FUTURE CAMPUS

Scenarios for the campus in 2040

SURF

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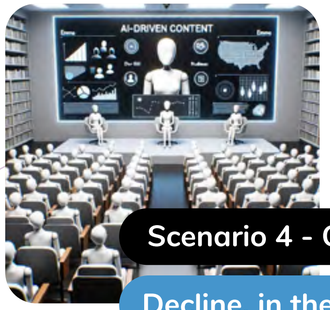
Human oriented,

strictly regulated



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FOREWORD: A LOOK INTO THE FUTURE

When I think of the campus of 2040, I see a lot of digital opportunities to enrich learning. Extended reality, serious gaming, but also other technologies that still need to be invented to help students to reach their goals in alignment with their own wishes and desires, far more than they are able to now. This will allow them to prepare for their professional life in an optimal way.

However, I also see a physical campus in front of me, where students meet and learn from each other and their lecturers. Of course, the physical campus of 2040 will have changed a lot since 2023, but I think it will still be invaluable. Perhaps it will add even more value than it does today. Because education is not only about acquiring knowledge. It is about gaining life experience and meeting people as well. Just look at the coronavirus pandemic: compulsory distance learning allowed our education to continue, but we were all so happy to meet each other physically again.

In other words, physical and virtual learning and life experiences are likely to go hand in hand on the campus of 2040. So, what exactly might that campus look like? What trends will affect the organisation of the campus of 2040, both in vocational and academic education, if those categories still exist? And how can we anticipate that future in the present? What challenges will we encounter?

This is what we investigated in the Future Campus project together with representatives from vocational and academic education. One of the trends we have noticed is that more and more interactions take place online and outside the four walls of the classroom. This has a direct impact on campus design, which will soon focus more on collaboration and interaction, as well as integration with professional practice, and less on pure knowledge transfer in the traditional setting of classrooms or large lecture halls.

Our research revealed a number of scenarios for the campus of 2040. Those are faraway prospects of course, but can be used to make innovative choices now to pave the way towards the ideal campus of 2040. The result will be a campus that is an inviting and inclusive place both physically and virtually, where students can reach their full potential.

I therefore hope that besides being an interesting read, this publication offers you lots of inspiration.

Jet de Ranitz
CEO SURF

FUTURE CAMPUS AT A GLANCE

The why

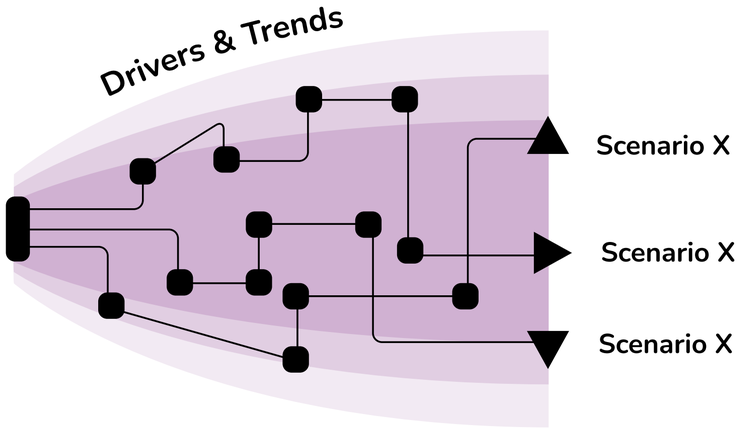
The campus plays a crucial role in the learning process of students. Despite this significance, the campus has not always received the attention it deserves in recent decades. Now that the virtual and physical worlds are merging more and more, SURF recognises the importance of campuses and has taken the initiative to thoroughly explore the ‘Future Campus’. The project was set up to better understand how we can strike a balance between the physical and virtual learning environment and how this could shape the future of education.

About futuring

Everyone engages in futuring. Whether you are taking a look at the weather forecast to prepare for rain or making strategic choices for your organisation, we all anticipate the future. We do this by analysing current trends and drivers. A driver (such as the weather) is neutral, while a trend (such as emerging clouds) indicates a direction: more or less, higher or lower, better or worse.

By identifying and combining trends and drivers, we can outline different future scenarios (see figure). This allows us to explore strategic choices, identify risks, and explore opportunities, which affects our current behaviours. In other words, it allows us to make choices in the present that anticipate possible desirable or undesirable futures.

And that is exactly what we did in the Future Campus project. The focus was on campuses in vocational, universities of applied science and academic education in 2040, both physically and virtually, and in combination of the two. We developed four scenarios to help institutions and organisations make strategic decisions. We looked at the characteristics of the campus and also examined the characteristics of education itself. After all, both are inextricably linked.



Method

To develop our future scenarios, we first identified the relevant stakeholders and conducted some desk research. Based on this, we defined the key drivers and trends that could affect the future of the campus. We then organised interactive regional meetings with the identified stakeholders, such as lecturers, managers, supporters, suppliers, architects and of course students. These meetings were crucial. They were an opportunity for a multidisciplinary exchange of insights and they enabled us to create conceptual scenarios together. These conceptual scenarios were then presented to a panel of experts using the Delphi methodology, an iterative approach that gathers expert feedback in successive rounds until consensus is reached. The panel helped us to refine and validate the characteristics of the scenarios. With their feedback, we were ultimately able to finalise and present the scenarios, as evidenced by the following sections of this publication.

Trend report

We identified and analysed various drivers and visible developments (trends) in the project in order to develop the scenarios. To find out more, download the trend report here.

Research on campus visions and strategies

In addition to outlining possible futures, the project researched institutions' current campus visions and strategies and what they have in common. To find out more, download the research report here (only available in Dutch).

SCENARIO ARCHETYPES

To outline the scenarios, we used the so-called scenario archetypes methodology (Fergnani & Jackson, 2019).

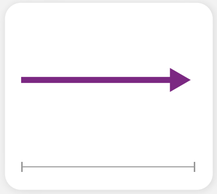
Let's first take a look at what exactly an archetype is. In the context of strategic foresight, an archetype refers to a typical description of a possible future. This is based on the idea that several generic scenarios (archetypes) exist that can be used as a basis for developing more specific scenarios. By looking at developments in the present based on an archetype with its associated characteristics, we can map out different futures. In this way, an archetype is a kind of perspective on the future.

