

Updates to European Digital Credentials – Release 2.0

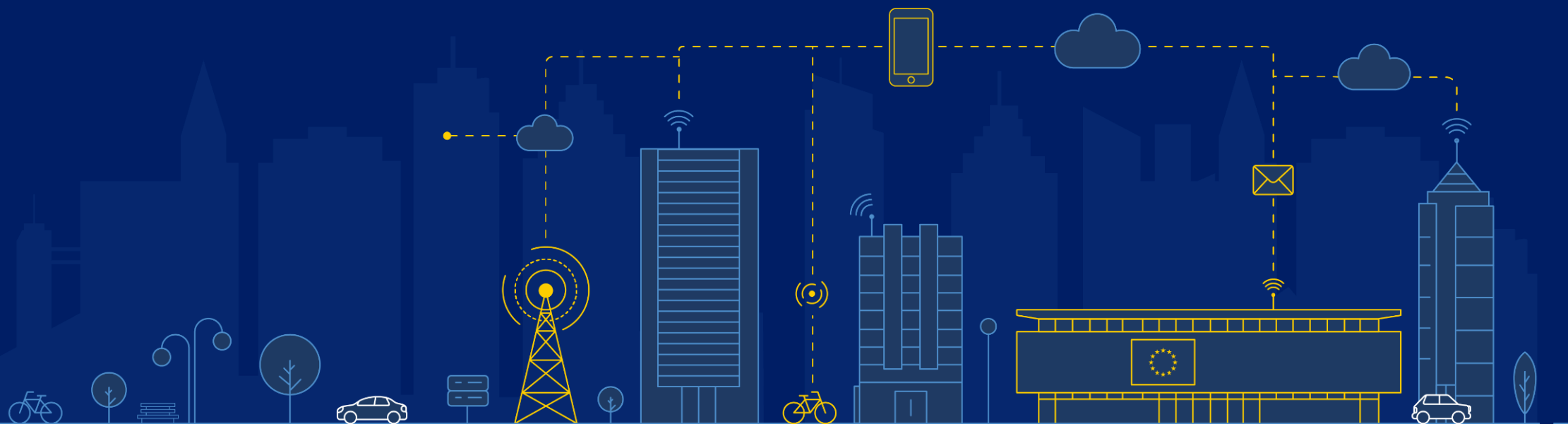
An overview of recent changes

- Updates from the European Commission
- From ELM v2 to ELM v3 – What has changed?
- News on Interoperability
 - From XML to JSON LD
 - Backwards compability
 - Re-signing credentials
- Demo - Improvements to Mandated Issue and changes to the Online Credential Builder
- Upcoming Support availabilities
- Future Roadmap

