European Digital Credentials for Learning

Koen Nomden

Slovenian Conference on micro-credentials, 10 May 2022

SOME BENEFITS OF DIGITAL (INSTEAD OF PAPER) CREDENTIALS

Individuals

- can build an online portfolio to track all of their learning while being in full control of their data
- can easily reuse their credentials to get a job or apply for further training all across Europe
- can present and have their credentials verified at any point in their career

Employers

- can reduce the time and cost of verifying credentials and processing job applications
- can better understand the credentials of candidates, especially from other countries
- can trust tamper-proof credentials

Education and training providers

- can reduce their administrative burden and the costs for issuing credentials
- can better understand the credentials of learners, especially from other countries

Framework for digitally signed credentials

definition of a digitally signed credential

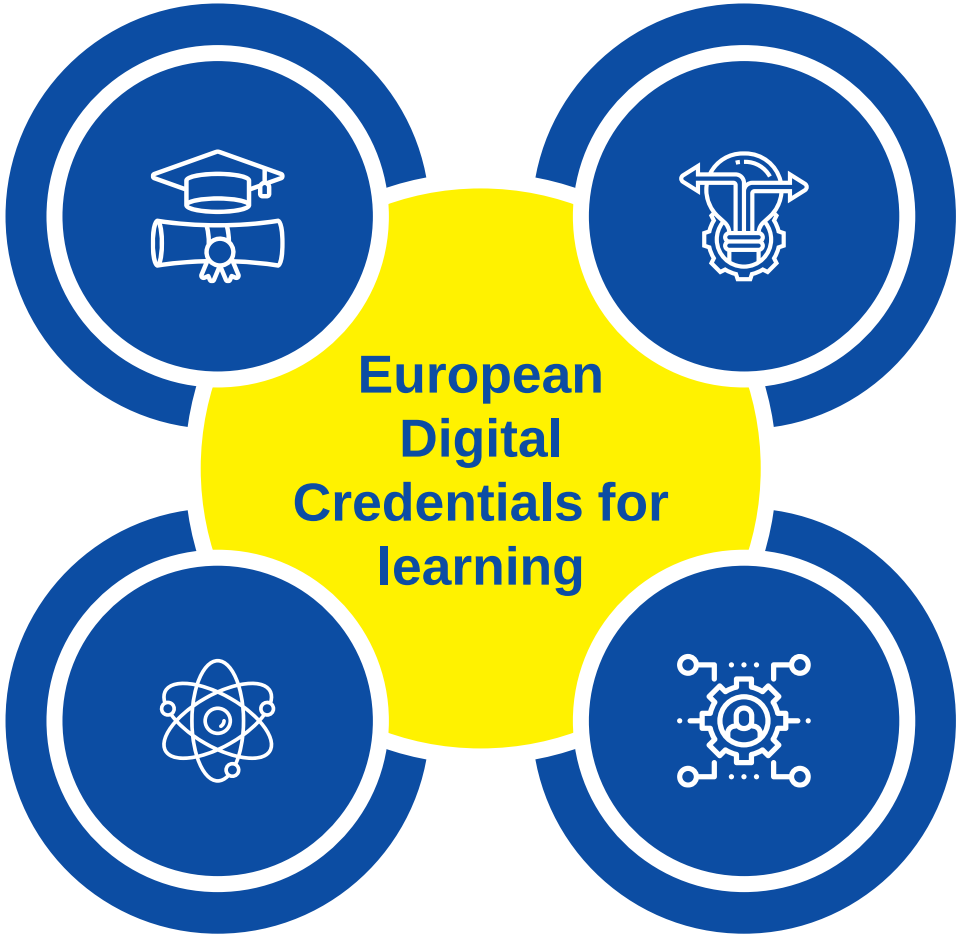
- A credential, in its most essential form, is a **documented statement** containing claims made about a person
- A European Digital **Credential for Learning** is a claim related to the learning achievement of a person
- A **digital signature (e-Seal)** guarantees the origin and integrity of the document

