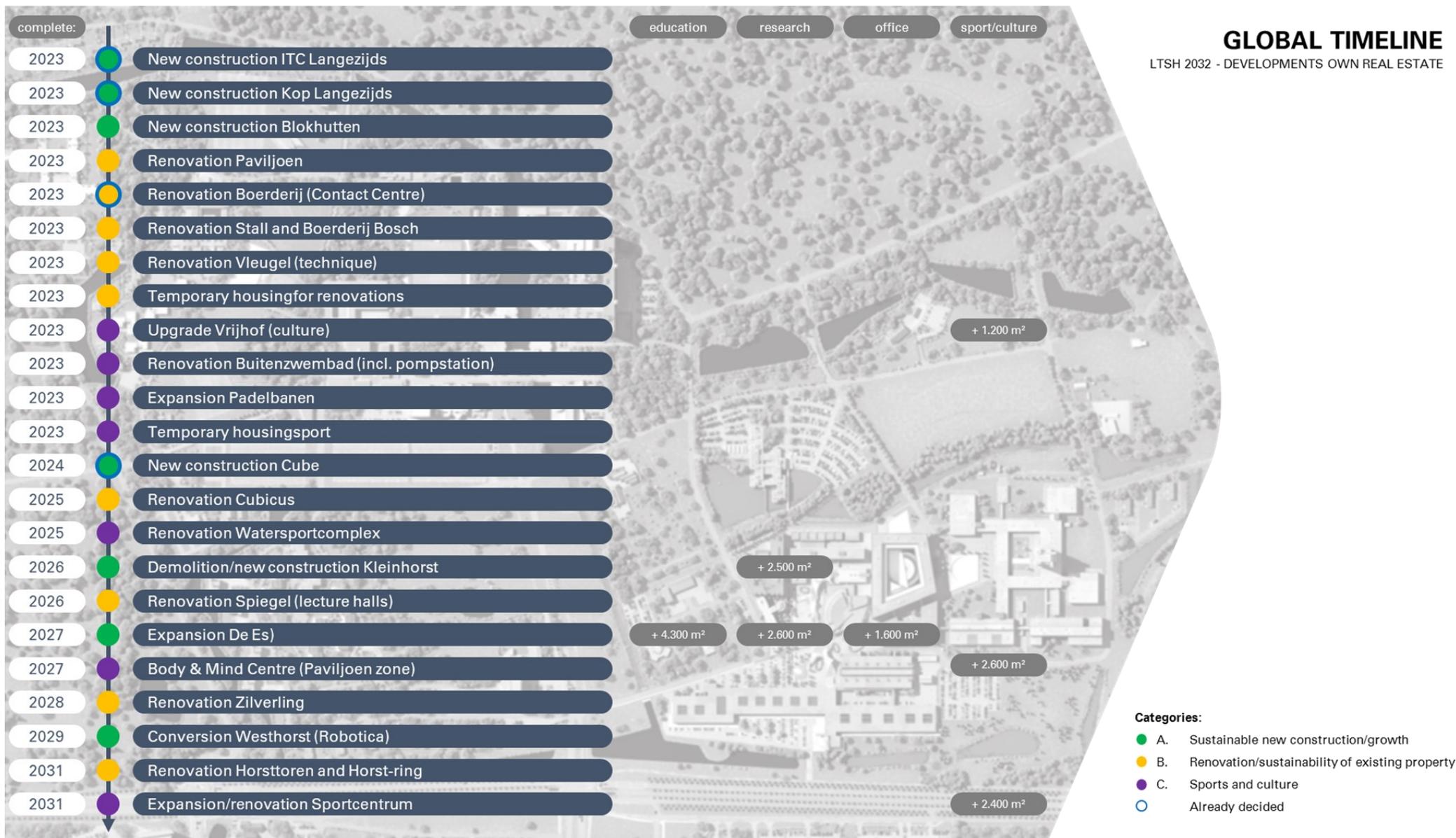


Figure 10: Global timeline LTSH (developments own real estate UT, excl. blokhutten m<sup>2</sup>).

provides insight into how robust the elaborated strategy is to changes and to what extent adjustments can be made.

The following risk themes have been identified in this section:

- Risk of anomalous development of the number of students and employees (both limited growth and very strong growth risks);
- Project planning in relation to continuity of operations;
- Financial risks.

Given the uncertainties in funding, university growth and the real estate market, flexibility and adaptability is more important than ever. It also requires monitoring developments and timely anticipation and (if necessary) adjustment. This is also possible because decision-making is organized at project level. As a result of management measures, the LTSH 2032 presented here may therefore change because, for example, projects are temporized or scrapped.

#### Setback and growth risks

If the actual development of the university deviates from the expected development (described in Section 04.01), this will directly affect UT's space requirements. Not only decline, but also growth is a substantial risk in this. For this purpose, several scenarios have been outlined in Section 04. The following principles have been formulated for the management measures to be deployed in these scenarios:

- Optimal utilization of the current real estate is paramount.
- Apart from the new developments at the Horst and the developments at the Es, expansion of the real estate stock in the form of new construction is in principle not an issue.
  - Flexible solutions are preferred if there is an additional need for space.

- Only if the real estate need is of a structural nature will permanent expansion be considered.
- When disposing of real estate, the first step is to look at the possibilities for leasing, and only if this is not possible or undesirable to sell. The latter because of its irreversible nature.

#### Limited growth or decline scenario

If the future number of UT students and employees is structurally lower than the baseline scenario in the 2032 LTSH, excess space is created within the real estate portfolio. If no coverage exists for this space, a situation arises in which real estate "weighs" disproportionately on UT's budget. A general management measure for this risk involves scrapping expansion and disposal of real estate. This involves the following route:

1. Delete further expansion (if still possible)
2. Dispose of temporary or semi-permanent housing (if any).
3. Free up buildings with a high external marketability for rental purposes.
4. If rental is not possible, they will be sold.

The function (or adaptive capacity of the building) and location of the building have a major influence on the external marketability. Buildings with a location on the edge of the campus, without a teaching and/or research specific layout are the first candidates for (temporary) disposal. Building de Spiegel can be mentioned as an example. De Spiegel forms the entrance to the campus, but at the same time is a building that, due to its location outside the R&D area, is potentially subject to divestment or reallocation. UT's strong R&D core would then remain unaffected for the time being. Should UT face a fallback scenario in the future, current users (services and the CvB) can be housed in the vacated space. The exact location will



depend on where lesser growth or shrinkage occurs. In this way, vacancy is largely clustered and disposal becomes possible. Financially, the damage can be limited: option 3 allows for cost-covering rent and option 4 generates a one-time revenue.

#### *Growth or peak scenario*

Unexpected growth is also a risk for UT. It is important for the university to be able to respond quickly to increasing housing needs. Here the following route is followed:

1. Further optimize use of current real estate and/or further digitalization.
2. Search for flexible expansion preferably on-campus, otherwise near campus. This can take the form of temporary construction (rental or purchase), or in existing third-party buildings (rental construction). The best solution must be found on a case-by-case basis, depending on finances.
3. Only if the need for space turns out to be permanent, more permanent solutions will be sought. The UT has a large, already earmarked area on the Es for expansion (in addition to the expansion from this LTSH).

