Una Europa Future UniLab

Sustainability Cluster

Envisioning report

The main goal of the Future University Lab is to address the fundamental issues related to the future of universities. A team of visionaries discussed this problem in order to find the most innovative solutions. The team included contributions from:

- Michel Bauwens, Founder of the Foundation for Peer-to-Peer Alternatives
- Professor Justyna Bugaj, expert in HR and university management
- Professor Jean-Luc Chappey, expert in modern history Dr Andrea Frank, Head of the Field of Action, Science and Research at Stifterverband
- Professor Soledad Garcia-Ferrari, expert on current processes of urban development and regeneration
- Cristina Herrero Jáuregui, expert in biodiversity
- Professor Angelo Paletta, ProRector of the University of Bologna
- Professor Minna Palmroth, Director of Finnish Centre of Excellence in Research of Sustainable Space

The questions that served as the springboard for further discussion of the visionaries were as follows:
(1) How should universities take the lead in the search for a new balance between human society and the natural environment?
(2) How can universities promote the well-being of employees and students and help them flourish?
(3) How can universities become future-proof and resilient in an ever more rapidly changing world?

The team initially created a Miro board to share ideas and guide the discussion using a range of presentations and diagrams. Those that are relevant to the specific issues presented in this document, have been incorporated below.
https://miro.com/app/board/o9J_kjFCGKE=/

What is 'sustainability' for future universities?

Sustainability as a term has been used across subjects and fields, embedding a number of issues and challenges in our world, ranging from the environment to economy and to social welfare. Of particular relevance is the analysis carried out by Bill Reed (2007), who creates a useful nested hierarchy of ecological/economic approaches, by the degree they degrade or regenerate the living world and our web of life. Reed (2007) identifies first, 'conventional business practice', which actions remain within legal limits (considering that what is legal is moral), but massively degrade the environment by not recognising externalities. This is followed by 'green approaches', which aim to limit the damage of their actions through practicing forms of remediation. Further ahead, 'sustainability approaches' aim to achieve a neutral position where no more damage can be done, hoping to stop further degradation so that future generations of humans can continue to live. 'Restorative approaches' are much more active approaches to heal the already existing damage, at local ecological levels. 'Reconciliatory approaches' advance to deeper levels by changing the very nature of the relationship between human and extra-human nature, by recognising the interdependence of all life. Finally, it is only with 'regenerative practice' that humanity becomes itself generative towards nature, by organising economic and societal life around the improvement of the health of both human and extra-human ecosystems as well as communities.

In the context of academia, it may be difficult to define what universities will need to fight against, or recover from, in the future. As a result, sustainability and resilience should not be explored through their isolated components, and the interconnections and complexities are more useful to understand the needs that universities will confront, to ensure their future sustainability. An initial proposal can be to explore the notion of sustainability through understanding requirements for future universities in relation to energy, resources, and wellbeing, engaging with these concepts within an interconnected approach.

In this context, initial aspects that may address the proposed question relate to understanding the range of issues that may 'kill' or prevent universities from continue to work. We can approach these by exploring 'megatrends' that have been identified globally, such as population increase, uncontrolled urbanisation, climate change risks, and unprecedented changes in the use of new technologies. Within this future, academic institutions may develop the tools and policies that allow user interaction with our changing world or may adopt an isolated, elitist approach. How can we encourage in our universities, choices aimed at integration and interconnection with a changing society?

> Sustainability is about the whole.
>
> Different fields define sustainability in a different manner. However, a common idea behind the various definitions is the importance of a balance between several aspects of a whole, such that the whole sustains in the future. Applied to the concept of the university, this means that the different functions of the university should find a mutually benefitting balance, such that the university prospers even with the rapidly changing boundary conditions.

