



- Skills for the European
- Open Science
- Commons

Recognition Framework

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on behalf of
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Purpose of the Recognition Framework?

- Define the use of digital credentials
- To give Open Science professionals/experts proof of their instructor/trainer skills
- For employers to be able to recognize these skills across Europe



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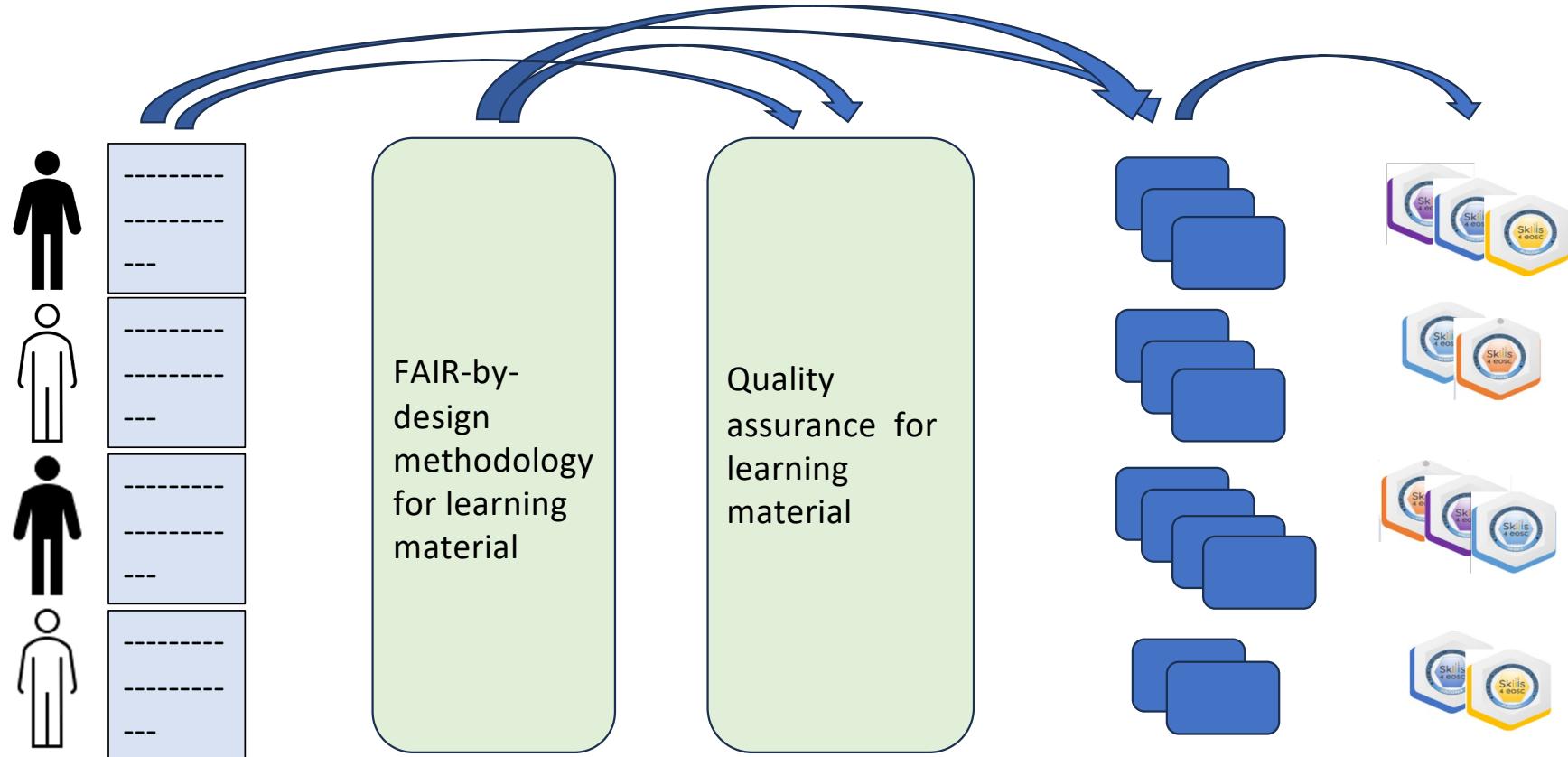


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MVS define skills for
Open Science
profiles

The methodology
defines the workflow for
creating FAIR learning
materials

QA Checklists to
assess quality of
learning materials

Learning material
is developed

Credentials are issued
after completing
course + assessment

Recognition Framework Requirements



Flexible

institutions use parts that suit their needs and adapt them to their context



Inexpensive

no high additional costs



Easy to implement

technical parts of the framework are based on **open standards** and easy to implement



Trustworthy

individual can safely store the credential and easily share it with third parties to validate



Digital Credentials for Attendance Only

PROs

- **Encourages Participation**

- Can motivate more individuals to participate, as they receive recognition simply for being present.

- **Inclusivity**

- It allows all participants, regardless of their performance in assessments, to receive a credential, promoting inclusivity and reducing the pressure of assessment.

- **Easy to Administer**

- Straightforward to issue, reducing administrative overhead.

- **Building a Learning Culture**

- Can contribute to a culture of continuous learning, encouraging individuals to engage in more training opportunities.

CONS

- **Limited Value**

- Attendance may carry less weight since they do not necessarily indicate that the recipient has gained or demonstrated any specific skills or knowledge.

- **Potentially Misleading**

- Could be misleading if interpreted as a sign of competency when they only signify participation.

- **Lack of Differentiation**

- No distinction between those who merely attend and those who actively engage and master the material, potentially diminishing the credential's perceived value.

Digital Credentials for Successful Completion of Assessment

PROs

- **Demonstrates Competency**

- Recipient has not only attended the training but also successfully demonstrated understanding and application of the material, making them more meaningful and valuable.