Overall, there is sufficient flexibility in UT's real estate portfolio. The strategy leaves housing supply that can be deployed. Therefore, the first consideration is to fill vacancies. After all, optimal utilization of the real estate is paramount. Specifically for the COV, the current occupancy and utilization is below target. For example, occupancy for lecture halls is at 58% (based on measurements from 2019, the last representative year) while 70% is considered feasible (see section 03.04). Consideration could also be given to expanding roster times to the (early) evening hours and there are opportunities to make better use of Fridays. Especially if LLL takes more shape.

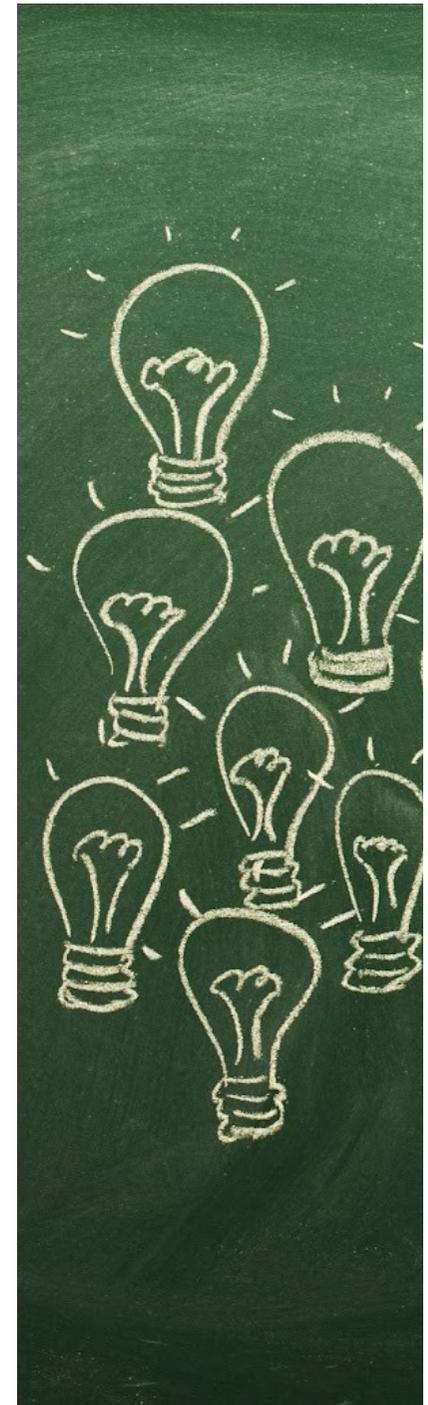
Without building additional real estate, both measures, better occupancy/utilization and longer opening hours, allow, based on an initial estimate, an increase in COV capacity of at least 1,000 to 2,000 additional students with which the peak scenario seems feasible. This is a conservative estimate, the number is expected to be higher. This will be further elaborated in the COV program. Further digitalization may also be implemented for both staff and students, reducing the physical occupancy rate on campus. The financial impact depends on many factors:

- The revenue side: extra students bring in extra money
- The portion of the revenue side that can be spent on housing
- The then prevailing market rent for square footage in the case of rentals
- The then current construction prices for real estate in case of permanent expansion

#### *Quick scan analysis of real estate investment opportunities*

Table 6 (on the next page) contains the results of a financial quick scan and shows which real estate investment opportunities could involve growth in student numbers. This gives some financial sense of this risk.

If additional permanent housing must be proceeded with, Table 6 above shows the possibilities. Suppose additional COV is needed for 5,000 additional students, then €[...] incl. VAT can be invested in real estate. Assuming €[...] /m<sup>2</sup> GLA incl. VAT in costs (indication p.p. 2022), then 17,342 m<sup>2</sup> GLA / 10,405 m<sup>2</sup> UFA real estate can be realized. Based on the current key figures with 1.95 m<sup>2</sup> UFA COV per student (based on the current supply of teaching spaces, the current way of teaching and the current student population, see chapter 02), a space requirement of 9,750 m<sup>2</sup> UFA is present which in theory



should be feasible.

**Risk of continuity problems**

UT is in control of its own planning (design, selection of parties, etc.) for these projects, but the procedures surrounding permits, including the possible need for a zoning change, cannot be fully predicted in advance. The nitrogen discussion may also affect the process. However, the current zoning plan offers a lot of room. The risk increases if more new construction is required due to above-expected growth. The main management measure for this risk is to start planning in a timely manner and engage in timely discussions with the relevant authorities in order to create as much space as possible for these procedures in the schedule.

The risk of continuity problems is also caused by internal shifts. The elaborated strategy mentions real estate projects that lead to relocation of organizational units. Because there is chain dependency in this relocation operation, there is a risk of disruption of business processes due to schedule slippage. This is particularly relevant in education facilities because here the supply of space

directly affects academic years (maximum number of admissions) and scheduling. In principle, the relocation of office users can take place without any problem at any time during the year.

**Financial risks**

*Interest allocation*

A fixed amount of interest (€[...]) is charged annually to the REH operation, which represents an internal interest charge of 2%. This interest expense is recharged from the REH to the users of the real estate on campus through the capital component in the space rate. The interest amount (both the interest expense in the REH and the interest income through the interest rate) affects the calculation of the investment space for real estate projects. In the calculations underlying this LTSH 2032, as per current situation, €[...] in interest costs were assumed.

*Depreciation period*

When calculating the real estate projects, assumptions were made regarding the depreciation period. These are based on averages for a construction project, unless a more accurate estimate can be made

Assumptions	
[...] # and %	

Number of extra students:	500	1.000	2.000	3.000	4.000	5.000
Room in exploitation	[...] # and €					
Room for depreciation						
Extra investment space						

Table 6: Financial quick scan



on the basis of currently available data. The depreciation period affects the result (REH) and the room for investment.

#### *Space rates*

The calculation of this LTSH 2032 takes into account the current space rates; the assumption is that they will not have to be increased in the coming years. The room for investment in the LTSH 2032 depends primarily on the difference between the income from space rates (capital component) and ground rent income on the one hand, and the interest and depreciation costs of the property on the other. The fixing of housing rates and the premise that the REH must have at least a balanced operation determines the room to invest in new real estate. A decrease in space rates therefore means less room to invest in real estate, an increase gives more room (viewed from the REH operation).

In terms of space rates, it should be noted that the capital component in this rate does not grow with the construction cost index. The real estate market is currently overstrained. This leads to scarcity of personnel and materials and drives up prices. As a result, construction costs are rising faster than inflation. The calculation shows that an indexation of the capital component is not immediately necessary at this time. Until 2031, RT rate revenues provide sufficient room to offset depreciation from planned investments. Should it appear at any time that the investments planned in the LTSH 2032 will still be more expensive than estimated due to increased construction costs, it will be necessary to examine whether this will have an impact on housing rates.

#### *Vacancy*

When the available space in our real estate portfolio exceeds the

housing needs, vacancy occurs. With vacancy, many of the costs associated with owning property continue (depreciation, maintenance), however, these are no longer offset by income. This has implications for the REH's bottom line. Under the heading "Limited growth scenario," earlier in this section, we indicate how structural vacancy will be dealt with in the event of a decline in student numbers.

#### *(Re)financing risks*

Relatively, compared to early 2022, financing interest rates have risen sharply. If future interest rates rise further, this may pose a risk to the intended investment projects in (current and future versions of) the LTSH. In order to implement all projects in the LTSH 2032, additional loans will be required. Finance continuously monitors UT's liquidity position and will initiate the process to obtain additional loans in a timely manner. As it stands now, annual loans will be required beginning in 2024. The expectation is that these loans can be raised from the Treasury. However, this is not a foregone conclusion. Finance will consult on the possibilities and conditions during 2023.

