#8 Workshop
online

Competențe digitale
în cultură și industriile
creative

Digital Skills
for Culture & Creative
Industries

8 dec 2023

2○23
Timișoara 2023
European Capital of Culture

Timișoara 2023
European Capital of Culture

EUROPEAN CAPITAL
OF CULTURE

Department
of Distance Education
and Digital Education

Multimedia
Centre

Universitatea
Politehnica
Timișoara

MUZEUL NAȚIONAL AL BANATULUI

SPOTLIGHT
HERITAGE
TIMIȘOARA

EUDRES

IEEE Romania Section

EBSI-NE

Iceland
Liechtenstein
Norway grants

Primăria
Municipiului
Timișoara

Funded by
City of Timișoara
Center for Projects

Ministry of Culture

European Commission | ebsi European Blockchain

Update on EBSI

Education and other sectors/initiatives

#DigiSkillsTM and #TM2023 #SH2023

December 2023

Your speaker

Lluís Alfons Ariño Martin

Digital Strategist at Universitat Rovira i Virgili

International coordinator of CRUE-Digitalización

Member of the EUA Digital Transformation Steering Committee

National expert on eIDAS ToolBox Process (ARF and EUDI Wallet)

Convenor Educational credentials and professional qualifications use case at eIDAS Toolbox working group

Convenor Educational credentials use case at European Blockchain Partnership (EBP - EBSI)

AB member of the Digital Space for Skills project (DS4Skills)

AB member of Erasmus Without Papers project (EWP)

Leader of the Digital Credentials for Europe (DC4EU) eIDAS Large Scale Pilot WP5 (Educational credentials and professional qualifications, titles and licenses)
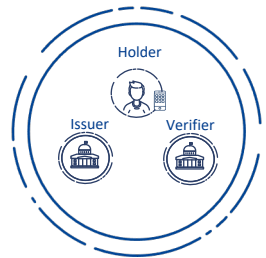
Agenda

01 EBSI update

02 2023 - Scaling up EBSI

03 Education deep dive

04 eIDAS and EBSI

01

EBSI update

What is EBSI?

Provides the elements to make information easy to verify, almost impossible to fake and under users' control.
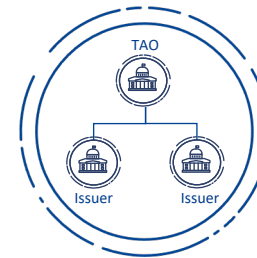

ebsi
European Blockchain

New way to exchange information

Exchanging information using Verifiable Credentials Framework
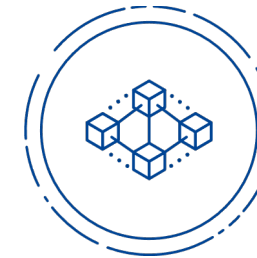
Interoperable digital wallets

Achieving interoperability using Conformance Testing Service of Digital Wallets

New Trust Model for Issuers

Digitalizing trust using Trust Model of Issuers

Decentralised infrastructure

Highly available and resilient source of information using permissioned Trust Registers deployed on EBSI's Blockchain supported by EBSI's Smart Contracts

