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Pathways to the future

A follow-up to "Universities without walls – A vision for 2030"

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Foreword

At the beginning of 2021, EUA launched "**Universities without walls – A vision for 2030**". It was developed in the midst of the Covid-19 pandemic, which presented unprecedented new challenges to the university sector while bringing to the fore others that have existed for some time. The pandemic accelerated digitalisation, laid bare social disparities and sharpened geopolitical tensions and rivalries. Although some might long for normality as we knew it, business as usual is no longer an option, neither for society nor for universities.

Universities are both subject to and active shapers of change. Crises present opportunities because they accelerate change, challenging us to leave our comfort zones and forcing us to an inflection point. We are at this point now and universities must do what they are best at: thinking ahead, pushing the frontiers of knowledge and using their capacity to shape a positive future. With EUA's "Universities without walls", we have set out a positive, normative vision for universities to shape their own future.

Each institution will develop its own path to achieve the vision that befits its role, its unique mission in global, national and regional society. Success will require a strategic reflection that considers possible future developments and the institution's inherent capacity to deal with them.

With this publication, EUA aims to foster such a reflection, building on the vision of "Universities without walls". Taking account of evidence, mainly from the members of the Association, we dare to speculate about possible futures and the interaction between universities and their contexts.

Our hope is that it will inspire university leaders and communities to imagine different futures – not all positive ones – and to envision how their institutions will both react to and shape them.

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Introduction

> *"Universities are created to tackle the unknown. While their future cannot be planned, the tools they have at their disposal to meet the future can be improved."[1]*

In February 2021, the European University Association (EUA) published "Universities without walls – A vision for 2030". It is a vision by and for the sector that was developed over more than six months together with visionaries and experts from EUA member and partner organisations.

The present publication is a follow-up to this vision. It sets out scenarios for future developments which may have an impact on universities and outlines possible pathways for European universities to pursue common goals. As such it is meant to serve as inspiration for university leaders and communities in developing strategies and priorities for action, taking account of their specific circumstances.

UNIVERSITIES WITHOUT WALLS – IN A NUTSHELL

In the context of the numerous changes we are experiencing, and not least the urgency of the Covid pandemic, Europe's universities are looking ahead to define their priorities for the next ten years. Europe and the world are facing several challenges, some of the most important being: finding a sustainable equilibrium between ecological, economic and social concerns, navigating the digital transition and dealing with (geo)political uncertainty. We are at a pivotal moment, where it is crucial to reflect about the future strategically.

"Universities without walls – A vision for 2030" is a seminal document setting out the goals that Europe's universities wish to pursue together: openness, sustainability and autonomy.

EUA's vision is for Europe's universities to be open, transformative and transnational, building partnerships with a wide range of actors locally and internationally. These universities will use the opportunities afforded by digitalisation, combining physical and virtual spaces in a holistic learning and research environment that accommodates the needs of a diverse university community.

Sustainability is a key feature of Europe's universities in 2030. Universities aim to make sustainability an integral part of their missions of learning and teaching, research, innovation and culture. Interdisciplinarity based on profound disciplinary knowledge will play an important role in this, combined with openness and creativity towards challenge-based approaches in learning and innovation, new ways of thinking and co-creating with partners. Diversity and social cohesion are key elements of sustainability, and European universities will work towards achieving both, in support of Europe's open, pluralistic and democratic societies.

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1   EUA (2021), *Universities without walls – A vision for 2030*, p. 10.

To do so, Europe needs strong, autonomous and accountable universities which act strategically and strive for continuous improvement. An open and trust-based relationship with society is a key condition that enables universities to fulfil their missions free from undue interference.

Universities are both subjects and shapers of societal change. They can and will play a major role in Europe's recovery, and the opportunities of contributing to positive change are enormous. In order to take these opportunities, universities need to be empowered through a concerted effort by all stakeholders: universities themselves, funding bodies, policy makers, quality assurance agencies and others.

EUA's vision sets out three success factors for universities to be able to achieve the vision. The first is regulatory and funding frameworks that protect academic freedom and ensure a high degree of institutional autonomy. This means that universities can take and implement strategic decisions in key organisational and academic matters as well as in funding and staffing. A second important success factor is adequate investment. This includes sufficient and sustainable core funding as well as the ability to diversify funding streams in a balanced way. The third key element is strong, transparent and inclusive leadership at the institutional level. This will take universities into the future, enabling university communities to actively shape their institution. It also requires further professionalisation and readiness of leaders to take up their roles.

Priorities for action need to be defined by each university, depending on their specific national and local circumstances. The vision sets out three things of importance across Europe: firstly, a reform of academic careers and assessment to make them less precarious, more flexible and more attractive, and achieve parity of esteem of the contributions of academics to the different university missions; secondly, the promotion of interdisciplinarity, particularly for meeting the sustainability challenge, through easing the accreditation of interdisciplinary programmes, opening up rigid discipline-based research assessment and rewarding interdisciplinarity in staff development; and thirdly, strengthening universities' civic engagement. In these times of crisis and major change, universities need to take up their societal responsibility and stand firm not only on their academic values, but also on the values of Europe's open, pluralistic and democratic societies. Concretely, this means university staff and students must connect even more to society, build bridges to other communities, and welcome external partners and citizens as participants in their activities.

HOW TO TAKE IT FURTHER – DEVELOPING PATHWAYS TO ACHIEVE THE VISION

The vision sets out broad goals and concepts, but each university has to find its own path toward achieving them. Each institution must set its own priorities, and develop strategies and ways of implementation to design its own future. EUA's vision is meant to be an inspiration for this process at the institutional level. Each institution has its own point of departure, aspirations and goals, and specific societal context in which it operates. At this pivotal moment, conditions for the next ten years are difficult to predict, even in the broadest of terms. For this reason, it is important to be creative in thinking about the future, imagining how trends that we already see might develop over the coming years.

With the present publication EUA intends to take the vision of "universities without walls" further into this imaginary terrain. Three of the major global challenges outlined at the beginning of the vision have been chosen for developing possible pathways toward achieving the vision:

1. Changing geopolitics: we are seeing a new alignment of forces on the geopolitical scene with the US, China and the EU finding new roles and dynamics. How will universities as international institutions be affected by this? How can they play an active role in shaping international relations?

2. Artificial intelligence, digitalisation and their impact on labour markets: how will technological change affect the role of university learning and teaching, and how will the relation between universities and big technology companies develop?

3. The development of democracy: only if democratic institutions are strong can universities function as open, autonomous units of society while safeguarding their core values – not least academic freedom and institutional autonomy. How will political systems in Europe develop? What does this mean for the role of universities in society and their ability to engage in societal debates?

SCENARIO METHODOLOGY

An important tool in future thinking is scenario building. For each of the three global challenges, EUA has sketched out three possible scenarios. These scenarios are models of hypothetical societal, political, economic and technological developments meant to help structure reflection and exchange. They were used as tools to inspire debate during the EUA leadership workshops held in Spring 2021. Designed as a thought experiment, the aim of the discussions was not to assess the likeliness of these scenarios becoming reality. Rather, their aim was to solicit ideas for developing strategies for pursuing universities' goals for 2030 in light of various possible external developments. This remains the basis for the publication: there is no assumption that any of these scenarios will become reality. They serve as a way to inspire thinking about how universities can meet some of the challenges of the future.

As a first step in the workshops, participants were asked to comment on the potential impact of a scenario on their university and how it would change their institution's ability to be open, autonomous and accountable, and its ability to strive for sustainability (the central goals of the vision). In a second step they were asked how they would craft institutional strategy and pursue institutional goals under circumstances imposed by the scenario. Based on the outcomes of these exchanges, the scenarios and possible pathways for action were further elaborated, resulting in the present publication. As universities head to 2030, this publication aims to provide a sense of direction for strategy development.

These in-depth discussions with university leaders have been used as an inspiration for the chapters to follow. Furthermore, through various projects and studies, EUA has developed a wealth of evidence to demonstrate how universities are already dealing with many of these issues today. Wherever possible, this evidence has been used to bring past experience to bear on our creative thinking about the future. In many cases, the evidence makes clear that, since the topics raised in the scenarios are already present in one form or another, there is a sense of urgency for universities to act. The future is already upon us.

Geopolitical change

Aspirations and challenges

The future of Europe's universities will be transnational. International cooperation will continue to provide a prerequisite for high quality research and innovation, as well as learning and teaching. Universities are showcases for peaceful and constructive European and international cooperation. They also nurture a positive and reflective attitude towards a European identity, in addition to global, national and regional ones and will do so in the future.[2]

This assertion from EUA's "Universities without walls – A vision for 2030" points to a very long tradition for universities: international cooperation. Scholars have the tendency to look beyond their national horizon and see what new ideas and knowledge have been created elsewhere. Being part of an international knowledge community is an idea that is deeply embedded in the identity of modern universities. However, the ideal of knowledge without borders can be taken hostage to geopolitics. As countries or alliances compete for power on the world stage, some knowledge can be seen as too valuable or too dangerous to share, and contacts between scholars in competing camps are looked upon with suspicion.