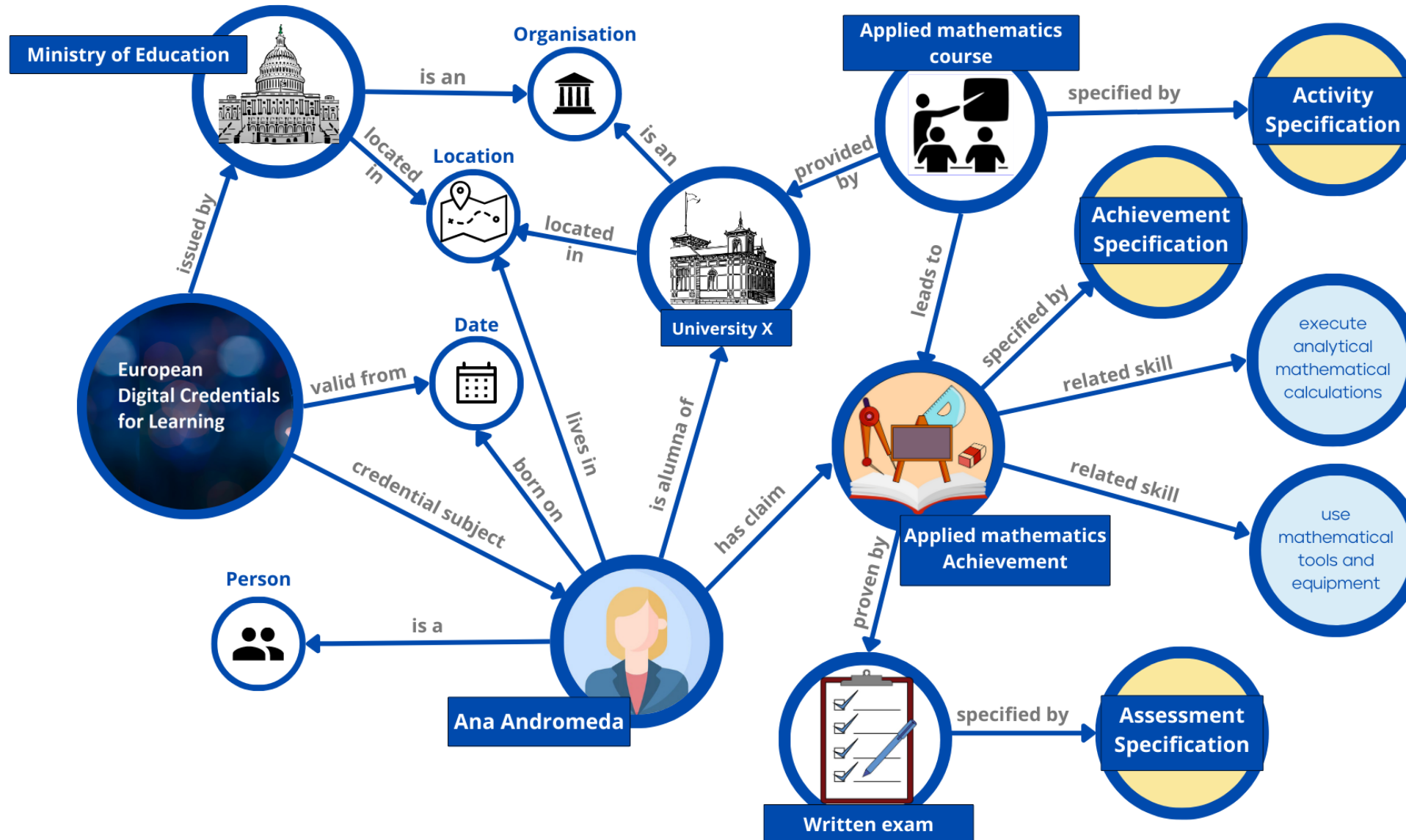




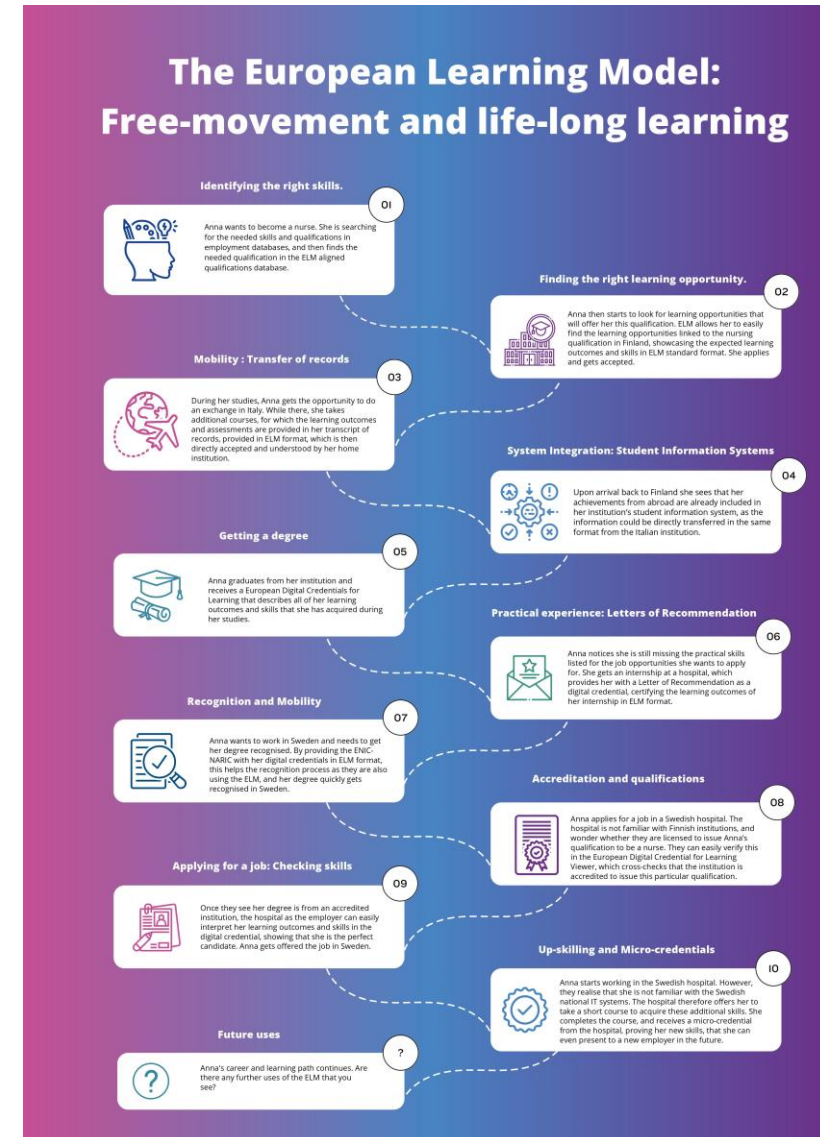
FROM ELM V.2 TO ELM V.3 : WHAT CHANGED?