#### *Management measures*

In the event of setbacks and/or forced cutbacks, projects may have to be reconsidered. This applies to the following three projects in no particular order:

- Renovation Zilverling
- Renovation of Spiegel lecture rooms
- Expansion and renovation of the Sports Centre/combi Vrijhof

For now, these projects seem to be the best candidates based on a number of arguments. The Zilverling and the Spiegel lecture halls,



due to the technical condition of all the renovation projects, are best postponed. The expansion and renovation of the Sports Centre or the renovation of the Vrijhof are not part of the primary process. Depending on the then current context, one or more projects can be selected. If this is not sufficient, more projects from the LTSH will have to be looked at, but then the operational risk increases accordingly.

#### Organizational risks

The elaborated strategy leads to several large-scale projects. In the period up to 2032, there are also several (conservation) projects within the existing stock. The management of the projects lies entirely with CFM. CFM's capacity is therefore a limiting factor and a risk to implementation. This has been taken into account in the preparation of this LTSH 2032. The projects are spread out over the planning period in such a way that they can be managed within the current staffing levels. A point of attention here is the capacity of the contract managers. Several projects require a lot of preparatory work, for which it is not yet clear to what extent this can be borne by the current staff. This will have to be addressed prior to the preparation phase of each project. Especially in the current market there is a great shortage of personnel.

If capacity proves insufficient (for contract managers but also for project managers), hiring additional capacity can be considered. However, this leads to organizational risks. UT may also consider opting for a form of construction organization that results in much of the control being placed in the hands of a market party and UT only directing. A third management measure is to temporize the implementation of the projects in such a way that the steering can be carried out by the existing formation. Since various projects are

connected to each other and use the same temporary shelters, it is important that a delay in one project is well communicated so that timely management measures can be taken for other projects.

#### 05.04 Conclusions housing strategy

In summary, the following can be concluded.

##### Total project task LTSH 2032 baseline scenario

The new LTSH 2032 focuses on housing for education, research, sports and culture. The LTSH identifies three main categories for its own real estate developments:

- A. Sustainable new construction/growth
- B. Renovation/sustainability of existing property
- C. Sports and culture

Due to the higher than expected intake of students and employees, the UT is expanding, which calls for additions to the UT's real estate portfolio. The emphasis here is on research education and sports & culture facilities. Over the next ten years, UT expects to complete approximately 25 projects as part of sustainable new construction/growth of the university. UT's total supply of m<sup>2</sup> UFA will increase by approximately 16,100 m<sup>2</sup> UFA after realization of these projects.

Some of UT's real estate is in need of renovation. In addition, UT has committed to making its real estate more sustainable through the "roadmap". Through 2032, UT expects to renovate and/or make 9 buildings more sustainable.

Renovating and making existing property more sustainable means that this property cannot be used temporarily (or only partially). For this reason, a "sliding puzzle" is required: the buildings being



renovated will be housed in a vacant, temporary or newly acquired building.

The LTSH 2032 explicitly includes Sport and Culture. Sports and Culture are inextricably linked to the campus experience. The expected growth in students means that sports and cultural facilities must be expanded and renewed. Until 2032, the UT expects to renew or renovate the sports & culture complexes through 7 projects. This will add approximately 5,000 m<sup>2</sup> UFA sports and cultural facilities. No decisions have yet been made on these projects.

The LTSH also takes into account investments of the university related to real estate developments of third parties, maintenance investments in UT's real estate and some projects that still have to be worked out in more detail.

The total investment cost of the LTSH in the period 2023-2032 is approximately €[...]. Projects with a size in the period 2023-2032 of approximately €[...] (excluding realization factor) have already been decided upon.

#### Setback and growth risks

The aforementioned budget is based on the baseline scenario. If the actual development of the university deviates from the expected development, this has a direct effect on UT's space requirements. Not only decline, but also growth is a substantial risk in this. The following principles have been formulated for the management measures to be deployed in these scenarios:

- Optimal use of current real estate is paramount.
- Apart from the new developments at the Horst and the

developments at the Es, expansion of the real estate stock in the form of new construction is in principle not an issue.

- Flexible solutions are preferred if there is an additional need for space.
- Only if the real estate need is of a structural nature will permanent expansion be considered.
- In the event of shrinkage, at that point it should be considered whether expansion plans can be scrapped.
- When disposing of real estate, the first step is to look at the possibilities for leasing, and only if this is not possible or undesirable to sell. The latter because of its irreversible nature.
- In case of setbacks and/or forced cutbacks, the following projects (presented in no particular order) will be weighed against each other:
  - Renovation Zilverling
  - Renovation lecture halls Spiegel
  - Expansion and renovation of the Sports Centre/combi Vrijhof.

#### Other risks

- UT's own planning of the proposed projects is under its own control, but the procedures surrounding permits, a zoning change or the nitrogen discussion cannot be fully predicted in advance. The risk increases if more new construction is required due to above-expected growth. The main management measure for this risk is to start planning in a timely manner and engage in timely discussions with the relevant authorities.
- The risk of continuity problems is also caused by internal shifts. The housing strategy leads to relocation of organizational units. As a result, there is a risk of disruption to business processes as a result of runaway schedules. This is particularly relevant in



education facilities because here the supply of space directly affects academic years (maximum number of admissions) and scheduling. The relocation of office users can in principle take place without problems at any time during the year.

- There are financial risks involved. Changes in the allocation of interest, depreciation periods and/or space rates affect the result and thus the scope for investment. If vacancy occurs, this has consequences for the result of the REH. If future interest rates rise further, this may pose a risk to the intended investment projects. The following section discusses the (re) financing risks and related management measures for UT.
- Finally, there are organizational risks. The housing strategy leads to multiple large-scale projects and multiple (conservation) projects within the existing stock. The management of the projects lies entirely with CFM. CFM's capacity is therefore a limiting factor and a risk for implementation. The projects are spread out over the planning period in such a way that they can be managed within the current staffing levels. A point of attention here is the capacity of the contract managers. If the capacity proves insufficient (for contract managers but also for project managers), hiring additional capacity can be considered. However, this leads to organizational risks. UT may also consider opting for a form of construction organization that results in much of the control being placed with a market party and UT only directing. A third management measure is to temporize the implementation of the projects in such a way that the steering can be carried out by the existing formation.



## **06** THE HOUSING PLAN IN RELATION TO THE UNIVERSITY'S FINANCIAL FRAMEWORK

## 06 THE HOUSING PLAN IN RELATION TO THE UNIVERSITY'S FINANCIAL FRAMEWORK

Chapter 06 tests whether the strategic housing plan described in Chapter 05 fits within UT's financial frameworks.

### 06.01 Multi-year financial perspective

The expected increase in funding from the central government has been reversed by the new coalition agreement. The STEM Sector Plans and the National Growth Fund do continue. However, it is still unclear exactly what this will mean for UT. When drawing up the budget, the most realistic scenario possible will be used, on the basis of which the real estate plans will also be calculated.