Central To the EU's Policy Agenda

Digital Education Action Plan

Micro-Credentials Recommendation

European Data Strategy



Europass Decision

Individual Learning Account Recommendation

European Skills Agenda

Completing the European Education Area (2025)

EUROPASS COMPONENTS

INTEROPERABILITY

Europass infosite

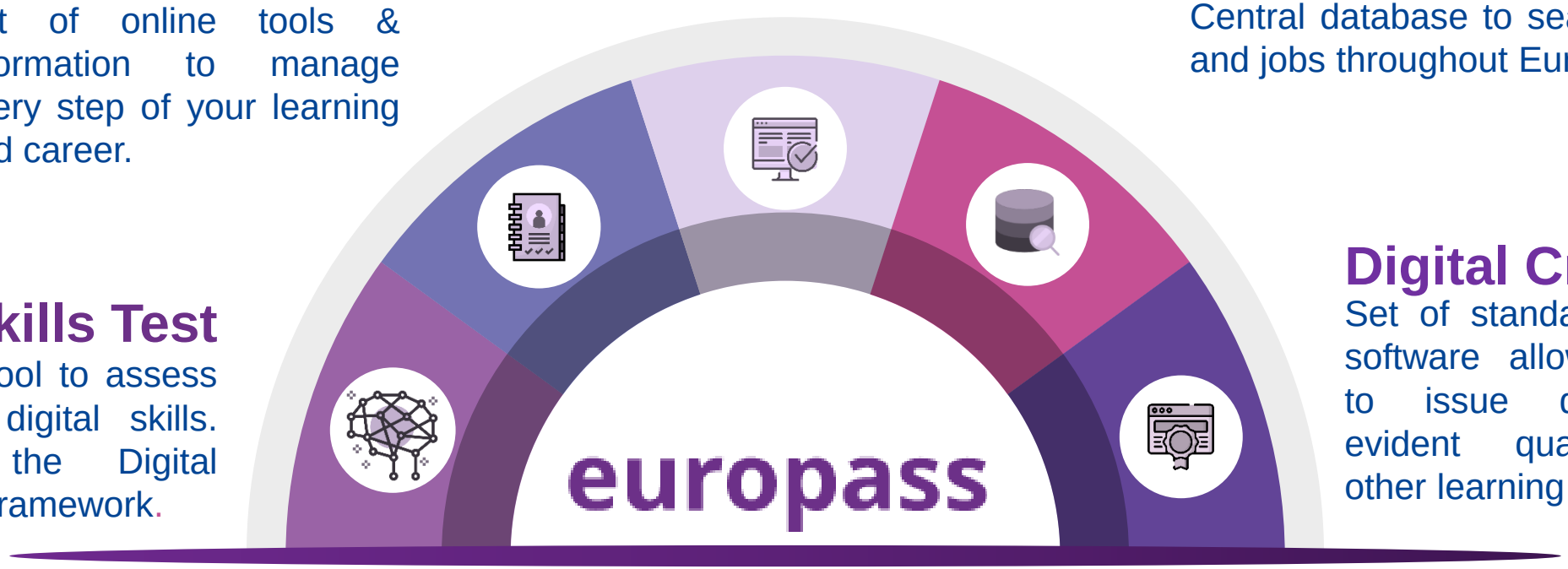
Presents information as described on the Europass decision and the first access point to register and use the digital tools.

e-Portfolio

Set of online tools & information to manage every step of your learning and career.

Jobs and Courses Search

Central database to search for courses and jobs throughout Europe



Digital skills Test

Open-source tool to assess and improve digital skills. Based on the Digital Competence Framework.

Digital Credentials

Set of standards, services & software allowing institutions to issue digital, tamper-evident qualifications and other learning credentials.