Figure 1 *Development of outbound student mobility in the world[3]*

Outbound mobile students, world (UNESCO)
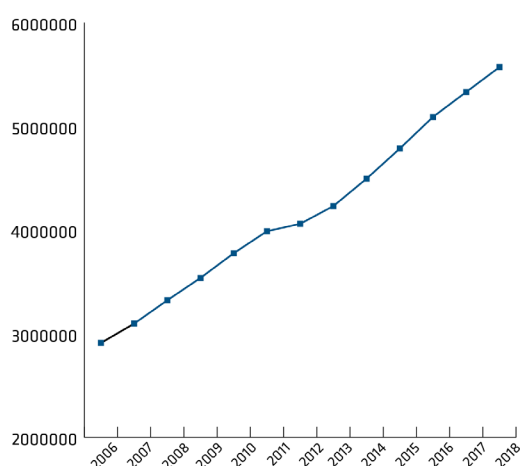
International cooperation among universities grew in the 2000s and 2010s with large increases in student mobility, in Europe partly driven by the Erasmus Programme and the tools of the Bologna

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2   Ibid. p. 6
3   UNESCO UIS.STAT, downloaded, 10/09/2021

Process.[4] By the 2020s, the world seems to have entered a new, confrontational logic, with the US and China as the main antagonists on the global stage, and Europe working to find its role in this new world order. However, many things can happen before 2030. The EU, with its large economy and 450 million citizens, is still committed to a world order based on international multilateral institutions with common rules, even while strengthening its bilateral ties to the US.

In this fluctuating situation, it is possible to imagine many scenarios. The ones chosen here to take as their point of departure the US-China confrontation and the place of Europe (understood as the EU and its allies), while keeping open the possibility of returning to a more consensual rules-based world order.

The backdrop to these scenarios is the internationalisation discourse of the last 20-30 years. After 1990, several factors contributed to rising international cooperation among universities: the end of the Cold War, the globalisation of trade in the 1990s, the growth in the emerging economies in the 2000s and the drop in the cost of travel in the same period are all examples of such factors. The world economy grew more integrated, and old political barriers turned into new cooperation opportunities. Within Europe, there was the economic and political integration of Central and Eastern European Countries and the Bologna Process, which brought a pan-European vision to higher education. Later, the economic growth of countries like China and Brazil made for new partnerships in a European university sector that was looking to internationalise. An EUA survey from 2013 showed how a strategic approach to internationalisation in universities had led to more international partnerships as well as increased student mobility.[5]

In 2020, another EUA survey on universities' international partnerships showed how universities are globally connected. Almost all have partners within Europe, and most have partners in other continents.[6]

Figure 2 *Location of international partners[7]*

International partners' location
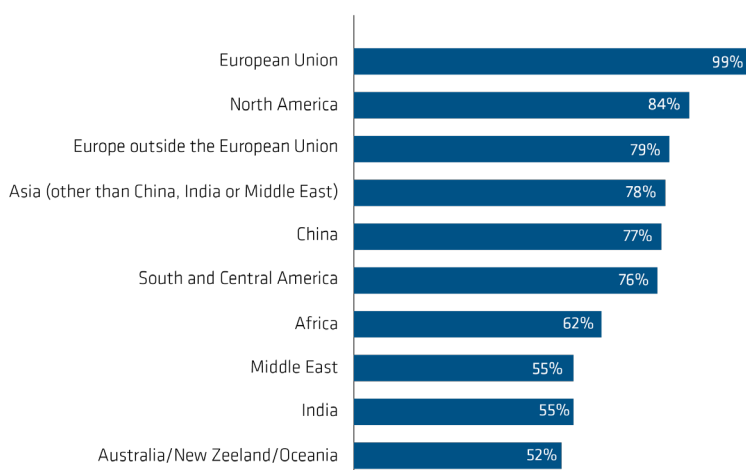
Survey on international strategic institutional partnerships Q15: Where are your institution's partners located?
Please tick all applicable.
N=215

4   de Wit, H. & Fiona Hunter (2015), "The Future of Internationalization of Higher Education in Europe" International Higher Education 2015: 85, p. 1

5   EUA (2013), *Internationalisation in European higher education: European policies, institutional strategies and EUA support*, p. 10

6   Claeys-Kulik, A-L., T. Jorgensen & H. Stöber (2020), *International strategic institutional partnerships and the European Universities Initiative*, p. 10

7   Ibid.

The reasons for universities to engage in international collaboration are manifold, but two main reasons are: to enhance the quality of their missions, particularly in learning and teaching but also in research, and to attract students and researchers from abroad. According to the EUA survey on international partnerships, institutions often have both goals at the same time.[8]

In the discussion about internationalisation as well as throughout the three scenarios described below, the question of cooperation and competition is of central importance. Universities remain aware that they will have to be competitive and attractive to students and researchers in order to ensure quality in their missions. In some cases, they would also need to attract foreign students for economic reasons. Interestingly, participants in the workshop identified the most closed scenario (the tri-partite world) as the one where Europe would have the biggest advantage in attracting students and researchers, especially if Europe branded itself as the "sustainable superpower". In the most open scenario (multilateralism), competition would potentially move towards rivalry between global clusters and alliances of universities.

By contrast, cooperation would benefit from the scenario with the most level playing field and the largest consensus about common values. This seeming trade-off between European competitiveness and a global level playing field comes from the assumption that Europe in a more closed world would still be a haven of academic freedom and commitment to sustainability, in contrast to the two other world powers, which are respectively authoritarian and profit-oriented.

European policies are changing. The European Commission under President Ursula von der Leyen branded itself as a geopolitical commission, dedicated to protecting Europe's strategic autonomy. While best known as a principle in defence and security policy, the concept of strategic autonomy is spilling over to other areas and came into sharp focus in the Covid-19 pandemic, as it became clear how Europe was dependent on foreign providers of personal protection such as masks or materials for testing. The capacity of the EU to act independently by its own norms and rules, when possible in cooperation with partners, became a major, cross-cutting priority for European politics.[9]

In the light of these discussions, in May 2021 the European Commission launched a communication on the EU's global approach to research and innovation. This approach builds on cooperation in open research and innovation as the default option. These principles are embedded in a vision for a multilateral system, where Europe works with various partners in different ways, according to how closely they share values and how cooperation can contribute to EU priorities in environment, digital transformation and health.[10]

These political discussions still could lead to any of the three scenarios, with different consequences for universities. These scenarios are not necessarily realistic, but they offer a way to think about developments that could happen—or are already happening—in a structured manner. Regarding geopolitical change, other scenarios are certainly possible—for example, a weakening of the European Union and strengthening of the large European nation states. For the sake of simplicity, the scenarios below take as their point of departure large-scale developments with Europe as a global actor, mostly ignoring major regional players and developments.

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8   Ibid. p. 13
9   Tocci, N. (2021), *European Strategic Autonomy: What It Is, Why We Need It, How to Achieve It*, Istituto Affari Internazionali.
10 European Commission (2021), *A Global Approach to Research and Innovation*, p. 14-18

Scenario 1: A tri-partite world

Scenario: The world is divided into spheres of interest by three dominant and competing powers: the United States, China and the European Union. The EU has gained enough power and internal cohesion to play a role equal to the United States or China on the international scene, and the three international powers accept their differences in terms of values and political systems. Europe no longer sees international cooperation as a means to spread universal values such as human rights and democracy but engages internationally to ensure its own strategic autonomy through access to markets and resources. The United States and China act in the same way. The three powers seek to strengthen and expand their spheres of influence while avoiding direct confrontation.

Cooperation between the major spheres of influence is difficult and treated with suspicion. The common global agenda of the sustainable development goals is reduced to regional versions. Europe could be the 'sustainable superpower, but this is its regional identity, and it does not seek global consensus on its goals with a more market-oriented United States or an authoritarian China.

Staying true to the EUA's vision, universities in this scenario would operate in a difficult environment but stay globally connected, finding possibilities to work across the divides between the three blocks, using loopholes and building bridges to promote peaceful cooperation. Guidelines and risk assessment for international cooperation could become one way of facilitating this type of cooperation across the blocks, as such guidelines define what is seen as problematic and which procedures are needed, and open the door for cooperation in all areas deemed non-problematic.

International mobility of students and researchers across the blocks would diminish. Countries in continental Europe do not receive as many students and researchers from China as for example the universities in the UK or the US, but they remain a significant portion of incoming international students nevertheless. There would be financial consequences if international student mobility decreased as most European countries charge higher fees for non-European students as for home students (Germany and Italy being notable exceptions).[11] In some systems, these fees are a substantial source of income. Research-intensive universities and systems that invest substantially in research and innovation in Europe are all dependent on talent that come from outside their own borders. According to an EUA survey on doctoral education from 2019, 20% of doctoral candidates in Europe come from another country than where they study,[12] but this varies between countries. In Switzerland, for example, over half of incoming doctoral candidates were foreign in 2018, and in France it was close to 40%.[13] For these countries, there will be implications for the quality of research activities if international mobility is seriously limited.

