

# Issuing e-sealed micro-credentials

**Online event**  
**17 November, 10:00 CET**



Co-funded by  
the European Union





# THE FUTURE OF MICRO-CREDENTIALS

INSIDE AND OUTSIDE UNIVERSITY ALLIANCES

ANTHONY F. CAMILLERI

KNOWLEDGE INNOVATION CENTRE

HOW IS THE  
LANDSCAPE  
CHANGING?

AI

...AI

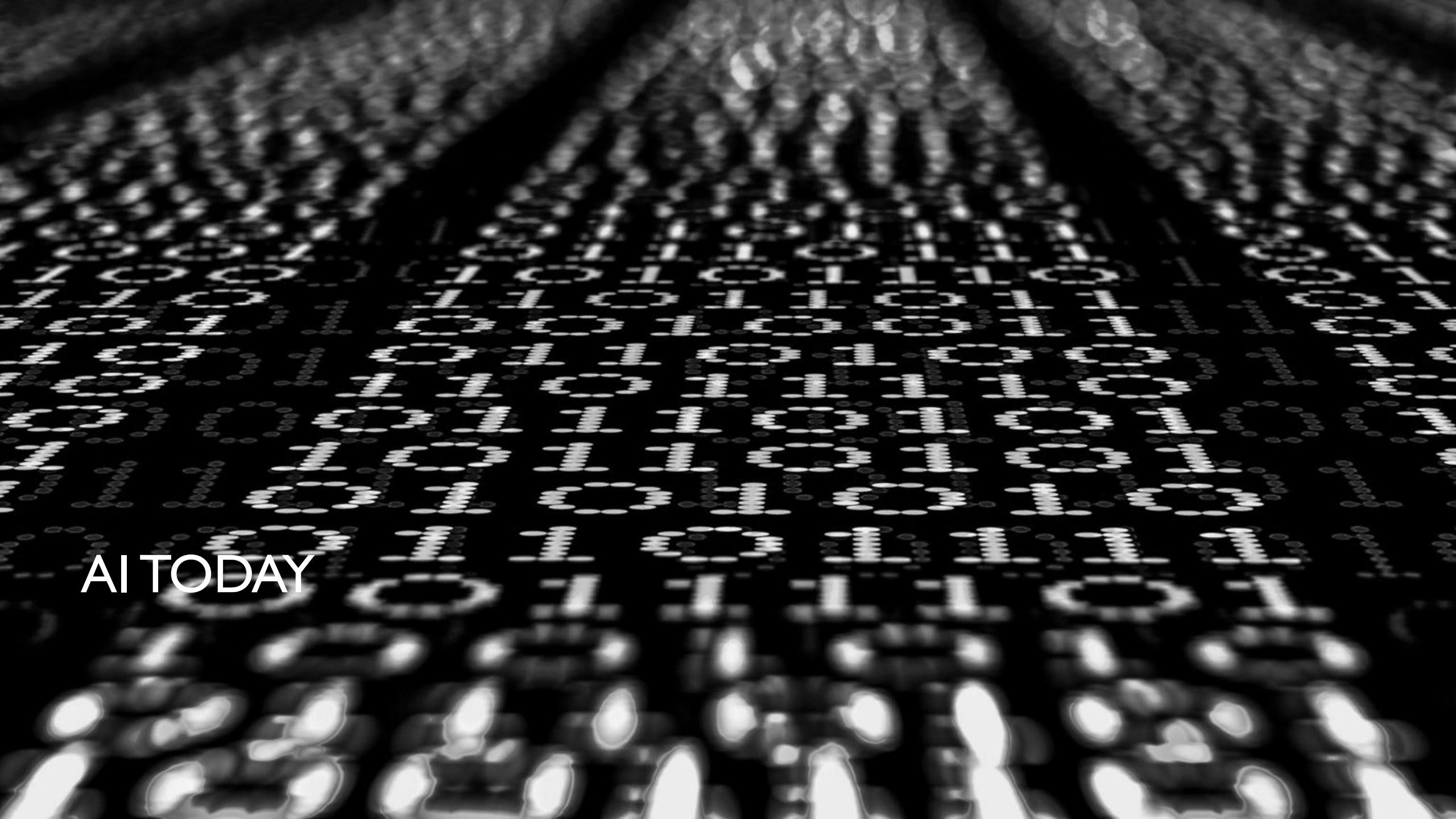
.....AI

HOW IS THE  
LANDSCAPE  
CHANGING?

## Micro-Credentials for Virtual Mobility

Evolving Trust Landscape

Diverging Employer and  
Institutional Recognition

The background is a dark, abstract space. It features a grid of binary code (0s and 1s) in white, which is slightly blurred and appears to be moving. Overlaid on this grid are several large, glowing white, organic shapes that resemble stylized leaves or petals. These shapes are more concentrated in the lower half of the image and appear to be falling or drifting downwards.

AI TODAY



**Massively accelerate our ability to ingest and compare information**



**Massively accelerate the process of media creation**



**Replace many forms of Tutoring**



**Lower Costs of Content Translation**

**IN THE SHORT-TERM AI WILL ALLOW US TO**

## Course

1 / 8





## Glossary

Brain

Course

Glossary

Concepts Cards

Quiz

Flashcards

Summary

Learn on the go

Summary & submit

> Anatomy

> Auditory cortex

> Brainstem

> Cerebellum

> Cerebral cortex

> Cerebrum

> Cognition

> Corpus callosum

> Electroencephalography

The cerebrum is also known as the \_\_\_\_ brain.

Turn

Card 1 of 10



## Quiz

Brain

Course

Glossary

Concepts Cards

Quiz

Flashcards

Summary

Learn on the go

What is the name of the structure that connects the two sides of the brain?

