ECIU UNIVERSITY MAGAZINE
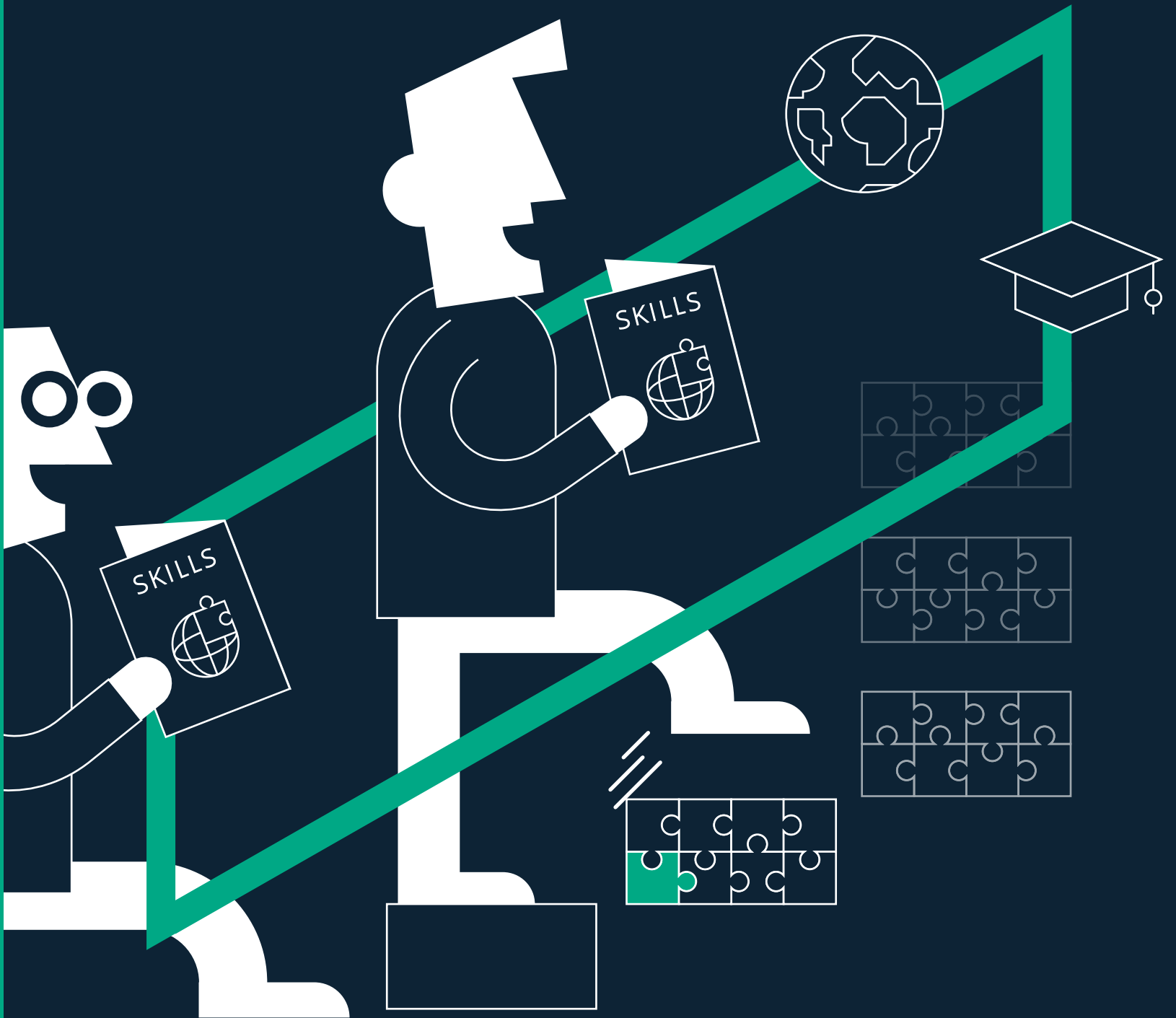
SKILLS

SKILLS

SKILLS AND COMPETENCIES
FOR LIFE

ECIU university

FOREWORD

CONNECTED FOR LIFE

Imagine you are a learner, researcher or citizen and meet in a European-wide university to find knowledge, skills and competencies to prepare you for the future. You decide for yourself when, where and which skills and competencies you would like to develop during your lifetime. Whenever you are keen to work in an international and multi-disciplinary-challenge team to tackle real-life challenges, you return to ECIU University, coming back as many time as you wish to pick up or provide knowledge. The new skills or competencies you acquire will be stored in an open-end digital competence passport. You are connected to ECIU University throughout your whole professional life by learning, doing impactful research and accelerating innovations.

This novel university approach is reflected in our Vision 2030: ECIU University – Connects U for life. This Vision was published just a year after the launch of ECIU University and it shows our joint commitment towards impactful education and research. We provide personalised learning paths with micro-credentials and a challenge-based approach at its core. This corresponds to the needs of learners, researchers, citizens, communities, public partners and industry.

We consider the ECIU University as an open ecosystem. Through the challenge-based approach in education, research and innovation under the framework of the UN SDG11 (Make cities and human settlements inclusive, safe, resilient and sustainable), we nourish strategic collaboration between cities, regions, industry and citizens. We connect the different European regions and, by doing so, we expect new, partnerships to arise among non-academic stakeholders on a European level to impact regional ecosystems. This differs from old models of seeing universities as singular entities.

The ECIU University is a massive joint effort of the ECIU member universities and their regional partners. More than a few hundreds of staff members at our universities and in the regions are collaborating to making the ECIU University a reality.

This magazine showcases several activities of ECIU University and the opportunities to engage with our European University. Enjoy reading, be part of and stay connected to ECIU University!

OUR MEMBERS
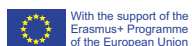
CONTENT

VICTOR

VAN DER CHIJS

ECIU President /
President of the
University of Twente

PER-MICHAEL

JOHANSEN

ECIU Vice-President /
Rector of Aalborg
University

MÀRIUS

MARTÍNEZ

ECIU Treasurer /
Vice-Rector, Universitat
Autònoma de Barcelona

THEMES

INNOVATIVE
CO-CREATION
MODEL

OPEN
COMMUNITY

EUROPEAN
EDUCATION
AND RESEARCH

CUTTING-EDGE
TECHNOLOGIES

u
today

HEY HELLO!

This is ECIU University. Nice to meet you! We believe in a European-wide ecosystem based upon open and inclusive collaboration, connecting societal stakeholders, researchers and learners to provide European answers to future societal challenges.

We create a playground for solving multi-disciplinary challenges in entrepreneurial, innovative ways and provide personalised learning and career opportunities for life at the European level, enabled by a novel university model based upon co-creation.

The ECIU University is created by the European Consortium of Innovative Universities (ECIU), which is the leading international consortium of research intensive universities, with collective emphasis on innovation, creativity and societal impact, driving the development of a knowledge–based economy. Our 12 member universities in Europe and our partner in Mexico share a history of fostering economic and social development in regions in transition.

WHERE WE STAND FOR

Research, education and innovation in ECIU University reflect our values.

We stand for:
- Academic quality
- Entrepreneurial mindset
- Open ecosystem
- Agility and flexibility
- Impact on society
- Personalised, inclusive community
- Resilience into the future

GOOD TO KNOW

Did you know that we call our students learners? Here is why: Our future learners are not only students, but life-long learners. They work together on challenges, choose their own learning path and coming back to the ecosystem again and again to pick up and contribute in knowledge.

"ECIU University is a promising alliance. We all have the ECIU University 2030 Vision in mind"

Says Mariya Gabriel, EU Commissioner for Innovation, Research, Culture, Education and Youth, in a meeting with the ECIU Presidium, Friday March 12

MAKE A REAL IMPACT

- 300 students take part in the challenges of this spring semester

- Around 30 'teamchers' have joined the challenges – these teachers will guide and facilitate the teams

- 30 ECIU University challenges were provided by the partners

- All challenges can be explored here:

- The next round of challenges for the autumn semester 2021 will be opened in a few months ◢

IT IS ALL ABOUT TEACHING

Since 2017 the ECIU Team Award for Innovation in Teaching and Learning recognises teams of people that successfully developing and implementing educational innovations. This year the module 'Learning Innovation for Enterprise (LIFE)' of Dublin City University has won the award, and the i-Week of Tecnológico de Monterrey took the second place.

The LIFE business and entrepreneurship module is designed for first-year undergraduates to illustrate how innovation unfolds in key commercial, entrepreneurial and organisational contexts.

It helps students to learn the A-Z of business in all its forms through Hackathons, online learning, conference seminars, applied projects, reflective writing and through getting out there and hearing directly from businesses.