Seen from another perspective, Europe would be an attractive destination for international talent. Particularly if Europe becomes the sustainable superpower, many students and researchers around the world who are motivated to contribute to sustainability goals would find coming to Europe and working here an attractive option. Although mobility from some countries would be limited in this scenario, there would be countries where the three big powers would look to attract talent, and here Europe would have the upper hand.

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11 European Commission/EACEA/Eurydice (2020), *National Student Fee and Support Systems in European Higher Education – 2020/21*, p. 26
12 Hasgall, A. , et al. (2019), *Doctoral education in Europe today: approaches and institutional structures*, p. 21
13 OECD (2021), *Education at a Glance 2020*, p. 233

The impact of this scenario would vary for different kinds of universities. Large, research-intensive institutions that are heavily engaged in global cooperation will be more affected than smaller institutions where national and intra-European cooperation are more important for research and for student mobility.

One question that this scenario leaves open is the role of regional powers, or countries that have substantial influence beyond their own borders without being global superpowers, for example, Russia. As is the case today, countries in the EU's Eastern Neighbourhood might be torn between alignment with the EU and its structures on one hand and large neighbours on the other. In a fairly stable situation, this position between the larger countries is not necessarily a great burden—a historical example would be Finland during the Cold War. In more volatile periods, it can be destabilising.

Scenario 2: A Renewed transatlantic partnership

Scenario: This is in some ways a return to the Cold War Era. The European Union and the United States have developed a values-based democratic alliance to spread democracy and pluralism in explicit opposition to authoritarian powers, mainly China. The transatlantic partners actively work to weaken its authoritarian opponents and promote what they see as universal values across the world. This includes ensuring that the democratic and pluralistic model remains attractive by promoting sustainability and a social equilibrium. Global engagement, however, is framed in a language of friends and enemies, depending on political values.

Sustainability, including social aspects, is promoted in order to retain cohesive and attractive democratic societies. However, it is no longer a global endeavour but seen as a hallmark of the democratic alliance.

Universities would be supported in their engagement in making democratic societies attractive and technologically competitive. However, cooperation with partners outside the democratic alliance would be difficult and tightly controlled in terms of topics and partner institutions.

As with the scenario of the tri-partite world, truly global cooperation would be problematic. Universities would have to find ways to cooperate with partners that are not in the democratic alliance. Again, explicit guidelines for cooperation and risk assessment could be ways to legitimate such cooperation. Besides, universities do not act in a world of two blocks, and it would be a serious constraint to have to choose between one or the other, given that European universities are heavily engaged with both Chinese and North American partners. According to the 2020 EUA survey on international cooperation, 72% of respondents had partners both in China and in the US. Those respondents that identified North America as a priority region also had China as one of their top three priorities in 24% of the cases.

For closer cooperation with the US, it would be important that the relationship is equal for it to be beneficial. While individual universities would cooperate, the systems would still be in competition for talent and investments. Today, about 7% of international students in the US come from Europe, while only 3% of international students in Europe come from the US.[14] The US also invests about 27% more on research and development than Europe (2.8 versus 2.2% of GDP).[15] European countries would have to increase overall investment in research, education and innovation to match the US, and it would have to make sure that is has equally attractive research and learning environments.

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14 Ibid. p. 230
15 World Bank – data for 2018 (including the UK for the EU)

This equality would also entail a parity of esteem between the European and US systems. Whereas the US to some extent has a concentration of research capacity in small, elite institutions, Europe has spread out its capacity more and often has much larger research-intensive universities than the US. While this results in US institutions being at the top of university rankings, these do not indicate that there is a difference in quality at the system level. Another difference is the mobility of researchers: in Europe, top researchers often move between different countries and universities, while US top researchers remain at their institution.[16]

University autonomy and academic freedom would be seen as characteristic of the democratic alliance; so also would pluralism and democracy. The political commitment to democratic values could potentially bring universities on both sides of the Atlantic closer together. In the years after Brexit and the election of Donald Trump, both US and European universities began to worry openly about the rise of populism. Despite the differences in the higher education systems and in the political context, universities both in Europe and in North America seem to agree on their civic role as providing a "bulwark against the spread of populism and nationalism".[17] However, criticism of liberal democratic market economies could be met with scepticism and potential suspicion of 'siding with the enemy'. While universities would likely continue to build links to academic communities outside the democratic alliance, they would internally likely be strong supporters of democratic values (see chapter on The Course of Democracy).

Scenario 3: Resurrection of multilateralism

Scenario: The world has returned to a consensus that a rules-based international order is in everyone's interest. Pluralistic values are generally seen across the globe as an ideal to be reached. International organisations are working, and structures are developed for global governance including regulation of technology and academic cooperation.

Sustainable development is a common global agenda. Universities are part of or support various multilateral structures to achieve sustainability. They also have more responsibility and are expected to live up to the role of providing new knowledge and solutions with global impact.

This scenario compared to the other two, would be the one in which it is the easiest for universities to achieve their vision. Universities would engage in many different types of international cooperation, acting as 'doors to the world' in their national and local environments. Institutional autonomy and academic freedom are universally accepted values that allow universities to take on their global responsibility. Universities would be supported in their aims by a political environment that believes in international cooperation, making it easier for universities to promote a global identity. As a lighthouse for multilateral cooperation, Europe would be a central piece in the world order, as would European universities in the global knowledge community.

Universities are well prepared for this scenario. As shown above, they have long embraced internationalisation and are already globally networked through decades of international cooperation. However, there are still areas that would need particular attention.

While values like academic freedom and institutional autonomy are universally recognised in this scenario, they might be interpreted and understood differently across the globe. It would be important that university leadership, staff and students are aware of these differences. This could, for instance,

16 Elsevier, Science Europe (2013) Comparative Benchmarking of European and US Research Collaboration and Researcher Mobility.
17 Sursock, A. (2018), Higher Education and its Communities. A Transatlantic View on Openness, Democracy and Engagement, p. 4

concern the ethical limits to academic freedom. As an example, concepts such as informed consent are known to be radically differently understood across the globe, and signing a form designed in Europe might not be adequate to ensure consent in other cultures.[18] Institutional autonomy will also be dependent on national particularities and precise framework conditions for the university sector (for example legal requirements or through financial incentives). Wide-ranging global cooperation with many different partners would require that all engage in constant dialogue about these concepts in order to explicitly define their common meaning and understand differences in practices and cultures. Risk assessment could in this scenario become more oriented towards avoiding cultural misunderstandings and less focused on avoiding espionage and other forms of foreign interference.

The issue of global competition for talent remains important in this scenario. Europe would continue to make sure that there is enough talent to retain and develop its high capacity in education, research and innovation. In this scenario, universities would forge strategic global alliances around certain topics, for example, those related to the SDGs, or alliances that would ensure the competitiveness of its members. This is already the case with existing global university groups.[19] Such clusters and alliances would compete for talent. Here, European institutions would need to be strong and attractive in order to be part of these groups.

In this scenario, it is not clear what the global research community would look like. On the one hand, there would be networks of research-intensive universities that form a global elite and that cooperate with each other; on the other, there would be a push for global capacity-building, leading to a more inclusive network of universities from all across the world. How the balance between the two will be struck remains to be seen. In the early 2010s, when emerging economies (often boosted by high raw materials prices) began to invest significantly in higher education, research and innovation, a multipolar, global research community began to emerge, with new actors like Brazil or South Africa. These countries often concentrated their research capacity in a few, strong universities, which would, for example, be national hubs of doctoral education.[20] The role of these institutions as both global players and key actors in national and regional capacity-building will be important for shaping global alliances, and European universities would do well to be informed about how they develop, and how they articulate their aims and values.

This scenario could also exist in a world where global research capacity remains mostly concentrated across the North Atlantic and in East Asia. It would certainly mean a poorer world, as knowledge produced in other contexts and from other cultures would still be missing. Today, capacity-building activities related to research and higher education in Europe are given priority by a rather small, but very active number of institutions. Working toward a more multilateral research system would probably make this type of activity more attractive, and it would certainly continue to be pertinent. In any case, a balance would need to be struck between making alliances with high-capacity partners and developing other types of cooperation in capacity-building. Politically, the European Commission's "modulated approach" to international research and innovation cooperation could be a way to further this balance. Here, multilateral cooperation is seen as having a differentiated set of activities and measures depending on the world region: European cooperation with the US would, for example, be more focused on common standards and capacity in digital technologies, while cooperation with Africa would focus more on transition to knowledge-based societies.