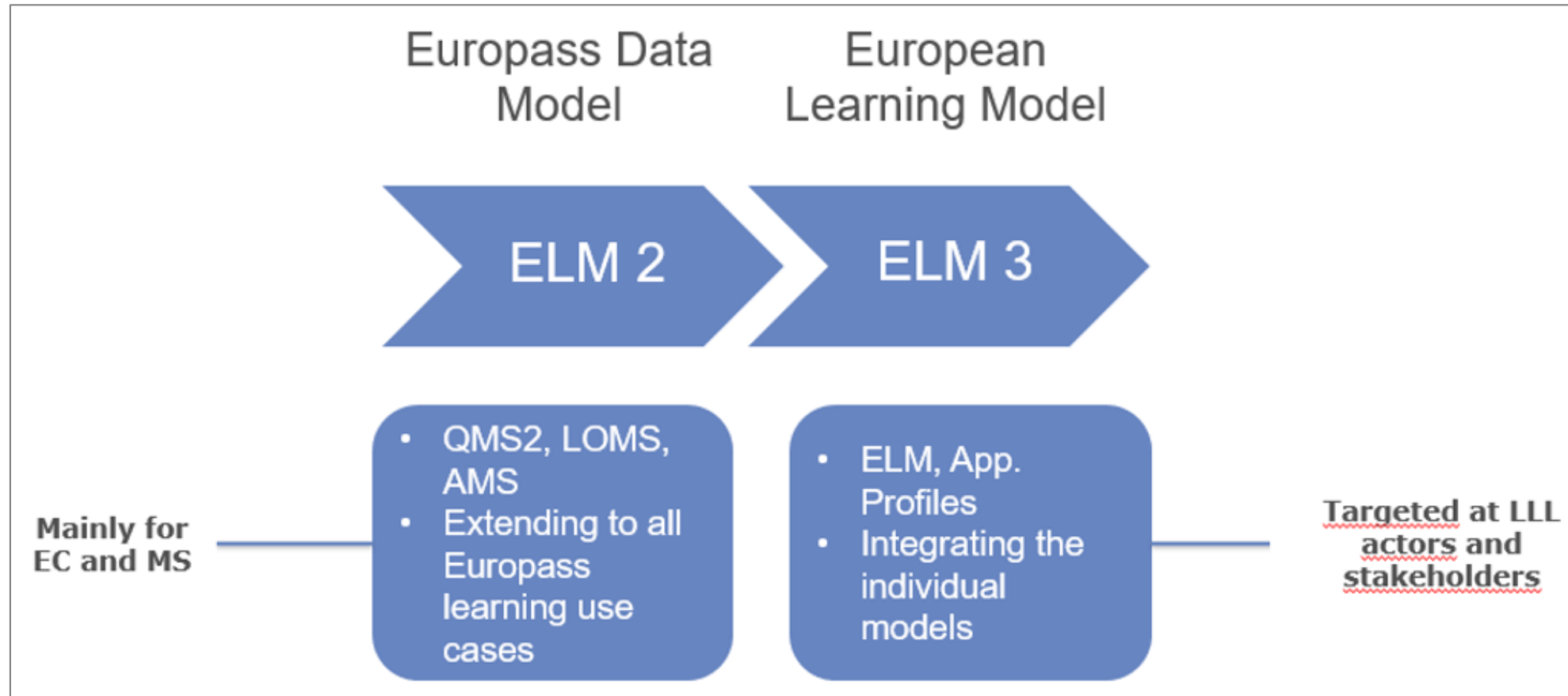


What is the ELM



- ELMv3 is the basis of EDC
- Long-term support version
- Multilingual
- Introduction of new properties based on demand
- ELMv3 Launch Webinar of the 11th of May available [here](#)