The method uses four archetypes:

Bron: Fergnani, A., & Jackson, M. (2019). Extracting scenario archetypes: A quantitative text analysis of documents about the future. *Futures & Foresight Science, 1*(2), e17.

GROWTH

A Growth scenario is predominantly positive and prosperous and is characterised by incremental technological and social innovation and economic growth. It means that visible – good, but sometimes also bad – developments take their logical course and we realise today's dots on the horizon. This is therefore a predominantly optimistic scenario.

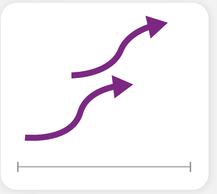


DISCIPLINE

In a Discipline scenario, we strive towards a better balance, often based on strict rules and guidance imposed to achieve certain (public) values or goals. It allows us to anticipate trends that could disrupt the current system and to make choices that strike a better balance.

TRANSFORMATION

In a Transformation scenario, fundamental changes and innovations take place that lead to a new normal and/or paradigm shift. This scenario is often characterised by more radical technological innovations. The old system is replaced by a new one.



COLLAPSE

In a gloomy Collapse scenario, social, economic or environmental systems fail or even collapse completely. This is therefore also regarded as a worst-case scenario. And yet, even in this scenario, whether the identified characteristics are positive or negative depends on who interprets them and in what context. Certain aspects of the Collapse scenario may even be considered desirable in some contexts.

The primary objective of these four scenario archetypes is to gain insight into possible future developments (this project, of course, focuses on the campus of 2040) to help institutions, organisations and individuals prepare for various possible futures. They serve as a means of reflection and discussion on future uncertainties, risks and opportunities.

However, we must take care that the scenarios of the scenario archetype method are interpreted correctly. You should therefore take the following insights into account when reading the scenarios:

1. **Not exclusive or predictive:**
   The scenarios are neither exclusive nor predictive. They are intended as explorations of what is possible, not as definitive predictions of what is going to happen. Multiple scenarios may partially come true, with elements from different scenarios manifesting in a single future reality.

2. **Not uniformly positive or negative:**
   The scenarios are not intrinsically positive or negative for everyone. What one regards as positive, someone else may see as negative. For example, some may see strict regulations in the Discipline scenario as a necessary and positive aspect, while others may perceive it as restrictive and negative.

3. **Overlap and interaction:**
   The different scenarios overlap. Some features or trends appear in multiple scenarios. This is not a bad thing. It indicates that certain aspects and trends can occur in different contexts and under different circumstances, and their impact and scope may vary by scenario.

The four identified scenarios should therefore be approached with an open and critical eye, and the opportunities they offer should be used as a tool to develop more informed and resilient campus strategies. They are not intended to accurately predict the future or suggest any type of desirability and/or probability. That interpretation is entirely up to you.

THE SCENARIOS AT A GLANCE

THE GROWTH SCENARIO

In 2040, the campus symbolises economic prosperity and technological progress. This vibrant and innovative environment is the result of substantial investments and intensive regional collaborations, and is both a physical and digital learning environment where growth and progress are key. Strategically positioned as a hub, the campus facilitates the seamless integration of digital and physical learning environments by applying the latest smart campus technologies and putting a strong emphasis on blended learning. This has made educational processes flexible and personalised, and the campus has become a vibrant, adaptive meeting place where knowledge exchange, co-creation and social interaction merge, and where sustainability and innovation integrate harmoniously into all facets of campus life.

This also has a downside, as the students' privacy and wellbeing come under increasing pressure. In addition, not all institutions and lecturers are able to keep up with the planned innovations. This means that the campus of 2040 reflects a search for balance between human values and technological progress.

THE DISCIPLINE SCENARIO

In 2040, education is characterised by strict regulations and structures, with an emphasis on public values, privacy and sustainability. The physical campus has been transformed into a sustainable knowledge hub with lots of green spaces and sustainable buildings generating energy. Online learning environments are centrally managed and seamlessly integrated with offline activities. Sustainability and inclusiveness are no longer choices, but obligations. The campus breathes sustainability and is accessible and inclusive for everyone. The government plays a leading role in shaping education. Lecturers are the beating heart of education, supported by technology. Standardisation enables flexibility in learning. This strikes a new balance between human values and technological progress.

THE TRANSFORMATION SCENARIO

In 2040, education has morphed into a whole new normal dominated by flexibility and personalisation. The campus is no longer just a location, but a vibrant ecosystem for learning and innovation operating as a hub for interdisciplinary collaboration and co-creation. The students are in charge of their dynamic, tailored learning journeys, and the lecturers act as coaches and facilitators supported by AI. Physical and digital learning environments have merged into a harmonious whole with technologies that create a seamless, immersive learning experience. The campus is both a virtual and physical meeting place that accessible to everyone, where innovation, creativity and sustainability come together and where learning takes place in an authentic context directly applied to real problems.

THE COLLAPSE SCENARIO

In 2040, the campus has become a sad symbol of technology dominance and overall degradation. The once vibrant and innovative learning environment has become an outdated and neglected place with no human touch to be found. The physical campus is in disrepair due to a lack of resources and decision-making. The virtual learning environment has been taken over by tech giants and is now a mandatory and isolating landscape in which personal connection and autonomy have made way for profit and control. In this scenario, the harmonious integration of human values and technological progress is but a distant memory, and the physical and virtual campuses are mere shadows of what they once were.

The scenarios we outline here are only a representation of possible futures. It is also important to realise that the scenarios outlined here have resulted from our research. When you start developing scenarios yourself, it is quite possible that you end up with other scenarios. Moreover, it is impossible to know with any certainty what vocational education and academic education will look like exactly in 2040.

The best thing we can do right now is to use thinking exercises like these to better anticipate what we all consider to be (un)likely and (un) desirable. This allows us to prepare ourselves for any future with complete confidence.

On the following pages, each of the four scenarios is outlined in more detail, as we formulated them in our project and in collaboration with all professionals and students in the field.