EBSI's key principles

We follow a values-driven approach

Provide **decentralised enhanced services** for citizens and businesses

Reinforce **trust and resilience**

Privacy and sustainability by design
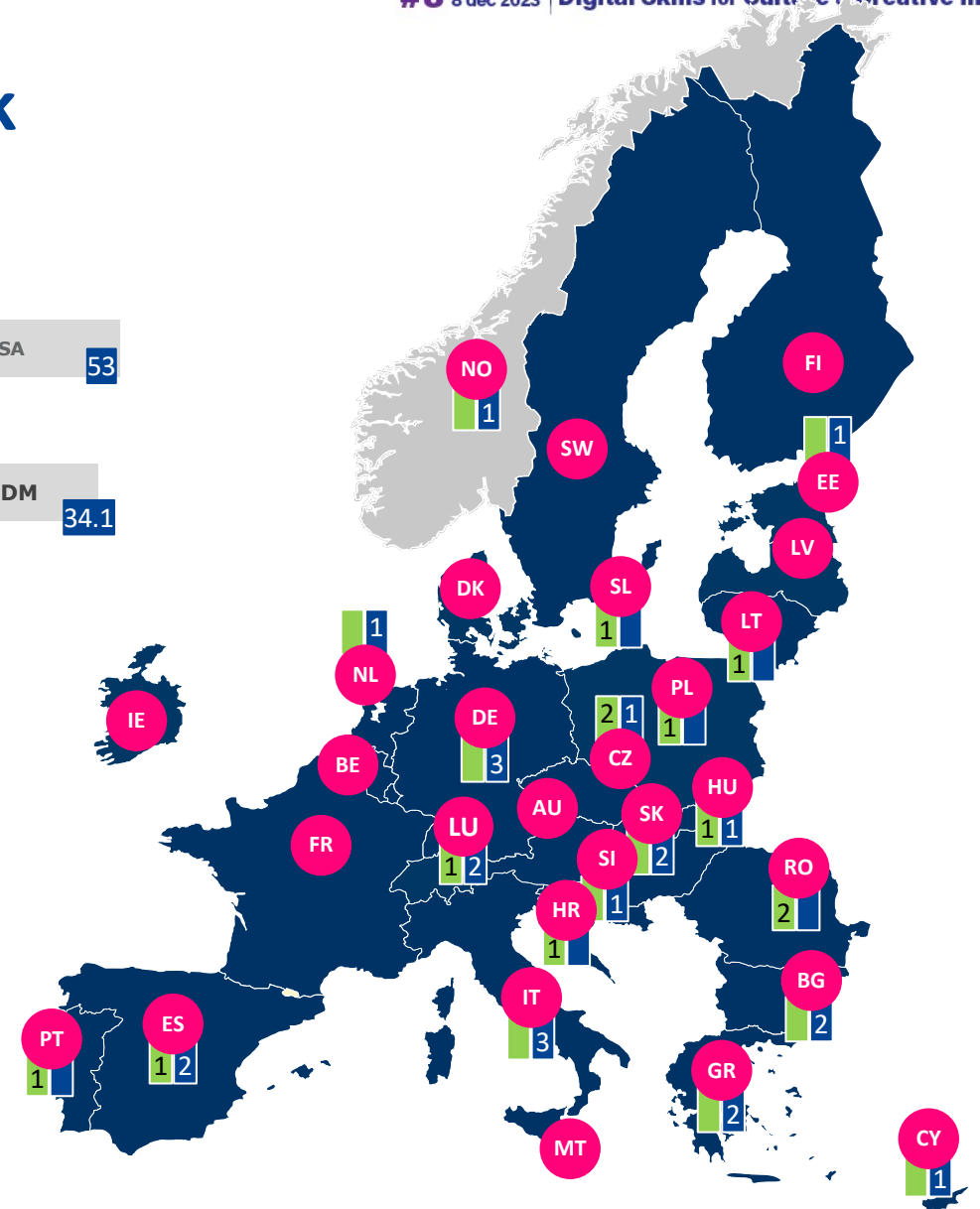
Cross-border & pan-European

Support to EU policies and **compliance with EU regulation**

EU governed, open but **autonomous infrastructure**

02

2023 – Scaling up EBSI

EBSI ecosystem in numbers, today.

2023 scaling up EBSI

A growing ecosystem of +350 organisations
From private and public sector (9 different types)
from +30 countries
Mobilised through 9 different "programs"

ebsi
European Blockchain

Legend:
- 5 University Alliance
- 67 University
- 18 Research Institute
- 106 Public Administration
- 20 Private company
- 2 Non-profit
- 109 IT Provider
- 14 Association
- 7

+106 EA PROGRAMME

+77 DC4EU

+61 EWC

+54 EBSI VECTOR

+35 Node operators

+25 EBSI-NE

+22 TRACE4EU

+24 Conformant wallets

+13 ONEPASS

Sum of ONEPASS | Sum of EBSI-NE | Sum of EBSI VECTOR | Sum of TRACE4EU | Sum of DC4EU | Sum of EWC | Sum of EA PROGRAMME | Sum of CONFORMANT WALLET | Sum of NODE OPERATORS