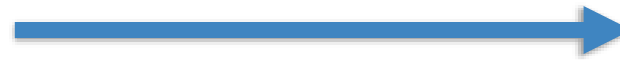




UPDATES TO INTEROPERABILITY



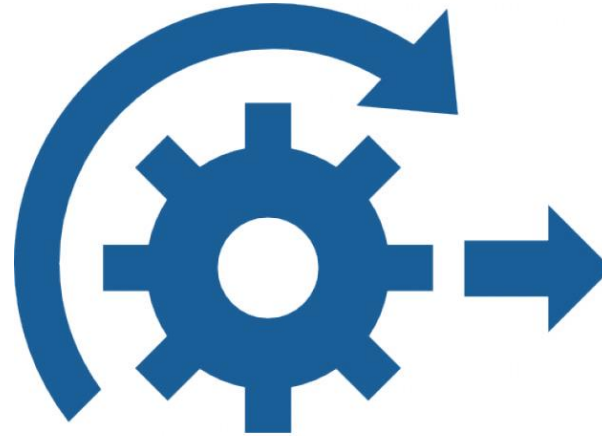
~~EDC
1.8~~



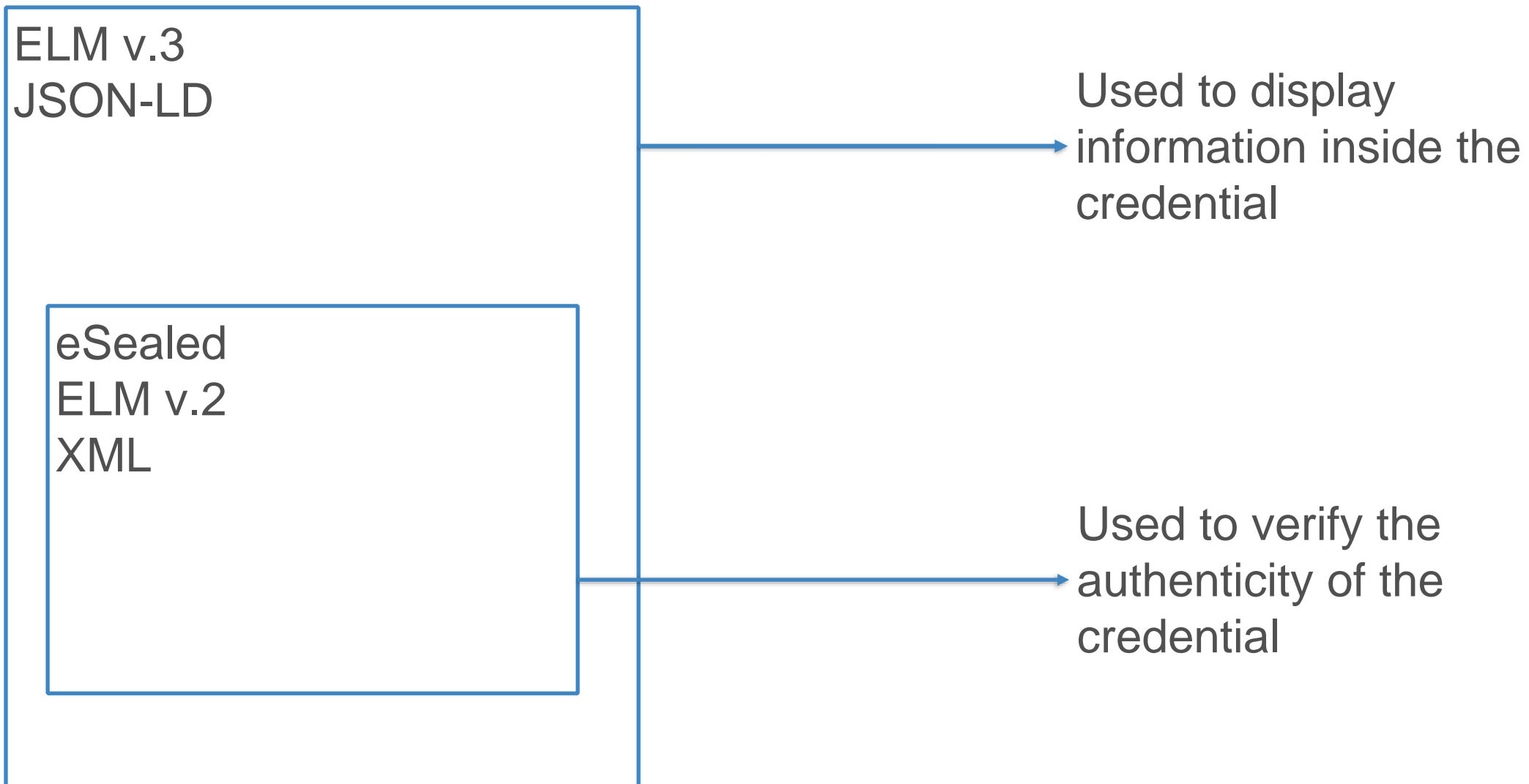
EDC
2.0

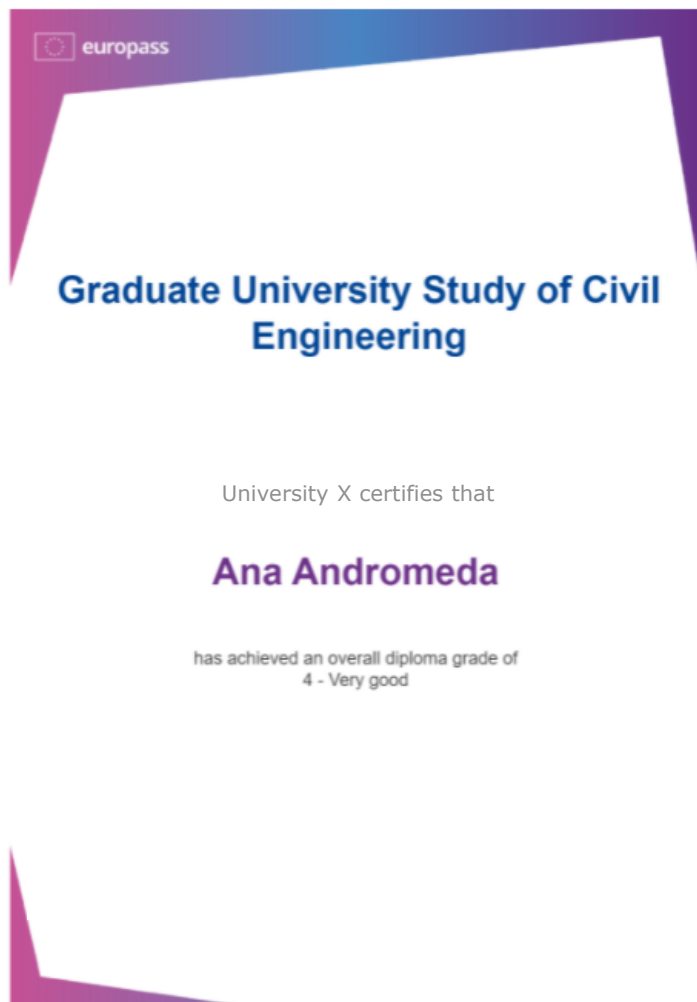
- W3C Verifiable Credentials Data Model is becoming the default ‘parent standard’ of all other credentialing standards, including ELM, Open Badges and Verifiable Credentials
- JSON has been replacing XML as the default language for developers for the past decade
- The EDC 1.0 expressed Verifiable Credentials as XML since eIDAS sealing standards had no support for JSON at the time – however, this made it a unique implementation with no compatibility offered by other wallets
- By moving to JSON, EDC will have improved interoperability and be easier to be supported by multiple verifiers
- By moving to JSON-LD it aids implementation in multiple systems, and extension of the data models for new purposes