Today, but with an edge

THE GROWTH SCENARIO

The optimistic and most predictable scenario. Flexible and blended, characterised by sustainability and incremental innovation.

SCENARIO 1 - GROWTH

TODAY, BUT WITH AN EDGE

It’s 2040 and Salima wakes up. Smart devices measure her relaxed heart rate and stress levels, a constant reminder of how technology is affecting her life in all its facets. After breakfast, she cycles to the campus. It’s not far. She lives in a special student complex with affordable and sustainable units. She sees fellow students in a variety of spaces at the central hub: quiet rooms, lounge corners and collaboration spaces. She grabs a cup of coffee from the barista robot and attends a lecture in the innovation room. The lecturer greets her on arrival. They practice a new treatment technique with VR headsets and the lecturer gives live feedback.

In the afternoon, she works independently in a focus booth at the media library. At the end of the day, Salima cycles home tired but happy. The campus feels like a second home to her where she can learn, meet people and develop, although sometimes it’s also nice to be able to disconnect.

Time to take you deep into the future, starting with the Growth scenario. In this scenario, there is economic prosperity and technological progress.

It is the most obvious scenario, in which we have actually realised the dots that are currently on the horizon. Trends continue as expected (mostly positive, but sometimes also negative). This means that in this scenario, the campus of 2040 is a vibrant, innovative environment that is thriving. There is a mentality of growth and progress. The scenario is characterised by a high level of physical and digital investment in the campus. There is a lot of focus on collaboration within the region and optimal support for students in their studies. Nevertheless, the pressure to perform has not declined everywhere and still leads to stress and mental health issues. At the same time, there are sufficient resources to maintain the quality of education and the facilities.

The campus is strategically located and easily accessible and acts as a hub in a network of education institutions that collaborate frequently and exchange knowledge. Decisions are taken with both the public interest and economic factors in mind, so that growth takes place in a responsible and sustainable way. Digitalisation has also paid off. By 2040, the campus has therefore become a lively meeting place where students, lecturers and professionals from the field come together in harmony. This is a so-called hybrid learning environment, where theory and practice meet in co-creation and synergy. The digital learning environment is

SCENARIO 1 - GROWTH

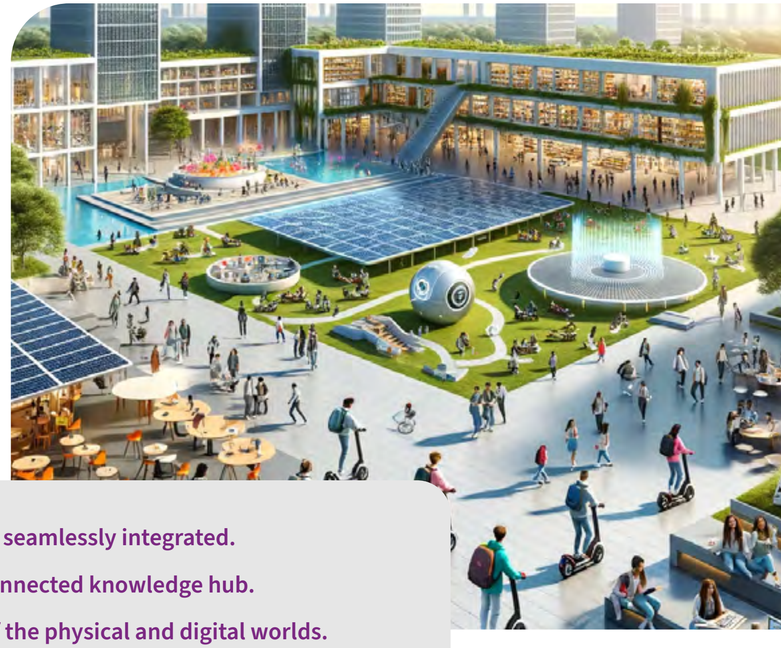
TODAY, BUT WITH AN EDGE

interoperable and seamlessly integrated with various platforms.

The physical and digital learning environments are perfectly integrated with each other thanks to the latest smart campus technologies and a strong commitment to blended learning. The spaces are multifunctional and flexible, and classrooms have been transformed into inspiring and interactive learning spaces. There are still lecture halls, but they have been furnished in a more flexible and multifunctional way. Education is highly personalised, and students have more freedom to put together their own learning journeys. The campus is as a place for knowledge transfer and a social hub. Lecturers act as guides rather that focusing on pure knowledge transfer, although from time to time effective instruction is simply essential. Qualification, socialisation and personalisation are now more balanced, although this is not yet the case for all institutions.

The campus breathes far more sustainability and innovation and harmoniously integrates green spaces and state-of-the-art technology facilities. The campus acts as a living lab and testing ground for solving societal issues and safely trying out new technologies. Artificial intelligence is used as a tool, not as a replacement for traditional education, although some lecturers are finding it hard to keep up with this change. Although institutions' capacity to change is still a challenge, a wide range of quality ICT and audiovisual facilities and smart building technologies have been implemented on the campus. The comfort and wellbeing of students and staff are key, and this is reflected immediately in both the virtual and physical campus environment. However, technological advances also have a darker side: privacy has become a major concern. The enormous amount of data collected by smart campus technologies raises questions about who has access to this data and how it is being used.

In short, in 2040 the campus is a vibrant centre of knowledge exchange, co-creation and social interaction, offering a physical and digital learning environment that is constantly adapting and evolving in response to the changing needs of students, lecturers and society as a whole. At the same time, there are certainly challenges that are already visible today and have only grown in 2040. Privacy and wellbeing are examples of such challenges.



Basic assumptions

1. Theory and practice are seamlessly integrated.
2. The campus acts as a connected knowledge hub.
3. It is a complete blend of the physical and digital worlds.
4. Education is flexible and tailor-made.
5. Sustainability and respect for the environment are core values.
6. The campus serves as a lively meeting place.
7. Public values have high priority in decision-making.
8. Lifelong learning is actively promoted.
9. The campus is at the forefront of innovation.
10. Technology is integrated into many aspects of education.