'We truly believe that students benefited greatly from the module and are determined to continue innovating and iterating the module as we deal with the changing educational landscape', says Roisin Lyons, LIFE module coordinator and Assistant Professor in Entrepreneurship at DCU. ◢

LET'S MEET!

Let's meet the external expert group of ECIU University. They give insights into the demands and expectations of the most important stakeholders of the university: learners, business, society and universities themselves. The group advises if the concepts, developed by the ECIU University, are future-proof, corresponding to the needs of society and industry. Members are:

Anders Caspár,
Director of External Relations, Ericsson Ltd

Jonas Pagh Jensen,
HSE Specialist, Siemens Gamesa

Kara McGann,
Head of Social Policy, Irish Business and Employers Confederation (IBEC)

Anna Kaisa Heinämäki,
Competitiveness Director of the City of Tampere in the Growth, Innovation and Competitiveness sector

Yannick Proto,
Head of the representative office, Region Occitanie in Brussels
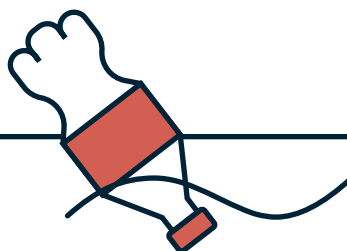
Gohar Hovhannisyan,
Former President of the European Student Union (ESU)

Beatriz Palacios-Corral,
Director of Innovation and Design for Teaching and Learning, Tecnológico de Monterrey ◢

"IT IS THE NORTH STAR FOR ALL OUR ACTIVITIES"

TEXT
MICHAELA NESVAROVA

Director
ECIU
University

SANDER
LOTZE

Director
Continuous
Learning at
Tampere
University

HELI
HARRIKARI

The ECIU University is officially a three-year pilot, but it certainly doesn't intend to stop there. To confirm its long-term strategy, there is now the ECIU University Vision 2030, highlighting the plan to create a brand-new European ecosystem. 'We really believe that this is the way forward,' say two of the Vision's main authors, Sander Lotze and Heli Harrikari.

What is the ECIU University Vision 2030 and why was it created?
Lotze: 'It is the North Star for all our activities. It guides us towards where we'd like to end up in 2030. It constantly reminds us of what our priorities are, what to focus on and what is to come after the three year pilot we're currently in. Second reason to create the Vision was to make sure that we align our activities with visions of all the member universities. Last but not least, we need to communicate our long-term goals with the European Commission.'

**What did the process of creating the Vision look like?**
Harrikari: 'In June 2020 we met up with the ECIU Executive Board and discussed main principles for the Vision. After the summer, we got together and spent several days talking and brainstorming. We created several versions of the Vision, some more ambitious than the final one, some less ambitious. After each version, we received feedback from the Board and ended up with the current version, which is on the more ambitious side of the spectrum.'

Lotze: 'In the process, we also interviewed all Board members individually to reflect on the content. We wanted to get the feeling of where the individual universities and their high management wanted to go. Plus, it was a good way to stay connected during the lockdown.'

What are the key elements of the Vision 2030?
Harrikari: 'The core idea is that we are not mimicking a traditional university. We are aiming to create a new European ecosystem for solving multi-disciplinary societal challenges, doing research and learning for life. As the Vision states, the main building blocks of the ECIU University are: open community, cutting-edge technologies, innovative co-creation model and European education and research.'

Lotze: 'Indeed, we are not here to replace or replicate traditional universities. Education and research are only one of our core tasks. Yes, we aim to educate, but we look at it from a different perspective. We aim to create a collaborative ecosystem where universities are key players.'

Key elements Vision 2030

OPEN COMMUNITY

CUTTING-EDGE TECHNOLOGIES

INNOVATIVE CO-CREATION MODEL

EUROPEAN EDUCATION AND RESEARCH
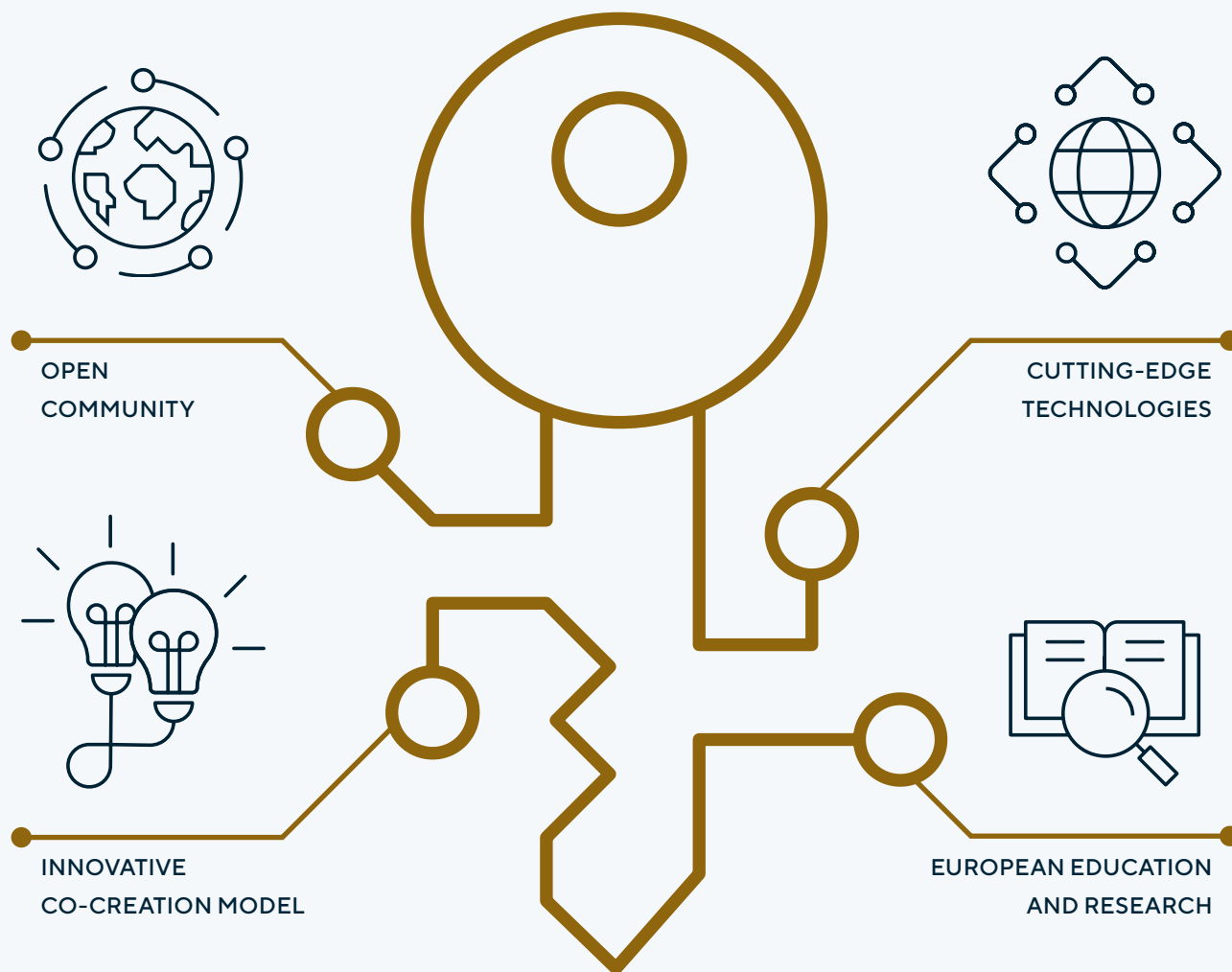
Can you name the main goals that the ECIU University wants to reach by 2030?

Harrikari: 'We want to offer learning opportunities, to have a Europe-wide ecosystem where people can come for individual learning pathways. Our focus lies on building a European community where people can join together and find opportunities. It is not about a university sitting somewhere, it's about people coming together. We hope to lower the traditional organizational borders. We want to create space where people can move freely and gather around solving challenges, not worry about which organization they belong to.'

Lotze: 'In this sense, the ECIU University has more of a facilitating role, rather than educational.'

Are there any hurdles for achieving these goals?

Lotze: 'Absolutely. Firstly, there are practical hurdles such as creating a new legal entity. European university is concept that doesn't exist yet. We need to make sure everyone understands what it'll be built on and where we are going with it. The ECIU University has all characteristics of a start-up, but it is a lot more complex.'

Harrikari: 'We have set out goals that would be difficult to achieve even in one country but we are dealing with different national systems Sometimes we wonder – what the heck were we thinking?'

Lotze: 'That is true. However, we all honestly believe in this university. This is not just some project for us, we really believe that this is the way forward. And every day we hear that others also believe this is the way to go.'