#### Resources from the central government

As already described in Chapter 02, the Rutte-III Cabinet has decided to invest extra money in the basis of scientific research under the heading of Sector Plans. As a result, the University of Twente will have approximately €[...] to spend annually from 2023 and this will lead to additional resources especially for the faculties ET, TNW and EEMCS. The budget also provides room for indirect costs, such as housing. In addition to the Sector Plans, UT will also receive resources from the National Growth Fund. This fund was set up to stimulate future economic growth and educational innovation. Of this, the amount that will be allocated to UT is not yet known.

#### Student numbers

Part of university funding is based on the number of students. UT has grown substantially in recent years, with the exception of the current academic year. However, growth is expected to continue in the coming years. This will have a positive impact on the state contribution and on tuition revenues, but of course, at the same time, it will also create additional needs for teaching spaces.

### 06.02 Investment needs

Chapter 05 described the basic scenario for the 2023-2032 housing plan. This scenario was created by taking stock of the wishes and needs of faculties and departments, taking into account, among other things, the capacity needed to accommodate the expected number of students and employees and the sustainability task at hand. Because the number of students and employees has grown significantly in recent years, more square footage is needed in the short term. More space is also needed in the areas of sports and culture. In addition, a considerable amount of investment is needed to make the existing real estate more sustainable and to keep it up to standard in terms of quality and functionality. Finally, the infrastructure on campus was also considered.

The starting point is that the expansion investments are profitable in themselves, in that the additional income from the added m<sup>2</sup> must be sufficient to co-finance the investments. The investments that do not generate additional income (such as investments in infra and renovations) must be covered in the REH by the released depreciation space of previous investments.

#### Overview of investments

The plan includes €[...] in real estate investments for the next ten years, which are categorized in Table 7. Account has been taken of an increase in construction costs of initially 8% per year, decreasing to 4% and a realization factor of 90%. The latter means that the assumption is that 90% of the planned expenditures will actually take place. Recent years have shown that projects often turn out differently than planned in advance. There can be many reasons for this, such as longer decision-making or permit processes, changing user requirements and delivery times for materials. In order to stick



to the planning, but still give as realistic a picture as possible of the expenditure pattern, a realization factor has been used.

Category
<b>Developments own real estate</b>
Sustainable growth / new buildings
Renovation / sustainability existing property
Sports and culture
<b>Developments real estate third parties</b>
<b>Infrastructure</b>
<b>Investments in maintenance</b>
<b>General</b>
<b>Total</b>
<b>After realisation factor</b>

Table 7: Amounts of investment by category

By far the largest part of these investments (€[...] - amount before application of realization factor) concerns developments in own real estate. These are investments in m<sup>2</sup> growth (€[...]), in renovation and sustainability of existing real estate (€[...]) and in sports and culture (€[...]). In growth (Sustainable growth/New buildings) concerns projects that add additional m<sup>2</sup> to the existing real estate portfolio. This expansion also generates income for the REH in the form of space charges. In a few cases, this also applies to projects in the Sports & culture category. Investments in the Renovation category do not generate additional income from space rates unless additional meters are added.

"Revenue" here refers to space rates paid by the users (tenants) of the property. This is income for the REH (operation of the property), but has no result for UT as a whole unless the user of the property is an external party.

Projects in the Infrastructure (€[...]) and Maintenance (€[...]) categories do not generate additional income from space charges. The same applies to investments in third-party real estate (spaces that the UT will rent, €[...]). The General category consists of €[...] for the creation of Homebases, €[...] for Unforeseen General and another €[...] for Projects to be determined.

Separate decisions will be made on each project (insofar as they have not already been made), taking into account, among other things, the financial situation at that time. The LTSH 2032 is therefore not a guarantee that all the real estate investments included in it will go ahead, but it represents the strategy on which adjustments can be made if the (financial) situation demands it. In order to be able to move quickly in this, a number of projects have been marked; these can be postponed or cancelled if this proves necessary. These are renovations of the Bastille and Zilverling (the first is planned after 2032), renovation of lecture halls in the Spiegel and the expansion/renovation of the Sports Center/combi Vrijhof. Together, these projects represent €[...] in the LTSH.

Most of the projects from LTSH 2032 were also already included in the Annual Plan 2022-2026. However, often for a lower amount. Of all the investments included in the LTSH 2032, €[...] is for investments in projects that are new compared to the Annual Plan 2022-2026. For sports & culture, the Annual Plan included an unspecified amount, which now, as the plans are developed, turns out not to be enough. This line is included separately in Table 8.



**Compared to Annual  
Plan 2022-2026**

In AP 2022-2026

New

Sports & culture

Total

After realisation factor

Table 8: Comparison with Annual Plan 2022-2026

### 06.03 UT Financial Framework

The burden of the housing plan must fit within a number of financial frameworks. These include financial ratios used by the Education Inspectorate and UT's methodology when it comes to covering housing costs.

#### Financial ratios

UT's financial policy focuses on a structural balance between income and expenses. Solvency II, which is calculated by dividing the amount of equity plus provisions by the amount of total assets, must be at least 30% (signaling value) in accordance with the requirement of the Education Inspectorate. UT aims for a value between 30% and 40%, with a target value of 35%. At the end of 2021, solvency II was 42%, slightly exceeding the standard. For liquidity, we use the current ratio. This ratio indicates the extent to which a company is able to pay its debts in the short term. To calculate this, the value of the current assets is divided by the value of the loan capital. The Education Inspectorate uses a signaling value of 50%. UT aims for a current ratio of 100%, using a range of 50% to 150%. At the end of 2021, the current ratio matched the target value of 100%.

As the third financial ratio, we aim for a liquidity of at least €[...]. As of the end of 2021, the university remains significantly above this

with a cash balance of €[...]. Finally, the housing ratio is used. The housing ratio indicates the percentage of total UT expenses spent on housing. The Education Inspectorate uses a maximum of 15% for this purpose. At UT, this percentage has been around 12% for years. This has proven to be a realistic percentage and will therefore remain as a guideline for UT. More housing costs take too much financial space away from the primary process. The housing ratio at the end of 2021 was 10%.

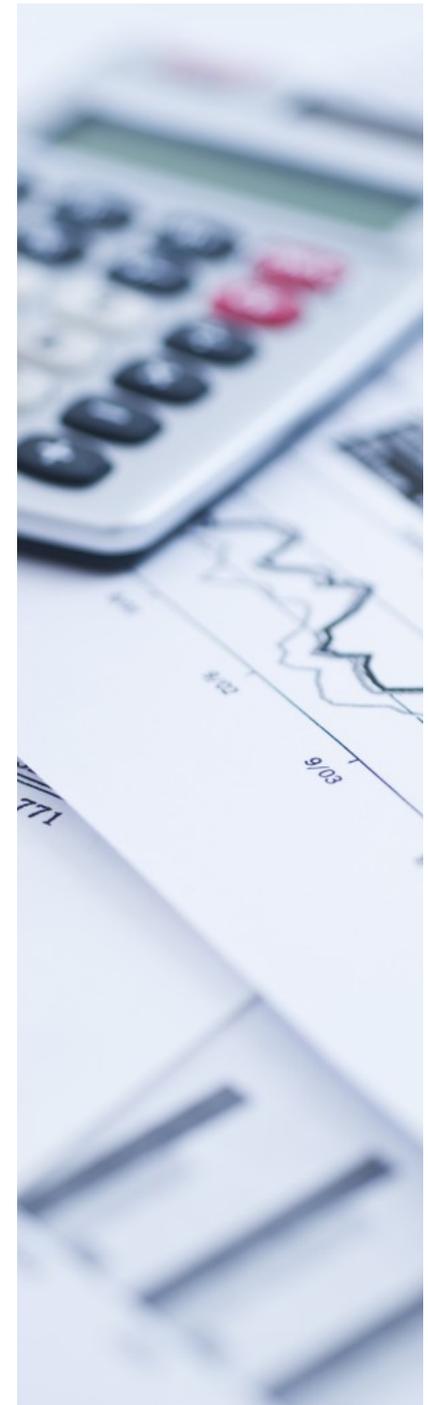
The financial ratios above are part of a larger financial framework. This reflects the limits of the financial possibilities, within which investments in the LTSH program must also fit. Section 02.05 shows the requirements of the Education Inspectorate in a table.