SCENARIO 1 - GROWTH

TODAY, BUT WITH AN EDGE

Extreme aspects

To better understand this scenario, it helps to expand its characteristics to an extreme level. When we do this, we discover the following aspects::

1. **Hyper-connectivity:** The campus acts as a super hub in a global network of knowledge, enabling real-time connectivity and knowledge sharing with any institution in the world.
2. **Ultra-personalisation of learning journeys:** Each individual has a fully personalised learning journey that is tailored to their needs, interests and capabilities, thanks to advanced AI and data analytics.
3. **Unprecedented technology integration:** The advanced technology is integrated in such a way that the physical and digital realities merge completely, creating unprecedented learning opportunities and experiences.
4. **Core principle of sustainability:** Every component of the campus is sustainable – from buildings that generate more energy than they consume to fully self-sufficient food and water thanks to innovative green technologies.
5. **Utopian community culture:** An environment in which harmony, respect and inclusivity prevail, where everyone is equal and has equal opportunities regardless of background or origin.
6. **Education without boundaries:** Learning is not limited to the walls of classrooms. It takes place anywhere and anytime, both on and off campus, synchronised across multiple platforms and media. There are no longer any barriers between sectors.

Wildcards

In addition to extreme aspects, there are also so-called wildcards. They are unforeseen and disruptive changes that may have a huge impact on the system. Wildcards significantly affecting this scenario include:

1. **EdTech breakthrough:** A sudden technological breakthrough in education disrupts or strengthens the existing methods.
2. **Global economic crisis:** An unexpected financial collapse threatens the available investment in and resources for education and may therefore hamper planned campus development and innovation.
3. **Scientific breakthrough in sustainability:** An unforeseen scientific breakthrough leads to the rapid adoption of advanced sustainable technologies, making the campus sustainable at lightning speed.
4. **Changing employment requirements:** Sudden shifts in the labour market mean that education (and therefore the campus) needs to be adjusted to meet new expectations.
5. **Cyber attacks:** Sudden and extreme digital threats can lead to a revision of the digital infrastructure and other priorities.

Human oriented, strictly regulated

THE DISCIPLINE SCENARIO

Search for balance. Sustainable and regulated, an approach based on public values and containment of technological developments.

SURF

SCENARIO 2 - DISCIPLINE

HUMAN ORIENTED, STRICTLY REGULATED

It's 2040 and Tim gets up in his net zero apartment. He lives in a sustainable student complex of affordable units, but there are strict rules and the atmosphere sometimes feels a bit clinical. On campus, he goes to an AI-driven workshop. The AI mentor recognises him immediately and proposes a learning plan. He dives into ethical technology issues. Tim appreciates flexibility, but sometimes yearns for spontaneity. During his break, he swipes through the possible campus activities: a VR trip, meditation and a debate. Later, he uses a mindfulness app to relax in a soundproof pod. Whilst cycling back, he appreciates the technological progress, but he also craves simplicity. The campus is both liberating and limiting and therefore evokes mixed feelings.

The Discipline scenario focuses on a structured and regulated educational environment in 2040 with a strong emphasis on public values, privacy, sustainability and strict compliance with regulations.

In short, we have disciplined ourselves and found a new balance. According to this scenario, education plays a crucial role in both identity and community formation. There is a paradoxical combination of flexibilisation and standardisation, in which strong standardisation enables the desired flexibility. The government has implemented strict rules in terms of privacy and environmental protection, and has gained more influence over what education offers and how it does this. The focus is on preparing students for the reality of society and the needs of the labour market. European regulations have an even greater impact on education standards than they do today.

Sustainability is no longer a choice, but an obligation. Campuses have been transformed into decentralised knowledge hubs that focus on sustainability. There is a strong emphasis on a healthy, green environment, which is clearly reflected in how much the buildings are integrated with the natural environment. The campus actively works towards carbon neutrality.

Inclusivity has become a fundamental right in education. This means strict standards for an inclusive learning environment. Diversity is

SCENARIO 2 - DISCIPLINE

HUMAN ORIENTED, STRICTLY REGULATED

actively promoted. Despite technological advances, sustainability, inclusiveness and community building remain core values, with a focus on keeping things on a human scale. Public education institutions are preferred over private ones, and there is a strong focus on lifelong learning. The connection between the campus and the business world has intensified, with education taking place more often in an authentic professional environment and students going to campus mainly for exchanges, targeted knowledge transfer and social activities. Projects build bridges between different disciplines.

Increasing regulation has somewhat curbed technological innovation. The government manages both the content and the process. Lecturers remain at the heart of education and use technology as a supporting tool. Online learning environments are managed more centrally, at a supra-institutional and sometimes even national level. There is seamless integration of online and offline educational activities. The campus uses smart campus technology extensively to improve the user experience.

In short, in 2040 there is stricter compliance with rules and standards to maintain a balanced education and campus ecosystem that integrates human values with technology. Sustainability, inclusiveness and community building are not just ideals. They are the pillars that support the education system – and therefore campus development and innovation, whether you like it or not.

Basic assumptions

1. Education shapes our identity and cultivates communities.
2. Strong standardisation enables flexibility.
3. Strict rules for privacy and the environment.
4. Sustainability is an obligation, not a choice.
5. Inclusivity is a fundamental right.
6. Human values are at the heart of all decisions.
7. The government heavily controls the processes and content.
8. Lecturers remain at the core of education and are supported by technology.
9. Seamless integration of online and offline learning.
10. Campus as an icon of sustainability.

SCENARIO 2 - DISCIPLINE

HUMAN ORIENTED, STRICTLY REGULATED

Extreme aspects

To better understand this scenario, it helps to expand its characteristics to an extreme level. When we do this, we discover the following aspects:

1. **Extreme sustainability measures:** All buildings are fully self-sufficient, and any violation of strict environmental regulations is punished immediately with severe sanctions. All energy is generated from renewable sources, and only circular materials are used.
2. **Total government :** A *social credit score system* based on behaviour, educational performance and social participation determines your social mobility and access to facilities and services. Government regulation penetrates every aspect of life, including personal life choices and behaviour.
3. **Hyper-standardisation of learning journeys:** Each student has a predefined and standardised learning journey that can't be deviated from. All educational content is standardised into a single curriculum for everyone. Lifelong learning, rather than learning all your life.
4. **Total privacy and control:** Constant surveillance and monitoring have become the norm, while paradoxically total privacy is also guaranteed by hyper-advanced encryption technologies and strictly regulated data access.
5. **Radically healthy lifestyle:** All food on campus is exclusively organic, vegan and locally produced. Everyone is expected to engage in daily physical and mental exercise.
6. **Mandatory community service:** All students are required to participate in community building activities and have to spend a certain number of hours helping their local communities. A social service obligation.