Prefrontal cortex

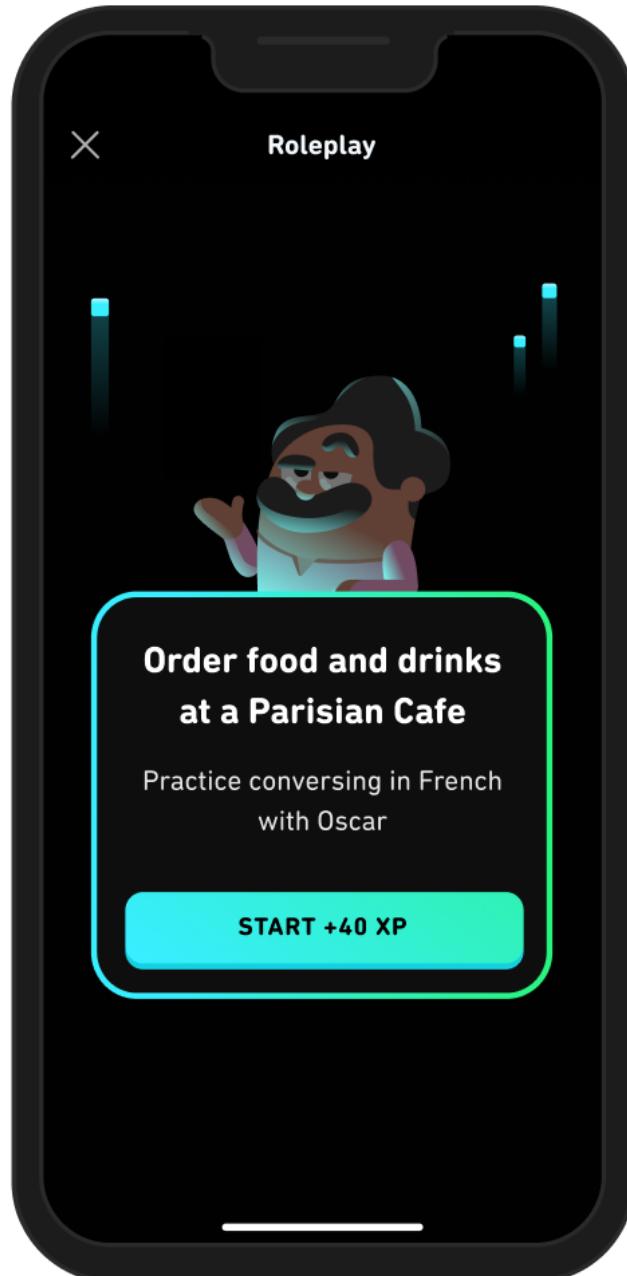
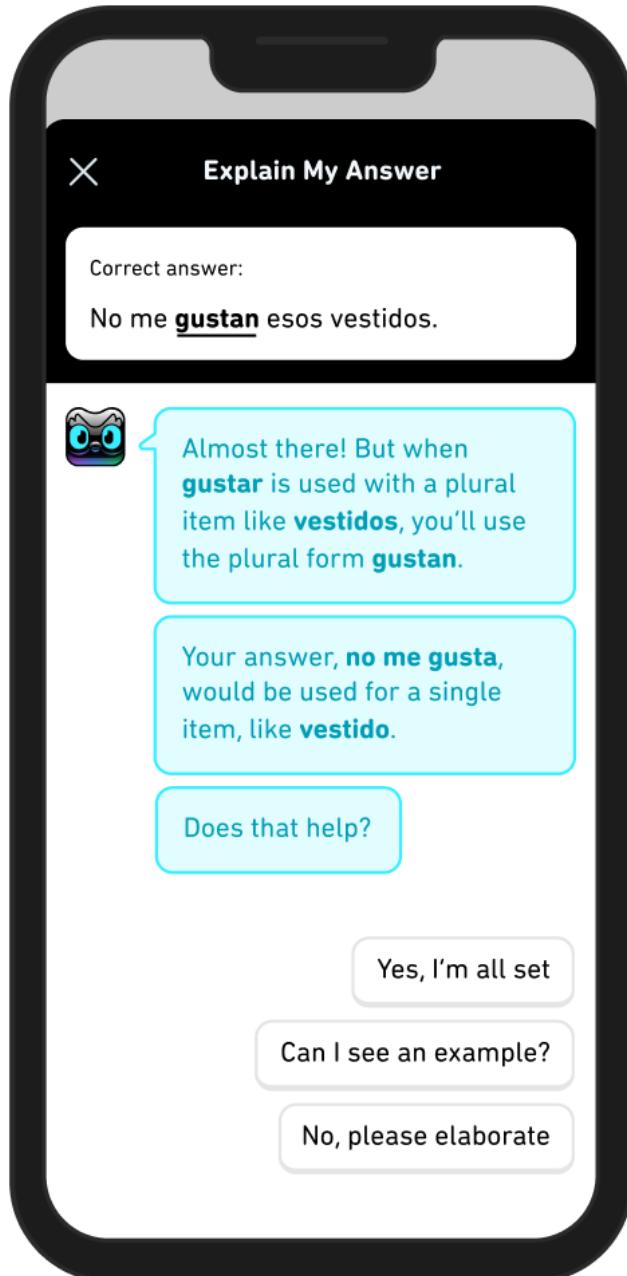
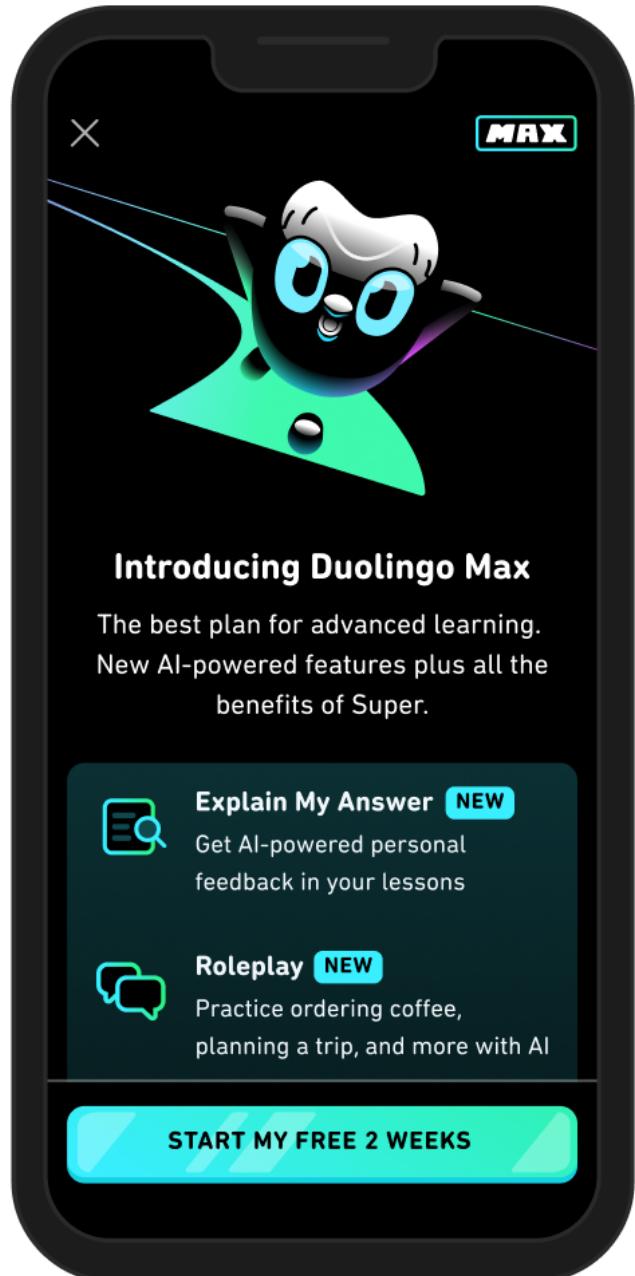
Corpus Callosum

Limbic system

Pituitary gland

Check







Khanmigo  
AI power

This conversation is recorded and viewable by your parent and teacher.

Can you just tell me the answer?

It's important that you learn how to do this yourself! What do you think you need to do to multiply 2 by  $5/12$ ?

They need the same denominator.

That's a good thought, but in this case, you don't need to find a common denominator because you're multiplying, not adding or subtracting. What else could you try?

Type message (do NOT share any personal data)



Clear chat



Khanmigo  
AI power

Let's start by discussing some details about your class. What grade level and subject do you teach? And what's the topic you want to create a lesson for?

I teach sixth grade English Language Arts. I want a lesson to help students learn how to identify, summarize, or explain the main idea using supporting details in an expository text.

That's a great topic! Have your students had any previous lessons on identifying the main idea or summarizing expository texts?

No

Type message (do NOT share any personal data)



Clear chat



Khanmigo  
AI power

This conversation is recorded and viewable by your parent and teacher.

Tell me more about your character. What are her interests, talents, fears, and dreams?

She likes dogs. She's good at writing.

She's scared of the dark. She dreams about changing the world.

That's a great start! Now, let's think about what kind of story we want to tell. What kind of goal or problem might your character face?

Type message (do NOT share any personal data)



Clear chat



# AI INTERPRETATION



Massively accelerate our ability to ingest and compare information

Massively accelerate the process of media creation

Replace many forms of Tutoring

Lower costs of Translation

 Integrate different materials and methods from hundreds of courses

 package learning in multiple formats: textbook, stories, presentation, video

 Make personalised tutoring part of every homework assignment

 Enable new Forms of Multi-Lingual Learning

IN THE SHORT-TERM AI WILL ALLOW US TO



“AI will become the calculator  
for micro-credential design”

Inspired by...Erik Brynjolfsson – Professor of Economics & Information  
Technology at Stanford

HOW IS THE  
LANDSCAPE  
CHANGING?

## Micro-Credentials for Virtual Mobility

Evolving Trust Landscape

Diverging Employer and  
Institutional Recognition

## WHAT IS THE STATUS OF MICRO-CREDENTIALS TODAY?

33

European University Alliances

Currently implementing or planning to  
implement micro-credentials

Source: 2023, Making Interoperability Work,  
HochschulForum Digitalisierung

## WHAT IS THE STATUS OF MICRO-CREDENTIALS TODAY?

4

European Countries

Have policies for the recognition of micro-credentials (with 8 more discussing)

Source: 2021, Micro-credentials and Bologna Key Commitments - State of play in the European Higher Education Area, MICROBOL.