18 See for example Ekmekci, P. E. & Berna A. (2017), "Interculturalism and Informed Consent: Respecting Cultural Differences without Breaching Human Rights", in *Cultura 14/2*

19 Gunn, A. & Mintrom, M. (2013): Global university alliances and the creation of collaborative advantage, Journal of Higher Education Policy and Management, 35:2

20 Jørgensen, T. E. (2012), CODOC - CODOC - Cooperation on Doctoral Education between Africa, Asia, Latin America and Europe, p. 27-28

Artificial intelligence and labour markets

Aspirations and challenges

The 2030 vision identifies technological change as one of the main drivers of development for universities:

> *Technological developments are changing lives and disrupting labour markets. Universities produce knowledge for new technologies and social innovation. The development and promotion of such innovation is a central element of their activities. Universities also ensure that the impact of new technologies on our societies is studied and evaluated and that graduates are equipped for labour markets that are changing due to digitalisation and new technologies, in particular artificial intelligence. These will also change the way universities and their partners work.*[21]

The question about the impact of new digital technologies on universities touches on a wide range of issues. One important aspect of the debate is the consequences of artificial intelligence on labour markets. Labour markets have already changed due to the automatisation of certain tasks through robots. This has led to a decrease in demand for mid-level skills and an increase in the demand for highly skilled labour.[22] Artificial intelligence has the potential to make machines capable of performing cognitive tasks including those of high-skilled persons, such as text analysis or text-production with standardised structures like contracts, or even production of news articles. Not all high-level functions can be taken over by artificial intelligence, and they are probably more resistant to automation in general, but the skills needs of society are going to change.

Looking at the issues of learning and teaching in the 2030 vision, universities aim at a flexible system of learning, which is less focused on providing specific skills. It primarily looks to

> *"[…] nurture and enable the development of learners as creative and critical thinkers, problem solvers and active and responsible citizens equipped for lifelong learning [and] kindle curiosity and creativity and support personal development through familiarity with the scientific method and the traditions of human knowledge and commitment to evidence-based discourse".*[23]

Besides this, it also supports professional development of learners, enabling them to "attain high-level skills and expertise, including entrepreneurial skills, for their professional development. They will be able to apply knowledge in a reflective manner and critically produce new knowledge."[24]

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21 EUA, (2021) *Universities without walls – A vision for 2030*, p. 7-8
22 Brekelmans, S. and G. Petropoulos. (2020) *Occupational change, artificial intelligence and the geography of EU labour markets*, Working Paper 03/2020, Bruegel
23 EUA (2021) *Universities without Walls*, p. 7;8
24 Ibid.

The three scenarios proposed here set out different ways that artificial intelligence can affect the context in which universities work. We do not know to what degree labour markets will fundamentally change and how big the disruption will be; nor can we foresee if old jobs will be replaced by new ones, as has been the case in periods of technological change in the past. Experts' opinions on this latter are diverging. The scenarios also attempt to look at the actors of this change, in particular how the large companies that develop digital technologies will shape the future of learning. Lastly, it is important also to consider the consequences of artificial intelligence on research.

Scenario 1: AI takes over

Scenario: Many cognitive high-skill jobs have been automated through artificial intelligence. Many professions now need fewer persons, for example lawyers, accountants, translators, or engineers. Not many high-skill jobs have been created that require tertiary education.

Artificial intelligence also changes how research is conducted. It opens new perspectives for data collection and analysis, for instance through text and data mining or observation using visual recognition.

Data is abundant from all parts of society through digital interactions. Cultural heritage is largely digitalised, and many observations in the field can be made through visual recognition by computers.

The context is important for this scenario: artificial intelligence has not only changed the role of university learning and teaching and research but has also heavily impacted society as a whole. Universities have fewer students and graduates, and they have less resources. Those with high research capacity are recognised as important for the knowledge-based economy and for working towards sustainability, but they are smaller in terms of student numbers. Others specialise in those disciplines where humans are still needed. Universities will have to focus their learning and teaching on those areas where human intervention and interaction is still required, and additionally, they have to equip their graduates with the knowledge of working with and alongside machines. Knowledge of ethics and fundamental rights related to human-machine interaction and awareness of issues around bias will be important as transversal competence to ensure human self-determination.

The importance of human supervision of artificial intelligence is already a key concern for the proposed EU legislation.[25] The main idea behind the proposals by the European Commission is a risk-based approach where artificial intelligence systems that entail ethical risks or risks to fundamental rights are controlled, including through human oversight. While the large majority of applications of artificial intelligence will not entail risks of these kinds, the awareness of these aspects of human-machine interaction will be important across all forms of learning. In cases where graduates will work directly with application of artificial intelligence systems, learning about these risks could even become a requirement.

There will continue to be areas of society where humans are irreplaceable. Universities are themselves a good example of this: during the Covid-19 pandemic, the limits of online education became clear. After months of moving all learning and teaching online, it was clear that some interaction had to be synchronous and in person. In a society where artificial intelligence is broadly taken up and implemented, it will likely also become clear where human interaction is necessary, and what its core benefits are. To remain relevant, it might be advisable for universities in this scenario to focus on preparing learners for these functions in society and thus contribute to their professional development. Beyond this, it is

25 See the European Commission's regulatory framework proposal on Artificial Intelligence, April 2021

likely that society will highly value critical thinking, curiosity, reflection and empathy as qualities that machines do not have, and it will be important for universities to embed this transversally in their learning and teaching.

Generally, in a society where humans need to work less as machines take over much of the tasks that were previously performed by humans, universities could also dedicate much of their learning and teaching to aspects that are not related to professional development, but to the personal development of learners and their role in society. These aspects have always been central to universities. Research-based learning is founded on the endeavour to expand and deepen human knowledge and promote the scientific way of understanding the world. In a society where machines produce prosperity, many learners would choose to use universities to learn and develop personally, rather than for professional reasons. Humans would gain the opportunity to think about how to distribute more widely the wealth created by machines, and more people can contribute to this effort beyond philosophers, political theorists and professional policy-makers.

Research practices would also be influenced in this scenario of ubiquitous artificial intelligence. Artificial intelligence has already improved some research fields, as it can drastically improve efficiency. In areas like cosmology, for example, this has led to more complex calculations and modelling without using advanced infrastructure such as supercomputers.[26] The medical field is another example where artificial intelligence, particularly deep learning, can be used to mine large and complex sets of data for research as well as for diagnosis and treatment.[27]

Given the availability of calculating power and data, researchers may be tempted to have data-driven enquiries rather than qualitative exchanges with partners. This would not only be the case for STEM disciplines. Social science and humanities can explore much of the ever-increasing digital exchanges and virtual realities through text and data mining. Historians can trawl digitalised archives to search for relevant documents or they could use artificial intelligence to discover text patterns and their change over time. While this opens the door to new and exciting kinds of enquiry, it also potentially removes the element of serendipity in research that often leads to creative new questions and hypotheses. Furthermore, as much research can now be done from within the university walls, there is the increasing risk that the engagement of researchers with society gets diminished.

As with other applications of artificial intelligence, there would have to be guidelines for what could be considered risky, and when safeguards such as human oversight in automated processes are required. In some cases, this would be needed to ensure the methodological quality and transparency of research: if results are produced by algorithms that are not transparent, it will be difficult to reproduce them. Moreover, human oversight will be needed if research results are significantly influencing the lives of individuals.

26 Simons Foundation. "The first AI universe sim is fast and accurate and its creators don't know how it works." ScienceDaily. ScienceDaily, 26 June 2019
27 Jian, F et al. (2017) *Artificial intelligence in healthcare: past, present and future Stroke and Vascular Neurology* 2017;2

Scenario 2: Re- and upskilling

Scenario: Many existing jobs have become automated, but new jobs have appeared. A good part of medium-skilled jobs have disappeared, but high-skilled jobs are plenty.

Learners have become even more diverse in terms of background and age as a much larger part of society applies for some kind of university education.

Political attention as well as the attention of university leadership is focused on the challenge of transforming the labour force. The provisions of specific new skills come to be seen as the most important task at hand.

In this situation, universities are likely to be heavily engaged in the societal challenge of re-skilling and upskilling large groups within society. This task will be well recognised by political decision-makers who see it as a major responsibility to respond to the transformation of the labour market and equip citizens to meet the technological change. Lifelong learning becomes a common societal project and there are comprehensive lifelong learning strategies at the national as well as European level.