Wildcards

In addition to extreme aspects, there are also so-called wildcards. They are unforeseen and disruptive changes that may have a huge impact on the system. Wildcards significantly affecting this scenario include:

1. **Extreme climate change:** Need for more stringent environmental and sustainability measures due to unforeseen environmental conditions, such as an environmental crisis.
2. **Unforeseen technological breakthroughs:** Potential disruption or reinforcement of the existing regulated structure and the balancing act between people and technology. One example would be a privacy scandal.
3. **Changes in international regulations:** Redefining local and national regulations as a result of new international standards and laws.
4. **A new pandemic:** A new pandemic drives the need for even stricter rules in terms of hygiene, contact and mobility. This increases the need for rules and control.
5. **Changes in the political climate:** Shifts in the political power relationships may cause changes in public policy and the level of regulations in the education system.

Radically different, yet still realistic

THE TRANSFORMATION SCENARIO

A new normal. Personalisation down to the last detail, technological developments everywhere, and the campus as a hub of innovation.

SURF

SCENARIO 3 - TRANSFORMATION

RADICALLY DIFFERENT, YET STILL REALISTIC

It is the year 2040. Aisha wakes up and grabs her VR headset, which she controls with her voice. Her AI coach proposes a schedule based on Aisha's interests. First, she joins students from all kinds of disciplines all over the country to take part in an interactive VR simulation on sustainable urban development. A lecturer guides them and encourages them to think outside the box. Then Aisha goes to the campus, which is a place of education, but also accommodates businesses. Aisha attends a masterclass by a renowned artist. During lunch, she exchanges ideas with fellow students and experts from the professional field in the central hub. Knowledge sharing and co-creation are central. In the library, she works on a real-life assignment for a client, and records the progress in her flexible digital portfolio. The campus feels like a second home, where boundaries blur and everything seems possible.

Transformation is a challenging scenario archetype. This is because a new normal is replacing the old system.

This requires us to fully breach our existing thinking frameworks, which can turn out to be really difficult. There is also the pitfall of quickly falling into wishful thinking, although not everyone perceives all characteristics of this scenario as such. We also found some overlap with the Growth scenario in our data, even though this scenario is still significantly different. It is more radical, and yet realistic.

The Transformation scenario focuses more strongly on the flexibility and personalisation of education in 2040. Almost to an extreme. The idea that students are passive recipients of knowledge is now a thing of the past. Students are active participants in their own dynamic learning journey, which is fully tailor-made for them. Even though this feature is also present in the Growth scenario, this scenario carries it through down to the last detail. Lecturers have fully adopted their roles as designers, coaches and facilitators, guiding students through a landscape of knowledge. This knowledge is always available at the touch of a button: artificial intelligence allows students to create a knowledge clip in seconds. Tailor-made instruction in no time. The online learning environment is no longer inferior to the physical one. This means that some training courses don't even need a physical campus environment anymore.

Two important features of this scenario are interdisciplinary collaboration and the breaching of traditional structures. In this scenario,

SCENARIO 3 - TRANSFORMATION

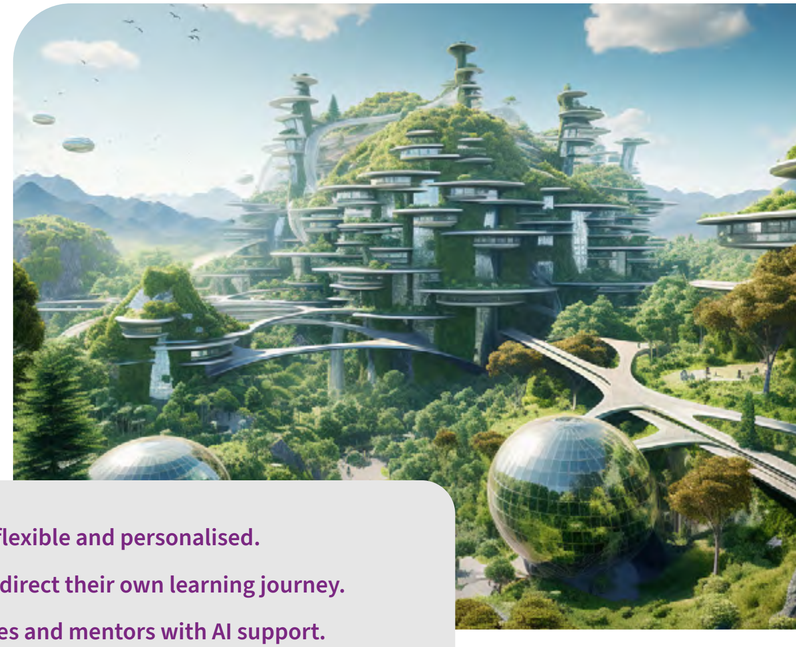
RADICALLY DIFFERENT, YET STILL REALISTIC

the boundaries between vocational education, higher professional education and higher academic education have practically disappeared, and they all speak exactly the same language. The link between education, government and business is highly optimised. Education institutions have therefore transformed into regional hubs of innovation and collaboration. In some cases, there is no longer even a question of education and practice, as they have merged completely.

Technological developments are very much present. Artificial intelligence is an integral part of education and supports lecturers in ways that were previously unthinkable. There is much more time for contact and connection, and all pure knowledge transfer takes place online. Theory and practice are combined as standard, and students work on real problems – often directly from an authentic professional context. Going to the campus therefore also means going to practice in the field. The campus has become a revolutionary ecosystem for learning and innovation rather than a just place for isolated knowledge transfer. Physical and digital spaces integrate seamlessly into a dynamic landscape of extended reality (XR), which is now a truly structural part of every educational practice.