03
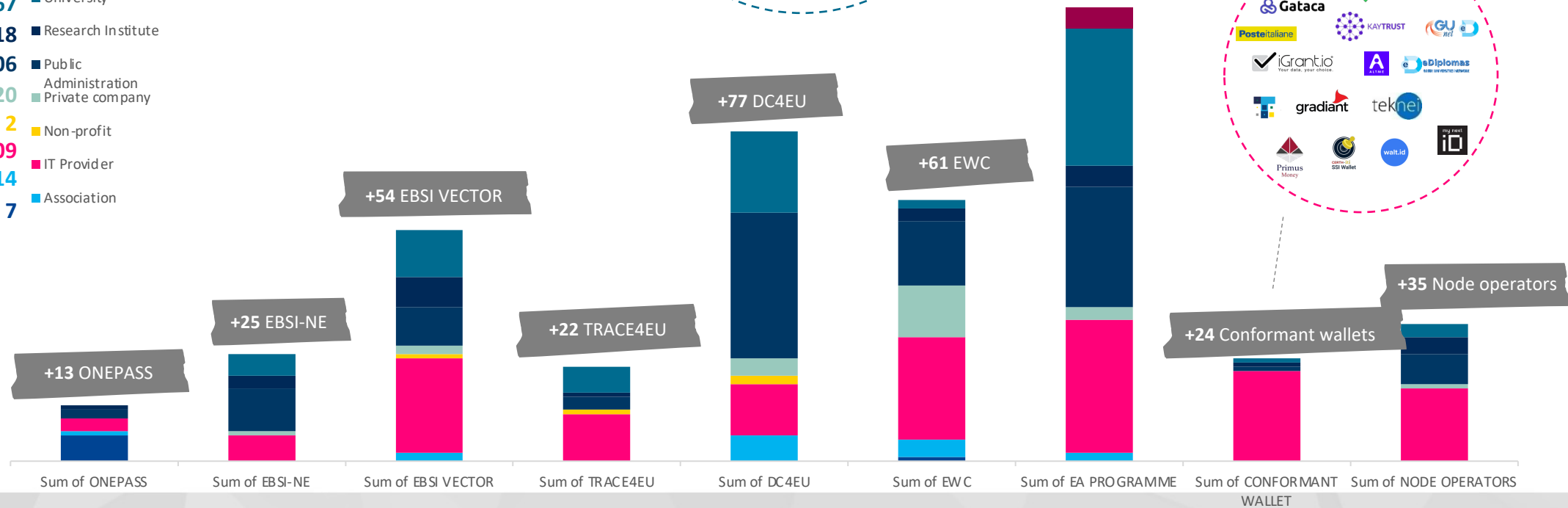
Education deep dive

Overview of pilot projects

Overview of pilot projects

University Alliances

Eva uses her Educational-ID and Alliance-ID credentials to access educational services such as formal courses, Erasmus, MOOCs, workshops, and resources at partner universities across borders. While living in a country, she gets access to more services like libraries, museums, or ferry transport.

+25 organisations
+15 countries

Access to public services – the Spanish case

Municipality resident requests proof of residence credential. The citizen then travels to a different region and uses the residency credential to access public services offered by a different regional municipality.

+9 organisations
+1 country

MyAcademicID

A European student requests from their university a credential that states their identity and student status. The student then has access to university student services across Europe using that credential.

+7 organisations
+3 countries

Formal Accreditation and Recognition

A student claims a bachelor's degree and transcript of records from the University of Athens (GR). The University of Athens (GR) issues the Bachelor Degree credential to the student. The student then applies for a Master Degree at Université of Lausanne (CH). The University of Lausanne (CH) verifies the credentials and gives access to the student.

+18 organisations
+2 countries

Micro-credentials

Eva receives credentials for participation in a hackathon, an internship research project, and a MOOC. She uses these credentials to apply to an Entrepreneurship Program at another university.

+11 organisations
+4 countries

Vocational Education and Training

Maria gains a welding certificate credential in Germany. She then goes to Denmark to gain an international welding credential, requiring the presentation of her German credential. She then applies to a job in France as a composite engineer, using both her credentials.