This means that universities will receive funding to fulfil this mission and to implement a mix of online, hybrid and physical formats for learning and teaching, and investing in the necessary infrastructure. As described in the EUA vision for 2030:

Learners' goals and needs will be diversified: Some will seek personal development and a degree after finishing secondary education, while others will enter at different stages in their lives and for different purposes. They will have access to a variety of learning spaces and flexible, multi- and interdisciplinary paths that ensure that their learning is at the centre of the process.[28]

Diversified learning and comprehensive policies for lifelong learning would likely include an increased use of tools like microcredentials. These are not new instruments to further lifelong learning, but in this scenario, they might be better implemented than in the past. In a recent EUA survey, 65% of respondents indicated that there is a growing demand for this type of credentials.[29] Currently, there are still many open questions regarding microcredentials: a report by EUA and partners concluded that while these were widely used, it is not clear how they fit in existing qualifications frameworks and instruments for recognition.[30]
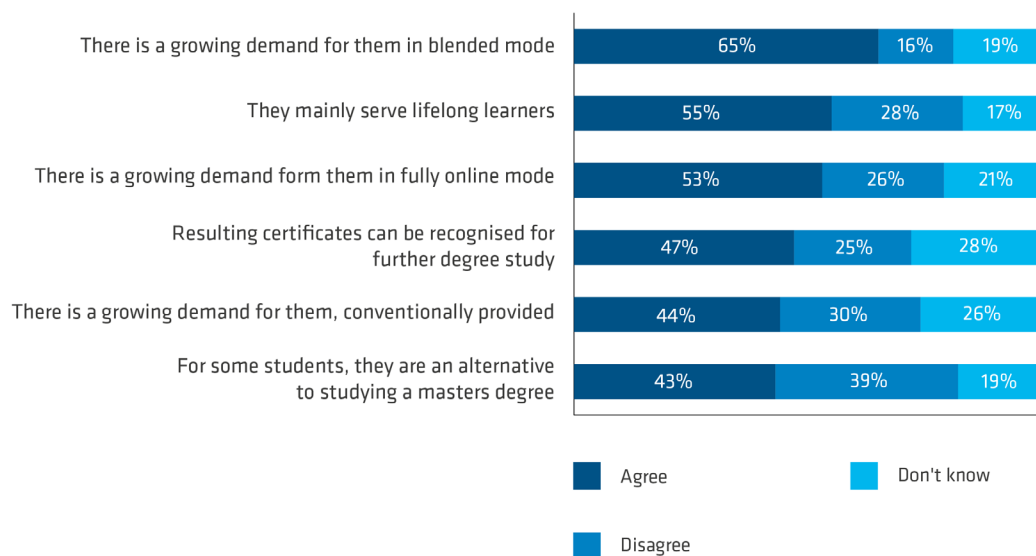
28 EUA (2021), *Universities without walls – A vision for 2030*, p. 8
29 Gaebel, M. et al. (2021), *Digitally Enhanced Learning in European Higher Education Institutions*, p. 23
30 Microbol (2020), *Micro-credentials linked to the Bologna Key Commitments*, Desk Research Report.

Figure 3 *Demand for short courses (non-degree) that earn certificates, micro-credentials or badges[31]*

Demand for short courses (non-degree) that earn certificates, micro-credentials or badges

	Agree	Disagree	Don't know
There is a growing demand for them in blended mode	65%	16%	19%
They mainly serve lifelong learners	55%	28%	17%
There is a growing demand form them in fully online mode	53%	26%	21%
Resulting certificates can be recognised for further degree study	47%	25%	28%
There is a growing demand for them, conventionally provided	44%	30%	26%
For some students, they are an alternative to studying a masters degree	43%	39%	19%

Survey on digitally enhanced learning and teaching in European higher education institutions Q22: How would you describe the demand for short courses (non-degree) that earn certificates, micro-credentials or badges at your institution? Please select one option for each item. n= 362

In a scenario of massive re-skilling, it can be imagined that the need for such credentials will increase the pressure to better define them and ensure certification and recognition.

Some learning would be done at a distance and possibly in an asynchronous way using digital tools. During the Covid-19 Pandemic, however, it already became clear that these kinds of learning had clear limitations and that presential, synchronous learning could often not be replaced by digital alternatives. This being said, universities have made big steps forward concerning digital provision in the last decade. Longitudinal data by EUA shows how digitally enhanced learning has been widely used since the beginning of the 2010s, and today it is "no longer about whether or not to use [digitally enhanced learning], but rather on how and to what extent."[32] In a situation where universities are faced with growing demands for lifelong learning, it would be likely that the current trend of using Massive Open Online Courses (MOOCs) and other digital tools for lifelong learning continues: in 2020 65% of institutions participating in an EUA survey indicated that their online provision targeted adult learners (up 30% from 2014).[33] In case of increasing use of digital tools to cater for a widening and diverse body of learners, the internal procedures and the framework conditions of digitally enhanced learning would have to catch up. Investments are needed in training, exchange, and infrastructure, for example. Moreover, quality assurance processes, which today do not often encompass digitally enhanced learning, would need to include this field as well.

The social responsibilities of universities will be enhanced, as they need to embrace an even more diversified group of learners than today. Equity, diversity and inclusion is already an important set of policies for universities. This reflects a varied set of developments, including past policies such

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31 Gaebel, M. et al. (2021), *Digitally Enhanced Learning in European Higher Education Institutions*, p. 23
32 Ibid. p. 12
33 Ibid. p. 46

as requiring accessibility for disabled persons, events like the influx of refugees around 2015 or the more general awareness about issues such as gender and sexual identities.[34] Looking at the measures that universities employ today to further equity, diversity and inclusion, it would be important to act together with other stakeholders to ensure that learners are informed about higher education opportunities. In a 2019 survey by EUA, most respondents indicated that other education stakeholders such as schools were most often their partners for this (75% of respondents), while cooperation with business and employer organisations was somewhat lower (44%). In a situation where learners enter universities at many different ages and points in their careers, partnering with business would probably be more prominent. The survey also showed how many institutions actively reached out to prospective learners through activities like open days, summer schools and social media. This kind of outreach would likely be very important in a scenario of massive re-skilling and upskilling. According to the same survey, counselling and mentoring are very often used to provide access to learning. As learners and types of learning and learning spaces become more diverse, this kind of individual guidance will become increasingly important.[35]

This scenario might also entail a rebalancing of the missions of universities. The challenge of providing specific, labour market relevant skills to a much larger number of learners might lead to a prioritisation of the education mission and less focus on research. In this case, it would be worth underlining that the strength of universities is in research-based learning and the broad set of skills and particular mindset that it cultivates.[36] In addition, it is likely that the new learning needs would require greater complexity, and that upskilling would not be possible without linking learning to ongoing research. A rebalancing of priorities would lead to a more balanced assessment of the careers of academic staff, which is one of the main priorities for action in the EUA vision for 2030.

Scenario 3: Big tech competition

Scenario: Universities are heavily engaged in upskilling and reskilling due to changes in labour markets. However, large tech companies have taken the opportunity to profit from the changes, offering their own learning opportunities that are targeted to servicing their products, and also selling services to universities. Universities are being offered services and platforms at a low price in terms of money, but with control of data going to the big technology companies. Universities thus have competition from other providers, promising fast and focused skills training and from companies that want to shape the technical tools for learning and research.

This scenario foresees that big technology companies become a major actor in the re-skilling and upskilling challenge, either through offering their own, targeted courses and credentials or through controlling infrastructure that universities depend on.

Some of these developments are already visible: large companies have provided training for their employees for a long time already, but recently companies have offered certified training for specific skills. As an example, Google provides career certificates through short courses, often in partnership with schools or universities, providing a ready-made curriculum or other resources.[37]

34 Claeys-Kulik, A-L., T. Jørgensen & H. Stoeber (2019), *Diversity, Equity and Inclusion in European Higher Education Institutions*
35 Ibid. p. 26-27
36 Dakovic, G. & T. Loukkola (2017), *2017 Thematic Peer Groups Report*, Learning and Teaching Paper #1, p. 7-8
37 See https://grow.google.com

Likewise, Amazon Web Services offer training material for education institutions, including universities, to develop their training of professionals working in particular with cloud computing.[38] In addition, large platforms that have specialised in offering MOOCs see their main source of income from short courses, where learners pay directly to the platform for a certificate provided by the platform rather than by a higher education institution.[39]

For universities, ubiquitous technology platforms such as those provided by Google, Facebook or Microsoft provide easily accessible ways of networking that are globally recognised and often already used by learners and staff. Having common platforms and being able to use social media for communication is not only very convenient for cooperation, it also allows targeting of big groups of potential learners. Large commercial solutions also provide a technical quality and standardisation that is often difficult to attain through other means, and the scale of solutions provided by big technology companies often makes them cheaper than developing in-house alternatives .

However, worries about the risks of being dependent on a few, commercial providers of services have been voiced. Many products used by universities exist in an ecosystem linked to one large company, for example Microsoft's combination of email, Office programmes and the Windows operating system. While it is very convenient to have a series of products that can work seamlessly together, it also creates 'lock-in' where universities have difficulties choosing solutions outside the ecosystem. This leads to decreased autonomy in deciding what products to use, and it also entails a financial risk when companies renegotiate contracts and universities have difficulties moving to alternative providers.

