

# European Digital Credentials for Learning

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Realizing Digital Societies with Comprehensive  
Data Infrastructure, and Workforce Education  
8 September 2022



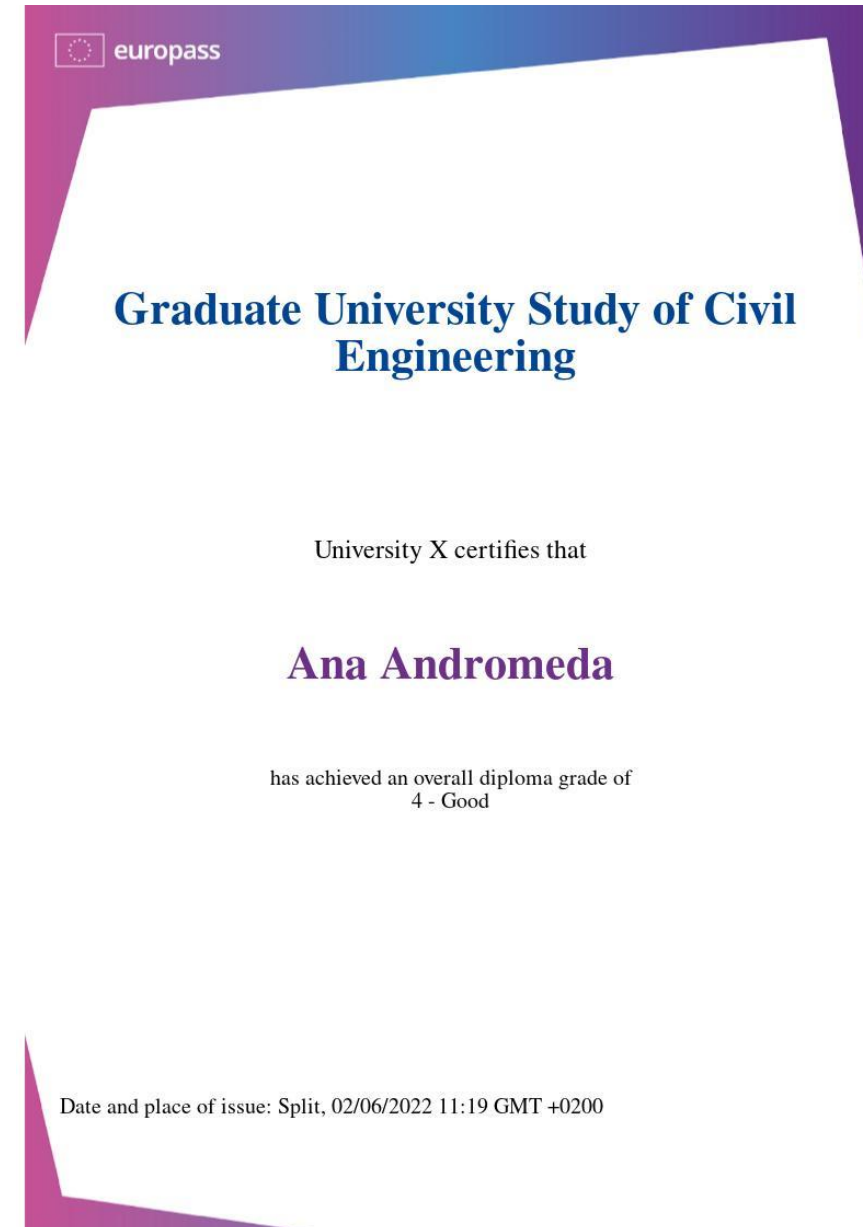
## TALKING POINTS

- Introduction of Key Concepts
- Policy Background and Context
- Europass
- European Learning Model, the single EU standard to describe learning
- European Digital Credentials for Learning Infrastructure
- Demonstration of usage