Harrikari: 'Exactly! We know that we are going in the right direction.'

Lotze: 'The next step is to move from vision to strategy and then to execution. This will be a lot of work, but – in a way – it will also be easy. Thanks to creating the Vision 2030, we now know which steps we need to take.' ✎

AN AGORA TO CO-CREATE ECIU UNIVERSITY AMONG LEARNERS

TEXT
STAN WANING
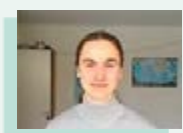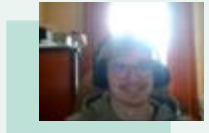
Initiate discussion among the thousands of students and learners and co-create ECIU University. That is exactly what the recently established ECIU University Student Agora is trying to accomplish. Benjamin Beton (23) is taking the lead in this effort.

He led the January 14 kick-off for the new initiative. He envisions a future in which the agora discusses and leads multiple focus groups. Those groups of learners would then deal with numerous specific topics relevant within the ECIU University. But it is a long way from that phase, as the Toulouse-based Beton knows. 'In January, seventeen student representatives participated in the kick-off. In this, the possible future of the agora were outlined. With just under twenty participants you can speak of a small group, but for now that is not a problem. One of the goals is to grow considerably in the short term.'

Cross-cultural entity

Beton is happy to explain in great detail the how and why of the agora. Why does ECIU benefit from a platform to support student discussion? And does something like this really not already exist? Beton: 'It is not new that students within the ECIU think about the future of education, for example, but that did not happen in the way we envisioned it within the agora. We are going to facilitate discussion in the long run and provide the space to form an opinion with our learners across Europe. It has to be a cross-cultural entity.'

Open community

According to Beton, who was previously active as president of the Erasmus Student Network in France, it is a misconception that a seat in the agora is reserved only for the chosen few or for students who hold a leadership position within a particular association. 'We are an open community. Anyone can apply at the moment,' he explains. Learners will be organised by groups. 'Such a group will discuss a specific topic and someone from the group will then communicate this to the agora. It is meant to be an open, agile network which futures the ECIU University.'
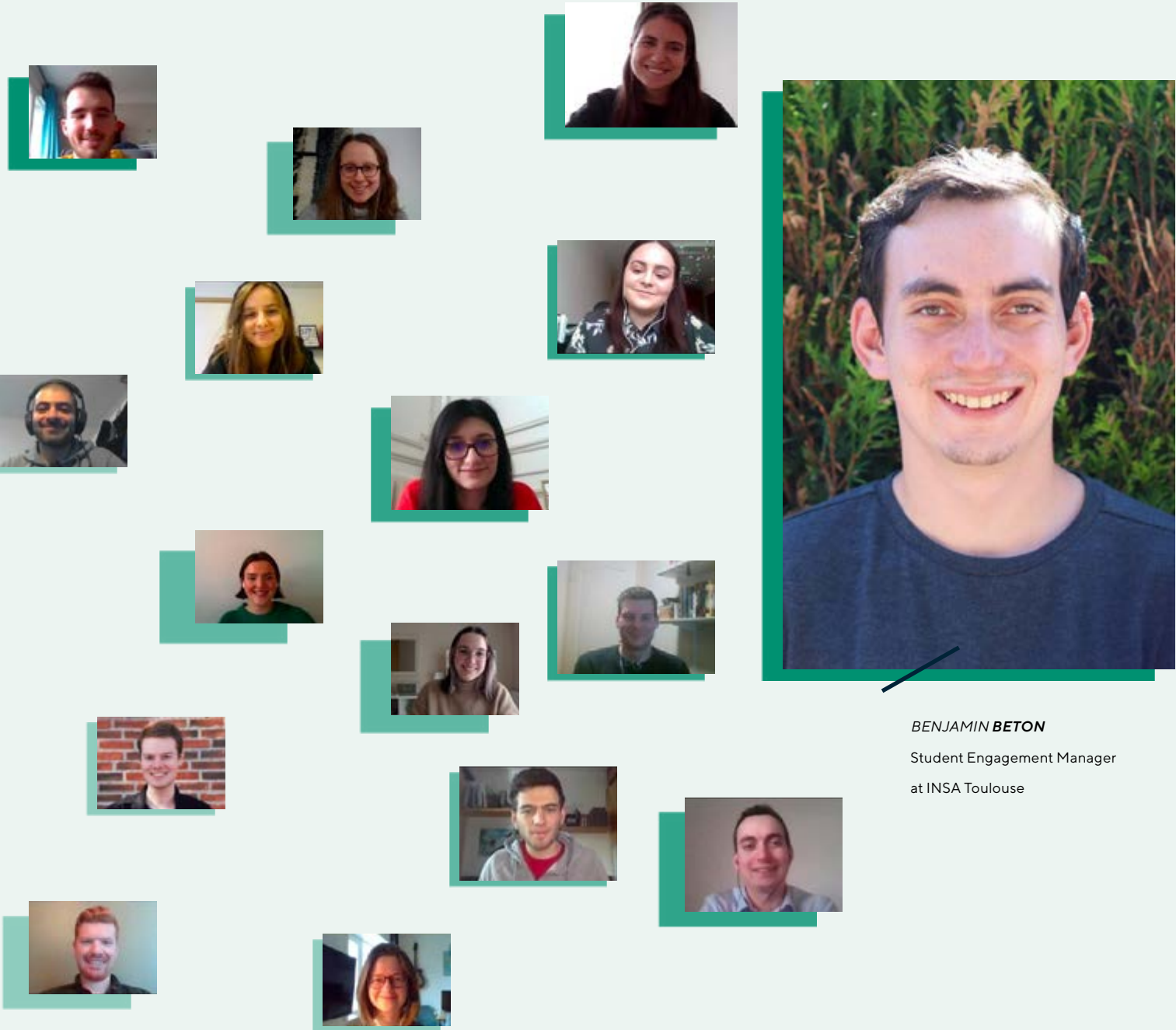
BENJAMIN **BETON**
Student Engagement Manager
at INSA Toulouse

Greek times

An agora freely translated means a gathering place. In Greek times it functioned as a market-place, where social life took place. 'And people gathered there to talk and discuss. In fact, exactly what we want to achieve. When I started this job in January, the name agora was already there, but I think it is an apt name. If only I had thought of it myself.'

Key learners

The hope is that students from all ECIU universities will join the agora. Beton is not pessimistic about that endeavour, but acknowledges that the cross-cultural goal requires extra attention. 'Open discussion among students about education is not the norm in every culture. Some countries are more open to that than others. I imagine you can see that in parallel with the application by university. Therefore, we may approach some key students in some universities. That will ensure a better distribution within the agora. Also, language could be a barrier for a student. Those are things that we are going to pay a lot of attention to.'

Future

What the near future will look like for the agora remains to be seen, according to Beton. His expectation is that participating students will meet approximately monthly. 'We want to give students room for discussion, but at the same time it shouldn't take up too much space. No matter which university you are at, students are always busy. We have to take that into account.' ✎

A PLATFORM FOR STUDENTS IN VIRTUAL REALITY

TEXT STAN WANING

Many people think of the term virtual reality as an elusive development for the distant future. Not so for Juha Eskelinen, Director Digitalisation Development Project at Tampere University. The Finn is leading the project to integrate virtual reality (VR) into the ECIU University in the near future.

JUHA **ESKELINEN**

Tampere University

ECIU XR Campus: that is the name of ECIU University in the virtual world. What does that look like? 'As some sort of park, in which you can walk around as a student with your avatar. In this campus area, you encounter all sorts of things that you would meet during a walk in a 'normal' park: a campfire, benches, but also an amphitheatre and rooms to enter,' says Eskelinen. 'The really big difference with a real-life park is that you can also fly over it. Normally not possible, unless you are superman.'

According to Eskelinen, the most interesting places are mainly in the rooms. 'Here you can think in small groups about complex themes on the principle of challenge-based learning. Suppose you discuss the climate problem, then the entire virtual space adapts itself to that theme. You can also make notes in the air, and when you leave the room, you can choose to leave those notes in that spot.'

Advantages

According to the Project Leader, the ECIU XR Campus has three major advantages. 'First, it provides an enhanced and customisable learning experience. Research has shown that our brain experiences virtual reality as 'real'. It brings together physical, virtual and online learning environments. In addition, ECIU VR Campus allows students wherever they are in the world to join forces. You agree on a time and meet in the park, without having to meet somewhere in person. That, in turn, brings us to the second benefit: sustainability. And, finally, VR has a tremendously strong potential for society. Virtual reality is boosting the Gross Domestic Product worldwide by 1.5 trillion dollars.'