Another issue is the ownership of data generated by specific services. When short courses and certificates become a commodity, student data becomes valuable as well. Knowing the interests of learners and their likelihood to buy courses in a specific area allows companies to target their customers much more efficiently. Universities are already using a number of digital tools for education that could generate data for this kind of use. As can be seen from the EUA DIGI HE survey, instruments like learning analytics use big data and are already used by a large number of institutions, while many plan to use it in the future. This development has led to worries about the ownership and the potential use of this public data by commercial providers of student information systems or learning management systems.[40]
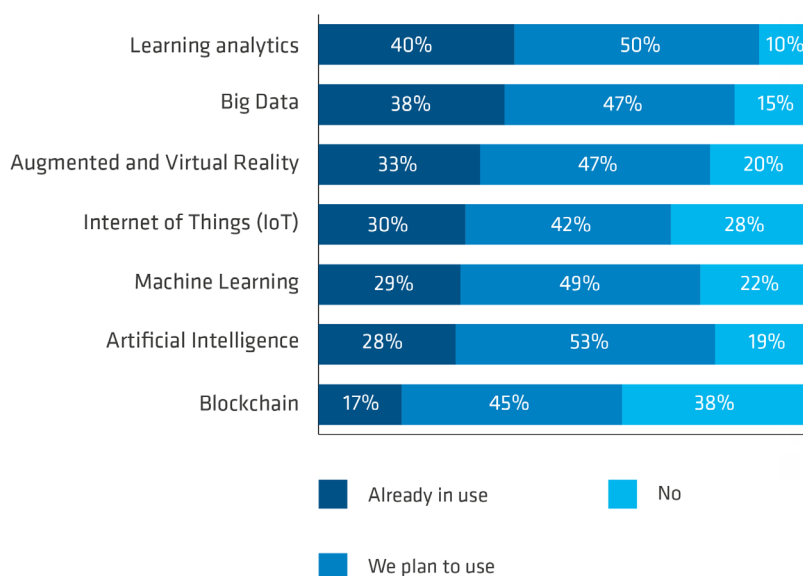
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38 See https://aws.amazon.com/training/awsacademy/
39 McKenzie, L., "MOOCs Failed, Short Courses Won" , in Inside Higher Ed 9 March 2021
40 VSNU – Werkgroep publieke waarden (2021), *Advies publieke warden voor het onderwijs*, p. 2-3

Figure 4 *Priorities for development of digital technologies[41]*

Digital technologies

	Already in use	We plan to use	No
Learning analytics	40%	50%	10%
Big Data	38%	47%	15%
Augmented and Virtual Reality	33%	47%	20%
Internet of Things (IoT)	30%	42%	28%
Machine Learning	29%	49%	22%
Artificial Intelligence	28%	53%	19%
Blockchain	17%	45%	38%

Survey on digitally enhanced learning and teaching in European higher education institutions Q39: Which of the following technologies do you see as a development priority for your institution? Please select one option for each item.
n= 340

Similar concerns exist for research data: databases of bibliometric data such as Scopus, the publisher Elsevier's citation and abstract database, contain information that is available for a fee.[42] This information can then be used for finding collaborators for research projects or by university leadership to take strategic decisions. The database can, for example, be used to see with which partners researchers from the university collaborate around the world and then seek to focus international strategies on these institutions. Elsevier also uses this proprietary data in combination with other data from commercial and public sources for its Research Intelligence consultancy service.[43] While this is very useful to academic staff as well as leadership, it does make institutions potentially dependent on the services of the private providers that have data.

For access to research results, the present open access debate is partly concerned with the issue of ownership of platforms, which could be both commercial platforms or community-led platforms giving access to publications. While the infrastructure exists for commercial platforms, which make them a faster and more practical alternative, many believe that community-based platforms would still be better, among other things to avoid monopolies and lock-in.[44] Part of this worry is connected to the fact that data from education and research more often than not are created through public investments and should be for the benefit of citizens and not monopolised by commercial companies.

In a scenario where large companies influence higher education and research through providing both direct training and education materials as well as creating monopolies in services, universities might have to think of strategies that decrease this dependence. A radical solution could be leaving the big, commonly used platforms and move towards open source products. This has been the case at CERN, where a renegotiation of the contract with Microsoft led to the adoption of alternative, open-source

41 Gaebel, M. et al. (2021), *Digitally Enhanced Learning in European Higher Education Institutions*, p. 36
42 https://www.scopus.com/
43 https://www.elsevier.com/research-intelligence
44 van Barneveld-Biesma, A. et al. (2020), *Read & Publish contracts in the context of a dynamic scholarly publishing system - A study on future scenarios for the scholarly publishing system*

solutions through the MALT Project, which has the explicit aim of offering the same services to all and avoiding lock-in to specific vendors.[45]

Another route would be to work with policy makers in order to have better regulation of the big technology platforms. Such regulation could, for example, reduce lock-in, ensure privacy regarding personal data and open access to research data as well as to data for learning and teaching purposes, as has been proposed by the Rector of the University of Amsterdam, Karen Maex.[46] Whereas this might be less onerous on the individual institution than changing service providers, it would be a long and difficult process politically to work against the interests of some of the world's most powerful companies. The decade-long discussions about open access demonstrates this well. However, in a scenario where big companies play an increasing or even dominant role in higher education and research, institutions will have to work closely together to defend their interests.

In this scenario, universities would also have to be aware of the ethical implications of data-driven higher education. Learning analytics has the potential to guide learners to make choices that is likely to fit their progression and learning styles. This can also allow greater social inclusion as learners with little prior knowledge of university learning can use it as a learning guide. However, this must be done in a way that retains and develops the autonomy of the learner. Developing individual learning paths that are different from the statistical norm is core to university values such as curiosity and critical thinking. Moreover, if algorithms create pre-defined learning pathways in a prescriptive way, there is a danger that potentially life-changing decisions are heavily influenced by artificial intelligence. Following the logic of the European Commission's approach to risk in artificial intelligence, this would be a use of the technology that would require human oversight. In a proposal for regulation of artificial intelligence in Europe, use of artificial intelligence to determine access to education or assessment of learners is explicitly defined as high-risk.[47] Overly prescriptive uses of learning analytics could fall into this category and thereby constitute a high-risk use of artificial intelligence. If this is legally the case, universities or private service providers could be subject to a set of obligations, including traceability, requirements for high quality datasets and human oversight.[48] Even if these requirements would not be legally required (either because the final European regulation would be less onerous or because the use of artificial intelligence would not be directly limited to access to education), it would be in line with the values of universities to ensure that learning analytics and big data are used in ways that promote individual choices and affirms"the individual character of the relation between students and the world".[49]

When it comes to digital assessment, similar considerations would be useful, and perhaps legally required in the future. At present, digital assessment holds promise of making examinations much more efficient and less time consuming for academic staff. However, the general challenges regarding digital tools for higher education remain: private providers offer tools for digital assessment, but this solution presents problems regarding privacy and the use of data. Universities attempt to develop their own tools but at times lack the scale and time to test them.[50] As regulation concerning these tools will likely be more restrictive in the future, there would be more obligations for universities that want to develop their own solutions. However, more restrictive regulation and increased transparency might help to increase trust in private providers that respect European norms.

45 https://malt.web.cern.ch/malt/
46 Maex, K. (2021) *Protect independent and public knowledge*
47 European Commission (2021) *Proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on artificial intelligence*, Annexes p. 4
48 Ibid, p. 46-58
49 VSNU – Werkgroep publieke waarden (2021), *Advies publieke warden voor het onderwijs*, p. 9 "het individuele karakter van studenten in relatie tot de wereld"
50 Gaebel, M. e. a. (2021), *Digitally Enhanced Learning in European Higher Education Institutions*, p. 26-27

The course of democracy

Aspirations and challenges

Here are the aspirations of Europe's universities for 2030 in terms of their engagement with democracy as phrased in EUA's vision:

Affirming the civic role of universities will be an increasingly important part of societal engagement. Universities will remain supporters of pluralistic and democratic societies founded on open and evidence-based public debate. They will continue to uphold these values throughout all their missions and activities. [...]

Universities are accountable to stakeholders and society at large. Accountability will be ensured through appropriate governance and continuous exchange with policy makers, civil society, citizens, business and industry and other societal groups, through various university activities. External stakeholders in university governing bodies will support such a dialogue. Generally, universities will communicate proactively and will engage in a continuous debate about their role and function in society, as a part of being accountable to society at large. [...]

Universities will uphold academic freedom, which is the freedom of thought and inquiry for the academic community to advance knowledge and the freedom to communicate this knowledge based on accepted standards of academic ethics and integrity. Universities will engage in dialogue with the rest of society. They will work with the communities around them, participate in public debates and address major societal challenges. [...]

The unique combination of the missions of learning and teaching, research, innovation and culture – and their fruitful interrelations – will remain the key characteristic of Europe's universities. These missions will be equally important and mutually enhancing, and an integrated approach will be beneficial to harnessing synergies. Through these missions, universities will support Europe's open, pluralistic and democratic societies.