## 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

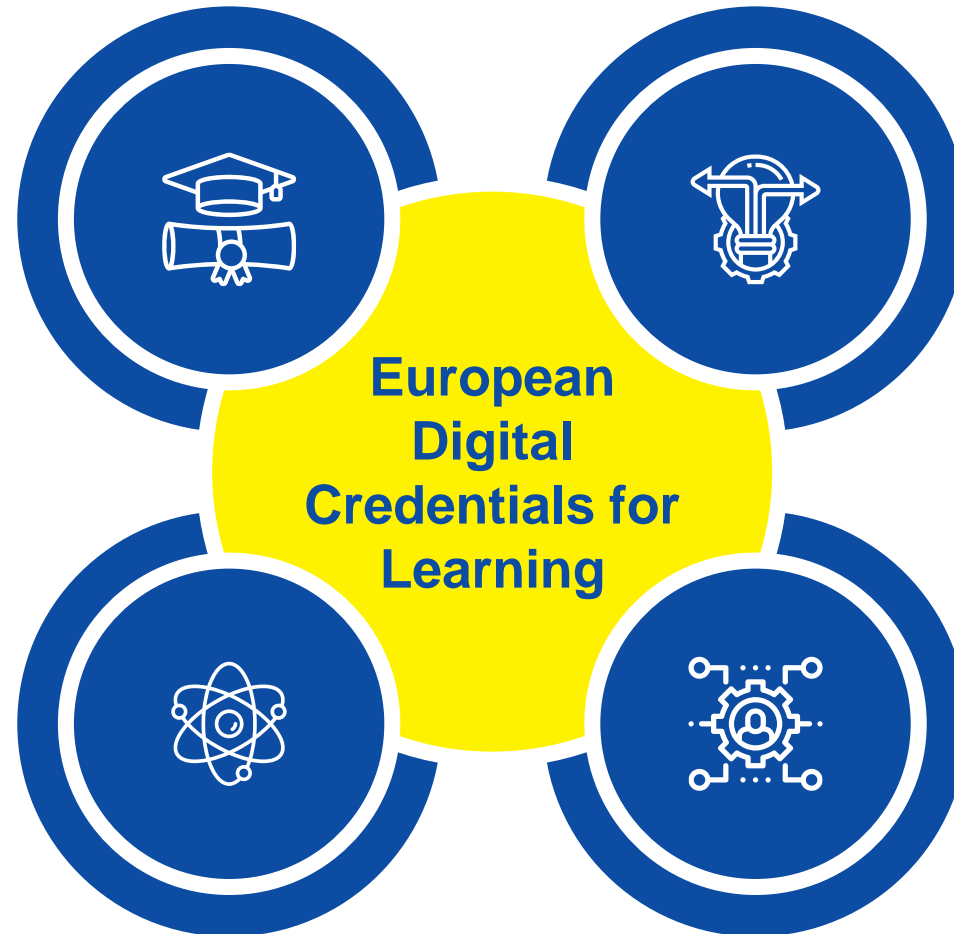


## CENTRAL TO THE EU'S POLICY AGENDA

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)