ELM v.2
XML

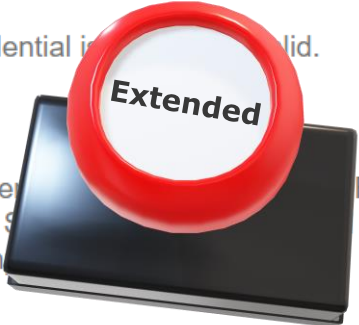


ELM v.3
JSON





Authentication and Verification Check

- FORMAT**
This credential is valid.
 - SEAL**
The credential has not been tampered with. Fisher has not been tampered with.
 - REVOCATION**
Verification step skipped
 - ACCREDITATION**
Verification step skipped
 - VALIDITY**
The credential is still valid.
 - VERIFIED**
- 

EDC is now the only credential system in the world capable of maintaining credential validity indefinitely.

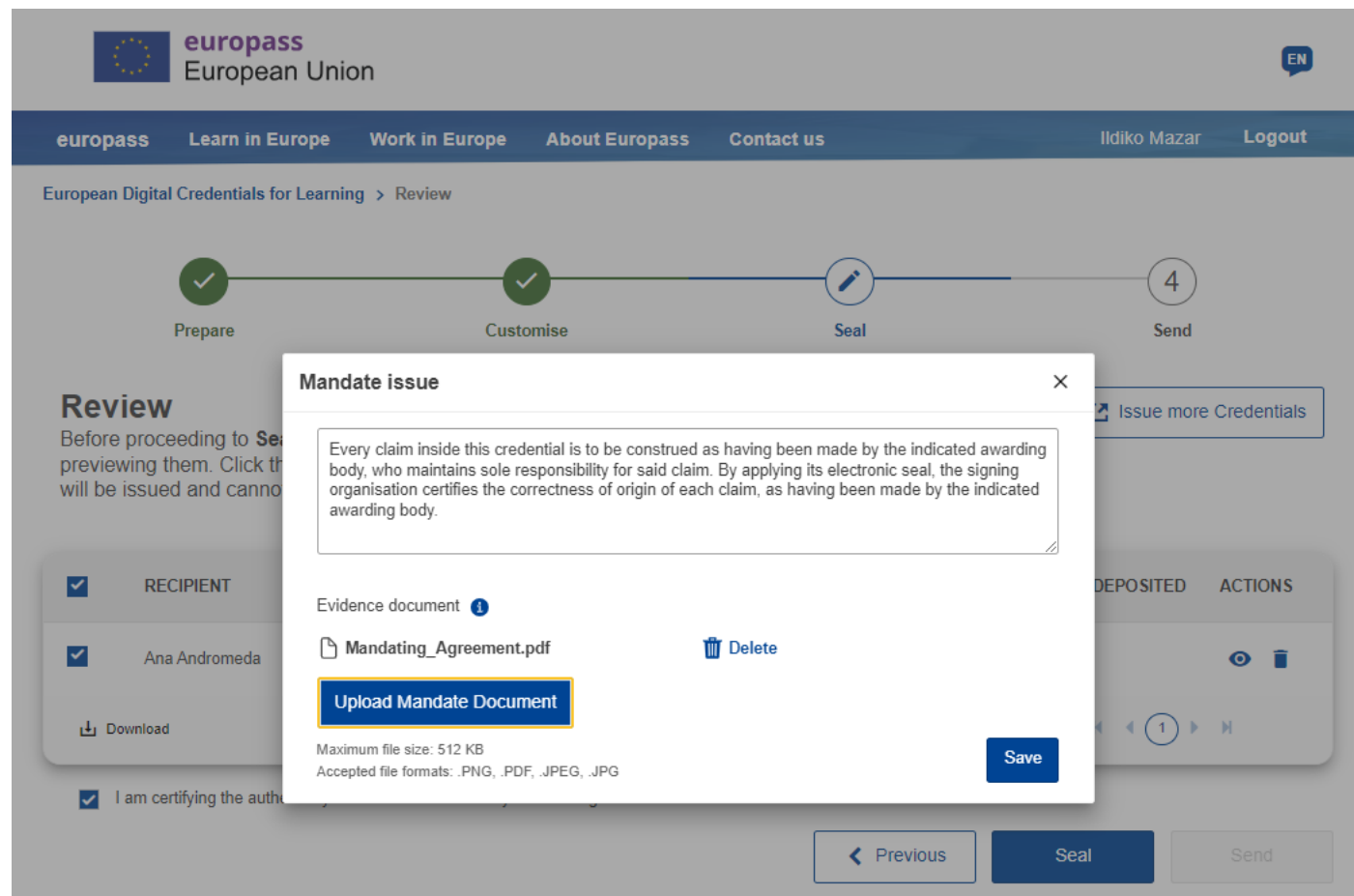
- ELM is **strongly inspired** by the lessons and experiences of ELMO and the EMREX community
- ELM takes these concepts and applies them to all levels of lifelong learning, including non-formal and informal learning
- ELM v.3 is 100% compatible with ELMO,
 - every field in ELMO is expressible as ELM
 - will allow for ELMO → ELM conversion
 - validated with ELMO community and [published on Github](#)



DEMO OF CHANGES TO MANDATED ISSUE AND THE ONLINE CREDENTIAL BUILDER



- Include mandating evidence in EDC
- Clearer division between Issuer and Awarding Bodies




The screenshot shows the 'Review' stage of the Europass process. A 'Mandate issue' dialog box is open, containing the following text:

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.