A leading role in education

Often, virtual reality involves thinking of an elaborate installation before you can enter a virtual environment. However, technology is developing so fast that a PC or wireless headset are enough to enter the virtual campus. 'In fact, VR glasses will be overtaken by technology before long. Developments in regular-looking, augmented reality glasses or even contact lenses, are promising. It will constitute gigantic economic potential and there is no stopping it. VR is also going to play a leading role in education.'

Eskelinen is confident in this respect. He sees the growth potential of virtual reality and labels it as a fascinating development. At the same time, he knows that the development is going so fast that it also entails risks. 'Economically , there is so much money involved in VR that there are always individuals who have bad intentions. In that respect, it would be good if there were rules and regulations, for example from the EU.'

Vappu

The project leader hopes that a pilot will start soon. The challenge, he says, is in the adaptation for participants. 'It may be difficult for participants to adjust to the virtual environment, but I expect that it is mainly a matter of getting used to it.' According to Eskelinen, the technology will not be the problem. 'In May, 1.5 million Finnish people were present in the same virtual environment. And that went perfectly well. Due to the COVID-19 crisis, this event called Vappu, which is a traditional Finnish holiday, could not be held physically, but this turned out to be a good alternative. It is a very promising development.'

MICRO-CREDENTIALS

Why micro-credentials?

Micro-credentials play a crucial role in ECIU University's drive to develop work-ready European citizens with future skills and competences and an innovative and entrepreneurial mindset. Micro-credentials are an opportunity to fundamentally change universities' role in transforming learning. And they are a promising means of aligning universities with wider societal perspectives and valued social goals. Micro-credentials redefine the types of awards and qualifications offered by universities. They can align universities' missions with wider societal, economic and environmental goals.

MICRO-CREDENTIALS DEFINITION BY THE EU, SUPPORTED BY ECIU UNIVERSITY

"A micro-credential is a proof of the learning outcomes that a learner has acquired following a short, transparent-ly-assessed learning experience. They are awarded upon the completion of short stand-alone courses (or modules) done on-site or online (or in a blended format)"

GOOD TO KNOW

Piloting with micro modules:

- Includes learning offerings from 12 ECIU University members
- Includes SDG11 and language learning related modules
- Includes assessment of the learning outcomes
- Range from 1 to 8 ECTS
- Provides in an online or in a hybrid setting

"There is an urgent need for short learning experiences to acquire targeted competences and skills."

Says Vanessa Debiais-Sainton, Head of Unit Higher Education at the European Commission, during a ECIU online seminar on January 28 about micro-credentials.

WHITE PAPER

Last January, ECIU University presented its micro-credentials white paper at an online event with 300 participants from all over Europe and beyond. The high interest, engaging discussions and support for the paper showed that the micro-credentials movement has momentum.

Speakers reflected on the European Commission's report on micro-credentials of December 2020, discussed short-term developments, longer-term ambitions and concrete actions in the micro-credentials field.

You can find more information, download the paper and watch the webinar here:

www.eciu.org/news/ paving-the-road-for- the-microcredentials -movement ◢

KEY ACTION 2021

- ECIU University is consulting with both internal and external partners to establish how we will define and operationalise three distinctive types of micro-credentials:
  - Formal learning as part of regular learning paths
  - Formal learning outside of regular learning paths
  - Non-formal learning as part of other activities, including short courses, work-related experiences and training offered by industry and societal partners

- ECIU University will begin a comprehensive programme of professional development to help raise awareness about the role of micro-credentials in driving our change agenda and delivering on the bold vision of building a co-creation learning ecosystem for life-long learning and future work-ready graduates.

- ECIU University and Dublin City University, National Institute for Digital Learning, launched a free online course through the FutureLearn platform on "Higher Education 4.0 - Skills, Credentials and Employability" which aims to develop greater European and global awareness and understanding of the change imperative, and the potential of micro-credentials as part of a new co-creation learning ecosystem. ◢

WORLD ECONOMIC FORUM

RESKILLING NEEDS

50 % of all employees will need reskilling by 2025, says the Future of Jobs report 2020 of the World Economic Forum. This is one of the key drivers for micro-credentials in education. ◢

Source: Future of Jobs Report 2020, World Economic Forum.

"WE ARE STRIVING FOR WIDE-SCALE BENEFITS OF MICRO-CREDENTIALS"

TEXT JELLE POSTHUMA

ECIU University is a forerunner in the field of micro-credentials. Last January, the consortium submitted a white paper to the European Commission to better define micro-credentials and to align them with existing qualification frameworks. But why are these credentials so important for the future of higher education? Henri Pirkkalainen and Arthur Silva of ECIU University clarify.

What is the idea behind micro-credentials?
Henri Pirkkalainen: 'Consider that you are a learner who goes to an employer. You have exactly the same degree but a slightly different set of studies than another applicant. The question is: what differentiates you from the other? That is precisely the function of micro-credentials. They are basically small bread crumbs, the evidence of a short learning experience that you have successfully accomplished. Micro-credentials 'track' the learning process and its outcomes: how it happened, how it was assessed and how you performed. This detailed information is stored in your digital profile which shows skills and competences you have acquired.'

Why are micro-credentials so important?
Artur Silva: 'Remember, we are in a pandemic. A great number of people will inevitably lose their jobs. They will therefore need a learning process to provide targeted reskilling and upskilling opportunities. Micro-credentials will make this transformation possible.'

Pirkkalainen: 'If we look at it in a more general sense: we want to rethink our degree-based universities to emphasize skill and compe-tence development. We need to rethink how we teach and what we teach, as well as what the learner gets as an outcome.'

What transformation is needed?
Silva: 'This is the big challenge for the whole of Europe. I think there are countries where this system is already quite established, like Australia and the United States. In Europe, we try to start a movement now. That is why the European Union started a consultation group last year. They established a roadmap to put it on the agenda and to ultimately realize it in the institutions.'

Pirkkalainen: 'It really requires a big change, not just in administration. There are quite some legal and technical aspects to consider when institutions want to issue digital credentials to their learners. For example, you need an electronic seal to issue verified micro-credentials in the new Europass system. Many institutions don't have these e-seals yet; nor do they know how to approach the adoption of digital credentials. That is why we need a co-creative approach to build awareness and common practices for micro-credentials. And probably we need to set up new administrative roles within universities

Associate Professor of Information and Knowledge Management at Tampere University

HENRI
PIRKKALAINEN

Full Professor of Organic Chemistry at the University of Aveiro and Vice-Rector for Research, Innovation and 3rd Cycle at University of Aveiro

ARTUR
SILVA

"The European Commission is really trying to push policies to regulate the recognition of micro-credentials across European countries"

ARTUR
SILVA

for that. It's not a quick process unfortunately. We should build institutional readiness to adopt micro-credentials for the long run. And at the moment we're still experimenting and capturing the best ways how to approach this, I would say.'

What could be the role of ECIU University?
Pirkkalainen: 'ECIU University is a frontrunner that is widely experimenting with micro-credentials in wide-scale field trials. We constantly learn more about micro-credentials as we proceed. At the moment, we are actively cooperating with the EU, our national authorities and technology providers, such as Europass, a provider and a platform for micro-credentials. Many of the activities need to be expanded to ensure wide-scale adoption of micro-credentials and this is what we are devoted to do.'

Silva: 'We are the biggest consortium in Europe, constituted by twelve universities from different countries that considered micro-credentials as a topic of interest from the beginning. These two facts are the reason why, in my opinion, our consortium is so interesting for the European Commission. The significance of micro-credentials is very clear when one sees how the Commission is promoting and pushing this move-

ment to establish a common language and a clearly defined roadmap. The European Commission is really trying to push policies to regulate the recognition of micro-credentials across European countries.'

How will the future look considering micro-credentials?
Silva: 'If we are optimistic, we will have a comprehensive system ready by 2030. At that point, all learning outcomes can be realized in micro-credentials and we have established a digital world to store all information. Anyone who needs reskilling and upskilling will have the opportunity to show their micro-credentials to their potential employers.'

Pirkkalainen: 'In my opinion, technologies will mature more quickly than organizations and people. We are witnessing a major change management project that will take years to develop. It is therefore not a short-term movement. At worst, the micro-credential movement will lead to a privilege for the few, which we want to avoid. We are striving for wide-scale benefits of micro-credentials. In that way the learner will have an improved access to learning offers and, at the same time, better control and handling of the credentials that showcase their competence development over time.'