+8 organisations
+2 countries

Employment

A European citizen stores employment and educational credentials to create and share a cross-national verifiable professional profile. Employers are then able to find and verify employees with the right skills.

+5 organisations
+2 countries

University Alliances

A student from a <University> in a <Country A> takes a short course from a <University> in a <Country B>. Both Universities are part of an European University alliance.

Problem statement

How to help students take a course in another university in the alliance (across border) and simplify administration and verification processes for Universities (specifically in the context of verifying students' affiliation, providing access to resources and accrediting courses)? (Pre-requisite: student requests and gest MyAcademicID from University A)

Scenario

A student from University A (part of a European University Alliance) wants to enroll in a course at University B (also part of the alliance). The student visits the website of University B and uses her digital wallet to identify herself. University B verifies her affiliation with University A and provide access to protected resources. To enroll in the course, the student needs to verify her membership/affiliation with University A through her MyAcademicID. If needed, the University B may also verify the courseID of the course the student wants to enroll in through her MyAcademicID claims. Once the student has passed the course, University B accredits the course and University A recognizes the course.

Credential type

- MyAcademicID
- Transcript of Record

Issuer
University A

Holder
Student

Verifier
University B

ebsi
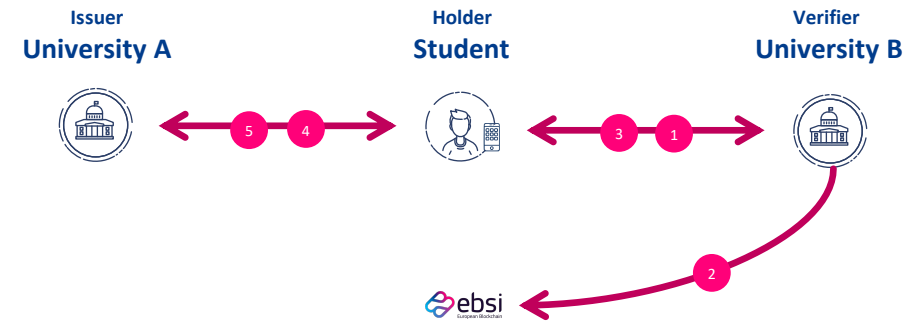
A student from University A takes a course offered by University B in the alliance. Once passed, University B accredits the course.

1 The student presents affiliation (*)

2 University B verifies affiliation (MyAcademicID) | courseID (MyAcademicID claims)

3 University B issues a transcript of records

4 The student presents the transcript of records to University A

5 University A recognises the transcript of records

MyAcademicID

A student from an educational institution from country A wants to access resources and facilities from educational institution at country B. She requests and obtains digital student ID from educational institution A and present it to educational institution B. Educational institution B verifies the student ID and grants the student access to the resources.

Problem statement

How to help students manage their student affiliation (e.g. student ID) in order to facilitate their access to *will serve as their identifier for accessing courses, workshops, common services, and physical facilities*? This by unifying and facilitating verification of *student's identity and data across border.*

Scenario

A student from an educational institution from country A wants to access resources and facilities from educational institution at country B. The student visits the educational institution from country A and provides her personal information and proof of identity. Educational institution A issues a student ID. The student stores it in her digital wallet. The student presents the student ID to the educational institution from country BB. The educational institution B verifies the student's ID information. The educational institution B grants the student access to the resources.