## DOMINANT FACTORS IN MICRO-CREDENTIAL OFFERS BY UNIVERSITY ALLIANCES

- Micro-Credentials are typically offered to students coming from institutions within the alliance – some alliances offer micro-credentials to the general public;
- **Recognition** of micro-credentials is nearly entirely within the alliances
- Many institutions see micro-credentials as **Erasmus-lite** an alternative or complement to mobility experiences, or as a mechanism to facilitate joint awards

# FLEXIBILITY IS INCREASING – WITHIN LIMITS

Micro-Credentials used to:

- build learning pathways crossing multiple institutions
- experiment with new learning methodologies
- do some examples of

# UNIVERSITY ALLIANCES HAVE NOT

- Significantly changed the structure of the student population
  - no upskilling at scale of adult learners;
  - no use of micro-credentials to increase access

## WHAT IS THE STATUS OF MICRO-CREDENTIALS TODAY?

12

MOOCs with over  
a million users in 2022

(none are from the EU)

## SCALE IS HARDER TO ACHIEVE AT HIGHER LEVELS

3%

of the top 250 MOOCs are  
at advanced level



Is a Focus on Virtual  
Mobility distracting from  
scaling micro-credentials?

HOW IS THE  
LANDSCAPE  
CHANGING?

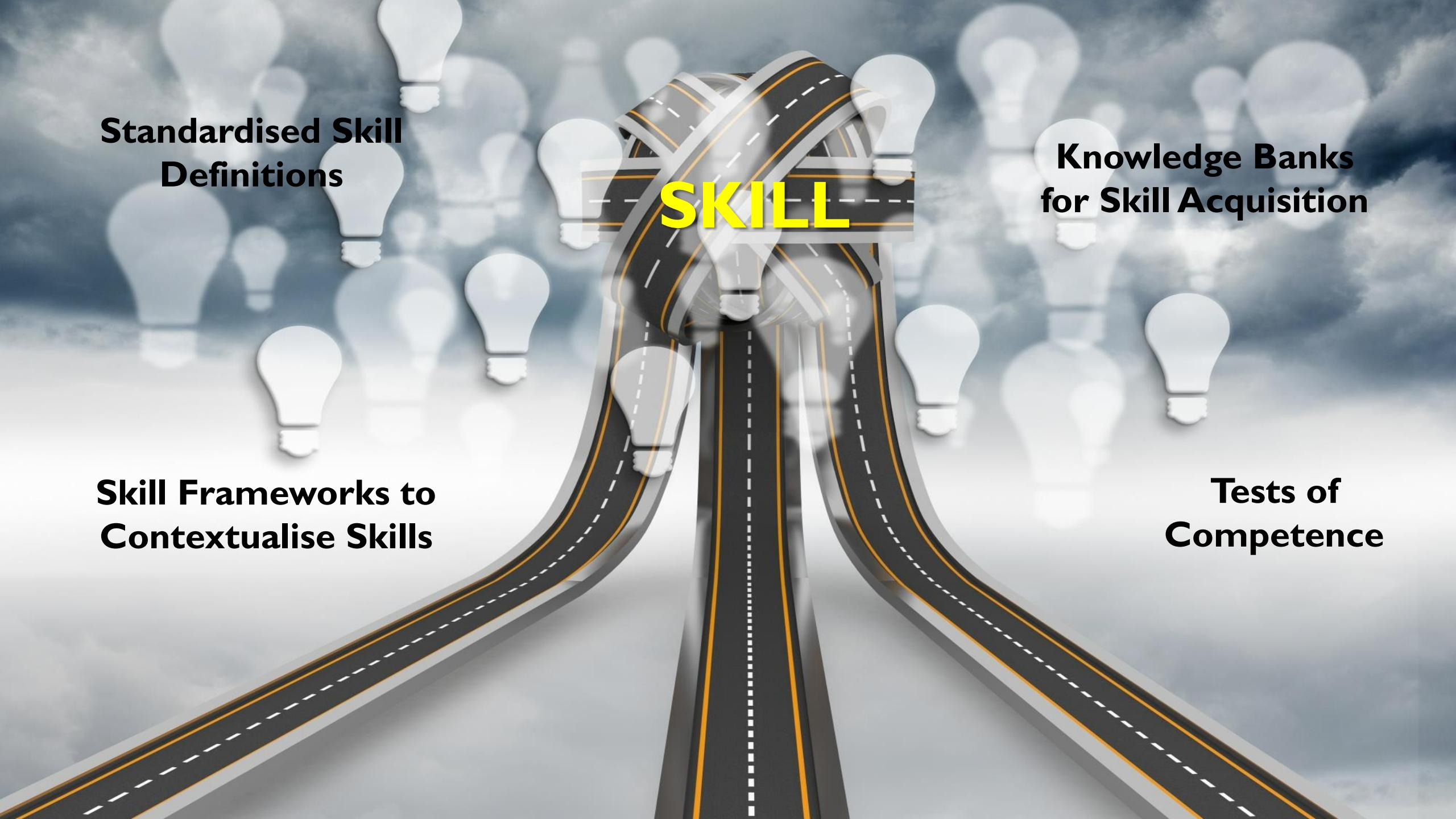
## Micro-Credentials for Virtual Mobility

Evolving Trust Landscape

Diverging Employer and  
Institutional Recognition

## WE HAVE MANY OF THE TOOLS TO UNDERSTAND THIS

- Digital Credentials are able to capture complex awarding processes
- The need for Digital Signatures is no longer up for discussion
- Trust Registries provide a link between accreditation processes and credentials/diplomas

A 3D rendering of a winding road with a dashed white line and a solid yellow line. The road is set against a background of a cloudy sky with numerous white lightbulb icons scattered throughout. The word "SKILL" is written in large, bold, yellow capital letters across the center of the road.

**Standardised Skill Definitions**

**Knowledge Banks for Skill Acquisition**

**Skill Frameworks to Contextualise Skills**

**Tests of Competence**



IS THIS EASY TO UNDERSTAND?

## LARGEST CHALLENGE

- Where to find trusted micro-credentials from European Universities / Alliances?

HOW IS THE  
LANDSCAPE  
CHANGING?

## Micro-Credentials for Virtual Mobility

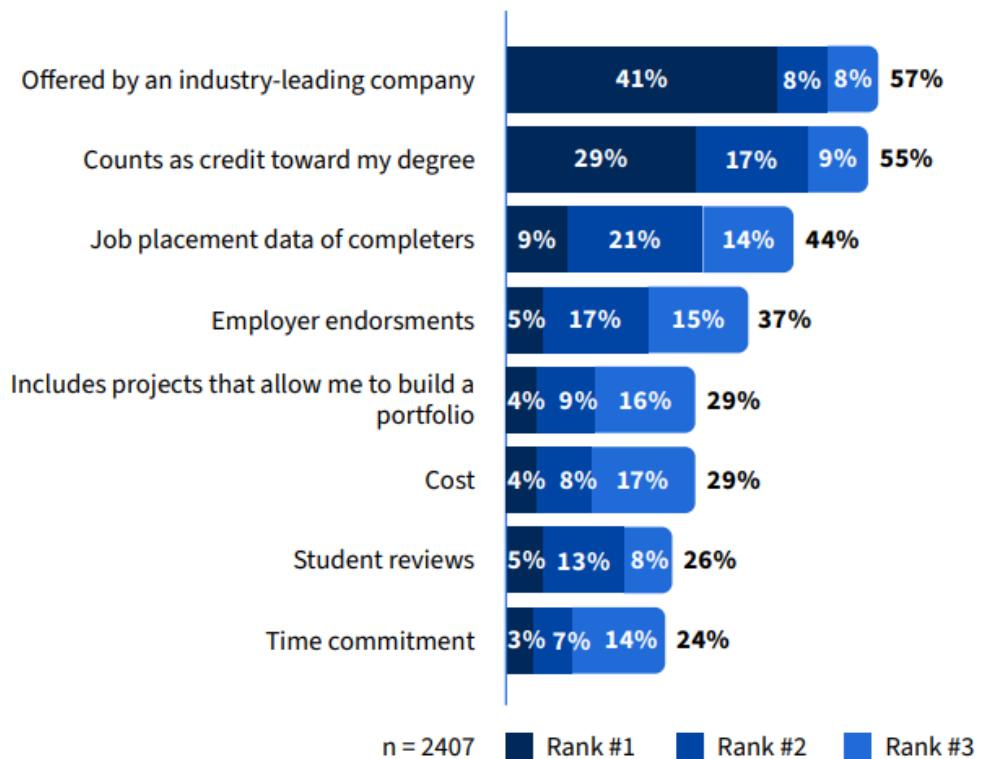
Evolving Trust Landscape

Diverging Employer and  
Institutional Recognition

# ARE WE FOCUSED ON THE RIGHT THINGS?

**Figure 3: Key factors in deciding to earn a Professional Certificate (students)**

**Question:** What factors would you consider when deciding to earn a Professional Certificate? (Select the top 3 and rank them, with 1 being most important)