TAKE YOUR NEXT STEP WITH
MICRO-CREDENTIALS

ECIU
university

SKILLS

MEMBER
UNIVERSITIES
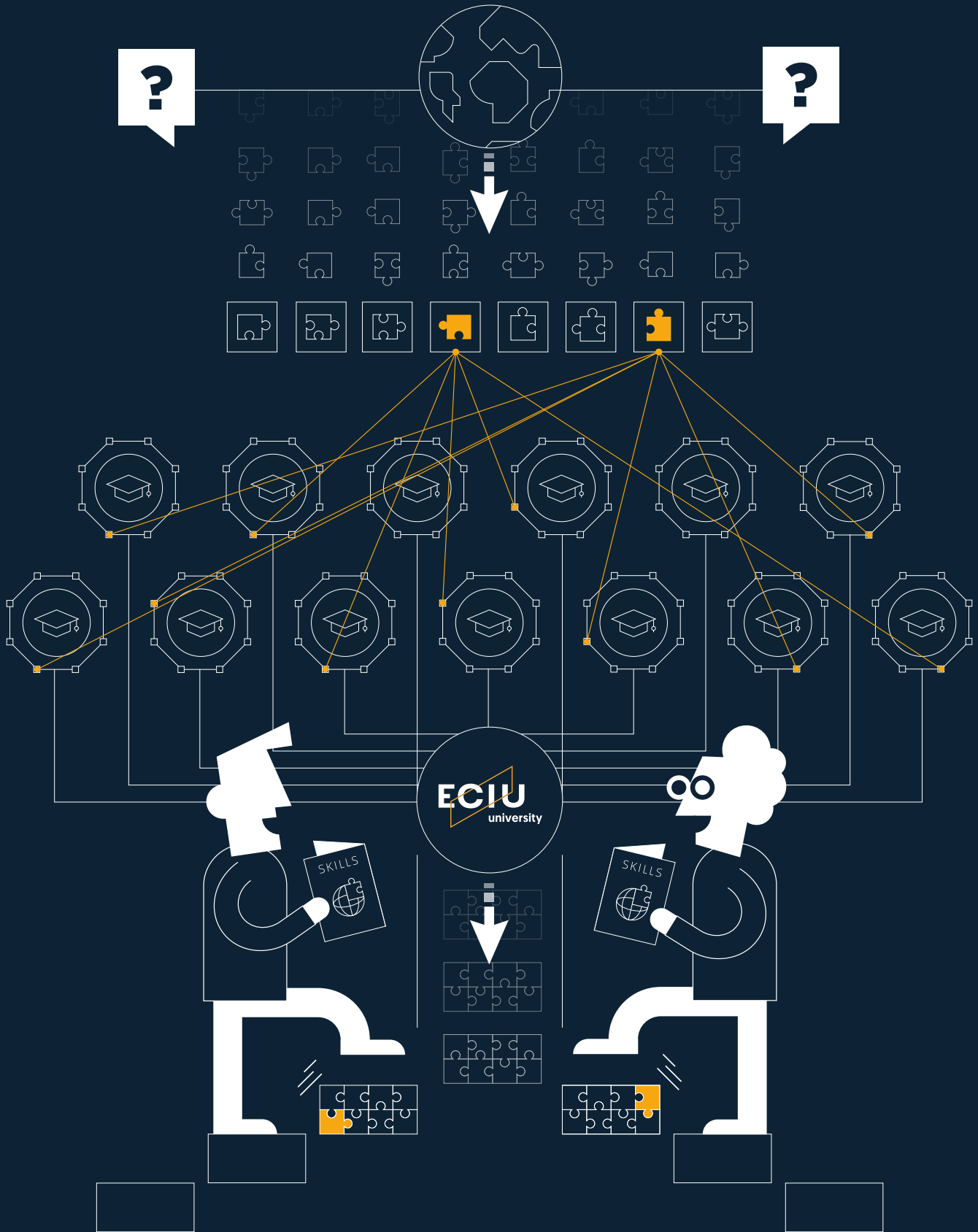
ECIU
CREDS

"THERE IS A SENSE OF SERENDIPITY ABOUT CITIZEN SCIENCE"

TEXT JELLE POSTHUMA

We know by now that citizen science is more than counting birds for researchers. In fact, many universities are strongly committed to the subject. But what role can ECIU University play in taking citizen science to the next level? Expert on the topic and Head of the Rector's Office at Universitat Autònoma de Barcelona, Xavier Ariño Vila, explains.

For our understanding: what is citizen science and why is it so important?

'Citizen science helps universities to open its doors to society and to its citizens. Citizens are not some kind of tool for our research: they should be the actors. It is important that they are actively involved in our research. The benefits are twofold: this, way, we improve our research and we improve our impact on society.'

In what way are you engaging with this subject?

'Since last year, we have been mapping out citizen science activities at various ECIU universities. The results were interesting. There are a lot of initiatives, but we have quite different views on the subject. It is a broad and flexible concept. In a general sense, it concerns participatory processes in research.

How can ECIU University include citizen science?

'To provide a structure or organisation for all initiatives regarding citizen science at our universities. There are many opportunities for institutionalising citizen science. That is the key. For example, when researchers need assistance on how to deal with the legal aspects of data and privacy, et cetera. With the help of so-called labs for citizen science, we can provide researches with better structures and facilities like repository for data. The most important thing is to make researchers feel that they are not on their own when working on citizen science.'

What will this look like for ECIU University in practice?

'At ECIU level, we want to create a Citizen Science Hub where we can share resources and facilities among institutions. We have been very lucky: one year ago, a call was launched by the European Commission on how to improve the research quality of European Universities. We used this call to prepare a new project in the context of ECIU university: Smart European Regions (SMART-ER, see also page 18). Citizen Science plays a big part in this call. This provides us with funding for the Citizen Science Hub. I am very optimistic. There are a lot of initiatives within the ECIU universities already. We have momentum - there is a sense of serendipity about citizen science.'

Dublin City University led the ECIU University Citizen Science Consultation event, last December, which saw over 80 participants from across the ECIU alliance connect and share their views on the topic of citizen science. All member institutions were represented on the day, with an audience comprising researchers, research support and development staff, postgraduate students, and other professional staff working in an ECIU member institution.

The consultation highlighted the strong appetite among the ECIU research community for the development, promotion, and institutional support of citizen science methodologies in research whenever relevant, and for the ECIU University to develop as a leader in the field. 75% of respondents on the day agreed that citizen science should be integrated into the whole research lifecycle (from problem definition to dissemination of results), and 73% of them believe that citizen science should, as much as possible, be an integral part of ECIU University activities.

"SCIENCE FOR WITH AND SOCIETY, THAT IS OUR MOTTO"

TEXT *RENSE KUIPERS*

SMART-ER is the very first virtual research institute of ECIU University, which officially launched in February. Xavier Gabarrell Durany (UAB) is the scientific coordinator of this Research Institute for SMART European Regions. 'Our best quality is our human capital. But it is also our biggest barrier.'

First off, what is SMART-ER?
'It is the first research institute embedded in ECIU University. Through a challenge-based approach we commit ourselves to design, develop and implement research linked to UN Sustainable Development Goal 11: sustainable cities and communities. The important distinction is: we focus on smart regions, not just smart cities. That allows us to better study entire ecosystems, instead of just urban areas or the natural environment. We look at the complete picture. The benefit of being embedded in the ECIU consortium is that we have the opportunity to learn from other regions. We all have our local accents but together, we are Europe. Because we are interconnected, we have a shared ground and understanding. If we share our thoughts, ideas and progress, we can all reach our targets.'

What is the current status of the institute?
'We are in a preparatory phase. It is like being a teenager: we are exploring, building and developing. We are defining the roles, the programmes, projects and the overall framework. That is what this first year is meant for. And we want to create a community, since our best quality is our human capital. But it is also our biggest barrier. That is why it is a significant challenge to first create internal engage-

ment. In the second and third year of SMART-ER, we aim for implementation on different levels, like pilots from the Seed Programme.'

What will the challenge-based approach mean for people who are or want to be involved?
'It is definitely a new approach for a lot of researchers and it could possibly change their work fundamentally. Within academia itself, it requires a multi-disciplinary approach with different fields working together to solve societal problems. But also in our external engage-ment with stakeholders – be it NGO's, municipalities, other local entities or citizens – we are moving our focus.