## WHY DOES THE EC NEED A DIGITAL CREDENTIAL INITIATIVE?

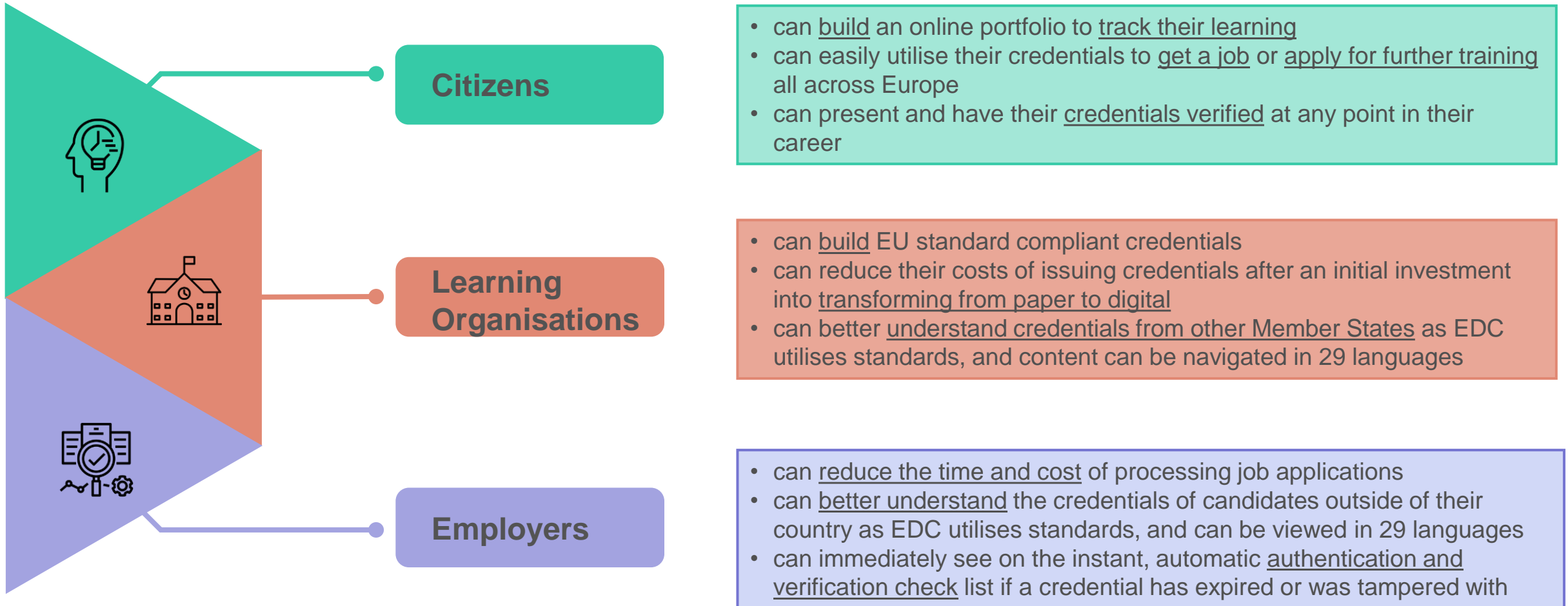
### OBJECTIVES

- Empower citizens to own their credentials
- Reduce market fragmentation
- Create an EU Skills Data Space
- Make digital credentials multilingual by default
- Remove barriers to recognition
- Provide accreditation & transparency tools

### BENEFITS

- Captures formal, non-formal & informal learning
- Addresses all levels of education
- Applicable to the whole course lifecycle
- Interoperable
- Aligned with European recognition instruments
- Free & open source

# WHY USE EUROPEAN DIGITAL CREDENTIALS FOR LEARNING?



## EUROPASS COMPONENTS

### 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.

### Digital skills Test

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

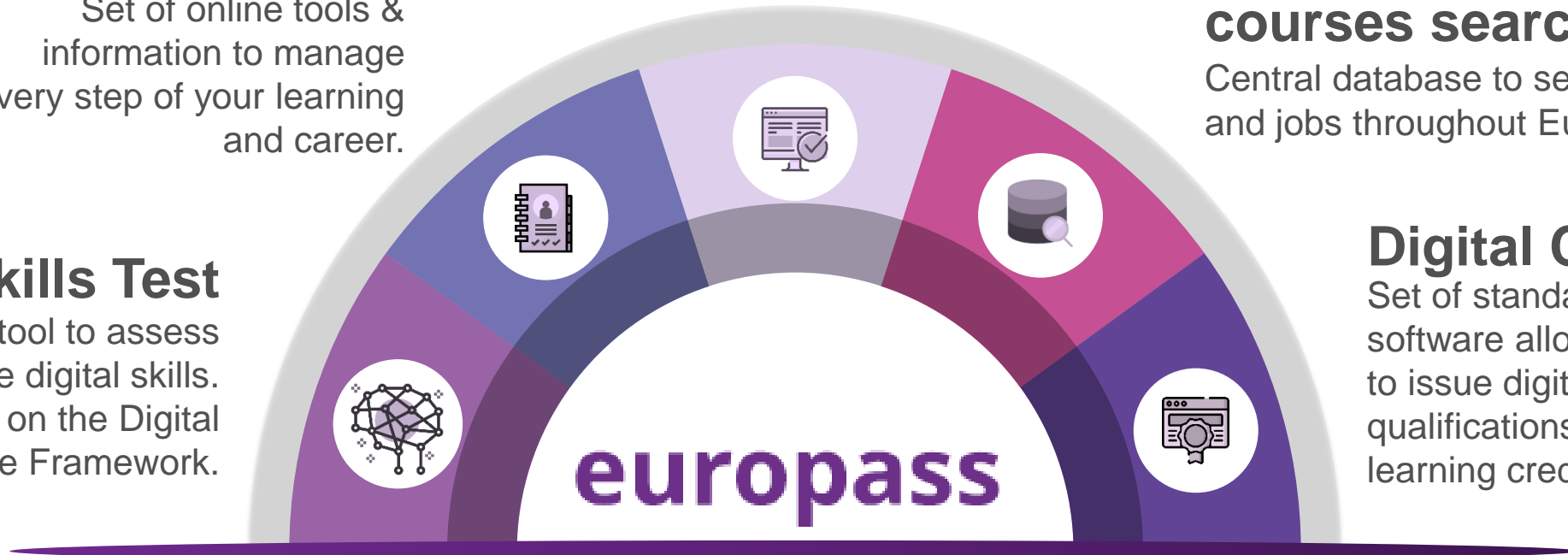
## INTEROPERABILITY

### Jobs, qualifications and courses search

Central database to search for courses and jobs throughout Europe.