## WHAT IS THE STATUS OF MICRO-CREDENTIALS TODAY?

27 Million LinkedIn Learning Users

Source: LinkedIn

# FUTURE OF MICRO- CREDENTIALS IN INDUSTRY

The screenshot shows the SAP Growth Portfolio app interface for a user named Jada Baker, a Retail Sales Associate. The interface is divided into several sections:

- Profile Section:** Displays the user's name, photo, and title.
- Recommended for You:** A grid of five cards, each representing a skill recommendation:
  - Visual merchandising Skill: Recommended based on activities in SAP SuccessFactors. Buttons: Add, Skip.
  - Upselling and Cross Selling Skill: Recommended based on activities in SAP SuccessFactors. Buttons: Add, Skip.
  - Marketing awareness Skill: Recommended based on activities in Microsoft Teams. Buttons: Add, Skip.
  - Adaptability Skill: Recommended based on activities in Microsoft Teams. Buttons: Add, Skip.
  - Time management Skill: Recommended based on activities in SAP SuccessFactors. Buttons: Add, Skip.
- Aspirations:** A section showing three aspirational goals:
  - Changing My Career Path (Aspiration)
  - Becoming a Skill Expert (Aspiration)
  - Becoming a High Potential (Aspiration)
- Skills:** A section showing proficiency levels for various skills:
  - Market Research Skill: 3/5 (Current: 3 - Proficient) with an Edit Proficiency button.
  - Creativity Skill: 4/5 (Current: 4 - Expert) with an Edit Proficiency button.
  - Product Development Skill: 3/5 (Current: 3 - Proficient) with an Edit Proficiency button.
  - Customer Service Skill: 4/5 (Current: 4 - Expert) with an Edit Proficiency button.
  - Culinary Science Skill: 5/5 (Current: Cumulative) with an Edit Proficiency button.
- Competencies:** A section showing proficiency levels for various competencies:
  - Making a Strong Impression Competency: 3/5 (Current: 3 - Proficient) with an Edit Proficiency button.
  - Resolving Conflict Competency: 3/5 (Current: 3 - Proficient) with an Edit Proficiency button.
  - Making Convincing... Competency: 3/5 (Current: 3 - Proficient) with an Edit Proficiency button.
  - Prioritizing and Organizing... Competency: 3/5 (Current: 3 - Proficient) with an Edit Proficiency button.
  - Thinking Globally Competency: 3/5 (Current: Cumulative) with an Edit Proficiency button.
- Search Bar:** A search bar at the top right for actions or people.

# FUTURE OF MICRO- CREDENTIALS IN INDUSTRY

SAP Development ▾

Search for actions or people

Career Worksheet Career Path Mentoring

Job Roles I'm Considering (4) My Current Roles (1)

<b>Senior Developer</b> <span>X</span>	<b>Sales</b> <span>X</span>	<b>Executive Management</b> <span>X</span>	<b>Planning</b> <span>X</span>
 <b>40%</b> Ready	 <b>22%</b> Ready	 <b>17%</b> Ready	 <b>13%</b> Ready
<a href="#">i</a> <a href="#">★</a> <a href="#">+</a>			

Attributes for Senior Dev... (4) Role Readiness: Evaluate your readiness

You need to work on 2 attributes

➤ Accounting skills [i](#)

Skill



0 1 2 3 4 5

➤ Accepting Direction [i](#)

Competency



0 1 2 3 4 5

2 target roles share this competency

You have met 2 attributes 

➤ API Development [i](#)

Skill



0 1 2 3 4 5

Last updated on 07/27/2023 from Growth Portfolio

Search View [i](#) [M](#) [P](#)

# SOME CONCLUSIONS

## SCENARIO A



**Adding variety and lower costs** within the boundaries of an outdated model of massified education

## SCENARIO B



**Creating a  
completely new  
paradigm for  
personalised  
learning**

# HOW ARE MICRO-CREDENTIALS LIKE ELECTRIC CARS?

proven concept  
proven technology  
social imperative  
public demand  
legacy and new providers  
easy to get  
enable new types of mobility



# HOW ARE MICRO-CREDENTIALS LIKE ELECTRIC CARS?

- not accepted everywhere
- not fully trusted
- are not interoperable
- face scaling issues
- compete with legacy systems



# PERSONALISING INDIVIDUAL MICRO- CREDENTIALS FOR DIFFERENT USERS IS THE NEW TECHNOLOGICAL FRONTIER

# SCALING

A EUROPEAN MODEL OF  
MICRO-CREDENTIALS IS THE  
LARGEST CHALLENGE FOR  
UNIVERSITY ALLIANCES



# TRUSTING MICRO-CREDENTIALS VIA AUTOMATIC RECOGNITION IS OVERDUE

# ANALYSING PEOPLE'S LIFE-HISTORY TO POWER RECOMMENDATIONS IS THE FUTURE OF PERSONALISED LEARNING

**DOCUMENTING**  
ACHIEVEMENT FOR EVERY  
CITIZEN WILL BE  
FOUNDATIONAL FOR SOCIAL  
MOBILITY

**THANK YOU  
FOR YOUR ATTENTION**



# Broader EU Policy context of micro-credentials

E-sealing micro-credentials by ECIU University

*Koen Nomden, European Commission  
DG EMPL.B2*

# European Year of Skills 2023

To further promote a mindset of reskilling and upskilling



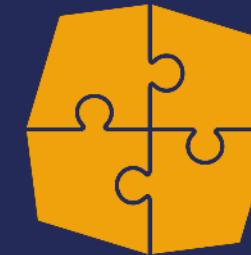
## Investment

Increased, more effective and inclusive investment



## Skills relevance

Strengthening skills relevance by close cooperation



## Matching aspirations

Matching people's aspirations and skills-set with labour market opportunities



## Attracting third country talent

Attracting people from third countries with the skills needed



# Key labour market challenges



**Geopolitics:** A skilled workforce is key to the EU's competitiveness and capacity for growth and innovation



**The solution starts at home:** but work to upskill, reskill and activate the domestic workforce will not alone be enough



**Demographic** changes: Europe is an ageing society



**Green:** The green transition will create 1-2.5 million additional jobs by 2030

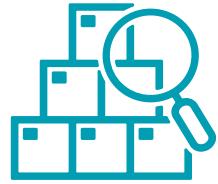


**Digital:** still 11 million short of the EU target of employing 20 million ICT professionals by 2030



**Care sector** growing needs: from 17.4 million workers in 2008 to around 22 million workers in 2022

# Some figures on skills shortages



**42 occupations**  
were classified as having  
**shortages** in 2023



**77%** of  
companies  
**struggled to**  
**find employees**  
with the required  
skills in 2019



**adult learning**  
participation rate  
remains **low**,  
**around 37%**



**over 90% of jobs** require  
digital skills, however **54%**  
**of the adult** population  
in Europe has  
**basic digital skills**

# EU targets by 2030 related to skills



**60%** of the adult population to participate in training each year

**80%** of Europeans to have at least basic digital skills

**20 million** ICT specialists  
(+ gender convergence)

# Skills development in the EU

Lifelong upskilling and reskilling need to become the norm, ensuring

sustainable competitiveness

social fairness

strong resilience



# What is the purpose of the EQF?

## CHALLENGE

Education and training systems differ across countries. Qualifications are diverse and reflect national rules and traditions.