A university is essentially an agreement with the wider society to produce talented workforce and to find answers to what is unknown. This agreement holds only if new generations are educated, and if the new findings of the unknown are conveyed to the society, forming the basis, for instance, for new innovations and policies. To be sustainable, universities need to create means to construct a notion of the future, considering shifting values and ensuring the quality of education. However, these future university environments should be connected with society, allowing for cross-collaboration and ensuring useful and sustained impact and innovation.
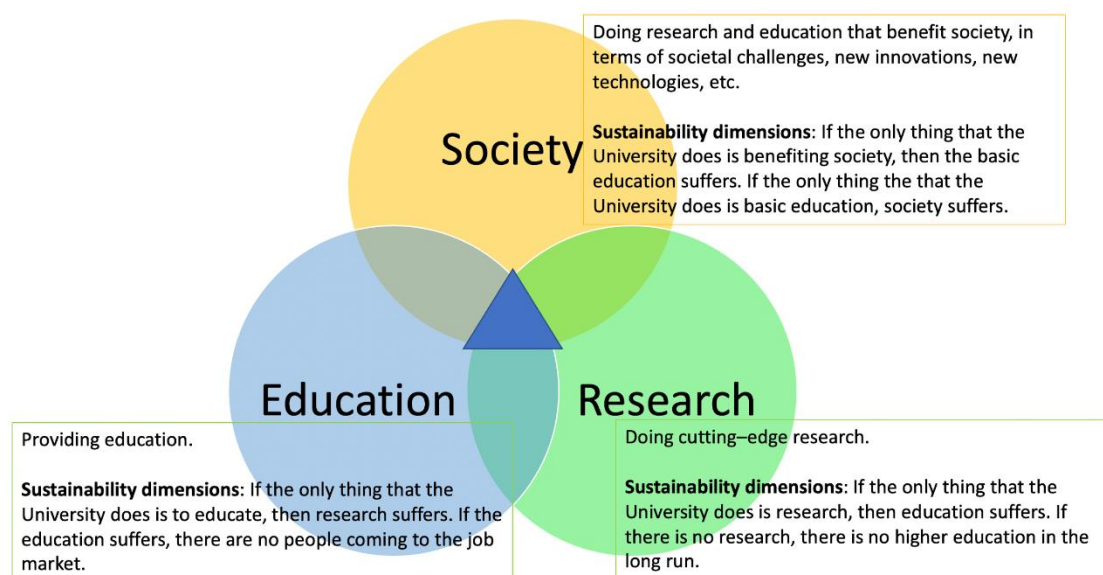
Amongst key challenges, issues around a potential loss of funding and lack of resources are highlighted. In this context, it is very important that universities develop resilience through increasing adaptation capacity, which can only take place with a close understanding of local contexts. 'Purpose-oriented' and 'mission-oriented' approaches, policies and strategies, should be at the core of future universities, encouraging innovative resource-management models that allow a combination of activities and shared responsibilities. This may include for example, a portfolio-based income

approach with students consulting and participating in projects organised in partnership with other institutions, which may help to prepare them for 'real life' outside academia.

Therefore, regional and global collaboration will be the only pathway to generate sustainability in education, as it will benefit global students to access and develop new outlets of knowledge. This context-specific understanding linked with increased global collaboration will need to consider the impact of growing inequalities within society and the meaning of education in the workplace, understanding also professional groups and regulations, as well as opportunities for graduates across fields. As a relatively recent example of equal collaboration, 'open source' has become crucial in achieving professional credibility through open and collaborative contributions, which constitute of: 1) learning opportunities in a given subject; 2) increasing collaboration skills; 3) creating social networks which can help later access to the workplace; and 4) building up a portfolio showing the capabilities of the students 'in practice'.

Exploring the context of universities and their diverse competencies and functions, it is imperative that sustainability is considered in relation to their role linking society, research and education, which is explored in the following diagram.

Graph 1. Function-based, sustainable way of working in the junction of the graph (blue triangle)

Doing research and education that benefit society, in terms of societal challenges, new innovations, new technologies, etc.

Sustainability dimensions: If the only thing that the University does is benefiting society, then the basic education suffers. If the only thing the that the University does is basic education, society suffers.

Society

Education

Providing education.

Sustainability dimensions: If the only thing that the University does is to educate, then research suffers. If the education suffers, there are no people coming to the job market.