### Digital Credentials

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



# IMPLEMENTATION OPPORTUNITIES AND ADVANTAGES



## Interoperability



Use **Data Model**



Use **Service**  
to issue Credentials



Use **Code**  
to develop own applications



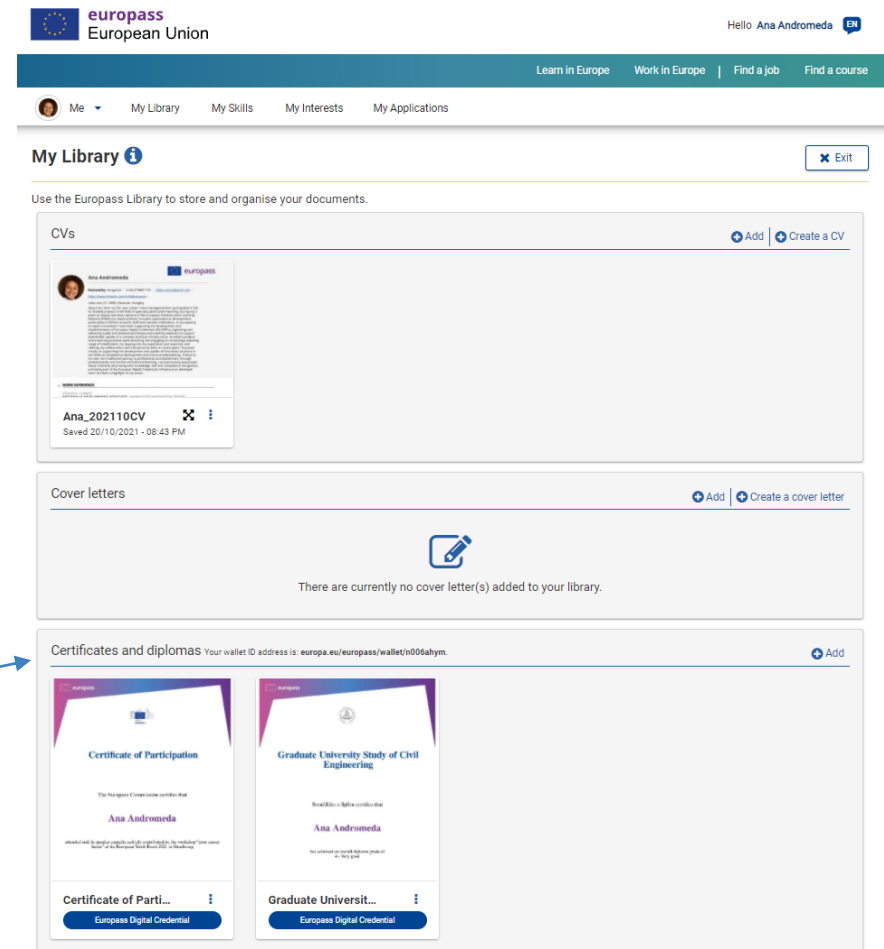
## Europass (available in 29 languages)



Access to 4 million wallets



Access to Qualification and  
Awarding bodies data



## European Learning Model Application Profiles



QMS



AMS



LOMS



EDC

describes claims related to



Activities



Achievements



Entitlements



Attestations



Learning  
Outcomes



Assessments

150 hours of  
coursework

100 hours of  
apprenticeship

DE Qualification as  
a Painter

LO of skill of  
painting

Final Examination  
Grade B

Entitlement to  
work as a painter

Recognition of  
qualification in FI

# EUROPEAN DIGITAL CREDENTIALS FOR LEARNING

## COMPONENTS OF THE INFRASTRUCTURE

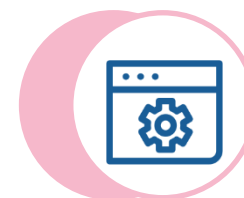
The EDC infrastructure encompasses the technical specifications to implement the framework. It comprises the following core building blocks to help operationalise the framework