The relationship between universities and democracy is contingent on how both are defined.[51] Universities have existed for a millennium in very different political and social contexts. During this time, only short periods and some regions have featured liberal democracies, which are characterised by free elections and a system of government that recognises and protects individual fundamental rights and freedoms, and where the exercise of political power is limited by the rule of law. Thus, from

51 Bacevic, J. (2017), "What is the relationship between universities and democracy? From purposes to the uses of university (and back)" Key note lecture delivered to the Department of Sociology and Social Anthropology's Graduate conference at the Central European University, Budapest, 18 September 2017.

a historical perspective, there appears to be no inherent positive relationship between universities as knowledge institutions and liberal democracies: the modern, Humboldtian university model was founded in an absolutist monarchy, and the European idea of a university spread largely due to colonialism. Universities as such are not democratic institutions. However, the open, sustainable and autonomous university which is the aspiration of EUA's vision cannot be fully realised in non-democratic systems: it requires a free flow of knowledge in and out of universities, the possibility to use evidence critically and the capacity of institutions to make their own decisions. In this vision, diversity is key. Diversity of perspectives, disciplines and approaches is important for progress in all university missions. There needs to be space for fruitful disagreement. Pushing the frontiers of knowledge, finding new innovative solutions to address grand challenges and educate the next generation of critical thinkers does not work in an environment where difference is regarded with suspicion. Any form of fundamentalism is counter to this idea, and this is why universities can work best in pluralistic societies.

Systems with authoritarian tendencies not only limit fundamental rights such as freedom of expression and assembly which are essential for democratic participation. They also often undermine the core values of institutional autonomy and academic freedom on which modern universities are founded. There is ample evidence for this both in Europe and beyond.[52]

Freedom of expression and academic freedom are not the same, and different views and definitions exist about the relationship between the two.[53] Freedom of expression is a fundamental right enjoyed by all persons to express one's opinion, belief, thought, idea or emotions freely. Academic freedom as described in EUA's joint statement with ALLEA and Science Europe in 2019 is the "freedom of thought and inquiry [of members of the academic community] to advance knowledge, [...] communicate the results of their work and educate the next generation of critical thinkers."[54] In the socially engaged view, academics use their academic freedom to contribute their academic knowledge and expertise to public debates with citizens and other groups. This knowledge is then fed into larger discussions and balanced with other concerns and interests as part of the political decision-making process. This is essential for evidence-based policymaking in open democratic knowledge societies. At the same time, the opinions and observations of citizens may be important not only as objects of academic research, but also as contributions to research, learning and innovation itself, for instance through citizen science.

Open debate and deliberation are essential for universities and their academic mission as well as for democratic societies. The role of universities in fostering pluralism and openness is enjoying renewed attention[55] following a period during which the public discourse was driven by the paradigm of efficiency and an increasing marketisation of higher education and universities. Under this "efficiency paradigm", universities risk being reduced to service providers with the main function of delivering credentials useful for the labour market. In this view, universities should in the first place provide marketable knowledge, often measured through quantitative indicators such as patents or financially successful start-ups. Many in the university community see the university's role as being broader and going beyond these functions to serve a wider purpose of fostering critical thinking and expanding human knowledge. Academia itself continues to explore the relationship between universities and democracy inspired, for example, by the theory of deliberative democracy and the public sphere of

52 Scholars at Risk (2020), *Free to think – Report of the Scholars at Risk Academic Freedom Monitoring Project*, 18 November 2020.
53 See for instance UN General Assembly (2020), *Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, David Kaye*, 28 July 2020.
54 EUA, ALLEA, Science Europe (2019), *Academic Freedom and Institutional Autonomy: Commitments must be followed by Action*, Joint Statement.
55 See for instance, Bergan, S., Gallagher, T., Harkavy, I. (eds.) (2020), *Academic freedom, university autonomy and the future of democracy in Europe*, Council of Europe Higher Education Series, No. 24.

Jürgen Habermas[56]. This renewed attention to the role of universities in democratic societies also has to do with the worrying tendencies of democratic backsliding.

According to the Democracy Report 2021 "the level of democracy enjoyed by the average global citizen in 2020 is down to levels last found around 1990."[57] Autocratisation is accelerating and 87 states across the globe, home to 68% of the world's population live under an autocratic regime.[58]

Across Europe, democracy and political systems are under pressure to different degrees.[59] One aspect of this is an increasingly vocal calling into question of democratic values, including freedom of expression[60]. This threatens academic freedom[61] and university autonomy[62], which are the basis for the scientific endeavour that drives societal progress.

Another element is the erosion of the public debate through misinformation. The spread of false information, fabricated evidence and the concept of "alternative facts" undermine the value of evidence and the role of science in society. The pandemic has further exacerbated societal discrepancies and rendered open public debates more difficult.

These developments also influence the role of universities in society, leading institutions to search for new and more effective ways to counter these trends. In times of crisis universities reflect on their core values.[63]

EUA has developed three different scenarios for the course of democracy in Europe. These were discussed with participants of the leadership workshop in June 2021 to explore their possible impact on universities with different profiles and in their specific local and national contexts.

Among the workshop participants, there was agreement that universities need to be strongholds and billboards for democracy. They need freedom, internally, to pursue their research and teaching and, externally, to engage with society. This requires that universities listen to their communities, recognise the political and social nature and impact of their work, and take responsibility for acting against democratic backsliding. This must be done, for instance, by creating more room for research and learning and teaching on democratic societies beyond social science and humanities curricula.

56 Fleming, T. (2006), University and Democracy: Habermas, Adult Learning and Learning Society, Maynooth Philosophical Papers, January 2006.
57 Nazifa Alizada et al. (2021), Autocratization Turns Viral, Democracy Report 2021, University of Gothenburg: V-Dem Institute.
58 Idem
59 Idem, p. 18; 31.
60 Idem, p. 24
61 Kinzelbach, K., Saliba, I., Spannahel, J. and Robert Quinn (2021), Free Universities: Putting the Academic Freedom Index into Action, Global Public Policy Institute (GPPi) & Scholars At Risk Network (SAR).
62 www.university-autonomy.eu
63 Steinel, M. (2019), The value of values for Europe's universities, EUA expert voice, 4 September 2019.

Scenario 1: Technocrats take over

Scenario: In this scenario, many decisions are taken outside of the democratic sphere. Elements of representative democracy might be kept, but as global societal challenges are becoming more complex and their understanding often requires technical or scientific expertise, decisions are outsourced to expert committees. Scientific and technical advice to policymaking is central. Many scientists become technocratic decision-makers themselves. Public engagement with citizens is less important.

The sustainability challenge is framed as a problem to solve through technology. Social aspects fade into the background. Engineering and hard sciences are on the rise. Professional higher education is important to produce graduates with professional skills and technical knowledge in various different fields that are quickly operational on the job market.

In this scenario, universities need to serve technocratic ideas. The development and deployment of new technologies will accelerate tremendously. New technologies, such as artificial intelligence, are likely to be used uncritically to foster technological and economic progress, while issues around bias, human agency and self-determination risk being ignored.

This can have positive effects for technical universities and professional higher education as they are perceived as important problem solvers and creators of technological innovation. Institutions that have difficulties to show such type of impact risk becoming irrelevant. They might continue to exist as "ivory towers" but will find it difficult to sustain parts of their activities as public funding gets constrained. Ultimately, the level of institutional autonomy and academic freedom for the individual is likely to be limited by such constraints.

Universities practice selective openness: they mainly educate and reproduce 'technocratic elites' who are the backbone of the political and economic system. Not much is done pro-actively to further open up. Public debates take place in universities, but do not reach large parts of society; they are discussions aimed at finding solutions to the challenges defined by the technocratic elite. Little value is given to including opinions from non-experts if they are not immediately translated into rational and unambiguous solutions. This leaves little space to disciplines in the humanities and social sciences, which tend to problematise, criticise and point to the ambiguities in society.

Universities collaborate internationally in order to ensure excellence in their missions. International cooperation is mostly seen as a means to increase the capacity of universities to produce knowledge that is politically useful and graduates who have a global horizon. Cooperation that aims at capacity-building in other regions of the world or general inter-cultural understanding and dialogue are less valued.

This scenario would likely lead to a recalibration of university missions with a bigger focus on efficiency of learning, teaching and research, a greater emphasis on economic goals and technological innovation and less attention to openness and public engagement. It is likely that performance of universities would be measured by quantitative indicators, such as employment, graduate earnings and practical application of knowledge (number of patents, spin-offs, amount of external funding attracted, etc.). This would likely further increase the role of technology, hard sciences, and STEM subjects. Research that can present solutions to problems and increase efficiency would be highly valued by society, while there would be little desire for research that explores ambiguity and unveils complexities. Universities would need to actively work towards ensuring the permeability of all fields of knowledge, including

social science, humanities and the arts, and promote a broader understanding of innovation, including social innovation, as otherwise humanity would fail to solve major challenges.

Scenario 2: The rise of authoritarianism

Scenario: In this scenario, societal disparities increase. Representative democracy fails to overcome it, radicalisation grows. Eventually, authoritarian powers take over government. They control political and state institutions, media and universities, and they limit fundamental rights. Open public debates are suppressed.

The social engagement part of the sustainability agenda is not addressed. Environmental aspects might be looked at to solve problems through technology. Social sciences and humanities lose their critical role.

This scenario describes some of the consequences of severe forms of authoritarianism in order to show the impact in the most drastic way. However, as there are varieties of democracy, there are also various stages and levels of authoritarianism and, consequently, responses of universities.