#### Assessment against financial ratios

The investment program from the LTSH 2032 has been calculated on the basis of the draft budget. Based on these figures, UT remains within the Education Inspectorate's signaling values during the budget period (2023-2027). However, the solvency II and current ratio are below the target value. Starting in 2024, UT will need to raise loans to meet liquidity requirements. Discussions with the central government will be initiated in 2023 for this purpose. Because the financial ratios offer hardly any room, it is extra important that prior to each investment decision the financial standards will be tested. Table 9 shows the development of the financial ratios.

#### Financial coverage

UT maintains the premise that the operation of our housing (REH) is not in deficit. Income in the REH must be sufficient to offset expenses. For the LTSH investment program, this broadly means that



Ratio	Requirement*	2023	2024	2025	2026	2027
Solvency II	> 30% 35%	[...] % en #				
Current ratio**	> 0,50 1,00					
Liquidity	> M€ 25 < 0,15					
Housing ratio	< 0,12					

\* These are the requirements of the Education Inspectorate. Internal UT-targets are printed in blue.

\*\* A discussion is currently taking place between the sector and the Inspectorate of Education regarding the change in the signaling value of the current ratio from 0,50 to 0,75.

Table 9: Developments of financial ratios

income from space charges ("rent") must generate sufficient income for the REH to offset depreciation and interest charges.

#### Testing against financial coverage

In order to calculate whether, under this assumption and assuming constant space rates, there is sufficient coverage in the REH for all proposed investments, the depreciation and income for the coming years were plotted. This shows that the LTSH 2032 to 2031 fits within the operation of the REH. After that, a deficit will occur and possible adjustments to the capital component in the RT rates will have to be considered (see Appendix 2).

#### 06.04 Growth and shrinkage scenarios

The housing plan assumes a baseline scenario of 16,000 students. This appears to be a realistic long-term number on which to base the need for permanent real estate. However, as is also evident from the projections and ambitions, the number of students and staff may grow faster or slower than anticipated. This has implications for housing needs and related finances. Section 05.03 discusses the scenarios for (limited) growth and shrinkage.

For each situation, it indicates the scenarios for the real estate. These scenarios have financial consequences. The realization of temporary or permanent housing is a real estate investment and will therefore be charged to the LTSH budget. These investments require liquid assets, which will eventually require (additional) loans. Renting temporary housing on campus or existing construction from third parties, does not affect the investment space, but it does affect the housing ratio, solvency and liquidity. For solvency and liquidity, again, these ratios do not allow for additional spending. However, under both the growth and peak scenarios, student numbers increase. This also means additional income for UT. At this time, it is not possible to predict what financial consequences such growth will have on UT's finances. Should this occur, the financial situation will be considered at that time and a decision will be made based on that assessment as to which investments can and cannot be made.

The housing ratio does allow for additional investments or expenditures beyond the baseline scenario. Before the 15% limit is reached, there is still room in the years 2023 through 2032 for about €[...] in additional housing costs (including depreciation). However, UT is targeting a housing ratio of 12%. At this upper limit, there is more limited room for renting additional m<sup>2</sup>, which is around €[...]. Both the growth and peak scenarios can be accommodated within the 15% housing ratio. The standard of 12% is likely to be exceeded in some years. However, with growth, UT's overall expenses will also increase, meaning there is room for more housing expenses.

There is still room in the REH operation until 2031 for depreciation of planned investments. Only after that will there be a deficit in the REH with unchanged RT rates. This is mainly because a number of major renovations are planned during that period, which require



substantial investments (and thus generate additional depreciation), but do not generate additional meters (and thus no additional RT income). If greater than expected growth requires more investment in temporary housing, this will only fit within the current system of the REH if it is also offset by income from RT (see Appendix 2). For rent, this will be passed on to the user, making this result neutral for the REH.

Less growth than expected, or even shrinkage, will result in vacancy. There will then no longer be coverage from room rates for the costs of the real estate (such as maintenance, energy and depreciation). This will create a deficit in the REH. In addition, UT incurs costs to maintain property that is not being used.

Using the 2032 LTSH as a starting point, a substantial shrinkage in UT's size is possible before the housing ratio limit is reached. In the first few years, if housing costs remain the same, total expenses are still allowed to decline by over €[...] before the 15% housing ratio is reached. This amounts to almost a quarter of total expenses.

Within the operation of the REH, there is still room for vacancy, should there be unforeseen shrinkage. In 2023, there is €[...] space in the REH. With an unchanged investment program, this means that €[...] less rental income is needed for a balanced REH operation than is currently budgeted. This means that there is room for 5% additional vacancy in 2023. In 2026 this percentage is even 20%. The decline scenario can be absorbed with this. Should the decline scenario occur before 2026, measures will be needed to keep the REH operation healthy.

#### **06.05 Funding**

For the next 10 years, UT has the ambition to allocate €[...] for real estate investments. The multi-year calculations (see the table in section 06.03 and graphs in Appendix 3), show that these investments cannot be financed exclusively with own resources. In addition, these calculations show that in the first few years the target values that UT has imposed on itself to ensure its financial continuity will not be met, but the signaling values of the Education Inspectorate will be met.

If all investments are implemented as planned, this means that additional funding will have to be raised starting in 2024. It should be noted that additional financing leads to a decrease in solvency. The maximum additional investments are thus effectively limited by the solvency standard applied by the UT/ Inspectorate of Education for the WO. Based on the draft budget, the amount of additional financing required is estimated at €[...] in 2024, €[...] in 2025 and an additional €[...] annually in 2026 and 2027. However, the exact size of the additional loans still depends on several factors.