The students are at the heart of everything and campus visits are a choice, not an obligation. The campus is a meeting place for co-creation and connection, even much more than in the Growth scenario. It is accessible to everyone, regardless of age or background. Some students hang out on the campus all day long. Lifelong learning is not only actively promoted; it is also celebrated. This is reflected in a larger number of mature students. The levels of education are integrated into a single flexible system. Students are in control of their own learning journey regardless of their level, even this is not as easy for everyone.

In short, this Transformation scenario outlines a vision of the future that blurs the boundaries between the traditional education systems and makes room for a boundless, interdisciplinary and highly personalised learning landscape. The campus has evolved into an ecosystem where physical and digital realities merge and enrich each other, resulting in a dynamic, immersive learning experience. The campus is no longer just a place of education. It has become an innovative meeting place where co-creation, interdisciplinary collaboration and connection are key.



Basic assumptions

1. Education is radically flexible and personalised.
2. Students manage and direct their own learning journey.
3. Lecturers act as coaches and mentors with AI support.
4. Creativity and innovation are crucial.
5. The campus is a hub for innovation.
6. Interdisciplinary collaboration is the norm.
7. The physical and virtual campus is infused with technology.
8. Theory and practice are no longer separate.
9. The campus has become an ecosystem for learning.
10. Sustainability and inclusion are (visible) core values.

SCENARIO 3 - TRANSFORMATION

RADICALLY DIFFERENT, YET STILL REALISTIC

Extreme aspects

To better understand this scenario, it helps to expand its characteristics to an extreme level. When we do this, we discover the following aspects:

1. **Brain-interface learning chips:** In this future scenario, knowledge can be directly uploaded to the brain with a chip. This completely eliminates the need for traditional learning.
2. **Education without institutions:** Schools and research universities as we know them have disappeared. Learning environments are integrated into the elements of society, such as businesses and communities, and learning takes place in the real world and is applied to real problems.
3. **Inexhaustible energy source:** A new source of energy has been discovered, which we can exploit to an unlimited extent. This allows our society to become completely independent of fossil fuels.
4. **Universal basic income:** Thanks to automated production and new sources of energy, there is enough prosperity to provide everyone with a basic income, which means there is barely any poverty left in the world.
5. **Hyper-immersive extended reality (XR):** All physical and digital learning experiences merge into a seamless, dynamic XR environment in which students learn and interact with the knowledge and with each other in ways we can't yet understand right now.
6. **Automatically adapted learning environments:** Learning environments are automatically adapted to each student's individual needs and preferences in real time, thanks to advanced AI and biometric sensors.

Wildcards

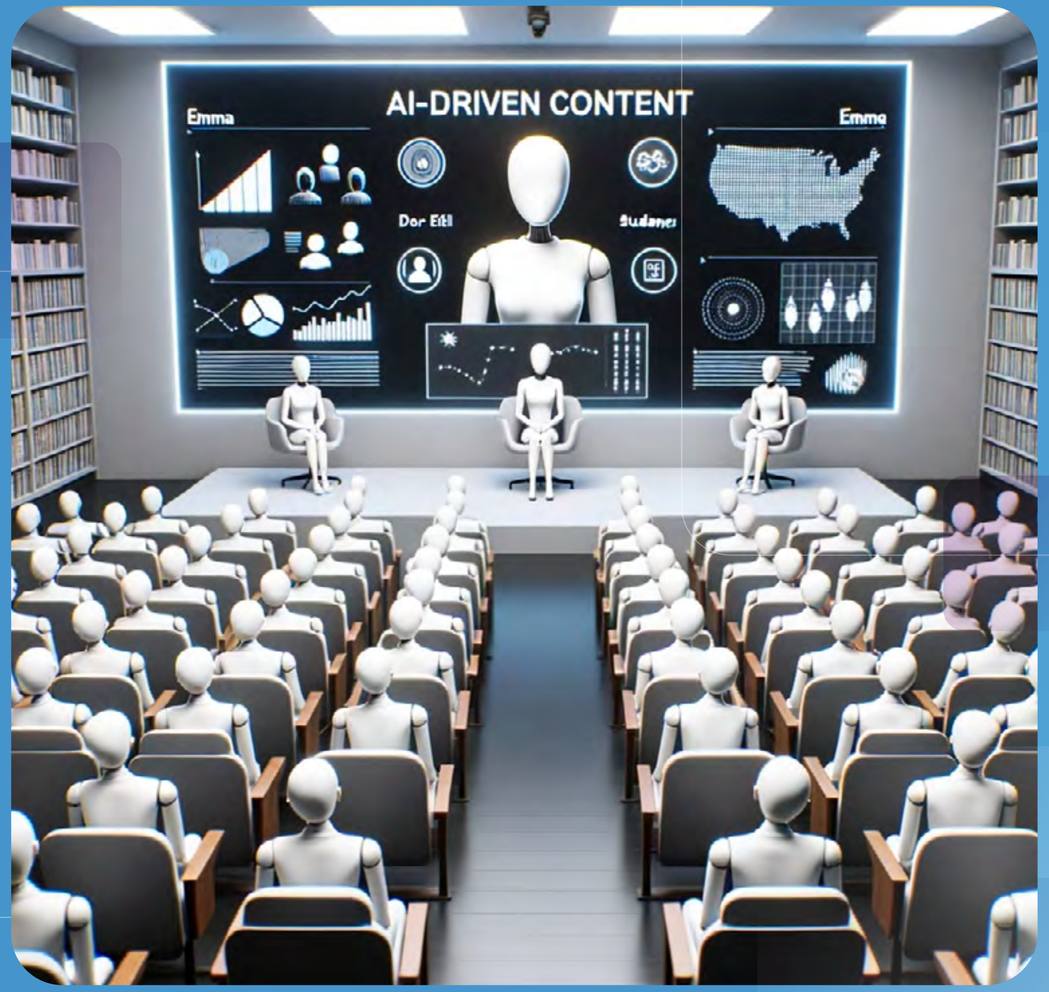
In addition to extreme aspects, there are also so-called wildcards. They are unforeseen and disruptive changes that may have a huge impact on the system. Wildcards significantly affecting this scenario include:

1. **Gamification of reality:** Integration of gamification principles into everyday reality, making every activity a potential learning experience.
2. **Thought-based learning:** Driving learning processes with thoughts through mind-machine interfaces requires revision of our privacy laws, bioethics and teaching methods.
3. **AI as a complete replacement of lecturers:** The complete replacement of lecturers with AI requires us to revise our labour laws, accreditation and pedagogy, and shifts the boundaries of education.
4. **Always-on learning platforms:** Learning platforms integrated into daily routines enable continuous learning and redefine what counts as 'education' and 'learning time'.
5. **Free movement of persons and goods within the UN:** A radical change in the global political landscape, in which free movement is implemented within the UN, giving globalisation a completely different character.