In situations of democratic decline and slowly rising authoritarian tendencies, universities have an important role in countering these developments. For this they need to contribute to societal and political debates by providing scientific expertise and evidence. They would also have a role in countering fake news, manipulation and propaganda by spreading critical thinking and the use of scientific methods in evidence-gathering.

In the event of authoritarian tendencies eventually winning the upper hand and taking over government, this can have different impacts on universities depending on their institutional profile.

Universities with a specific focus on providing practical knowledge or societal service might be enabled to operate at higher quality. This could be the case for medical universities and faculties (as observed for example in Myanmar where such institutions remained of high quality in comparison to others).[64] Other institutions, notably those focused on social sciences and humanities, will likely have difficulties if they wish to keep their critical role. The most prominent example of such a case is the Central European University that, due to repression from the Fidesz government, was forced to leave Hungary to relocate to Austria to be able to continue its operations and keep its profile. This is, however, an exceptional situation, and most universities would not be able to relocate.

For authoritarian systems, universities are important to reproduce elites for the regime. Therefore, it is likely that access to universities would be restricted and that universities become more and more state-controlled institutions, where persons in key functions are directly appointed by the government. Academic freedom is not respected. Individuals that are perceived as dangerous for the regime are threatened.

Another likely development would be the more explicit separation of learning and teaching, and research and innovation activities, each housed in separate institutions, as was the case in the Soviet Union, where research was largely confined to specialised institutes outside of universities. In this scenario, higher education is focused on efficiency rather than critical thought. Research and technological innovation become assets for international competitiveness of the system. As there is

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64 See, Ivinska, J. and Matei, L. (2014), *University Autonomy – A Practical Handbook*, published as part of the Project on support for higher education reform in Myanmar, Central European University, Higher Education Observatory.

little to no democratic control over investment in research, governments may use large resources on a few, highly visible projects in order to display scientific superiority. Success in solving technological challenges or conducting scientific prestige projects could serve to legitimise the regime.

International collaboration is difficult in this scenario. Any foreign influence that can be used to question the regime is viewed with suspicion. Cooperation will rather be focused on technological aspects, while inter-cultural cooperation would only be promoted if it can serve the regime.

Scenario 3: Democratic revival through more direct participation

Scenario: *Reforms of the political systems take place adding participatory elements to current bodies of representative democracy such as citizens assemblies composed of people selected through random drawing.*

The role of open public debates and deliberation is very important in this scenario and also strengthens the role of civil society. The role of political parties might be recalibrated, and other forms of less institutionalised political and social engagement might gain in importance.

Social aspects of sustainability, inclusiveness and diversity, become very important and get a prominent role in political debates.

In this scenario, universities no longer reproduce a small group of societal elites. If they want to survive, they need to open up and prove relevance beyond status. This would be the end of elite institutions.

Universities need to be ready to open to people from diverse backgrounds, offering flexible and multiple ways of engagement going beyond traditional degree programmes. Formal education and degrees as status symbols and key to joining political elites lose in importance as ordinary citizens have the possibility to become more directly involved in political decision-making.

Universities have an important role in fostering scientific literacy of large parts of society, making research and innovation accessible to solve societal grand challenges, and enabling informed decision-making. Universities would be central places for open public debates. Social science and humanities, citizen science and public engagement all take part in knowledge exchange. Universities collaborate internationally; international mobility is offered to learners to widen their horizons and empower them as citizens.

In order to be credible in this scenario, universities examine critically whether democratic values like equality, transparency, diversity and openness are respected inside the institution.

Opening up takes time, but there are many concrete ways for universities to do this and get engaged in society, work for social cohesion and counteract polarisation. These include the inclusion of people from disadvantaged backgrounds and underrepresented groups, and the integration of immigrants and refugees. Through academic reflection on the political, economic and social systems, universities can contribute to a flourishing democracy.

If universities manage to open up and provide opportunities to large parts of society, they will be recognised for their role and enjoy relatively high degrees of autonomy. If they do not succeed, their autonomy might get limited, for instance through funding constraints, and their role diminished.

Concluding reflections

Through their missions of learning and teaching, research, innovation and culture, universities have multifaceted roles that co-exist and nurture each other. The common vision for "universities without walls" articulated in EUA's vision is clear: to work closely with the rest of society to promote knowledge and critical reflection and contribute to positive change.

Universities want to be in a close and inclusive dialogue, but they also want to keep their distinct features and values as "places of respite and refuge to test new ideas, for lateral thinking and for creating new knowledge that still lies outside of mainstream awareness."[65] The purpose of universities being active and integrated in society while staying firm on their values and providing space for reflection is key to understanding the dynamics that could play out in the future: while the vision for universities is clear, the societal context might not always be conducive to realising it.

In the different scenarios there is a palpable tension between universities wanting to promote openness and the potential of society to be increasingly constrictive. There is also a constant risk that universities, rather than being autonomous actors, become instrumentalised for other purposes and aims, politically or economically. The trends towards authoritarianism, marketisation and increasing global tensions all point to a context that narrows the playing field for universities. At the same, it pushes them to be more explicit about their values, and to counter these trends by broadening and opening up.

In the various scenarios these risks appear repeatedly in the guise of one-dimensional utilitarianism. Regarding the future development of democracy, both in the case of technocratic governments as well as authoritarian tendencies, the role of universities in society becomes highly utilitarian, serving societal needs without contributing their own values and agendas: they become merely providers of skills and knowledge that are useful for others. The same is the case if universities become instrumental solely in overcoming the challenges of changing labour markets by providing skills and competences but downplaying reflection, curiosity and critical thinking. The pressure from the market, and not least from large technological monopolies, are to be taken seriously as threats to autonomy and values. Commodifying learning and knowledge, to be sold and promoted through data produced by students, researchers and universities, is a much too narrow vision of the role of universities in society.

Likewise, the growing global tensions coupled with the role of science and technology in geopolitics risks limiting the cooperation of universities with diverse partners. The common search to expand the bounds of human knowledge is undercut by political differences between governments. Moreover, universities risk being seen as mere instruments to ensure power, or strategic autonomy to use the EU concept, on the geopolitical stage.

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65 EUA, (2021), *Universities without walls – A vision for 2030*, p. 5

The scenarios where universities thrive are the ones where society at large is embracing openness and deliberation over one-dimensional utilitarianism. Multilateral and rules-based international relations and democracies with wide participation, ensuring pluralism and open deliberation, are the features of society (global or national) that make universities thrive. After all, universities are places of reflection first, and providers of solutions second.

What can universities do to promote their values in society and retain their fundamental role? Many universities are large and highly visible institutions, and they can play a role beyond being mere 'rule takers' or passive subjects to larger societal trends. With millions of learners being part of the university community, universities have the potential and the mission to convey their core values such as critical thinking, curiosity, rigour and respect for evidence. The open, evidence-based discussion at universities is also a civic value that can contribute to open and deliberative societies, which again promote these values in a virtuous circle. However, there are considerable forces that limit the realisation of the ideal. Among these are market-driven utilitarianism and political authoritarianism.

To counter the risk of being limited to functions that serve the market, universities can take the role of rule shapers that retain their autonomy and provide spaces for reflection, while at the same time providing important solutions to societal challenges. One important argument for that would be that there is no actual contradiction between the two functions: critical reflection on the human condition and re-thinking of society, as well as curiosity-driven investigation of the physical universe, are not isolated from application of new thoughts and discoveries in society: applied and fundamental have long become "complementary formats of research development".[66] If either the vision of closed, ivory-tower knowledge production or a purely utilitarian vision becomes completely dominant, universities risk defaulting on their mission. Universities need to be explicit about their capacity to develop and produce many kinds of knowledge that serve different, often complementary, purposes. This is true for research and innovation as well as for learning and teaching, and the engagement of universities with culture. Universities must embrace the role of active rule shapers in order to ensure the necessary framework conditions in the form of sufficient funding and an enabling regulatory environment.

Even when framework conditions are adversary, there are cases where universities can work to counter the prevailing trends in explicit or subversive ways: they can, for example, reach out in their local environment to promote civic, pluralist values through small, targeted projects. They can also interleave activities for stimulating curiosity and deep investigation within learning activities mainly targeted at providing skills relevant for the labour market–in many cases there would be no contradiction between the two goals of learning. Even when geopolitical tensions are high, universities and individual researchers traditionally have broad international networks that do not disappear because of disagreements between governments; they will still have the capacity to build bridges between societies where dialogue is otherwise difficult.

The vision of universities without walls can be realised if universities use their capacity to promote their values and actively shape the future. It will be crucial to retain awareness of the many roles that universities play in society and the multitude of different social, economic, scientific and cultural contributions that they make. The main risk for the vision is limiting universities to just one of these roles in order to follow agendas set elsewhere. Instead, the vision will be realised when universities show themselves and are accepted as multifaceted, value-driven institutions at the heart of knowledge-driven societies.

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66 Reichert, S. (2019), *The Role of Universities in Regional Innovation Ecosystems*, p. 12

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