> **"As a scientist, it requires you to work on what society needs, not what you were doing"**

How does the pandemic affect starting up a virtual research institute?
'The idea is to take the lessons we are learning now and profit from them in the future. I do not know what the future will hold, but I do
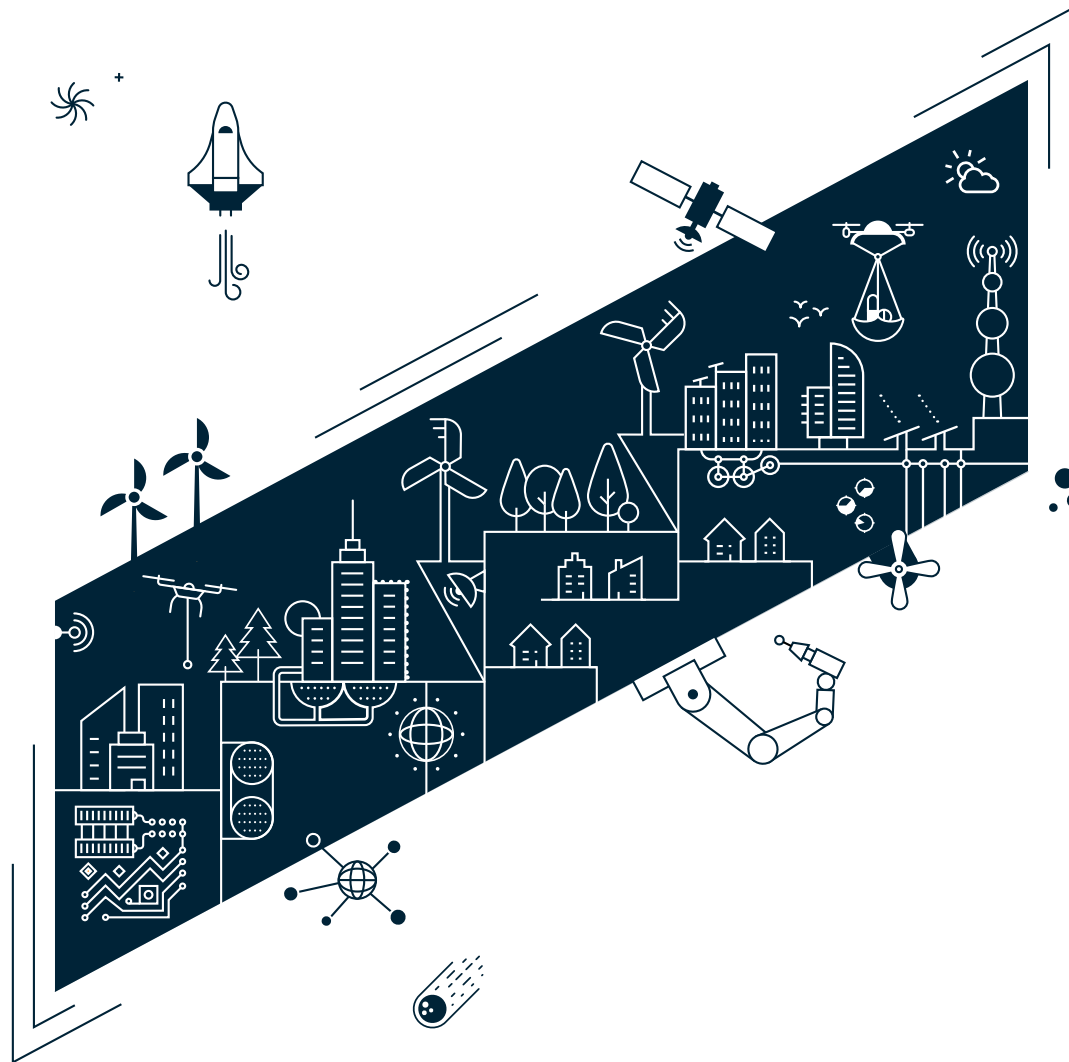
know that we need to meet people from other institutions physically – at least sometimes. We have included a staff mobility programme in our proposal, since part of creating a community is having mobility on different levels.'

How does being part of SMART-ER benefit researchers?
'We think this approach can help researchers in being successful in a lot of national and international calls. Naturally, it is an everyday business for scientists to apply for funding. But having stronger links through and within this research institute helps them to do it in a more structured way, more efficiently. Obtain more, with less effort.'

When would this institute be a success?
'We will take it step by step, so we have a few years to consolidate. It starts with internal engagement, followed by external engagement. There is no lack of excellent staff and students. But the success of this institute is intertwined with academia moving to a different playing field: the one where societal impact becomes more important than papers, projects and funds. Science with and for society, that is our motto. We put this discussion on the agenda. Even though we just started off, I hope that ECIU University will have more projects like this in the future.'

XAVIER
GABARRELL DURANY

Who is Xavier Gabarrell Durany?
Xavier Gabarrell Durany, Professor in the Department of Chemical, Biological and Environmental Engineering at the Universitat Autònoma de Barcelona (UAB). He is scientific coordinator of the SMART-ER in the ECIU University. He leads the research group on Industrial Ecology called Sostenipra and the Fertilecity project. He is an expert in circular economy, urban agriculture, life cycle analysis, material flow analysis, and waste management.

Research Mobililty Fund ready for relaunch

TEXT *RENSE KUIPERS*

After the pandemic got in the way of staff exchange and strengthening research collaborations, the Research Mobility Fund (RMF) is ready for a relaunch in 2021. 'It comes down to communication and dissemination. People need to know that they can apply.'

VERA

FERNANDES

University of Aveiro

The fund was launched in 2018. 'With the main objective being to foster the network and strengthen the research collaborations amongst ECIU Universities,' says Vera Fernandes, the RMF local coordinator from the University of Aveiro. 'It allows researchers, PhD candidates and research support staff to travel abroad and collaborate with people from other institutions within ECIU.'

According to Fernandes and international coordinator Jack Zhe Yang (Linköping University), the programme has been quite a success since its launch. 'The fund made it possible for nearly fifty visits within the ECIU network,' says Yang. 'What is quite interesting is the amount of time the researchers spent on exchange: fourteen days on average. That is quite something, considering their limited amount of time and the new minimum of five working days we set.' Still, for one university the fund has been more successful than the other, adds Fernandes. 'It comes down to communication and dissemination. People need to know that they can apply.'

That is why the coordinators want to spread the word about the Research Mobility Fund. 'We have updated the website and we are having more internal meetings, to exchange best practices and learn from each other,' says Yang. There is plenty of room to grow, he knows. 'Applicants may apply for up to €5,000, but the average is €2,000. With the budget the universities put in, we can have about a hundred visits each year.'

For its relaunch this year, the fund has become more focused on research that fits in with the Sustainable Development Goal 11: Sustainable cities and communities. Fernandes and Yang hope international travel will soon be possible again, once the pandemic tapers off. 'We have to keep hope things will get better soon,' says Fernandes. 'This form of staff mobility definitely pays off in researchers submitting grant applications together, knowledge exchange and stronger collaborations.'

If you're looking for more information about the Research Mobility fund and/or want to apply, go to this webpage:

https://www.eciu.org/for-university-staff/researchers-mobility-fund

"IT NEEDS TO BE RELEVANT, IMPACTFUL AND NOT HAVE A SOLUTION YET"
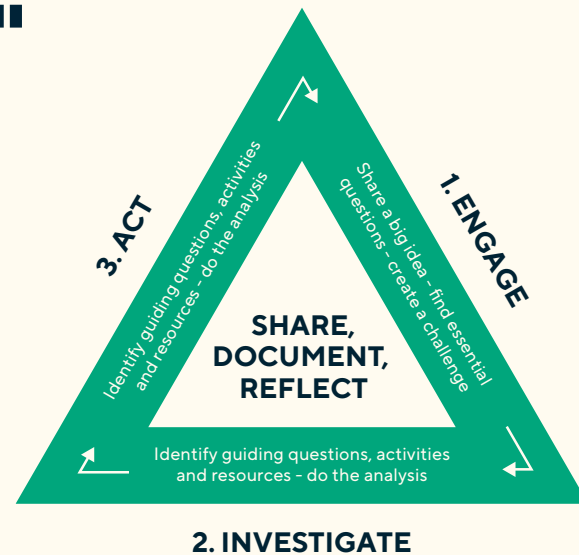
TEXT
MICHAELA NESVAROVA

ANDREA **BROSE**
Hamburg University of Technology

Challenge-based learning is at the heart of ECIU University. What does it look like in practice? 'Learners will work on issues that have no solutions yet,' says Andrea Brose, who leads the work package on challenge-based education.

3. ACT
Identify guiding questions, activities and resources - do the analysis

1. ENGAGE
Share a big idea - find essential questions - create a challenge

SHARE, DOCUMENT, REFLECT

Identify guiding questions, activities and resources - do the analysis

2. INVESTIGATE

How is challenge-based learning set up within the ECIU University?

'At this moment, the challenges are embedded in preexisting modules because that allowed us to set them up rather quickly. Only students from our universities participate, but soon we want to include 'life-long learners', or rather continuing education and professional development.'

How are the challenges selected?