Below the text is an 'Evidence document' section with a file named 'Mandating_Agreement.pdf' and a 'Delete' button. A blue 'Upload Mandate Document' button is highlighted with a yellow border. At the bottom right of the dialog is a 'Save' button.

The background interface shows a progress bar with steps: Prepare (checked), Customise (checked), Seal (active), and Send (4). Below the progress bar, there is a 'Review' section with a 'Download' button and a table of recipients. The table has columns for 'RECIPIENT', 'DEPOSITED', and 'ACTIONS'. One recipient, 'Ana Andromeda', is listed. At the bottom of the page, there are 'Previous', 'Seal', and 'Send' buttons.

- Changes in Online Credential Builder
 - More and better structured fields
 - Template management
- Changes in EDC Viewer
 - Simplified side bar
 - Display of Credential ID in header
- Changes in Github
- Updating and improving documentation



Certificate of Participation

Valid from: 11/05/2023 | Type: Generic | Credential id: urn:credential:0155cd3d-e013-4e65-be23-cf0996727fbc

[Credential summary](#) | [Export](#) | [Upload another credential](#) | [Share](#) | English ▾

Ana Andromeda

EU Commission, DG EMPL

Launch of the European Learning Model

Launch of the European Learning Model

Directed By
EU Commission, DG EMPL [Show more ▾](#)

Start date	End date
11/05/2023	11/05/2023

Description

The European Learning Model supports the process of matching people's aspirations and skill sets with labour market needs and opportunities. By providing tools to support the recognition of qualifications and the validation of skills, the ELM promotes a mindset of up/reskilling and lifelong learning, and furthers the goals of the European Skills Agenda and the Digital Education Action Plan. The European Commission has publicly launched the European Learning Model v.3 (ELM v.3) in May 2023, introducing the broader policy context, the application of the model in different sectors and settings, synergies with other EU initiatives and services, and highlighting the changes and improvements compared to ELM v.2.

[Activity information](#)

[Other Information](#)



UPCOMING MATERIALS AND SUPPORT



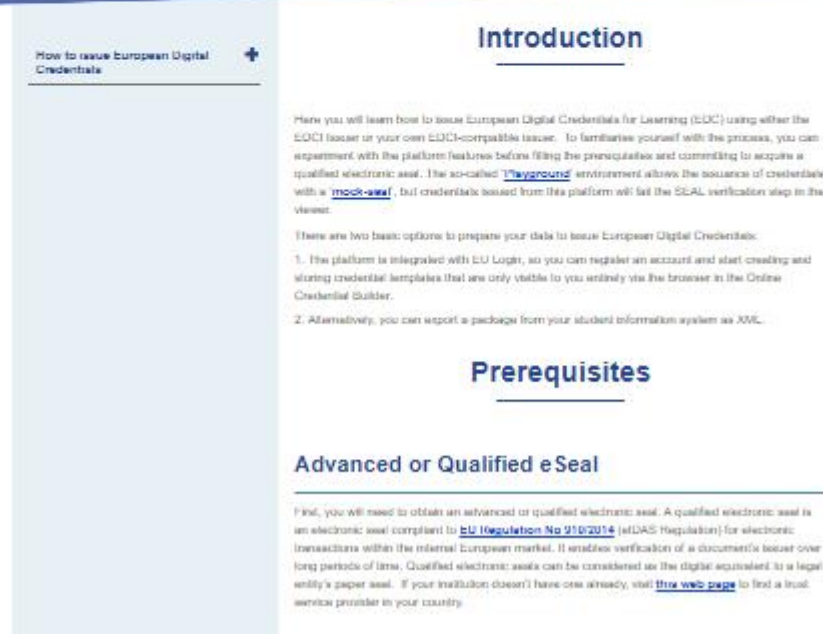


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How to issue European Digital Credentials for Learning

A step-by-step guide to help build, customise, issue and use your own European Digital Credentials for Learning.

- Update of the pages to reflect the changes from XML to JSON
- ‘How to get started’ - guide
- ‘How to’ guides on how to create basic types of credentials – including micro-credentials



Introduction

Here you will learn how to issue European Digital Credentials for Learning (EDC) using either the EDC issuer or your own EDC-compatible issuer. To familiarise yourself with the process, you can experiment with the platform features before filling the prerequisites and committing to acquire a qualified electronic seal. The so-called [“playground”](#) environment allows the issuance of credentials with a [mock seal](#), but credentials issued from the platform will fail the SEAL verification step in the viewer.

There are two basic options to prepare your data to issue European Digital Credentials:

1. The platform is integrated with EU Login, so you can register an account and start creating and storing credential templates that are only visible to you initially via the browser in the Online Credential Builder.
2. Alternatively, you can export a package from your student information system as XML.

Prerequisites

Advanced or Qualified e Seal

First, you will need to obtain an advanced or qualified electronic seal. A qualified electronic seal is an electronic seal compliant to [EU Regulation No 910/2014](#) (eIDAS Regulation) for electronic transactions within the internal European market. It enables verification of a document's issuer over long periods of time. Qualified electronic seals can be considered as the digital equivalent to a legal entity's paper seal. If your institution doesn't have one already, visit [this web page](#) to find a trust service provider in your country.