**Standards**



**Services**



**Software**

# ELEMENTS OF THE INFRASTRUCTURE

## Open Infrastructure for Learner Data

### Standards

1. European Learning Model
2. Interoperability standards

### Services

1. EDC Issuer
2. EDC Wallet
3. EDC Viewer
4. Accreditation database
5. Course & Qualification  
Search
6. Open Data Services

### Software & support

1. eIDAS & EDC code libraries
2. Docker images
3. Qualifications Dataset  
Register
4. Playground
5. API libraries
6. Helpdesk

# SYSTEM FUNCTIONS



## Issue

credentials and  
send them to their  
owners

Any standard  
compliant issuer can  
award info-rich,  
tamper-evident  
digitally signed  
credentials (fast, free  
and paperless)



## Store

credentials securely  
in a single online or  
offline wallet

EDCs can be directly  
deposited into any  
standard compliant  
credential wallet



## Verify

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

Instant, automatic  
authentication and  
verification checks  
verify credential's  
authenticity, validity,  
integrity and issuer's  
accreditation status  
(if applicable)



## Share

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

Owners can share  
their EDC(s) from any  
standard compliant  
wallet securely by  
custom links for fixed  
time periods

# STORE



## Paper-based



The credential owner picks up the credential from the awarding body

and/or



The awarding body sends the credential via registered delivery method



The credential owner securely stores the credential

## European Digital Credentials for Learning



The credential is sent to the credential owner

and/or



The credential is directly deposited into the credential owner's Wallet



The credential is indefinitely and securely stored in the wallet

No obligation to use Europass Wallet.

*Credential-owner can run a wallet on their own device, or obtain one from any provider.*

# SHARE



## Paper-based



The credential owner requests a new certified copy of the credential from the awarding body



The credential owner sends or presents the copy of the credential to the requester

## European Digital Credentials for Learning



The credential owner shares a link to the credential in their Wallet

No obligation to use Europass Wallet.

*Link can be shared to any cloud-based wallet.*

## TYPES OF DIGITAL CREDENTIALS

- **Qualifications** (e.g., professional certificates, university diplomas and diploma supplements),
- **Activities** (e.g., participation in classes, non-formal learning events, work experience),
- **Assessments** (e.g., transcripts of records), and
- **Entitlements** (e.g., right to enrol in learning opportunities, or to undertake an occupation)



# EDC COMPULSORY PROPERTIES

Issuer

Recipient

Credential type

Credential title

Valid from date

e-Seal

Graduate University Study of Civil Engineering

Valid from: 20/09/2019 00:00 GMT +0200

Type: Mandated Issue

Credential Preview

Export

Upload another credential

Share

English

Ana Andromeda

Sveučilište u Splitu

Master of Science in Civil Engineering

Applied mathematics Study visit


Applied mathematics course

Recognition for credit

Civil engineer

Postgraduate doctoral study

europass



Graduate University Study of Civil Engineering

Sveučilište u Splitu certifies that

Ana Andromeda

has achieved an overall diploma grade of 4 - Very good

Date and place of issue: Split, 21/10/2021 11:57 GMT +0200

Authentication and Verification Check

✓ **FORMAT**

This credential is technically valid.

✓ **SEAL**

The credential is signed by the issuing institution and is valid.

○ **REVOCATION**

Verification step skipped

○ **ACCREDITATION**

Verification step skipped

✓ **VALIDITY**


The credential is still valid.

🏆 **VERIFIED**


# INSTANT AND AUTOMATIC CHECKS, INCLUDING ACCREDITATION


## Graduate University Study of Civil Engineering


Valid from: 20/09/2019 00:00 GMT +0200 | Type: Diploma Supplement (Mandated Issue)





[Home](#) | [Export](#) | [Upload another credential](#) | [Share](#) | [English](#)


 Ana Andromeda


 Sveučilište u Splitu


 Master of Science in Civil Engineering

 Applied mathematics course

 Applied mathematics Study visit

 Postgraduate doctoral study

 Surveyors Board Member

 Civil engineer

Sveučilište u Splitu  
**EUROPASS DIPLOMA SUPPLEMENT**

This Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO (CEPES). The purpose of the supplement is to provide reliable and independent data to organise the institutional transparency and facilitate academic and professional recognition of qualifications (diplomas, degrees, certificates, etc.).