Credential type

- Student ID
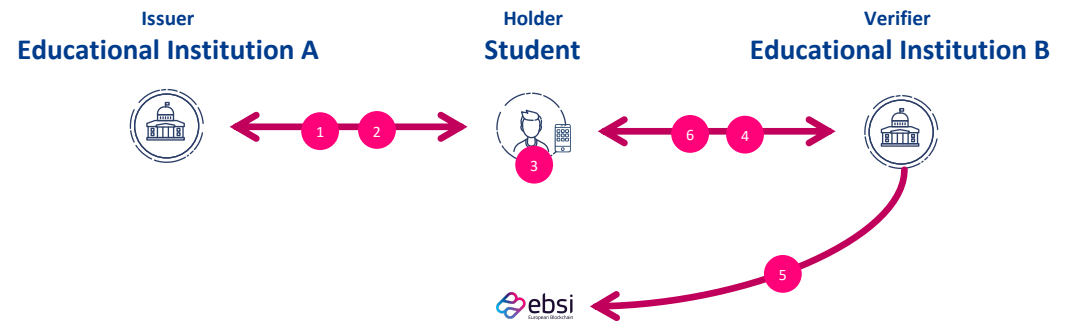
Issuer — Educational Institution A | **Holder** — Student | **Verifier** — Educational Institution B

A student from an educational institution from country A wants to access resources and facilities from educational institution at country B. She requests and obtains digital student ID from educational institution A and present it to educational institution B who verifies it and grants her access to the resources.

1. The student visits the educational institution A and provides her personal information and proof of identity
2. Educational institution A issues a verifiable credential (student ID)
3. The student stores it in her digital wallet.
4. The student presents the student ID credential to the educational institution B
5. The educational institution B verifies the student's ID information
6. The educational institution B grants the student access to the resources.

Formal Accreditation and Recognition

A student who has completed a formal education degree in a University from country A wants to enrol for another formal education degree at University from country B.

Problem statement

How to help students make a claim of a formal education degree, store and share it in order to enrol for another formal education program across border? This by simplifying administration and verification processes for Education Institutions like Universities (specifically in the context of accreditation and recognition of academic degrees in registration or enrolment processes) and ultimately facilitate social mobility across Europe.

Scenario

A student wants to enrol for a formal education degree (e.g. Master degree) at University in country B after having complete another formal education degree (e.g. Bachelor degree) at University in country A. In order to do so, the student requests the issuance of a formal education degree in University A, stores it in her wallet and shares it with University B during the enrolment process. University B verifies the formal education degree and the student gets admitted into the formal education program.

Credential type

- *(Secondary Education diploma)*
- Bachelor diploma
- Master diploma
- PhD diploma

Issuer — University A | **Holder** — Student | **Verifier** — University B
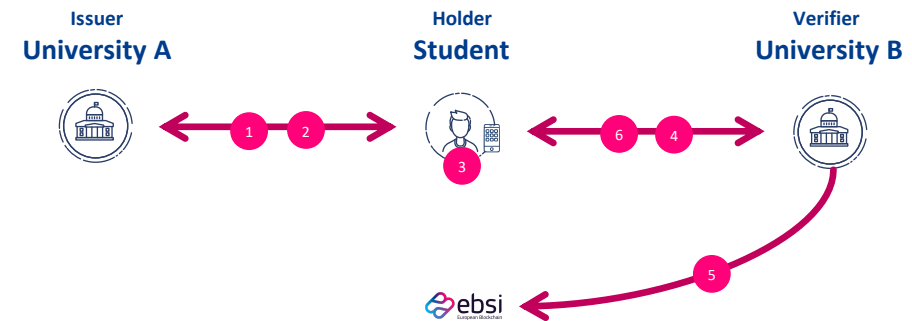
A student who has completed a formal education degree in a University A wants to enrol for a formal education degree at University B.

1. The student requests the issuance of a formal education degree in University A.
2. University A issues the formal education degree to the student and notifies her
3. The student stores the formal education degree in her wallet
4. The student shares the formal education degree with University B
5. University B verifies the formal education degree
6. University B offers admission to formal education degree to the student and notifies her

Micro-credentials

A student from University A takes a short course from University B. Upon completion, the student receives micro-credentials. The student can then take these micro-credentials to University A, who will verify the credentials. Upon successful verification, the new university will add the micro-credentials to the student's transcript of record.

Problem statement

How to improve the reliability, security and accessibility of digital credentials for students in higher education through the implementation of micro-credentials, for improved job opportunities and recognition across various institutions?

Scenario

A university offers short courses and upon completion, the student receives micro-credentials as verifiable credentials. These credentials include information about the courses taken and the skills and competencies the student has acquired. The student can then take these micro-credentials to another university, who will verify the credentials. Upon successful verification, the new university will add the micro-credentials to the student's transcript of record, showing their achievements and further education.