DISCOVER BROWSE TRY EU LOGIN

DIGITAL eSignature / EU Trust Services Dashboard / Browse / Trusted Lists / Search by type of service

Which country? step 2/2

Check all

<input type="checkbox"/> Austria	<input checked="" type="checkbox"/> Belgium	<input type="checkbox"/> Bulgaria
<input type="checkbox"/> Cyprus	<input type="checkbox"/> Czech Republic	<input type="checkbox"/> Germany
<input type="checkbox"/> Denmark	<input type="checkbox"/> Estonia	<input type="checkbox"/> Greece
<input type="checkbox"/> Spain	<input type="checkbox"/> Finland	<input type="checkbox"/> France
<input type="checkbox"/> Croatia	<input type="checkbox"/> Hungary	<input type="checkbox"/> Ireland
<input type="checkbox"/> Iceland	<input type="checkbox"/> Italy	<input type="checkbox"/> Liechtenstein
<input type="checkbox"/> Lithuania	<input type="checkbox"/> Luxembourg	<input type="checkbox"/> Latvia
<input type="checkbox"/> Malta	<input checked="" type="checkbox"/> Netherlands	<input type="checkbox"/> Norway

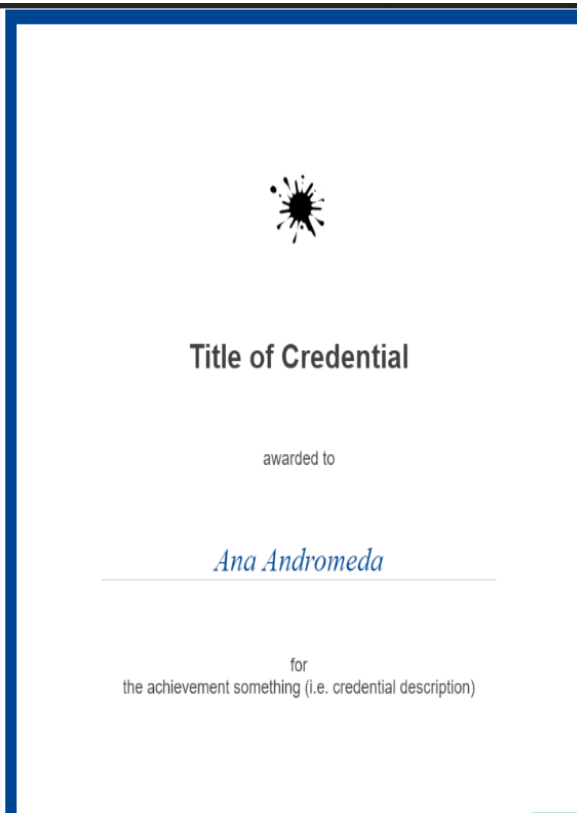
Current search

Qualified certificate for electronic seal
Certificate for electronic seal

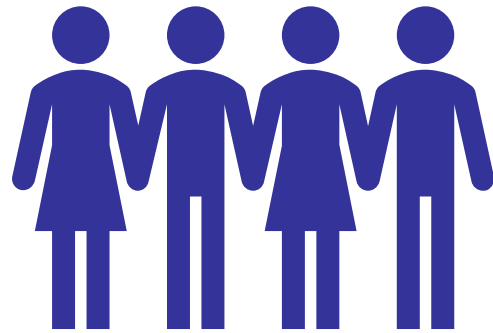
- Belgium
- Netherlands

- Further information on how to acquire an eSeal
- Information on the signature requirements
- A how to guide

```
1 <div style="font-style: normal; padding-bottom: 2rem; padding-top: 10rem; >
2   <div
3     style="flex: 0 0 100%; max-width: 100%; display: block; text-align: center;"
4   >
5     
11    <p style="margin-top: 6rem; text-align: center !important; font-weight: 700; font-family:
12      sans-serif; color: #404040 !important; font-size: 36px;" th:text="{credential.displayParameter.
13        title}"></p><br>
14    <p style="text-align: center !important; font-weight: 300; font-family: sans-serif; color: #404040
15      !important; font-size: 20px;" th:text="{#awardedTo}"></p><br>
16    <p style="margin-bottom: 0; text-align: center !important; font-weight: 300; font-style: italic;
17      color: #004494 !important; font-size: 36px;" th:with="{
18      caseFullName = ${credential.credentialSubject.fullName != null and !#strings.isEmpty
19        (credential.credentialSubject.fullName)},
20      caseGivenName = ${credential.credentialSubject.givenName != null and !#strings.isEmpty
21        (credential.credentialSubject.givenName)},
22      caseBirthName = ${credential.credentialSubject.birthName != null and !#strings.isEmpty
23        (credential.credentialSubject.birthName)},
24      caseFamilyName = ${credential.credentialSubject.familyName != null and !#strings.isEmpty
25        (credential.credentialSubject.familyName)},
26      caseNationalID = ${credential.credentialSubject.nationalID != null and !#strings.isEmpty
27        (credential.credentialSubject.nationalID)}"
28      th:text="{
29        caseFullName ? credential.credentialSubject.fullName :
30        caseGivenName ? #strings.concatReplaceNulls(' ', credential.credentialSubject.givenName,
31          ' ', credential.credentialSubject.patronymicName, ' ', credential.credentialSubject.
32          familyName) :
33        caseBirthName ? credential.credentialSubject.birthName :
34        caseFamilyName ? credential.credentialSubject.familyName :
35        caseNationalID ? credential.credentialSubject.nationalID : 'Anonymous'
36      }"></p>
37    <p style="margin-top: 0; height: 0; margin-left: 15%; width: 70%; border-bottom: 1px solid #ccc;"
38      ></p><br>
39    <p style="margin-bottom: 0; text-align: center !important; font-weight: 300; font-family:
40      sans-serif; color: #404040 !important; font-size: 20px;" th:text="{#for}"></p>
41    <p style="margin-top: 0; text-align: center !important; font-weight: 300; font-family: sans-serif;
42      color: #404040 !important; font-size: 20px;" th:text="{credential.displayParameter.description}
43      "></p>
44  </div>
45 </div>
```