**1. HOLDER OF THE QUALIFICATION**

1.1 Family name	1.2 First name
<input type="text"/>	<input type="text"/>
1.3 Date of birth (DD/MM/YYYY)	1.4 Member ID number or code
<input type="text"/>	<input type="text"/>

**2. ISSUING ORGANISATION**

2.1 Name of institution	2.2 Country
<input type="text"/>	<input type="text"/>
2.3 Address	
<input type="text"/>	

«

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### Authentication and Verification Check

- ☒ **FORMAT**  
This credential is technically valid.
- ☒ **SEAL**  
The credential is Sealed by Nombre Servicio Sellado TEST. This credential has not been tampered with since issue.
- ☐ **REVOCATION**  
Verification step skipped
- ☒ **ACCREDITATION**  
University of Split is Accredited by the Croatian Agency for Quality Assurance
- ☒ **VALIDITY**  
The credential is still valid.
- ☒ **VERIFIED**

Ana Andromeda

Sveučilište u Splitu

Master of Science in Civil Engineering

Applied mathematics course

Applied mathematics Study visit

Concrete structures I course

Dynamics of structures and earthquake engineering course

Geotechnical engineering course

Stability of structures course

Postgraduate doctoral study

Civil engineer

Recognition for credit

## Master of Science in Civil Engineering

**Awarding Date:** 20/09/2019 00:00 GMT +0200

**Awarding Body:** Fakultet Građevinarstva, Arhitekture i Geodezije

This is the overall description of the achievement of the Master of Science in Civil Engineering, that is linked to the overall credential, together with its sub-achievements.

### Proven by

Title	Grade
Overall Assessment	excellent (5)

**Influenced by:** Applied mathematics course, Applied mathematics Study visit, Concrete structures I course, Dynamics of structures and earthquake engineering course, Geotechnical engineering course, Stability of structures course

**Entitles Owner to:** Postgraduate doctoral study , Civil engineer , Recognition for credit

### Sub-Achievements

Applied mathematics, Concrete structures I, Dynamics of structures and earthquake engineering, Geotechnical engineering, Stability of structures

### Specification

**Ach-Spec-ID-Scheme identifier:** AchSpecID-72

**Learning Outcomes:**

**LO1 related to applied mathematics** 

**LOID-Scheme identifier:** LOID-73a

To formulate equations of mathematical physics for engineering problems, and to solve them analytically or with numerical methods.

**Type:** knowledge

**Reusability Level:** cross-sector skills and competences

**Related ESCO Skills:** use mathematical tools and equipment, execute analytical mathematical calculations, geodesy

**Related Skills:** applied mathematics, perform engineering calculations, construct earthquake resistant structures

# EUROPEAN LEARNING MODEL

Can utilise **443 properties** to describe

- **Organisations**
- Details of the **credential owner**
- **Achievements** (including grades and references to learning outcomes, EQF/NQF levels, ISCED-f codes, ESCO skills activities and entitlements)
- **Activities** (by start and end dates; format, mode and volume of learning)
- **Entitlements** (Entitlement to work as an attorney or enroll in further education)

## Share



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### Recipient information ⓘ

Names and organisations

e.g. Leipzig university

More than one recipients can be added

Reason for sharing

e.g. Applying for a course

### Link

Choose how long the file will be available for. You can change this date on your Activity Feed

Valid until: \*

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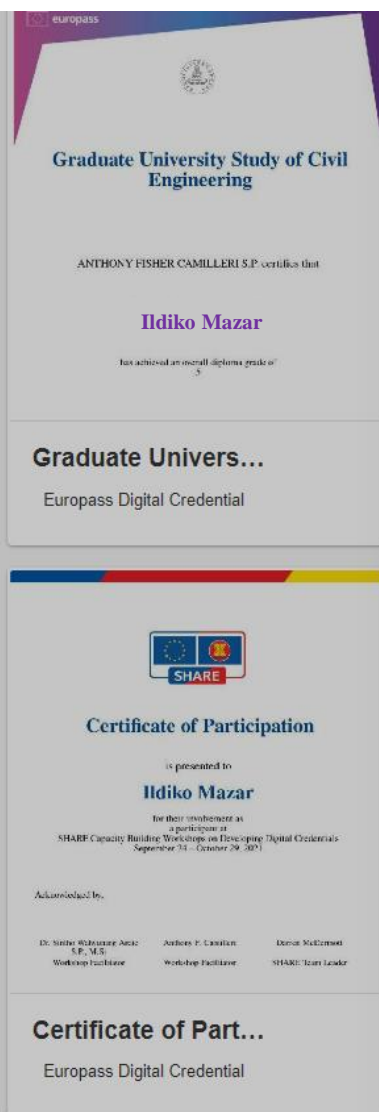
2023