Decline, in the shadow of big tech

THE COLLAPSE SCENARIO

Online because it there is no other option. The campus is in decline due to growing dependence and a widening gap between the poor and the rich.



SURF

SCENARIO 4 - COLLAPSE

DECLINE, IN THE SHADOW OF BIG TECH

It's 2040 and Emma wakes up in her small concrete room. She checks her old smartphone and an unemotional AI tutor gives her today's schedule: online meetings and a lecture on campus. The lecturer's role is marginalised and AI-driven programs deliver impersonal education without any human interaction due to a lack of manpower and resources. After an arduous online session, she cycles for miles to the campus with its neglected facilities and buildings in disrepair. As she pedals, she thinks about how her childhood friend is doing a traineeship at a large company, which she is unfortunately not eligible for herself.

There is growing economic inequality and education has become a luxury dominated by tech giants. The digital world is full of danger, causing mistrust and fear.

***Last but not least*, we have come to the Collapse scenario. This scenario is also known as the worst-case scenario, in which the system declines or even collapses.**

In this gloomy outlook, technological developments have led to unbridled digitalisation and a very strong dependence on tech giants in 2040. As a result, there is growing social and economic inequality with a homogeneous population and exclusive education. The gap between rich and poor is widening. The public campus is struggling with outdated facilities and overworked lecturers, partly due to a lack of investment and resources. Study materials are often outdated. Students are lonely and have trust issues – even more so than today. This is caused, among other things, by threats from the digital jungle such as phishing and deepfake technologies. The choice of efficiency over wellbeing has reduced the quality of education and the personal touch has been lost.

The influence of multinationals has radically changed the way of teaching. There is a gap between the facilities of wealthy tech companies and the rest. The traditional education model is increasingly under pressure because of new technologies that are very difficult to keep up with. The centralisation of power in tech giants leads to even greater control and poses a threat to autonomy and diversity. There is an us-against- them situation, rather than collaboration. The dominance of tech giants hampers the adaptability of education institutions. Monitoring is at the expense of the wellbeing of students and lecturers.

SCENARIO 4 - COLLAPSE

DECLINE, IN THE SHADOW OF BIG TECH

As a result, qualifications from public institutions have lost their value and relevance. Indecision stands in the way of innovation and progress. Virtual educational programmes have become the norm because there is no alternative anymore. Physical interaction is declining in favour of online education, partly due to quotas and staff shortages. This causes isolation and alienation among students. Reduced funding has forced many traditional institutions to close.

Mental issues among students are on the rise. Trust between students and institutions is under pressure. The role of lecturers is marginalised by AI and other technologies, which has reduced the quality of education. As a result, students are not sufficiently prepared for an ever-faster changing world.

In short, in the Collapse scenario, the campus of 2040 is a mere shadow of what it once was. The potential for an inclusive, innovative learning environment is overshadowed by technological and social decline. The physical environment is in disrepair and obsolete, and the facilities have been neglected. Technological dominance is prominently impacting virtual learning environments, which are ruled by tech giants. There are even private campuses, which are very organised but are only accessible to the elite.

Basic assumptions

1. Uncontrollable growth of technology and dependence.
2. Increasing social and economic inequality.
3. Loss of quality in education, due to issues such as insufficient resources.
4. Personal involvement and connection have disappeared.
5. Gap between rich tech companies and the rest.
6. Physical campus very much obsolete and in disrepair.
7. Power of the few is a threat to autonomy.
8. Qualifications are losing their value and relevance.
9. Virtual environments dominated by tech companies have become the norm.
10. Wellbeing is under great pressure.

SCENARIO 4 - COLLAPSE

DECLINE, IN THE SHADOW OF BIG TECH

Extreme aspects

To better understand this scenario, it helps to expand its characteristics to an extreme level. When we do this, we discover the following aspects:

1. **Technological proliferation:** Technology has advanced to such an extent that the human aspect has been completely lost. AI systems have taken over every aspect of life, and people are overwhelmed and manipulated by overstimulating and intrusive technologies. The human spirit and soul have been cannibalised by technology. People live in a constant state of apathy and deprivation without hope, purpose or meaning.
2. **Social fragmentation:** Society has completely disintegrated due to extreme social and economic inequalities. Urban areas are either reinforced enclaves or dilapidated, lawless areas without any basic services.
3. **Educational collapse:** Education institutions have changed into dilapidated and abandoned ruins without any form of structure, order or authority. Learning has been fully digitalised and depersonalised with algorithmic content taking the place of lecturers.
4. **Absence of privacy:** Every aspect of life is transparent and monitored by the technology systems of all-powerful tech companies. People have given up any right to privacy, in exchange for ‘free’ services and convenience.
5. **Economic nihilism:** Money has become worthless and people are totally dependent on credit provided by companies in exchange for services and data. The free market is an illusion, and any type of economic mobility has become impossible.
6. **Ecological crisis:** The natural environment has been irreparably damaged by years of exploitation and neglect. The air is poisoned, the water is polluted, and all flora and fauna are almost completely extinct.