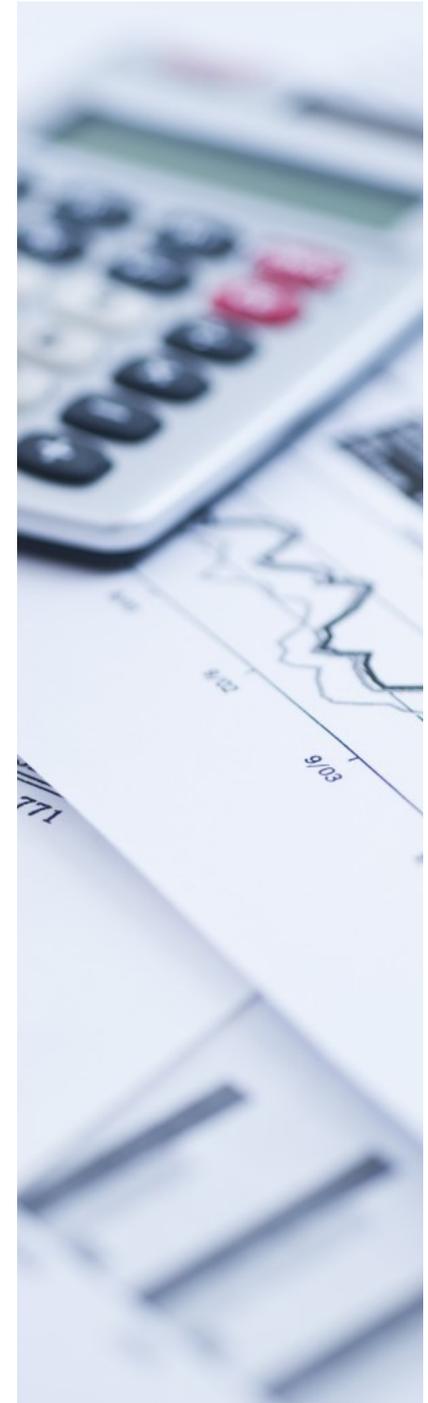
For now, Finance assumes that the necessary additional financing can be raised from the Ministry of Finance. The Ministry sets extensive conditions for making this available. Finance will explore options for raising additional financing from the Ministry during 2023. In 2009, UT has already secured three loans from the Ministry of Finance to finance its real estate investments. These loans are repaid on a straight-line basis over a 30-year period. The interest rate of these loans was recently revised which covers the interest rate risk for the coming years.



## 06.06 Conclusions finances

The LTSH 2032 includes estimated investments for the next ten years, totaling €[...]. In order to carry out all these investments together with the other planned investments (such as in equipment), additional loans will have to be raised, causing the solvency II to fall further below the target value. Future government policies may affect the whole positively or negatively, think positively about compensation for energy costs and inflation.

The €[...] will be made available with the adoption of the LTSH 2032. There must be a regular review of whether the whole still fits within the applicable standards for financial ratios at the UT level at that time. However, the nature of this strategic housing plan means that, should there be reason to do so, adjustments can be made within the frameworks. Projects may or may not go ahead or may be adjusted in such a way, for example in the planning, that the financial frameworks are once again met. No problems are foreseen for the financial coverage and the housing ratio in the coming years. The growth scenarios can also be accommodated within these standards



# 07 SUMMARY

## 07 SUMMARY

### Motivation

In order to make the campus future-proof both quantitatively (in square metres) and qualitatively, and to determine in a well-considered manner which real estate initiatives should be undertaken to this end over time, UT periodically develops a long-term strategic housing plan (LTSH) that serves as a framework for decisions on large-scale investment projects. The LTSH is managed by the LTSH programme team, which coordinates with a steering committee and a sounding board group. This 10-year LTSH provides the framework for the 2023-2032 period (hereinafter LTSH 2032). The previous LTSH 2030 contains some starting points that are no longer current and many of the envisaged developments have since been realised, or have been overtaken by time.

### Frameworks and starting points

Developments in recent years (including the continuing impact of COVID-19 on the way we work and study) have led to a number of additional starting points. The main ones are:

- A different relationship between home working and on-campus working has emerged. Both will have a place in the 'new way of working'.
- We want to move towards more flexible use of work and study spaces, resulting in a clean desk policy.
- An average flex factor (number of workstations per FTE) will be introduced, with customisation based on activity-based working per unit. It is an average target at UT level of <1.0 per FTE. UT has nearly 5,000 workstations.
- Physical education is no longer the only natural form, as a result of digitalisation, blended learning is increasingly accepted especially for lectures.

In addition, UT continues to apply the following general real estate frameworks:

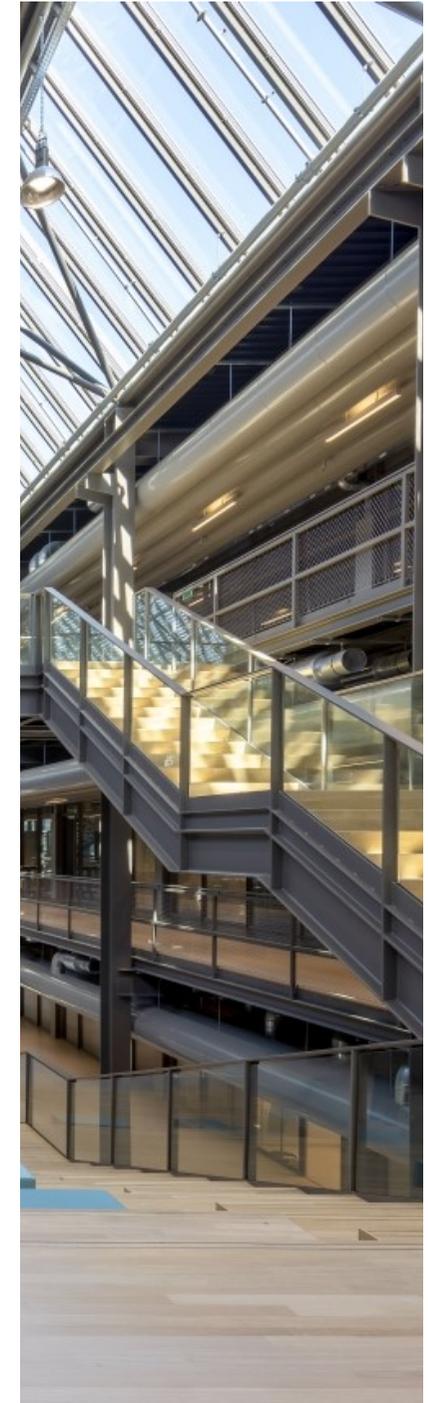
- Steering for quality and flexibility.
- Focus on sustainability.
- Digital transformation.
- Focus on efficient use of space and optimal deployment of the current real estate portfolio.
- Fitting within image quality and zoning plan.
- Within financial frameworks and ratios.

### Scenarios and effects on real estate

The new LTSH has a scope of 10 years: 2023-2032. The central question of the LTSH 2032 is: for what capacity of staff and students should the real estate be dimensioned in the coming years and what 'real estate strategies are conceivable in case of larger and smaller fluctuations, both above and below capacity utilisation.

### *Student and staff numbers*

On the basis of an inventory and trend analysis within the UT, insight was gained into what the UT can basically assume in terms of student and employee numbers in the coming years: the baseline scenario. This scenario assumes more or less constant conditions with a steady trend from the past continuing into the future. This leads to an estimate of about 16,000 students and about 4,300 FTE in 2032. Side note: these remain estimates. The property plan has been checked for robustness through a risk analysis if the numbers of students and staff are higher or lower in the future. Here, a smaller and a larger deviation were considered.



Scenario	Decline	Limited growth	Baseline	Growth	Peak
Student numbers	13.000	14.500	<b>16.000</b>	17.500	19.000
Employee numbers (FTE)	3.200	3.800	<b>4.300</b>	4.900	5.500

### *Growth/peak*

Unexpected growth as outlined in the scenarios poses a risk to UT. It is important for the university to be able to respond quickly to increasing accommodation needs. In doing so, the following route will be followed:

1. Further optimise use of current real estate and/or further digitalisation.
2. Search for flexible expansion preferably on-campus, otherwise near campus. This can take the form of temporary construction (rental or purchase) or in existing third-party buildings (rental construction). The best solution must be found on a case-by-case basis, depending on finances.
3. Only if the need for space turns out to be permanent, more permanent solutions will be sought. UT has a large, already earmarked area on the Es for expansion (besides the expansion from this LTSH 2032).