Research

Doing cutting–edge research.

Sustainability dimensions: If the only thing that the University does is research, then education suffers. If there is no research, there is no higher education in the long run.

Source: own research.

In the above context, it is essential to conceptualise and define different forms of knowledge creation and knowledge sharing. We need to reconsider the role of 'basic and accessible' forms of knowledge and establish mechanisms that allow knowledge growth and development with an open, inclusive and multicultural approach. This should be the result of wider, multidisciplinary interactions and should allow innovation and creative thinking, valuing the particular qualities of students and their social contexts. Universities have a key role in developing new concepts in the context of an emerging society based on new ethical and sustainable demands. To this aim, universities should involve students and teachers in emerging opportunities and partnerships that aspire to the achievement of the Sustainable Development Goals, so that both students and teachers feel they are collectively participating in bringing about change. Universities should create a learning and research environment in which students and teachers understand their role in sustainable futures and develop the skills to deal with future challenges. One way to achieve this could be to create 'open source third places' that are supported by the universities, but open to civil society and are engaged in collaborative projects that enhance knowledge and experience throughout the wider social contexts (e.g. Fablabs or non-university Higher Education Institutions programmes).
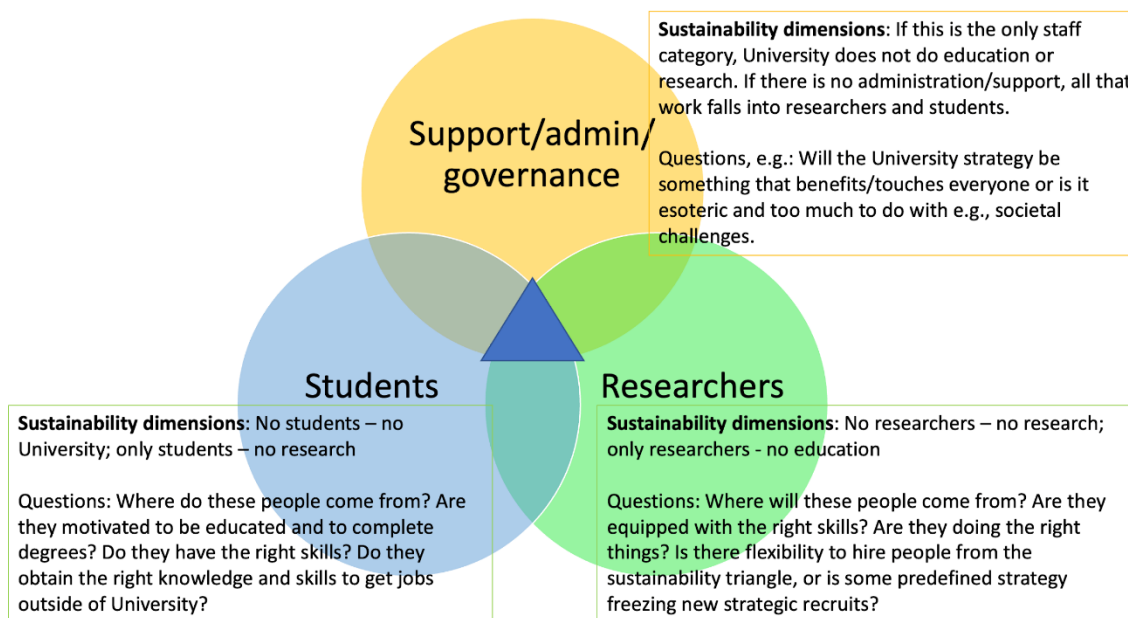
Sustainability in the context of climate change

Responding to the challenges related to climate change impact, we need to ensure that universities work in a 'green' campus, promoting measures aimed at reducing the impact on the planet and carbon emissions, sustainable construction, as well as a healthy and inclusive environment. Universities' research should showcase and promote sustainable tools and measures for local and global socio-economic environments. Major challenges around sustainability aimed at changing behaviours and increasing awareness should be included in the curricula. Even though exchanges between universities should be encouraged, awareness to reduce carbon footprint by minimising unnecessary travelling, or using other means rather than planes, should be taken into account. Current online skills due to reduced mobility by the pandemic can be of use for future lower carbon emissions from mobility.