'They have been collected within our network. There are some criteria for us to accept a suggested challenge. It needs to be relevant, impactful and not have a solution yet. We are currently focusing on challenges related to Sustainable Development Goal 11 on sustainable cities and communities, because our universities have a common strength in this domain. Selected challenges are advertised on our website and learners can choose which one they find the most interesting. If not enough people are interested, it means the challenge doesn't get picked up. If it does, students are divided into diverse teams and start working on a solution together. The solution can be a prototype, but also a conclusion that the question cannot be answered yet.'

Can you mention a couple of examples of challenges students can already work on?

'For instance: Promoting active means of transportation in Hamburg. I like this one, not only because it is focused on my home city, but because it is a big idea which leaves a lot of room to look at the problem from many perspectives.'

What type of challenges do you envision people working on in five to ten years' time?

'I envision challenges big and broad enough for people to completely design their own learning path. I imagine they will be driven by local and regional issues, but can provide answers that go beyond.'

Do you see challenge-based learning as the future of education?

It may not be for everyone, I believe it could be embedded more in our entire educational system, so that we grow up with it and get used to co-creating our learning path. It certainly has the potential to shape the future of education.'

Within the ECIU University, challenge-based learning means putting the learner in the center of their educational process. The learner needs to be in the driver's seat and they should be able to pick the topic they are genuinely interested in. Learners work in international and multidisciplinary teams, tackling issues that have no solutions yet. Because of this, their education will have a true potential for impact.

"I HAVE LEARNED TO STEP UP AND ASK QUESTIONS"

Federica Tagliavini, Master student European and International Studies at the University of Trento, took part in the Autumn Challenge, an extracurricular education programme powered by ECIU University at the University of Twente.

Please tell us about your findings and experience.... 'I mastered new skills and I learned new things both through online classes and group-work exercises. As students we are free to manage our challenge on our own: decide the outcome, what steps to take to reach our ultimate goal.'

Why did you decide to take part in the challenge? 'I am studying international relations; therefore, I was looking for something that could enable me to work on real-life issue. Moreover, the international characteristic of this experience intrigued me.'

What do you get out of it? 'To learn to work in a group. We must divide tasks, present as a fully-fledge group to other individuals, meet the deadline on time, and try to find a collective solution to our challenge. Generally speaking I am a shy person, but I have learned to step up and ask question in a big, multicultural environment, even online.'

If you recommend this to another student, what would you say? 'Through this program you have the chance to work on a real-life issue and the research will be valued and used to improve the current situation. I would also say that he will have the chance to learn about many different things.'

SMART CITY SOLUTIONS

Kaunas Municipality aims to improve the life and well-being of citizens. The city involved students of Kaunas University of Technology (KTU) into solving the real challenges the city faces.

The Kaunas city challenges were introduced to the students of Computer Intelligence and Decision Making, a challenge-based module created by KTU. Students had to solve efficient resource management, air pollution, optimal routing of waste collection, parking, and road pothole challenges.

'Kaunas has strong universities and scientists working and living in the city who are very familiar with everyday problems. Therefore, the emerging partnership between the city and science, the ideas and solutions created by students and scientists on how to overcome the challenges and manage the city's resources, are very gratifying', says Dr Varžinskas, the Head of KTU Centre for Packaging Innovations and Research.

Agnė Paulauskaitė-Tarasevičinė, associate professor at KTU Department of Applied Informatics and the coordinator of ECIU challenge-based (CBL) module, shares her insights of working with students on Kaunas city challenges: 'From the start, challenge-based learning methodology sounded very interesting to me as this methodology perfectly suits to bridge the gap between technical and soft skills.'

'It was a new experience to engage the students into the decision making through CBL. Initially, the methodology itself was not very comfortable for the students, but later students were actively involved in the discussions, suggested a lot of possible solutions to the challenge and after all we have approved five ideas. Three of these had the potential to be developed as real solutions in Kaunas city. So, I am really satisfied with results bearing in mind that the duration was 3 months only.'

TRIPLESOLUTION FOR TRANS- PORTATION

Students Arne Kragseth and Elisabeth Stene from University of Stavanger came up with a triple solution for a better mobility in the Stavanger region. In a challenge, they worked with regional mobility provider Kolumbus, exploring barriers to increased use of public transport.

They came up with a three-pronged solution: Employing different-sized buses, even single-user podcars, introducing self-driving vehicles, and using artificial intelligence to solve the logistics.

The Stavanger region is sprawling, with many sparsely populated neighbourhoods. This makes it difficult to create a comprehensive public transport system. The students suggested using podcars to take the customers directly to their destination, or to one of the main bus lanes for a longer journey. This solution would be flexible, and therefore increase use of public transport. It would also reduce congestion, energy use and parking needs.

Elisabeth Stene (economics), took part in the ECIU Creathon at Twente University in 2018. 'That experience inspired me to challenge my mindset. So when this project came up, I naturally wanted to be part of it. I cannot speak highly enough about this way of working with society', she says.

Arne Kragseth also values having had the opportunity to work on a real case. 'Academic studies can be quite far removed from the practical world, so this was very valuable,' he says.

"A VALUABLE ADDITION TO MY STUDIES"

Robin Ross (19) is a second-year UT student and took part in the Autumn Challenge , powered by ECIU University and the University of Twente. His participation was based on personal interest. 'It is a nice addition to my academic work.'

What he is looking forward to most is writing strategic policies and working out scenarios. 'Work that I have never done before. A good learning opportunity. We work hands-on and learn in practice.'

Together with four other students, Ross worked on a challenge from the municipality of Enschede that needs a strategic policy for the transformation to a circular economy and the role the government plays in this. It was up to the students to do research, carry out analyses, collect best practices and conduct interviews with entrepreneurs and to talk to other, relevant stakeholders from the field.

That all these activities contributed to the solution of a real, existing issue was a big plus for Ross. 'It was not made up. We have worked in an existing environment with experts. That is a big difference compared with fictitious cases. This was much more awesome. In these few weeks, I have got to know many people, worldwide, developed new skills, and met the real work field.'

THE ECIU UNIVERSITY ECOSYSTEM
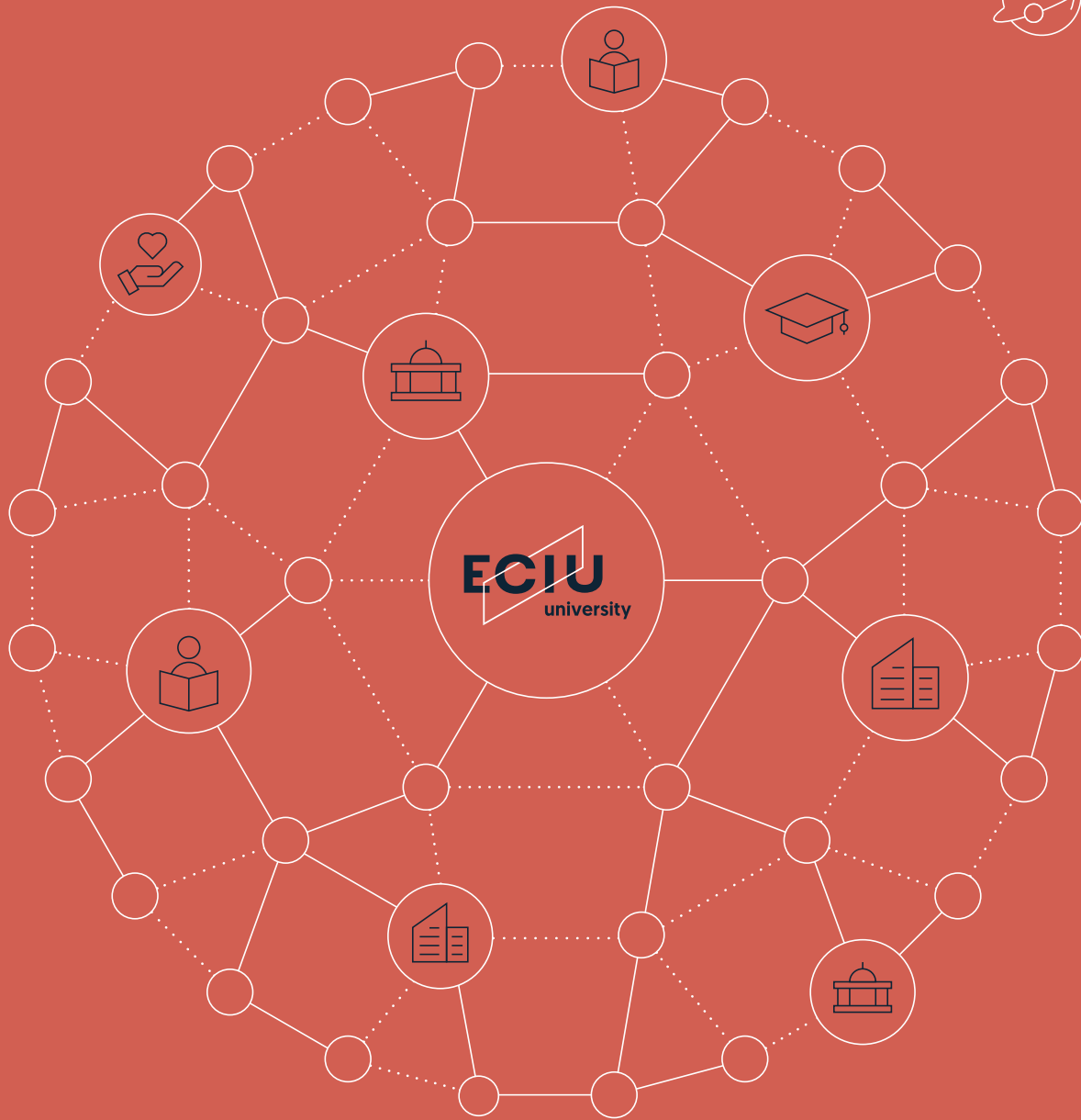
ECIU
university