Credential type

• Transcript of records (short-courses | micro-credentials)
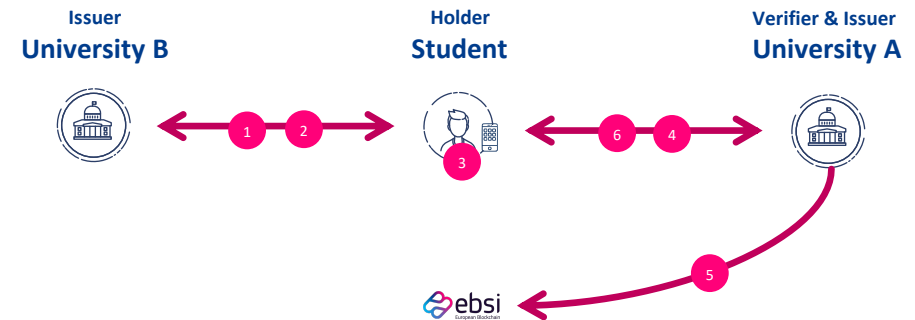
Issuer University B   **Holder** Student   **Verifier & Issuer** University A

A student from University A takes a short course from University B. Upon completion, the student receives micro-credential and presents it to University A, who will verify it and issue a transcript of records.

1. The student requests the issuance of micro-credential from University B.

2. University B issues the credential to the student and notifies her

3. The student stores the credential in her wallet

4. The student shares the credential with University A

5. University A verifies the credential

6. University A issues a transcript of records.

Vocational Education and Training

A <professional> from a <Company> in a <Country A> wants to take a <course> in a specific domain to improve her competences and skills and make sure that it is accredited by a <VET> from a <Country B>.

Problem statement

How to help professionals make a trustworthy claim of a vocational training certificate, store and share it in order to ensure that her qualifications are officially recognised across border?

## Scenario

A <student> from a <VET institution> in a <country A> will carry out a vocational and educational work placement (apprenticeship/learning in a work environment) in a <company> in a <Country B>.
Upon successful completion and verification, <VET institution> in a <Country A> together with <company> in <Country B> verifies and adds accredited skills and competences (e.g. ESCO framework) in form of microcredentials as if it were one more subject of the VET title (transcript)

Credential type

- Transcript of records (short-courses | vocational training certificate)

Issuer
VET A

Holder
Professional

Verifier
Employer B

ebsi
European Blockchain
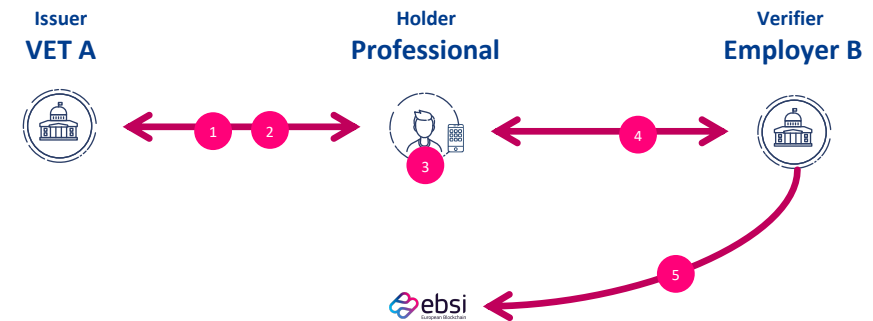
A VET student wants to take an internship to improve her competences and skills in a specific domain and make sure that her qualifications are officially recognised across border.

1. The student from VET institution A requests an educational work placement in Company B

2. Student performs the apprenticeship earning skills and competences in the work environment

3. In close cooperation VET institution A and company B evaluate student's achievements

4. VET institution issues microcredetnials to student for ESCO skills/competences gained at Company B

5. The student can accredit the micro credentials obtained in the employability offers of the European EURES network

Employment

A <professional> from a <Company> in a <Country A> wants to apply for a job at a <Company> in a <Country B>.