## SPECIFIC OBJECTIVE

To improve the transparency, comparability and portability of people's qualifications, skills, credentials

## WIDER IMPACTS

- Employability, mobility and social integration of workers and learners
- Foster lifelong learning
- Modernising education and training systems

# Wider eco-system of the European Approach to micro-credentials

Acquire, update  
and improve  
skills

Quality and  
transparency of  
MC

Quality,  
accessibility and  
flexibility of the  
learning offer

Personalised  
learning and  
career pathways

Inclusiveness,  
access and  
equal  
opportunities

Skills  
intelligence –  
understanding  
LM needs

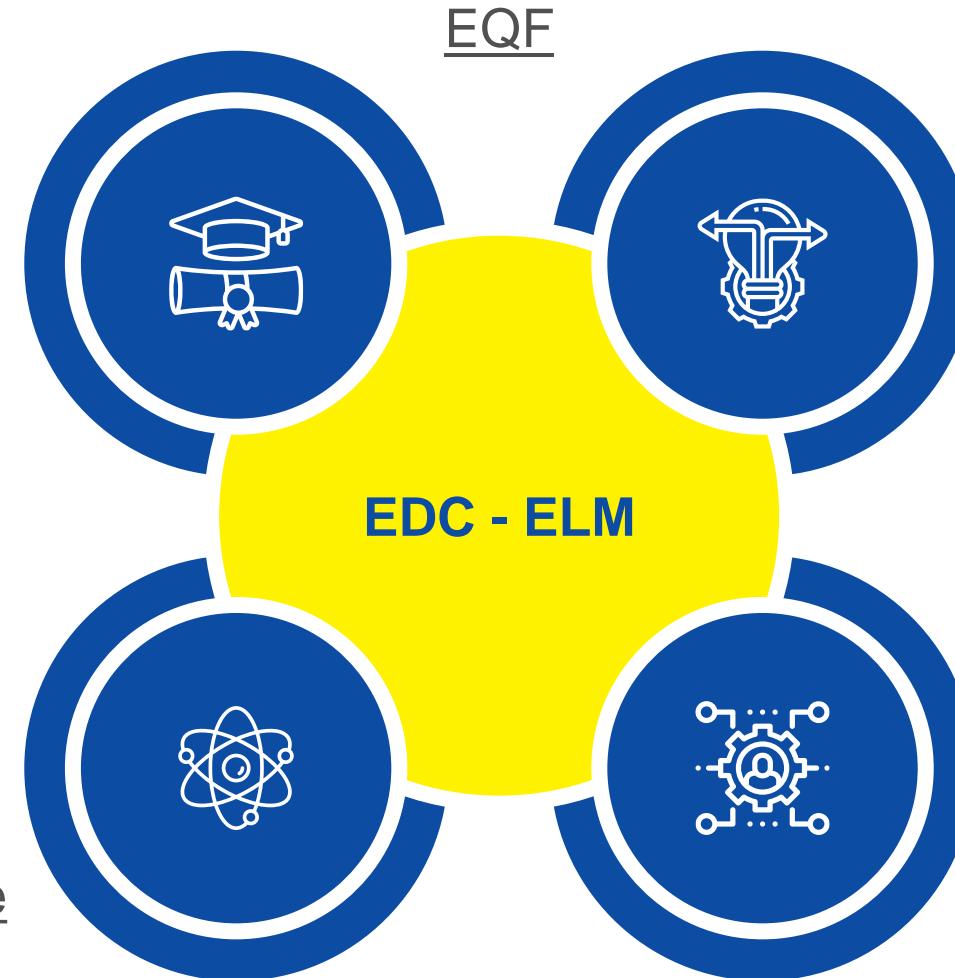
# How could micro-credentials be used to address skill shortages?

Quick

Targeted

Flexible  
settings

Recognition  
as  
motivation



Digital Education Action Plan

Micro-Credentials  
Recommendation

European Data Strategy

Digital Decade

Europass Decision

Individual Learning  
Account Recommendation

European Skills Agenda

Achieving the European Education Area (2025)

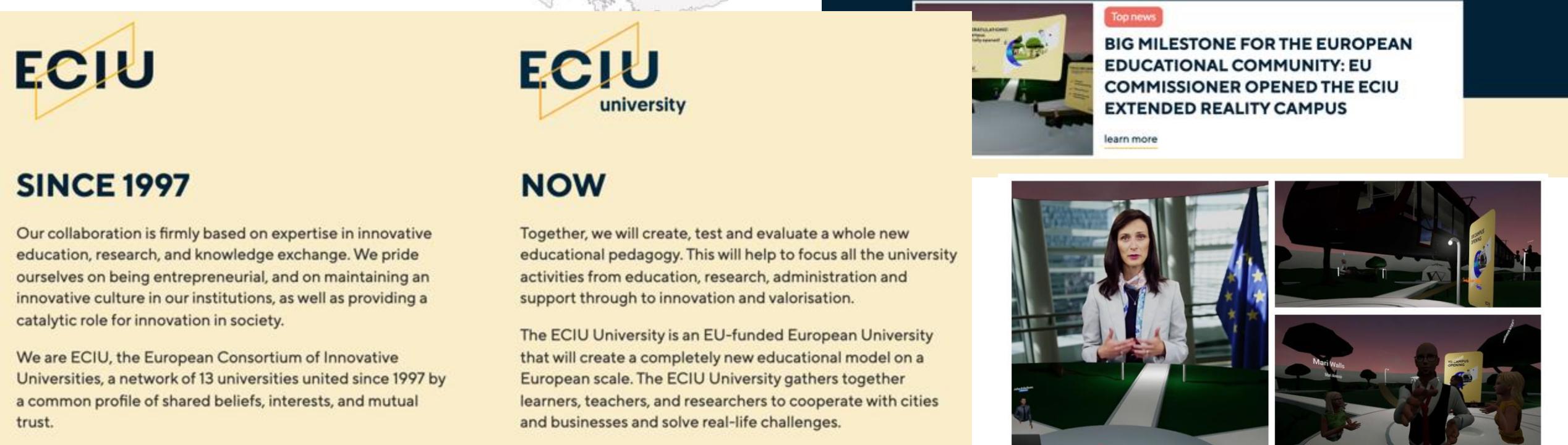
Thank you.

CHALLENGING  
CONVENTIONAL  
THINKING



## ECIU Micro-credentials

Padmasheela Kiiskilä , Researcher, ECIU University,  
Tampere University



The screenshot shows the ECIU University website. At the top left is the ECIU logo with a yellow geometric icon. To its right is a map of Europe with orange dots representing member universities, and a video player icon. Below the map is a large yellow banner with the ECIU logo and the word 'NOW'. To the right of the banner is a news card for 'BIG MILESTONE FOR THE EUROPEAN EDUCATIONAL COMMUNITY: EU COMMISSIONER OPENED THE ECIU EXTENDED REALITY CAMPUS'. The news card includes a photo of a person speaking at a podium, the EU flag, and a 'learn more' button. Below the news card are three images of the virtual reality campus: a woman speaking at a podium, a night view of a modern building, and a group of people in a virtual environment.

**ECIU**

**SINCE 1997**

Our collaboration is firmly based on expertise in innovative education, research, and knowledge exchange. We pride ourselves on being entrepreneurial, and on maintaining an innovative culture in our institutions, as well as providing a catalytic role for innovation in society.

We are ECIU, the European Consortium of Innovative Universities, a network of 13 universities united since 1997 by a common profile of shared beliefs, interests, and mutual trust.

**NOW**

Together, we will create, test and evaluate a whole new educational pedagogy. This will help to focus all the university activities from education, research, administration and support through to innovation and valorisation.

The ECIU University is an EU-funded European University that will create a completely new educational model on a European scale. The ECIU University gathers together learners, teachers, and researchers to cooperate with cities and businesses and solve real-life challenges.