INDUSTRY
& SME'S

LEARNERS

NGO'S

REGIONS &
MUNICIPALITIES

UNIVERSITIES

CO-CREATING THE FUTURE

'ECIU University believes in a European-wide ecosystem based upon open and inclusive collaboration connecting industry, societal stakeholders, researchers and learners to provide European answers to future societal challenges', says Jan Axelsson, Director of Collaboration at Linköping University.

Through the twelve Local Partnership Arenas (LPA:s), set up by the ECIU University initiative, contemporary challenges for the advancement of a future viable society are sourced, discussed, refined and eventually posted as defined challenge-based learning opportunities for ECIU students and researchers.

'The Local Partnership Arenas are built on quadruple-helix settings, involving private, public, as well as civic partners, and academia. Together with the stakeholders challenges are humanized through personal narratives, and further contextualized by discussions in so called 'Society Quests' events all over Europe.'

In the coming step, the ECIU University will refine the potential offers of 'glocal' Challenge-Based Learning, Research and Innovation opportunities supported by a constellation of multi-sector collaborators in 'think tanks'.

Axelsson: 'An ECIU University Challenge Partner is not only the supplier of the challenge but is also actively involved in the progress of the work. Sometimes participating in the project challenge-solving process as an external specialist, or maybe as the most preferred adopter of results or even as a co-learning member of the development team.'

To further strengthen a challenged-based innovation and societal impact strategy, on European level, ECIU University has set up Innovation Hubs at three locations:

Innovation Hub North
Coordinated by Linköping University
Including Tampere University,
Kaunas University of Technology
and University of Stavanger.

Innovation Hub Mid
Coordinated by Hamburg University of Technology. Including University of Twente, Dublin City University and Aalborg University.

Innovation Hub South
Coordinated by Universitat Autònoma de Barcelona. Including Group INSA (France), University of Aveiro, and University Trento.

'The hubs provide our societal stakeholders, learners and research entrepreneurs with a gateway addressing societal impact on a collective basis, sharing resources, networks, and expertise for the support of successful implementation of innovation', says Axelsson.

"WE ARE REINVENTING OURSELVES THANKS TO ECIU"

TEXT SANDRA POOL

The landscape of higher education is changing. This requires a different kind of university, with more focus on skills, providing personal, flexible learning paths. The ECIU University meets that need. Victor van der Chijs will stop as president of the European Consortium of Innovative Universities (ECIU). A retrospective - and an outlook.

Almost four years of being president, now nearly over. How do you look back on that period?

'With pride and with great pleasure. I've noticed that the thirteen partner universities are growing closer. That was everyone's wish from the get-go. The call from the European Union, which led to the creation of ECIU University, accelerated the pace of cooperation. Initially, it was mainly about exchange, education and the leadership program for future leaders. Now, we are taking bold steps together to develop the education of the future. And we can, because the consortium has existed for almost 25 years now. We know each other well and there is a lot of mutual trust. Each partner university has reinvented itself in part thanks to ECIU.'

What are the next steps?

'Of the 41 European university alliances participating in the European Commission's call to consider the university of the future, ECIU is the largest group with the longest history. Our programme is ambitious; that makes us one of the frontrunners in Europe at the moment. For example, we recently wrote a whitepaper to gain a better understanding of issues relating to micro-credentials. The contact with Brussels is also good. This is partly due to having our office in the Belgian capital. We regularly speak with European Commissioner Mariya Gabriel, whose portfolio includes education. She said to us recently: "You are the future of higher education in Europe and are showing how things should be done." A wonderful affirmation. Now it's up to us to deliver.'

And how does that work in practice?

We are making full use of the potential of the consortium. We take full advantage of each other's knowledge and skills. On the topic of micro-credentials, for example, Dublin City University is in the lead because of their experience in this area. And when it comes to digital learning, Tampere University plays that role. There is a lot of enthusiasm and commitment and our learning curve is very steep. If something ever doesn't work out, we are honest with one another and look at how we can help each other to achieve our goals. There have been plenty of such examples in recent years. It is a huge puzzle, and if you want to do it right, you need to look ten years ahead. That's what we agreed upon together. This won't stop after the pilot. For example, we are already working on getting an ECIU digital platform aligend.'

VICTOR **VAN DER CHIJS**
University of Twente

What does ECIU University mean for UT?

'The ECIU University is a vehicle for innovation, in terms of both research and education. This must be embedded within the faculties. We had a great discussion with the University Council on how we, UT, can derive maximum benefit from the consortium. The faculties are very eager but also still putting the puzzle together. This is pioneering. Within the academic world, there are always people who want to experiment and say 'come on, let's get on with it'. We are part of a pilot, and that things are going wrong is part of the process. We've allowed room for that.'

What ingredients should definitely be included in the recipe for future-proof education?

I think about my sixteen-year-old son, who will soon be going to university, and what I would love for him to have access to by then. Definitely the option of adjusting his learning path along the way. I studied law myself, simply because I didn't know what I wanted. If only I could have changed halfway! Eventually, my interests turned more towards political science. Room to experiment and switch must be built into the system, along with options for gaining international experience, learning to work together and finding out how society works. My son will soon learn that a problem can have several solutions and that these ought to be tackled together, in multidisciplinary teams. That is exactly what we are doing with ECIU University.'

And if you look at the university itself, how will it evolve?

On top of, or parallel to, or within the current educational institutions, a flexible structure is starting to arise. This allows students to learn in a different way, to get acquainted with new disciplines and to contribute to solving social problems. It is up to the student whether he or she does eighty percent of his or her studies within the 'established order' and twenty percent within the 'super structure', or fifty-fifty or even one hundred percent superstructure.'

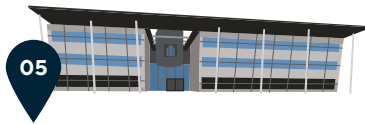**What do you wish for the ECIU University?**

'To continue innovating. The partner universities have found each other on all fronts. That step has been taken. Now the ECIU University needs to land the plane within the institutions. This movement has been set in motion and is our answer to the call to develop the education of the future. Society needs broadly developed talents with more focus on skills. It is a great thing to be able to anticipating for this already.' ✐
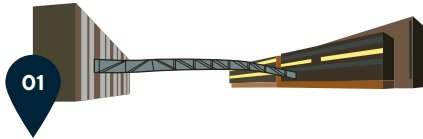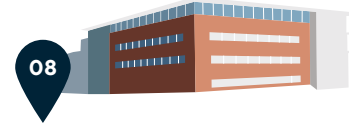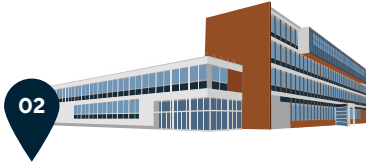
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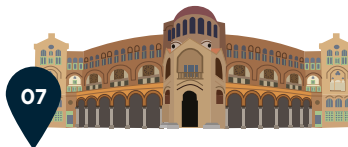
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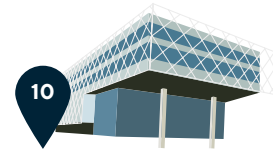
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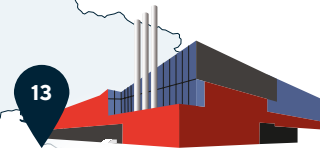OF TECHNOLOGY
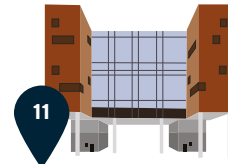
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UNIVERSITY
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Mexico, Monterrey

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