Infrastructure & Technicalities

European Digital Credentials for Learning

Functions

Issue

credentials and send them to their owners

Store

credentials securely in a single online or offline wallet

Verify

if the credential is authentic, valid and issued by an accredited organisation

Share

the information in the credential with any other person or organisation with just a click

European Digital Credentials for Learning

components of the infrastructure

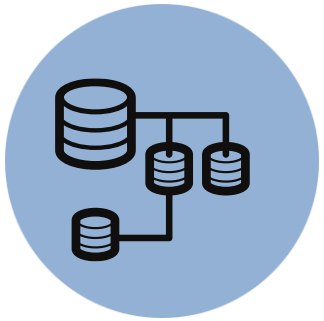
This infrastructure encompasses the technical specifications to implement the framework. It comprises the following core building blocks to help operationalise the framework

Standards

Services

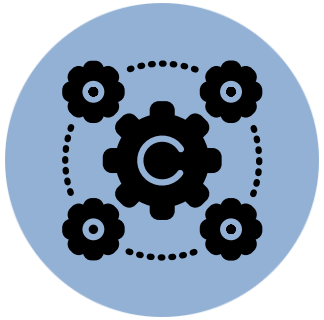
Software

Standards



European Learning Model

- First data scheme that provides a vocabulary to describe and document all stages, forms and sizes of the learning lifecycle
- It is intended to harmonise data models across the continent



Interoperability Standards

- Allow users to send data between different systems in a secure manner
- Communication between the issuer and the wallet and between wallets

Services

EDC ISSUER

- Allows credential awarding bodies to prepare and issue degrees, diplomas, certificates of participation or other credentials to learners

EDC WALLET

- Citizens can store their digital credentials in a secure online space (Europass e-portfolio), and can share them with third parties

EDC VIEWER

- The EDC Viewer is an online interface that displays the contents of credentials, and runs instant authentication and verification checks

Services

Accreditation Database

- Keeps a record of accreditations and licences and is used to check the authenticity of digital credentials

Courses and Qualifications Search

- Information on qualifications and learning opportunities is available via the Find Courses tool of Europass

Open Data Services

- The European Learning Model + vocabularies are made available as linked open data, via an integration with the EU Publications Office

Software & Support

eIDAS & EDC code libraries

- The Commission has open sourced the entire source code of the EDC Issuer, Wallet and Viewer

Docker images

- Installable applications that provide a simple solution to implementers who want to use services on their own infrastructure

Qualifications Dataset Register (QDR)

- Data manager tool that enables national authorities to prepare their data for publication on Europass

Software & Support

Playground

- Allows users to build, award and view test credentials

API Libraries

- Interoperability is provided via APIs which allow for creation of wallets and deposit of credentials into those wallet

Help Desk

- EMPL-ELM-support@ec.europa.eu

European Commission

The European Learning Model (ELM)

EUROPEAN LEARNING MODEL

- A single data model which can be used at all stages of a learning lifecycle
- Can be applied to any educational/learning process, whether regulated or 'open'
- Includes information on accreditation for regulated/licensed learning
- ELM forms the basis of all EC services in this area, and is also used by MS to send data to the EC
- Work is underway with vendors to integrate ELM natively in educational software