# THE EUROPEAN CONSORTIUM OF INNOVATIVE UNIVERSITIES

Top news

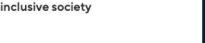
**BIG MILESTONE FOR THE EUROPEAN EDUCATIONAL COMMUNITY: EU COMMISSIONER OPENED THE ECIU EXTENDED REALITY CAMPUS**

[learn more](#)



## Browse learning opportunities

8 learning opportunities

Learning opportunity	Open for application
Challenge	
Micro-module	
Topic	
Circular economy	
Energy and sustainability	
Entrepreneurship, technology and innovation	
Language learning	
Resilient communities	
Transport and Mobility	
Status	
Open for application	
Coming soon	
Closed for application	

**ENTIRE PRF**

**Open for application**

**Open for application**

**Open for application**



ENERGY AND SUSTAINABILITY

709A06 Strategic Planning –  
Regions and EU



## Broad range of learning Offerings as micro-credentials

- Current offers include
- Challenges
  - May have ECTS
  - Hackathons and workshops that don't carry ECTS
- Micro-modules
  - Include learning offerings from partners
  - Co-created by partners for ECIU
  - Micro 1-3 ECTS, standard up to 8ECTS
  - Online or hybrid setting
  - Instruction in English

<https://engage.eciu.eu/browse>

# Micro-modules

**"A micro-module is a short learning experience that formally assessed and supports learners to fill their knowledge gaps and boost their capabilities in order to successfully engage in ECIU University challenge-based activities."**

## Characteristics (2021-2022):

- Provided by an accredited institution or program (currently via ECIU network)
- Preferably **1-3 ECTS** (or unbundled from a larger module)
- Is preferably master's level, but can be also bachelor's level
- Priority for **online** provision, offline possible
- Provided in **English**



Intercultural Competences:  
Guiding practical insights  
through Citizen Science  
(ICCS)



Challenge Micro-module**Topic**

- Circular economy
- Energy and sustainability
- Entrepreneurship, technology and innovation
- Language learning
- Resilient communities
- Transport and Mobility

**Status**

- Open for application
- Coming soon
- Closed for application
- Finished

**Study format**

- Online
- Hybrid
- Campus

**University**

Choose universities

Open for application



RESILIENT COMMUNITIES

Engineering solutions for a more inclusive society

STUDY PERIOD

4 Apr – 11 Jul

Open for application



ENTREPRENEURSHIP, TECHNOLOGY AND INNOV...

The Sustainable Wine Race

STUDY PERIOD

17 Apr – 19 May

Open for application



RESILIENT COMMUNITIES

Create Tomorrow

STUDY PERIOD

1 May – 4 May

Open for application



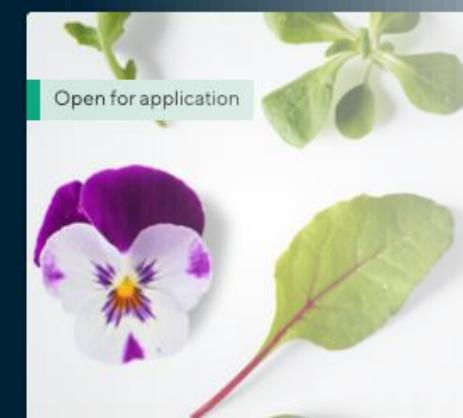
ENTREPRENEURSHIP, TECHNOLOGY AND INNOV...

Innovative Entrepreneurship

STUDY PERIOD

27 Mar – 19 May

Open for application



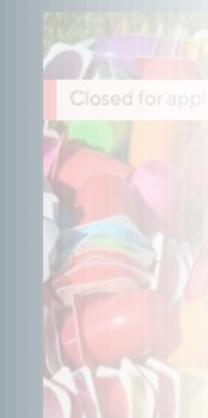
ENERGY AND SUSTAINABILITY

The Flowers Gourmet Hackathon

STUDY PERIOD

17 Apr – 14 May

Closed for application



CIRCULAR ECONOMY

School education, consumption and...

STUDY PERIOD

6 Mar – 31 May

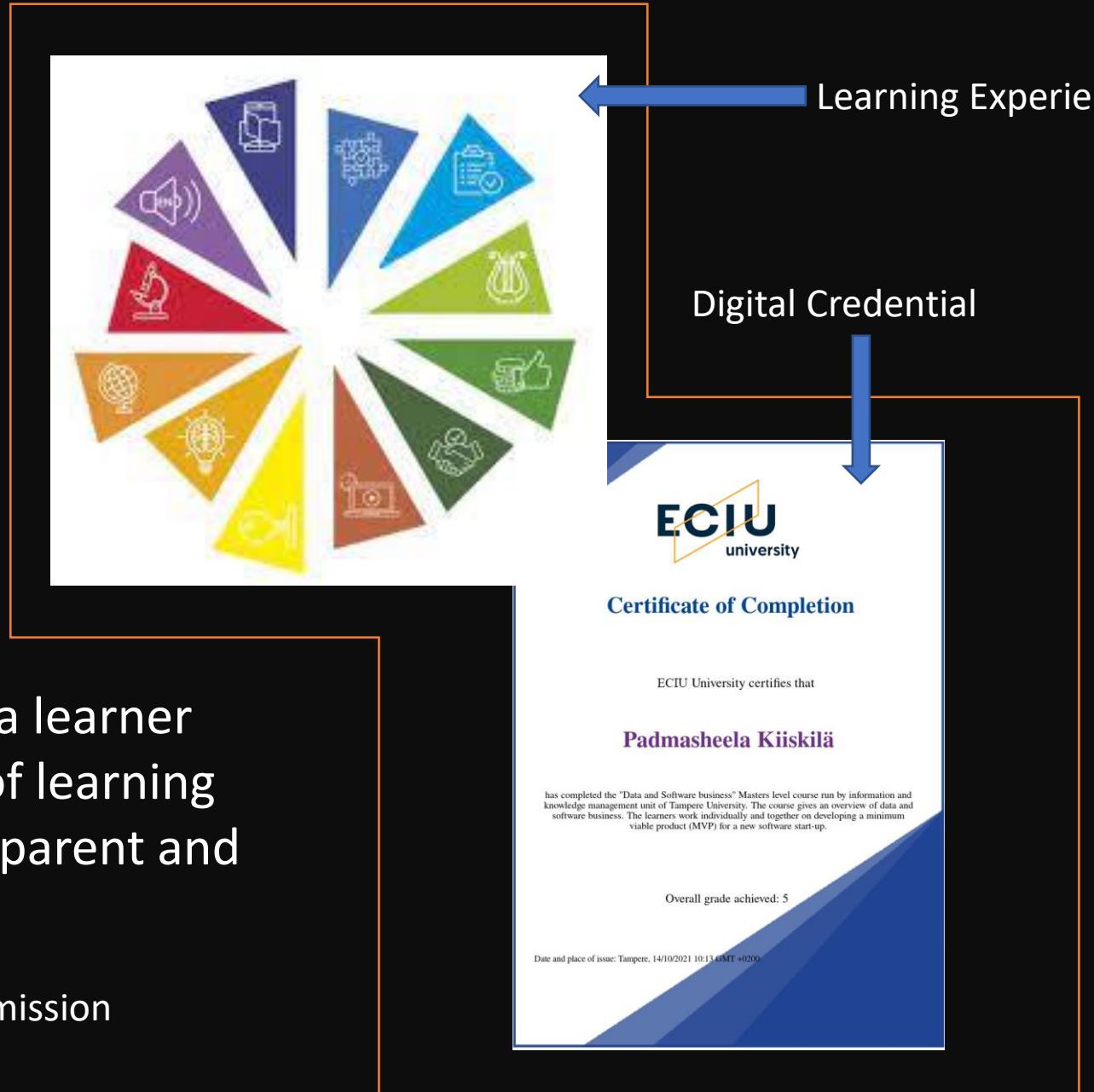
## Challenges

- SDG themes
- Collaboration with
  - Industry
  - Cities
- ECTS based
- May have short non-formal opportunities (No ECTS)

# Micro-credentials in ECIU University

A record of the learning outcomes that a learner has acquired following a small volume of learning which have been assessed against transparent and clearly defined criteria

- EU commission



# European standard elements to describe a micro-credential (Annex I)

Mandatory elements:	Identification of the learner
	Title of the micro-credential
	Country(ies)/Region(s) of the issuer
	Awarding body(ies)
	Date of issuing
	Learning outcomes
	Notional workload needed to achieve the learning outcomes (in ECTS credits, where possible)
	Level (and cycle, if applicable) of the learning experience leading to the micro-credential (EQF, QF-EHEA), if applicable
	Type of assessment
	Form of participation in the learning activity
Optional elements, where relevant (non-exhaustive list)	Type of quality assurance used to underpin the micro-credential
	Prerequisites needed to enrol in the learning activity
	Supervision and identity verification during assessment (unsupervised with no identity verification, supervised with no identity verification, supervised online, or onsite with identity verification)
	Grade achieved
	Integration/stackability options (stand-alone, independent micro-credential/integrated, stackable towards another credential)
Further information	

**Introduction to Artificial Intelligence**

Valid from: 11/06/2023 | Type: Generic | Credential id: urn:credential:c11943bf-1279-484f-a4e3-93fc876ed1d6

Home | Export | Upload another credential | Share | English

Padmasheela Kiskila  
Stichting European Consortium of Innovative Universities  
Introduction to Artificial Intelligence  
Create a chatbot using Scratch  
Use image classification tools to identify different objects in images  
Recognition for credit  
Overall assessment

ECIU  
Introduction to Artificial Intelligence  
certifies that  
Padmasheela Kiskila  
Warning! This is a sample Micro Credential! It is not valid for being awarded.