Wildcards

In addition to extreme aspects, there are also so-called wildcards. They are unforeseen and disruptive changes that may have a huge impact on the system. Wildcards significantly affecting this scenario include:

1. **Digitalised humanity:** Human experiences and emotions have been fully converted into data, which has a profound impact on personal identity and the perception of what it means to be human.
2. **The bankruptcy of education:** The bankruptcy of education institutions leads to more inequality and the loss of collective knowledge.
3. **Algorithmic discrimination:** The extensive use of biased algorithms results in systematic discrimination and limited access to education.
4. **Hyperinflation of qualifications:** The abundance and devaluation of qualifications have reduced confidence in their value and relevance.
5. **Mass unemployment:** Massive technology-driven unemployment is causing economic stagnation and a crisis in professional identity, which has made education less relevant.

SHAPE THE FUTURE YOURSELF

Nobody really knows what the future is going to look like. What we can try and do is shape the most desirable future ourselves and at the same time arm ourselves against what we consider undesirable.

However, this is only possible if you, your colleagues and your entire organisation initiate and bring about change. In order to achieve this, the scenarios must be translated into strategic choices. But how do you do that? How do you translate the scenarios and contextualise them in such a way that you can develop a roadmap to achieve the desired future and avoid unwanted elements? We have developed a practical toolkit for this purpose.

This toolkit provides a set of practical strategies that allow you and your colleagues to determine which desirable and undesirable elements from the scenarios are relevant to your context. Together you will then devise strategic initiatives for campus development and innovation that will ensure you can face the future with confidence. This allows you to both anticipate and shape the future.

download the toolkit

COLUMN: DARE TO (RE)DESIGN!

Recent years have shown that developing a future can be rather an uncertain endeavour due to external factors. In a constantly changing world, education institutions have the task and responsibility of acting as a beacon of stability to everyone who connects with them for a short or long time. How? By daring to design: physical and digital places, networks inside and outside the region, as well as trust in each other's professional attitude. This creates an inspiring and safe learning environment, both digitally and physically. It needs to be a dynamic place, bustling with activity and attracting you so that you never want to leave (the sticky campus). With a personal meeting place with a multidisciplinary composition for students, lecturers and externals.

This means education institutions have to be brave enough to develop a strategic housing vision that – in my opinion – focuses far less on traditional frameworks around timetables, deployment and organisation, and more on the needs of the actual courses of study. One example of this is theory classrooms in a conventional classroom layout. In recent years, I have noticed an increasing need for a different type of space for learning and teaching. Spaces that are flexible in terms use, furnishings, furniture and materials. Rooms that meet the needs of the target group and the context of an activity. This creates the best possible space for lecturers in their role as coaches, experts or assessors. It results in spaces for both formal, informal and social activities.

Such a vision doesn't come about overnight. Of course, we can build on the current strategic vision, which my own institution, HAN University of Applied Sciences, has supplemented with the principles of blended learning. We look at the student and teacher journey to determine what type of physical and virtual campus environment is best suited. The results of SURF's Future Campus project help multidisciplinary teams to have an open discussion about the sustainable place that a campus can and must offer in a positive, but sometimes uncertain future. This publication is therefore an excellent practical guide to get started on this. With the motto: dare to (re)design!

Huib Langenberg
Education and ICT Policy Officer at the HAN University of Applied Sciences

THE STUDENT PERSPECTIVE

In collaboration with the 'Trend Research & Concept Creation in Lifestyle' course at Fontys University of Applied Sciences, we have thoroughly evaluated the four future scenarios for the campus of 2040 with students from vocational education, higher professional education and higher academic education. As part of a six-week programme, these students conducted both quantitative and qualitative research, including surveys, focus groups and in-depth interviews. This process was indispensable, because ultimately, students are our primary target group. Their voice in the decision-making process for campus development and innovation is therefore crucial.

Results

The results provide a brief and concise, yet valuable insight into the students' perspective. The most important results are best captured in a few explanatory quotes:

1. **Student wellbeing:** Many students emphasise the importance of wellbeing. There is a clear call for an educational environment that offers room to the individual, promotes health and strikes a balance between digital innovation and human interaction.

"*Education must recognise and respect our personalities. It has to adapt to us, not vice versa.*"

"*In large-scale lectures, I feel like just a number. A personal coach could make the difference.*"

2. **Meeting places:** There is a strong desire for more places at the institutions where students can relax, collaborate and expand their network.

"*We need more than just places to study. We want spaces where we can relax, collaborate and simply 'be'.*"

3. **Privacy:** The concern for privacy and the threat of technology giants becoming too powerful are clearly present.

"*The idea that large tech companies are in control is frightening. Where is our privacy and autonomy?*"

4. **Sustainability:** Students feel that sustainability is very important and support blended education with both physical and digital components.

"*Many aspects we consider important are reflected in the scenarios: sustainability, blended education and privacy.*"

This is just the tip of the iceberg, but the Fontys University of Applied Sciences' research project offers an enriching perspective on the future scenarios of the campus of 2040. The message is clear: students have a voice and they need to play a role in campus development and innovation.

We asked Yorick van der Heiden, policy officer at the Dutch organisation for intercity student consultation ISO, to reflect on the project's results. His response in the column on the next page underlines how important it is to take into account our target group: the students.

COLUMN: THE CAMPUS AS A HOME

The campus is the place where students prepare for the future. However to successfully do that, they need an environment that keeps up with the times. In recent decades, education has become more and more about the students themselves and less about the actual studies alone. Fixed curricula are making way for more flexible learning paths, and knowledge transfer is being eclipsed by interactive, personal activities that support students' learning process.

On the one hand, the best education – the one that best suits a student – is different for every student. Digitalisation and the resulting flexibility will make this possible in the future. From putting together a course package yourself to receiving education from other education institutions, in the future learning will transcend campus boundaries, which is a wonderful development.

On the other hand, the campus should first and foremost be a fixed, trusted place where people can meet and develop both physically and digitally. Being able to meet each other and stay in contact with other students and lecturers is indispensable here, and the stability of a place that feels like a home is needed for students to get the best out of themselves. This should be true not only when they are studying full-time, but also be a place for lifelong development. If that is what the campus of the future looks like, I am really looking forward to the future of education, both as a student and as an ISO policy maker.

Yorick van der Heiden
ISO

COLOPHON

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