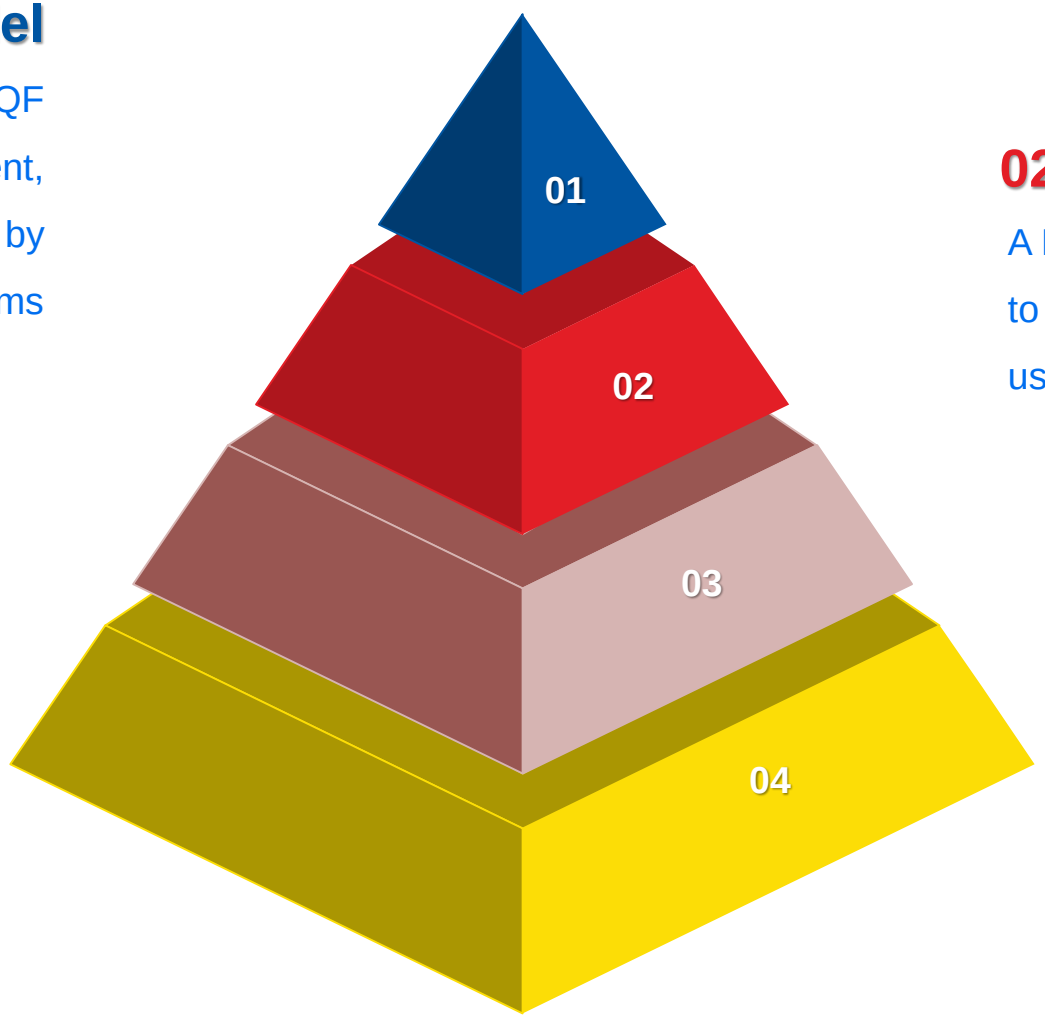
European Learning Model

01 European Information Model

Definitions and Standards in EQF Recommendation, Diploma Supplement, Europass Decision, etc. supplemented by glossaries for additional terms

03 Application Profiles

Specific sets of rules for publishing learning opportuinnities, qualifications, accreditation and credentials in Europass