The financial impact of growth depends on many factors to think of:

- The revenue side: extra students bring in extra money so also extra budget for accommodation.
- The then prevailing market rent for square meters in case of renting additional meters.
- The then prevailing building prices for property in case of permanent expansion.

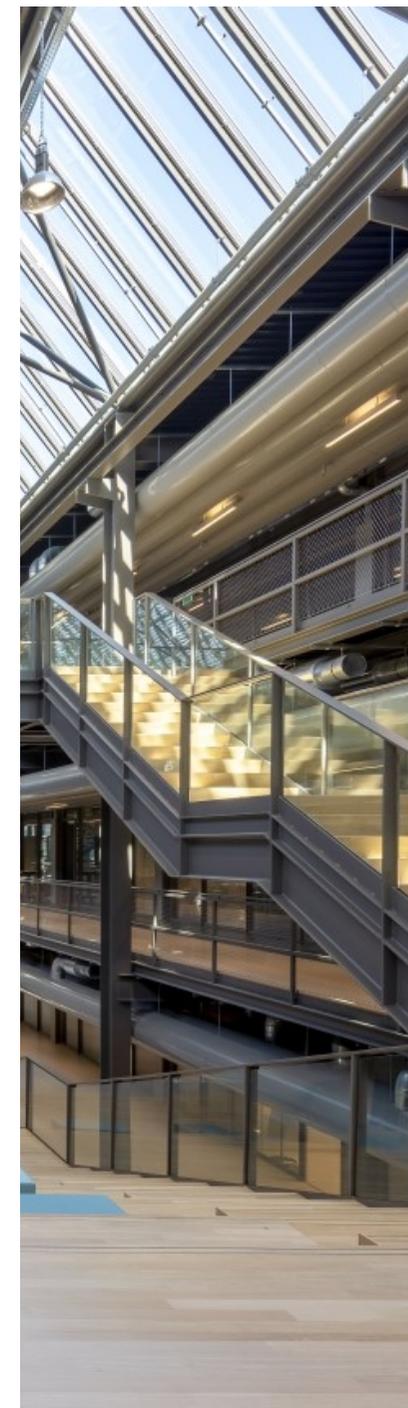
A quick scan, based on the current way of teaching and current price level, with different growth in student numbers up to 5,000 students above the baseline scenario shows that there is such a flow of money that it should be sufficient to be able to add sufficient permanent meters in the extreme case.

### *Limited growth/decline*

If the future number of UT students and employees is structurally lower than the baseline scenario of the LTSH 2032, excess space is created within the real estate portfolio. If there is no cover for this space, a situation arises in which real estate 'weighs' disproportionately on UT's budget. A general management measure for this risk is the disposal of real estate. This involves the following route:

1. Scrapping further expansion (if still possible).
2. Dispose of temporary or semi-permanent accommodation (if any).
3. Freeing up buildings with high external marketability for rental purposes.
4. If rental is not possible, it will be sold.

The function (or adaptive capacity of the building) and location of the building have a major influence on its external marketability. Buildings located at the edge of the campus, without education and with a specific layout are the first candidates for (temporary) disposal. If this situation arises, a building like the Spiegel can be considered. UT's strong 'O&O square' will then remain untouched for the time being. Financially, the damage can be limited: option 2 allows for a cost-covering rent and option 3 generates a one-time income.



### Elaboration of baseline scenario into property strategy

In the further elaboration of the LTSH 2032, the baseline scenario was used as indicated. This means that, for the next 10 years, the capacity of the real estate will be dimensioned according to the outlined numbers. With that important note that through better occupancy, utilisation and opening up (wider lecture hours) of the real estate and further digitalisation, there is certainly still room for growth. This is especially true for the COV i.r.t. growing student population. The new LTSH 2032 functionally emphasises accommodation for education, research, sports and culture. In terms of real estate projects, the LTSH then distinguishes three main categories:

1. Sustainable new construction/growth;
2. Renovation/sustainability of existing property;
3. Sports and culture.

#### Space additions

To arrive at a property scenario, the baseline scenario has been translated into a space requirement. This is particularly important for category A and C. The space requirement is based on both a numerical analysis and interviews with users. It looks broadly as follows:

- |   |                                 |
|---|---------------------------------|
| • Education and project rooms:<br>(1,500 places and 25 project rooms) | 4,250 m <sup>2</sup> UFA        |
| • Examination rooms:<br>(incl. replaced Therm)                        | 2,150 m <sup>2</sup> UFA        |
| • Research and practical rooms:                                       | 5,100 m <sup>2</sup> UFA        |
| • Office spaces:  | 1,600 m <sup>2</sup> UFA        |
| • Sports and cultural facilities:                                     | 6,000 m <sup>2</sup> UFA        |
| <b>Total</b>  | <b>18,200 m<sup>2</sup> UFA</b> |

The LTSH 2032 assumes an addition of about **16,100 m<sup>2</sup> UFA** in upcoming projects. This is an **11.4%** increase in the property stock compared to the current **141,720 m<sup>2</sup> UFA**. Apart from some rounding, the difference of 2,100 m<sup>2</sup> UFA between the space requirement and what is realised is explained as follows: the replacement of the Therm is not included (now) and there is ultimately almost 1,000 m<sup>2</sup> UFA less in the sports and culture plans.

#### Real estate strategy and projects

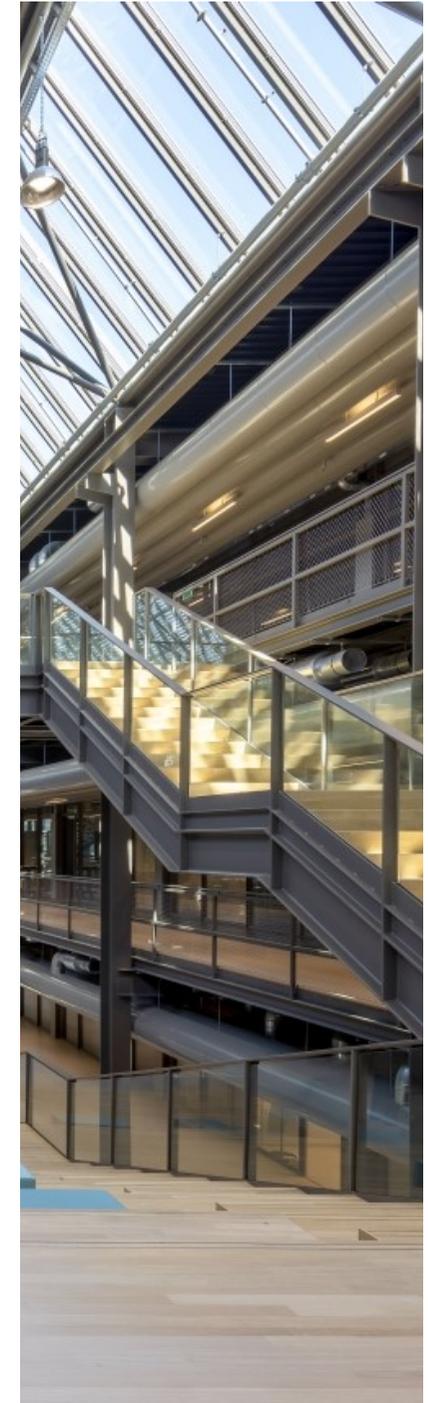
Apart from some general items, the LTSH 2032 has 35 projects for the next 10 years. The total investment costs of the LTSH in the period 2023-2032 amount to approximately **€[...] incl. VAT**. Projects with a size in the period 2023-2032 of about **€[...] incl. VAT** have already been decided upon. In case of setbacks, if there are no other financial buttons, the following projects, for which a total of **€[...] incl. VAT** (without realisation factor correction) is included in the LTSH, will be reconsidered:

- Renovation Zilverling.
- Renovation of Spiegel lecture rooms.
- Expansion and renovation of Sports Cente/combi Vrijhof.