- Publishing of JSON-LD templates for consultation
- Repository for HTML customization code in Thymeleaf



- Creation of a community space for good practice sharing and questions
- Let us know what we are missing
- What would you have needed at first contact ?
- EMPL-ELM-SUPPORT@ec.europa.eu

NEXT STEPS



2.1. Ontology

- [Ontology](#)

2.2. RDF Application Profiles

- [AMS](#)
 - [AMS-constraints](#)
 - [AMS-constraints-mdr](#)
- [LOQ](#)
 - [LOQ-constraints](#)
 - [LOQ-constraints-mdr](#)
- [EDC](#)
 - [EDC-generic-no-cv](#)
 - [EDC-generic-full](#)
- [PID](#)
 - [PID-constraints](#)

2.3. XSD Application Profiles

- [AMS](#)
 - [AMS](#)
- [LOQ](#)
 - [LOQ](#)

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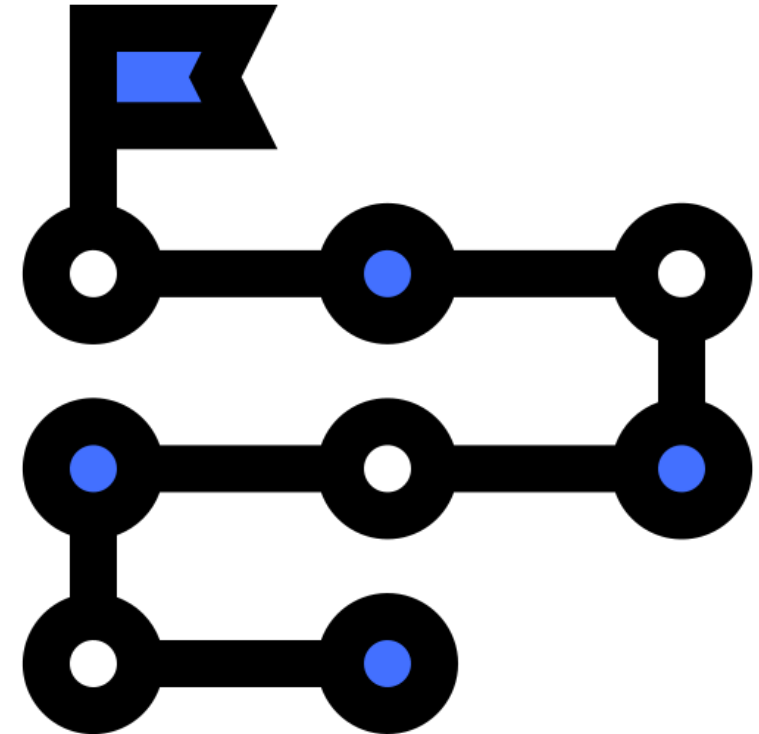
European Digital Credential

A set of claims made by an issuer in Europe, using the EDC Standards. A European Digital Credential for Learning is a set of one or more claims which may be used to demonstrate that the owner has certain skills or has achieved certain learning outcomes through formal, non-formal or informal learning. European Digital Credential class is a subclass of Verifiable Credential.

- Applies to: [elm:EuropeanDigitalCredential](#)

Property name	URI	Expected value	Card.	Description
attachment	elm:attachment	Media Object	0..*	Any digital document (PDF, JPEG or PNG format) that an issuer has attached to the European Digital Credential document.
credential profile	elm:credentialProfiles	Concept	1..*	A profile of the European Digital Credential. It should be provided using the EDC Controlled List of Credential Types.
credential schema	cred:credentialSchema	Shacl Validator 2017	1..*	The schema of the european digital credential.
credential status	cred:credentialStatus	xsd:anyURI	0..1	The status of the european digital credential.
display	elm:displayParameter	Display Parameter	1..1	The display details of the credential.
evidence	cred:evidence	Evidence	0..*	The evidence of the european digital credential.

- **2023:**
 - Improvements to Accreditation
- **Future:**
 - EBSI integration
 - Synergies with SDG
 - Revocation
 - Archive Wallet
 - Role Management
 - Recognition statements
 - Europass Mobility
 - ELM governance



Any questions?

THANK YOU!

Contact us at : EMPL-ELM-SUPPORT@ec.europa.eu