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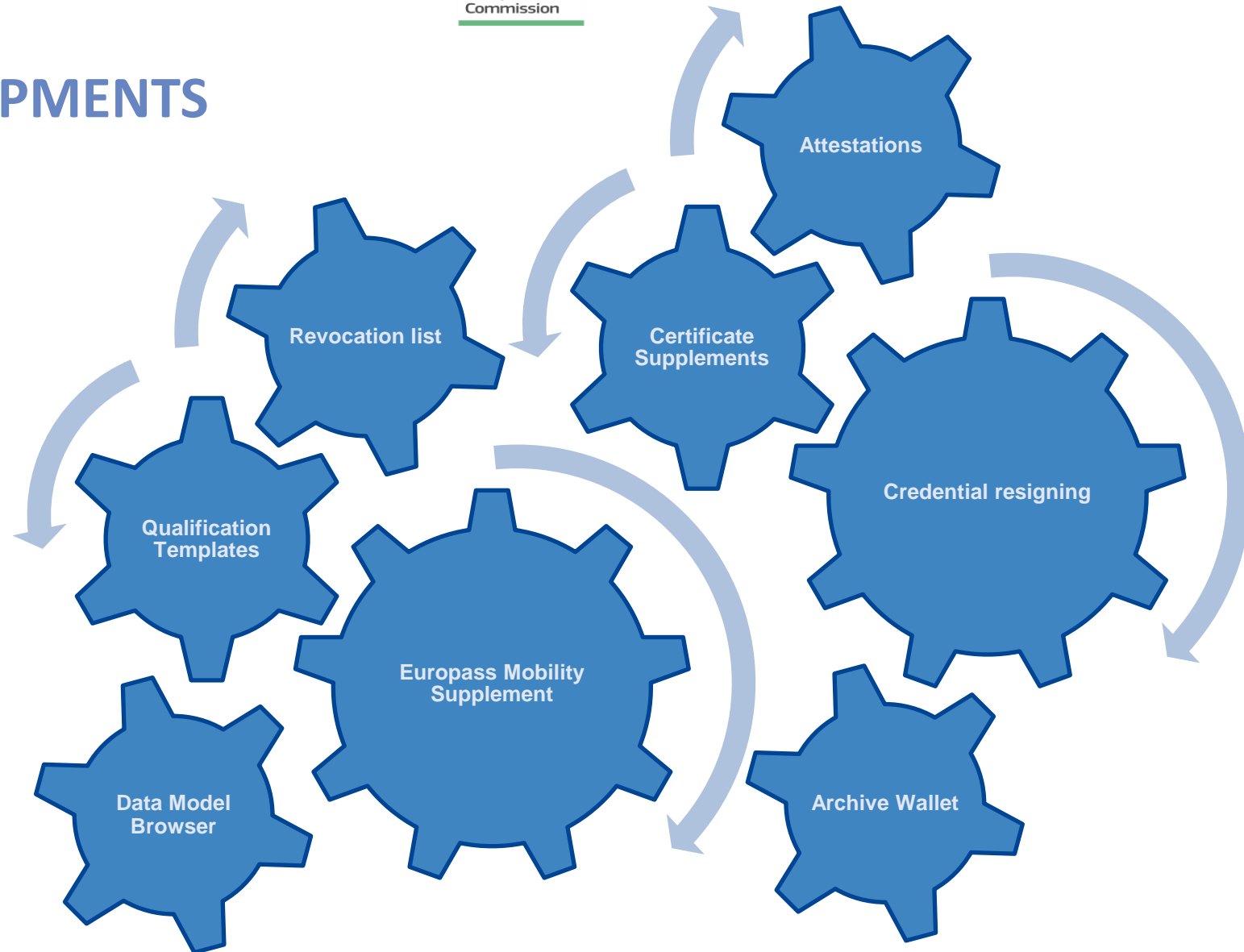


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Deselect all

## FUTURE DEVELOPMENTS





# Thank you!

Contact us at  
**[EMPL-ELM-Support@ec.europa.eu](mailto:EMPL-ELM-Support@ec.europa.eu)**