Further exploring sustainability in a broader social context

To be sustainable, universities need to work at the intersection of society, education, and research. In other words, research and education should benefit society, addressing societal challenges, and developing new innovation and new technologies that will equip society with the necessary tools to confront forthcoming challenges. It is important to keep in mind that societally benefitting may, in the case of universities, have different timescales than e.g., in applied research within companies. It may not yet be known, what is societally benefitting in the future, especially as the society is in rapid change. Therefore, research needs to be carried out in balance between short-term and long-term benefits, ensuring that fundamental research will also be emphasised.

Within the above context, to be sustainable the approach of universities should be people-based, including students, professional and support services as well as teachers and researchers. This approach should focus on continual skills development, pastoral, and support mechanisms, including peer-to-peer collaboration, wellbeing, equality, diversity, and inclusion. This approach is summarised in the diagram presented below.

Graph 2. People-based, sustainability is in the junction of the graph (blue triangle)

Support/admin/governance

Sustainability dimensions: If this is the only staff category, University does not do education or research. If there is no administration/support, all that work falls into researchers and students.

Questions, e.g.: Will the University strategy be something that benefits/touches everyone or is it esoteric and too much to do with e.g., societal challenges.

Students

Sustainability dimensions: No students – no University; only students – no research

Questions: Where do these people come from? Are they motivated to be educated and to complete degrees? Do they have the right skills? Do they obtain the right knowledge and skills to get jobs outside of University?

Researchers

Sustainability dimensions: No researchers – no research; only researchers - no education

Questions: Where will these people come from? Are they equipped with the right skills? Are they doing the right things? Is there flexibility to hire people from the sustainability triangle, or is some predefined strategy freezing new strategic recruits?

Source: own research.

The future sustainable university

In order to shape our future university to increase sustainability, we need to consider in a first instance the skills and open attitudes graduates will need to engage in future world challenges. Universities need to move away from only increasing the knowledge capacity of students and instead, help developing creative thinking through curiosity, building a sense of community and shared responsibility. Neither universities nor the private sector, which focusses on financial optimisation, have played a significant role in ecological regeneration. Universities might need to shift their attention to multi-capital approaches that take into account 'system value creation', creating financial, human and natural capital. Furthermore, research benefitting new policies oriented to slow down the ecological degeneration is desirable. However, considering this may not sustainable if the entire university shifts towards this direction. The aim is that the whole, be it the university itself or a strategic partnership, works in such a way that a balance can be achieved.

In addition, universities need to create a space for research development that is useful and able to inform and equip societies. Among the necessary skills graduates will need are intercultural intelligence, collaborative skills, the ability to understand professional requirements, the open attitude towards change, and excellent communication skills that allow them to interact with a range of international social audiences beyond academic and professional. Also, the "more traditional" skills of self-responsibility, effort and motivation, as well as the abilities to overcome adversities should be encouraged. The curriculum should develop opportunities for exposure to a range of realities to increase adaptation and resilience.

In addition, institutional systems and infrastructures, as well as policy, regulation, and governance models, should be reshaped to encourage flexibility of learning pathways, building on the global collaborations mentioned above, and including practice and research-oriented elements. Peer-to-peer and self-reflection should be embedded components in the future curriculum to allow and support creative thinking and innovation. Overall the curriculum for a sustainable university should enrich educational experiences, with a range of options including mobility (physical and virtual) and collaboration with other organisations with academia, and allow for inclusive interactions across society.

A key priority in this context is the redesign and redevelopment of the range of models that support the work of universities. Essential will be to rethink financial, educational (teaching and learning as well as administrative) and human resources models, which will support and develop the innovative approaches described above across curriculum pathways and research development, and to increase the role of students, teachers, and researchers in wider societal change.

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