Part of the strategy is to free up space in other buildings that will in turn be of interest to nearby faculties for further growth. The following figure 11 shows all projects for the next 10 years.

#### Finance

UT will receive additional funding from the Groeifonds and the Sectorplannen in the coming years. What exactly this will mean is not yet known. There is also still uncertainty about any compensation for energy costs/inflation. Extra resources give room to develop more square metres within the financial norms and to



**STRATEGIC AND SUSTAINABLE EXPANSIONS AND RENOVATIONS**  
DEVELOPMENTS OWN REAL ESTATE

**REAL ESTATE STRATEGY**  
LTSH 2032 - DEVELOPMENTS OWN REAL ESTATE

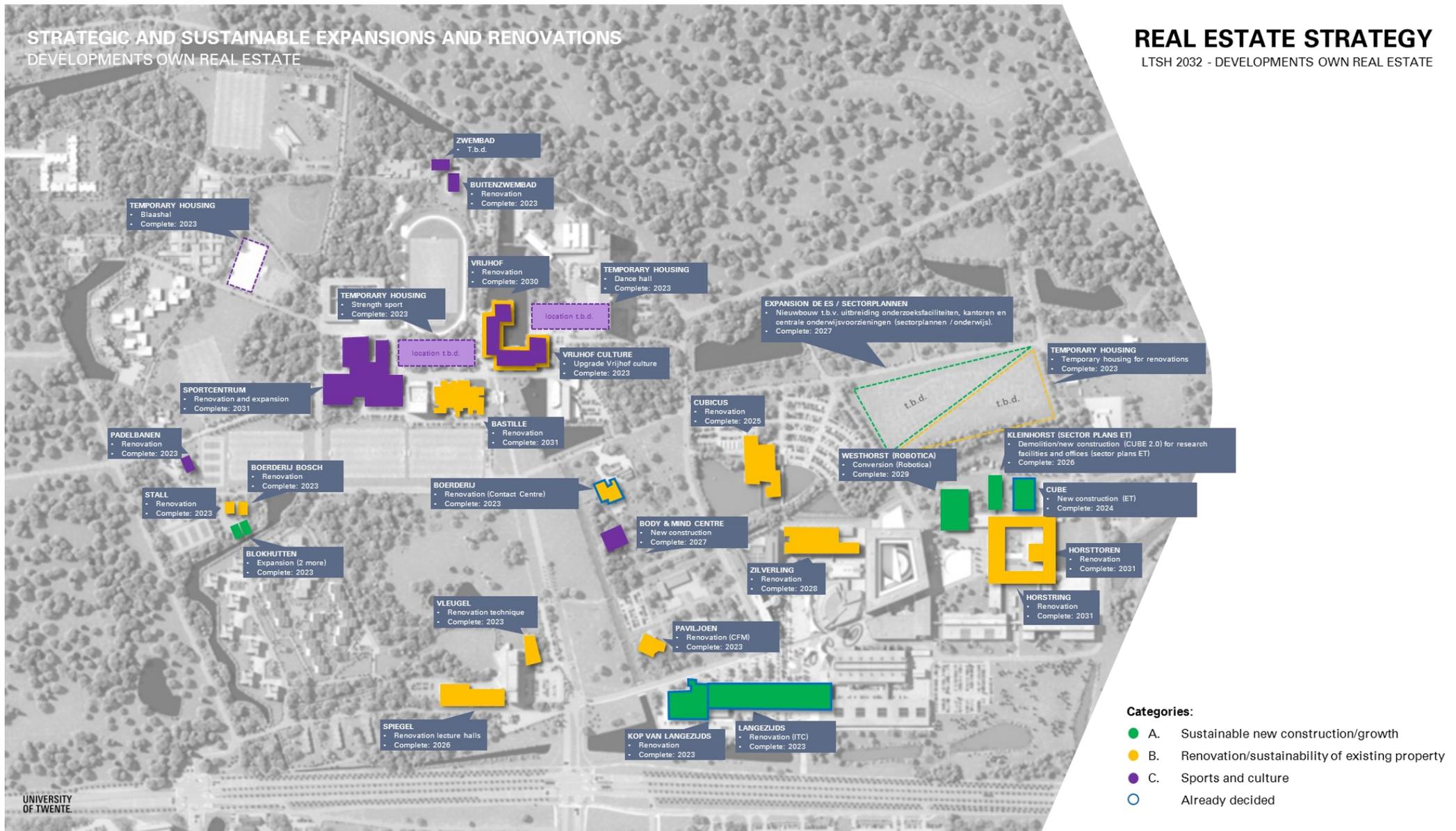


Figure 11: Overview of projects by main categories (developments own real estate UT).

renovate and make the existing property portfolio more sustainable.

The Education Inspectorate uses a number of signalling values that UT's finances must meet. These are partly supplemented by its own standards and target values. Property investments must fit within these financial ratios.

The following table 10 shows which ratios the LTSH 2032 has been tested.

Ratio	Requirement*	2023	2024	2025	2026	2027
Solvency II	> 30% 35%	[...] % en #				
Current ratio**	> 0,50 1,00					
Liquidity	> M€ 25 < 0,15					
Housing ratio	< 0,12					

\* These are the requirements of the Education Inspectorate. Internal UT-targets are printed in blue.

\*\* A discussion is currently taking place between the sector and the Inspectorate of Education regarding the change in the signaling value of the current ratio from 0,50 to 0,75.

Table 10: Development financial ratios

Besides these ratios, we also looked at the result in the REH. This indicates whether income from the RT tariff is sufficient to offset depreciation charges. This is an internal test, which says nothing about the result for UT.

The financial ratios were calculated based on the draft budget. Based on this draft budget, it appears that the current ratio falls below the signalling value of the Education Inspectorate. Therefore, additional funding will be raised. The solvency II and current ratio will remain below the target value in subsequent years. Future government policy can affect this both positively and negatively. Total investments have the following effects on the ratios:

- Liquidity: the investment programme is too large to carry out with currently available funds. Therefore, a loan will have to be raised.
- Solvency II: this will be below the target value in the coming years, but still above the Education Inspectorate's signalling value.
- Housing ratio: this remains around 11%.
- Coverage margin REH: there is sufficient room in the REH until 2031 to implement the investment programme.

#### Adaptive strategic LTSH

UT has chosen to adopt and make available the LTSH 2032 including the budget of **€[...] incl. VAT**. It is important to mark that it is an adaptive strategic plan. An annual review will follow in any case. In addition, the governance of the LTSH is structured so that 1 or more decision-making moments are built into each project. In this way, the LTSH and the Executive Board (EB) remain 'in control'. Especially in case of financial setbacks, it is important to be able to scale down then. It is also possible to adjust the planning. For now, no problems are foreseen for the coverage and housing ratio. The decline and growth scenario can also be absorbed within these standards. Every (major) investment will be reviewed in accordance with the ratio's and governance within the LTSH.