Problem statement

How to help professionals manage employment and educational credentials as verifiable credentials in one single place in order to facilitate their job application process e.g. creating verifiable CV? This by facilitating verification processes coming from different sources and business domains/sectors and provide a comprehensive representation of an individual's qualifications and skills.

Scenario

A professional from country A applies for a job at a company in country B In order to do so, she shares her Verifiable CV from her wallet, which can include her formal educational credentials (e.g. diploma), her licence to practice the job, any verifiable certificates she would have for skills obtained in trainings or on the job from previous employers. The company reviews the CV and offers the person a job. The company issues a certificate of employment and adds it to the employee's digital wallet for safekeeping. The certificate of employment serves as proof of the employee's employment and can be verified by future employers

Credential type

Verifiable CV
- Certificate of Employment
- Identity
- Diploma
License to practice

Issuer
University A

Holder
Professional

Verifier
Employer B

Employer A
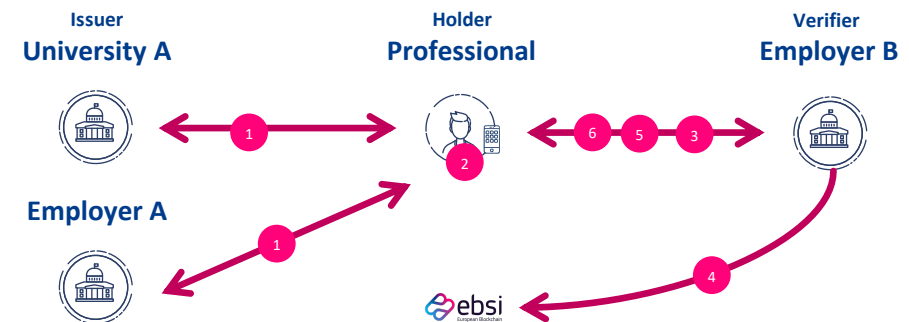
A professional from a company A applies for a job at a company B. She shares her Verifiable CV with multiple credentials. The company verifies the CV and offers the job.

1. Pre-requisite: The student has received the different credentials (e.g. diploma, licence to practice, etc.)
2. The professional creates her CV (Verifiable presentation that can contain multiple credentials)
3. The professional shares the CV (Verifiable Presentation) with the employer B
4. The employer B verifies the CV
5. The employer B offers the professional with the job
6. The employer B issues the certificate of employment and adds it to the employee's digital wallet.

04

eIDAS and EBSI

eIDAS review and Large Scale Pilots

Legislative Process

• Negotiation of the proposal for the revision of the **eIDAS regulation** underpinning the EUDI Framework

Wallet Technical Specifications

• Member States and the Commission are in the process of establishing a **common toolbox** consisting of an **architecture and reference framework,** common standards and specifications and guidelines and best practices for the EUDIW

Large-scale Pilots

• **Grants** under the Digital Europe Programme for l**arge-scale pilots around use-cases** for the EUDIW including mobile driver licences, ePayments, eHealth and educational/professional qualifications

Wallet Reference Implementation

• Procurement of a **reference implementation** of the EUDIW based on the technical specifications agreed by the toolbox.

eIDAS review and Large Scale Pilots

LSPs will contribute defininig business requirements for related domains

20 countries

56 public and 80+ private entities

Use cases:

Electronic Government services, Bank Account opening, SIM registration, mobile driving licence, Remote Qualified Electronic Signature and ePrescription.

22 countries

36 public and 40+ private entities

Use cases:

Educational credentials and professional qualifications, Portable Document A1 (PDA1), European Health Insurance Card (EHIC).

19 countries

18 public and 40+ private entities

Use cases:

Digital Travel Credentials, Payments, Legal persons

8 countries

6 private and 15 private entities

Use cases:

payments use-cases at both a cross-country and cross-sector level with partners coming from both private and public sector

Total budget: >90 Million (50% EU contribution), >250 Participants,

eIDAS review and Large Scale Pilot on Education
DC4EU will focus/define education & professional qualifications, titles and licenses

22 countries
+100 organisations

Relevant authorities at MS level
Relevant educational actors
Key EC DGs