« < 1 / 1 > »

**Authentication and Verification Check**

- FORMAT**  
This credential is technically valid.
- SEAL**  
The credential is Sealed by Stichting European Consortium of Innovative Universities. This credential has not been tampered with since issue.
- REVOCATION**  
Function under development. Contact the awarding body for information about this credential's revocation status.
- ACCREDITATION**  
The credential does not contain reference to an accreditation record related to the awarding body.
- VALIDITY**  
The credential is still valid.
- VERIFIED**

## European Standards

European Learning Model

European Digital Credential

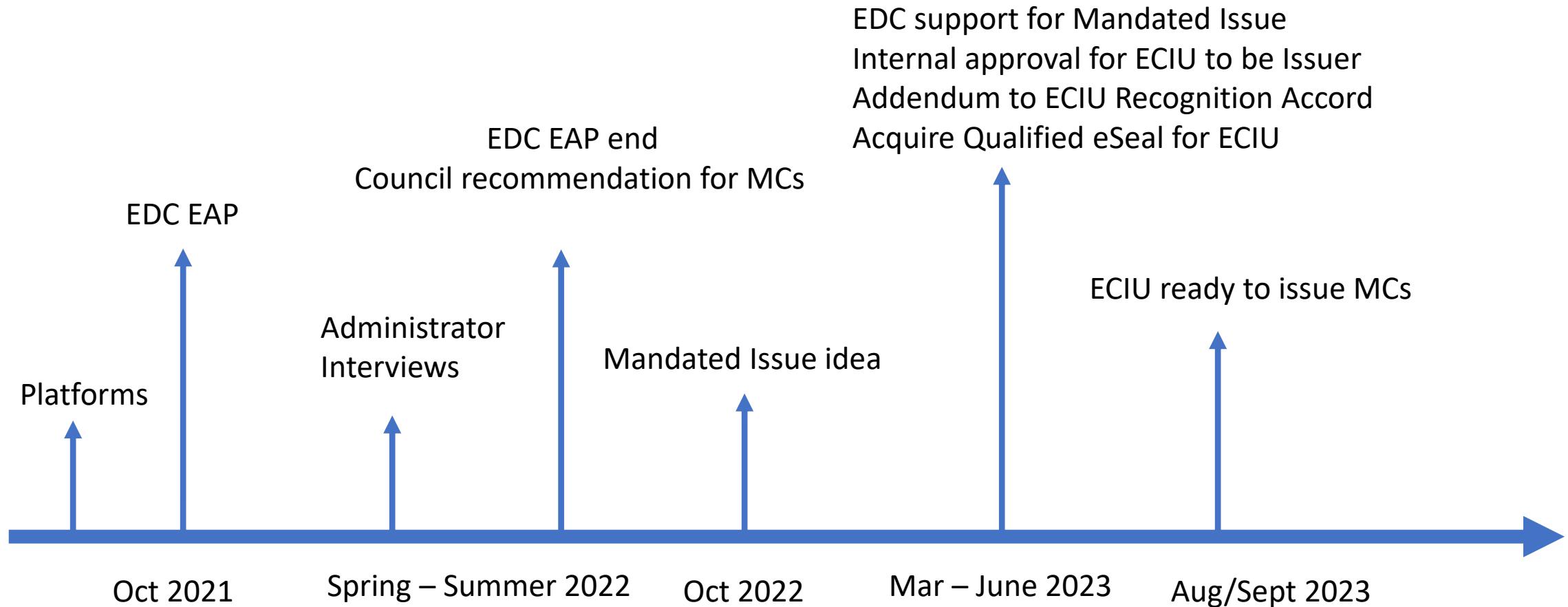
W3C VC datamodel

EQF levels

Qualified eSeal

DEQAR for accreditation

ESCO framework



## ECIU Micro-credential journey

## Mandated issue

The European Digital Credentials for Learning Infrastructure allows credential issuers to delegate the sealing role to third parties. Signing a digital credential on behalf of another organisation is called mandated issue, and this is familiar practice in cases where, for example, a national body such as a Ministry of Education or a parent organisation of an awarding body, seals a credential on behalf of the institution that officially issues it. In other cases, it may be a technology provider that, from within its system, formally seals credentials issued by its education and training provider client.

# eSeal

If an institution wants to issue legally admissible digital credentials that pass the EDC Seal verification check, **it must acquire an advanced or qualified electronic seal**, and once a credential is sealed with that e-Seal, it cannot be tampered with without detection – the slightest change in the file data will result in the e-Seal verification check failure

Source: <https://europa.eu/europass/en/stakeholders/european-digital-credentials/stakeholder-information-about-european-digital-credentials>

## Qualified eSeal

- uniquely linked to the creator of the seal
- capable of identifying the creator of the seal
- created using electronic seal creation data that the creator of the seal can, with a high level of confidence under its control, use for electronic seal creation, and
- linked to the data to which it relates in such a way that any subsequent change in the data is detectable
- created by a qualified seal creation device (QSCD)
- and is based on a qualified certificate for electronic seals

<https://ec.europa.eu/digital-building-blocks/wikis/display/ESIGKB/What+are+the+levels+simple+-+advanced+and+qualified+of+electronic+seals>



Padmasheela Kiiskilä



Stichting European Consortium  
of Innovative Universities



Introduction to Artificial Intelligence



Create a chatbot using Scratch



Use image classification tools to  
identify different objects in images



Recognition for credit



Overall assessment

## Signed by

### Stichting European Consortium of Innovative Universities



#### Also known as

Stichting European Consortium of Innovative Universities

#### Seal validation information



The credential is Sealed. This credential has not been tampered with since it was issued by  
Stichting European Consortium of Innovative Universities;KLASS3-SK 2016 AIA OCSP  
RESPONDER 202311 ;KLASS3-SK 2016 AIA OCSP RESPONDER 202307 ;root-ca ;KLASS3-SK  
2016 ;good-tsa ;Stichting European Consortium of Innovative Universities ;, on 7/6/23, 4:11 PM.

#### Evidence statement

Every claim inside this credential is to be construed as having been made by the indicated awarding body, who maintains sole responsibility for said claim. By applying its electronic seal, the signing organisation certifies the correctness of origin of each claim, as having been made by the indicated awarding body.

#### Identifiers

##### Legal ID

08164880

##### EIDAS Identifier

NTRNL-08164880



Johan Peterson



Stichting European Consortium of  
Innovative Universities



ECIU eSealed Micro-credentials



## ECIU eSealed Micro-credentials

### DUBLIN CITY UNIVERSITY (DCU)

Show less

#### Legal ID

999892588

#### Awarding Date

01/12/2023

#### Description

Show less

Webinar - Participants in this webinar will learn about how the ECIU University is rolling out centralised, tamper-proof micro-credentials to its learners. These micro-credentials are issued and eSealed by ECIU University using the European Digital Credentials platform, ECIU University and other credentialing experts will explain the ECIU user journey as an early adopter of e-sealed micro-credentials.