02 European Learning Model

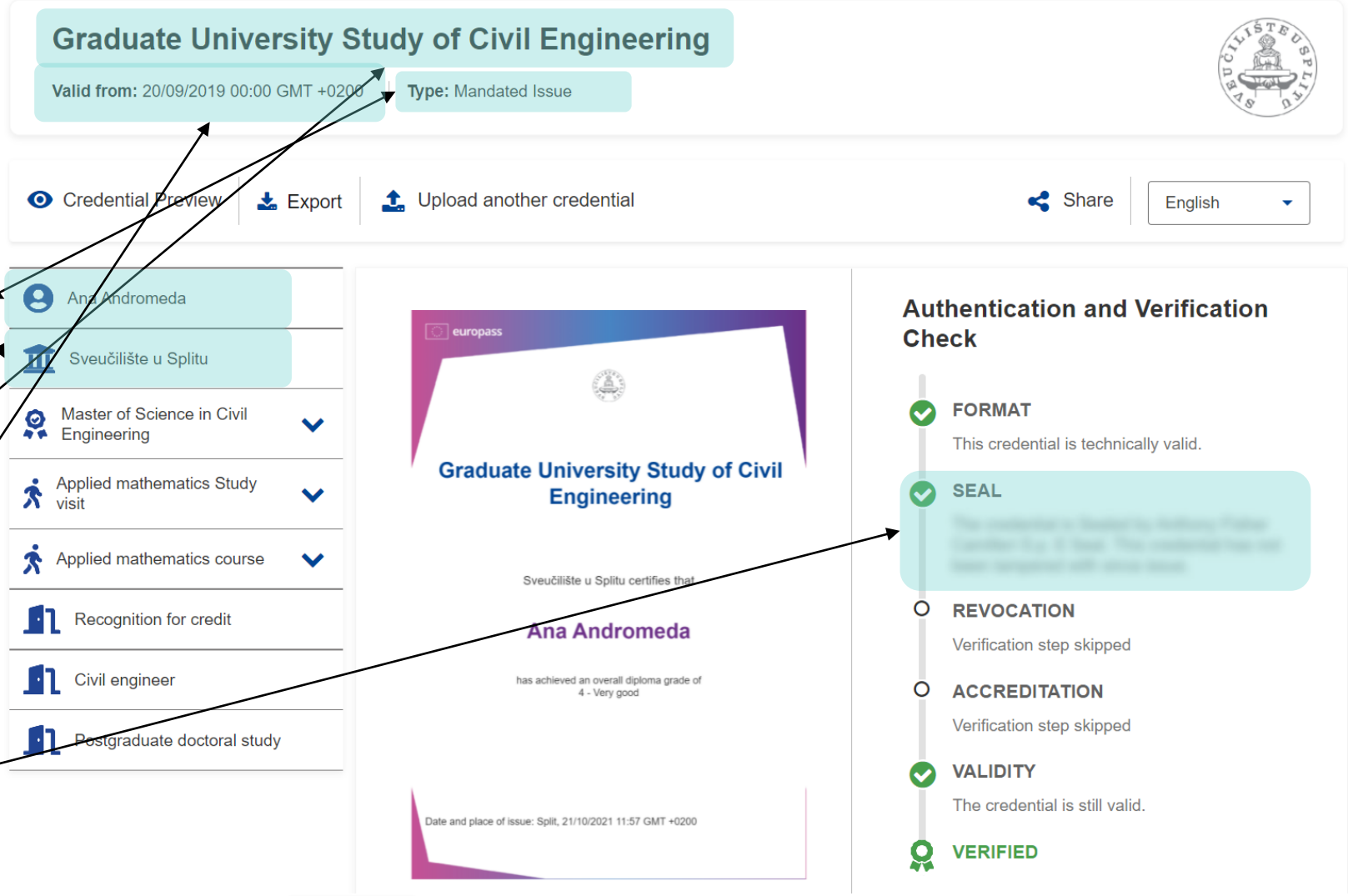
A Linked Open Data publication of concepts to be used in educational and employment use cases throughout Europe

04 Extensions

National, Regional or Sectoral extensions of the data model & application profiles to deal with specific use cases

EDC Compulsory properties

- Issuer
- Recipient
- Credential type
- Credential title
- Valid from date
- e-Seal



EUROPEAN DIGITAL CREDENTIALS AND OTHER EU INITIATIVES

- Several EU and MS initiatives are developing wallet initiatives and technologies

- Most of these include a 'diploma' or 'educational credential' use case
  - EBSI Diploma use case: under European Blockchain Services Infrastructure
  - EU Identity Wallet (eIDAS): Member States will offer citizens and businesses digital wallets that will be able to link their national digital identities with proof of other personal attributes

- EBSI and the EU Identity Wallet are using ELM as the base model for organising data in the educational domain

Thank you!

Contact us at **EMPL-ELM-Support@ec.europa.eu**