#### Learning Outcomes

##### Understanding micro-credentials

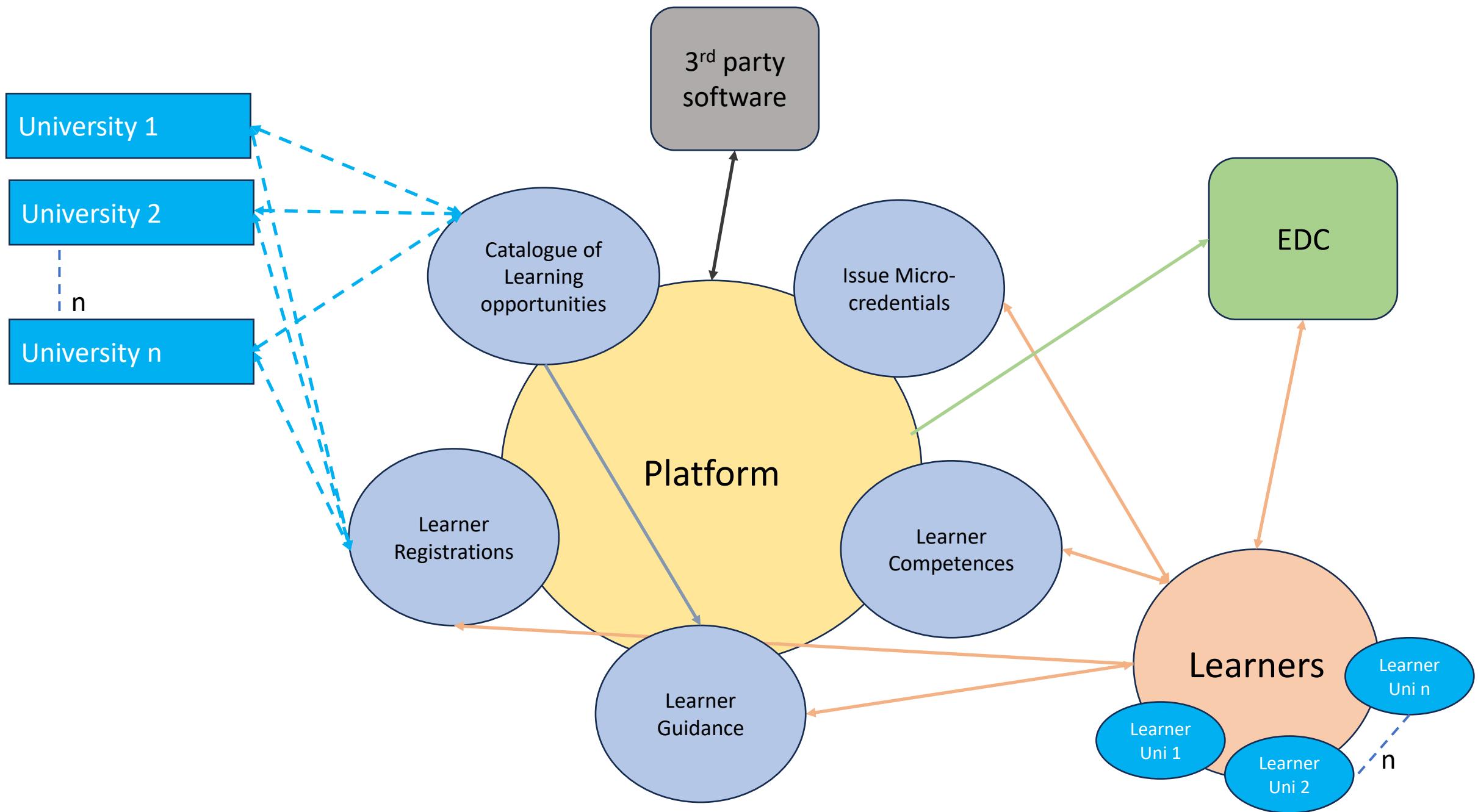
##### Related ESCO Skills

[digital competencies](#) , [Types of digital badges](#) , [demonstrate enthusiasm](#)

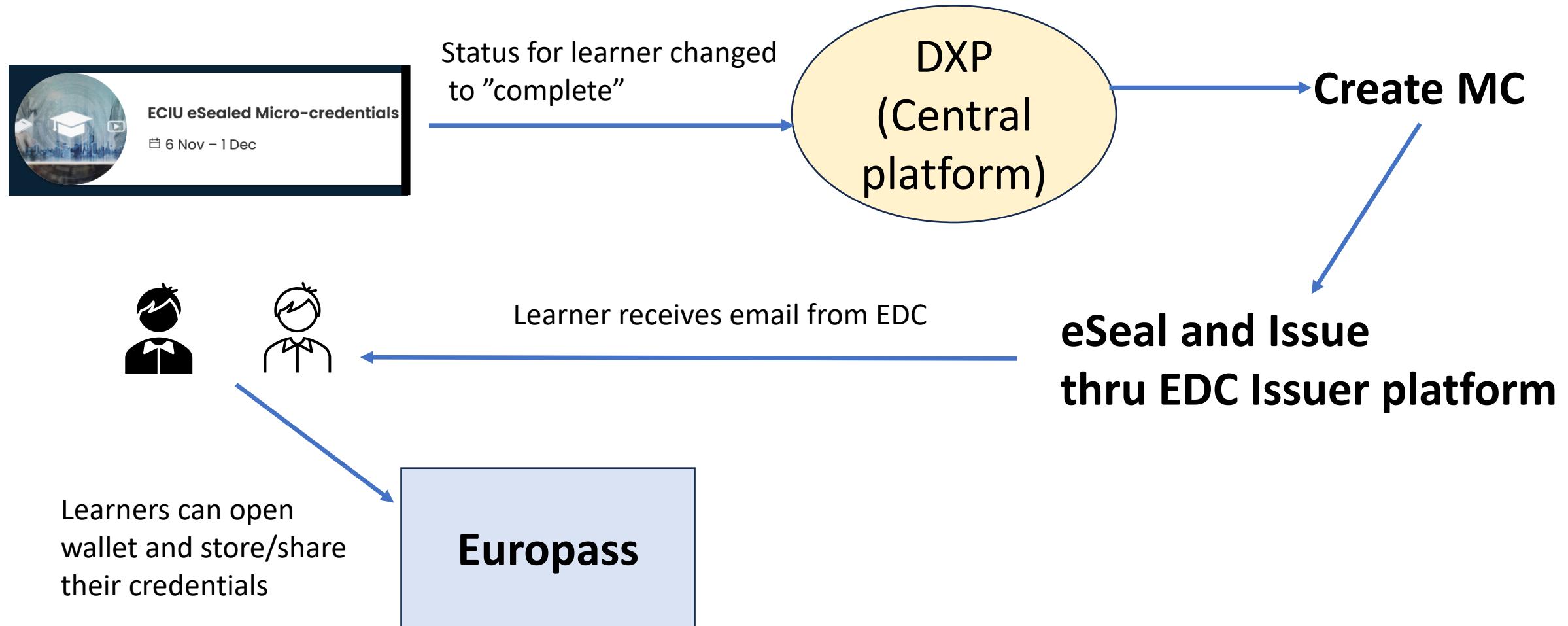
##### Related Skills

Show less

#### Achievement information



# Journey from registering to ELO till MC issued



# PAVING THE ROAD FOR THE MICRO-CREDENTIALS MOVEMENT

## ECIU UNIVERSITY WHITE PAPER ON MICRO-CREDENTIALS

Access our 1st Micro-Credential white paper:

<https://www.eciu.org/news/micro-learning-varies-from-online-courses-to-study-packages>

Access our 2nd Micro-Credential white paper:

<https://www.eciu.org/news/paving-the-road-for-the-micro-credentials-movement>

Access our 3rd Micro-Credential white paper:

<https://www.eciu.org/news/presentation-of-the-third-eciu-university-micro-credentials-paper-a-vision-for-european-learners-values-and-priorities>



Kiiskilä, P., Hanafy, A., & Pirkkalainen, H. (2022). Features of Micro-credential Platforms in Higher Education. In CSEDU (1) (pp. 81–91).

## Features of Micro-Credential platforms in Higher Education

Kiiskilä, P., Kukkonen, A., & Pirkkalainen, H. (2023). Are Micro-Credentials Valuable for Students? Perspective on Verifiable Digital Credentials. *SN Computer Science*, 4(4), 366.

SN Computer Science (2023) 4:366  
<https://doi.org/10.1007/s42979-023-01797-y>

ORIGINAL RESEARCH



### Are Micro-Credentials Valuable for Students? Perspective on Verifiable Digital Credentials

Padmasheela Kiiskilä<sup>1</sup>  · Arttu Kukkonen<sup>1</sup> · Henri Pirkkalainen<sup>1</sup>

Association for Information Systems  
AIS Electronic Library (AISeL)

14th Scandinavian Conference on Information Systems

Scandinavian Conference on Information Systems

9-22-2023

### HOW CAN EUROPEAN BLOCKCHAIN SERVICES INFRASTRUCTURE BE USED FOR MANAGING EDUCATIONAL DIGITAL CREDENTIALS?

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