- **Higher Recognition**

- Often more respected by employers and peers, as they provide evidence of skills and knowledge.

- **Motivates Learning**

- Knowing that they must pass an assessment to receive a credential can motivate participants to engage more.

- **Differentiates Skill Levels**

- Differentiates between who mastered the material and who has not, which can be important in professional or academic settings.

CONs

- **Excludes Some Participants**

- Those who struggle with assessments may not receive a credential, which could discourage participation and be seen as less inclusive.

- **Increased Pressure**

- Participants may feel more stressed or anxious about assessments, which could negatively impact their learning experience.

- **More Complex Administration**

- Administering assessments and issuing credentials based on performance requires more resources, including time, effort, and sometimes technology, to ensure fair and accurate evaluation.

- **Risk of Credential Inflation**

- If not carefully designed, assessments could lead to credential inflation, where the credential becomes less valuable due to inconsistent or low standards.



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Looking for a

standard

verifiable

portable

shareable

digital

micro-
credentials

rich
metadata



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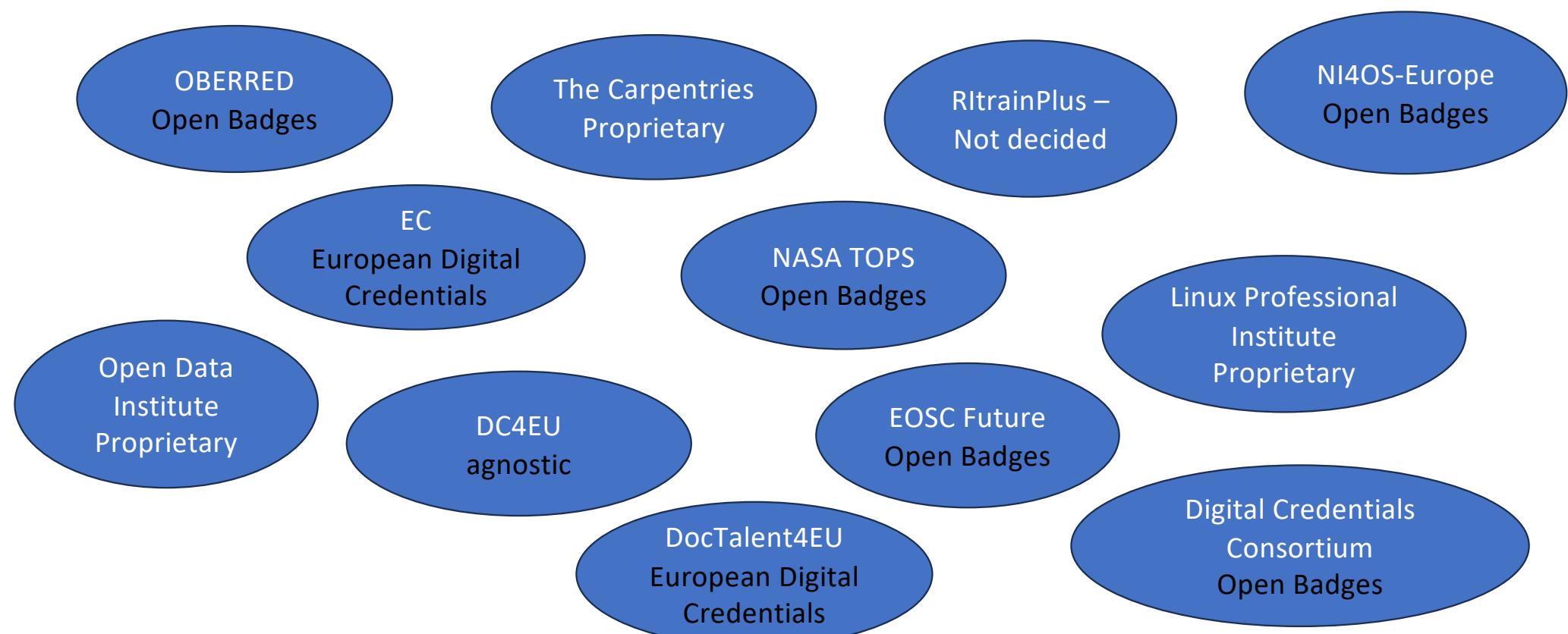


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Results of the landscaping



Viable Options



Open
Badges



EU Digital
Credentials



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What are Open Digital Badges?

created and issued to recognise

- competencies
- skills
- achievements or
- attitudes

a digital picture with metadata

- informs who has issued the badge to whom and on what basis

standard and verifiable portable digital credential

- metadata aligns with the Open Badges standard created by the Mozilla Foundation and further developed by IMS global



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Open Badges Content

- Image plus
 - name of the badge
 - description
 - creator write descriptions of the badge
 - criteria info
 - badge issuer presents the criteria used to recognise the skills, achievements or competences of the recipient

OPEN BADGES

Data & Information **Inside**

Alignment	Expiration Date
Badge Criteria	Issued Date
Badge Description	Issuer
Badge Name	JSON-LD
Digital Signature	Recipient
Evidence	Verification



[Open Badge content](#) by 1EdTech, licensed under CC-BY-4.0



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Gathering & Sharing Open Badges

Badges can be collected

- in a backpack, passport, or wallet solution
- <https://badgr.com/>
- Collections can be created to group individual badges into categories

Badges can be shared on social media

- People can click on an Open Badge, view all the evidence, read details about the achievement, and verify the badge's authenticity

FAIR Instructor



[Download](#)

FAIR Instructor

Awarded to Sonja Filiposka

Issued 29 February 2024, 7:20 PM

Issued by Skills4EOSC

Course: FAIR-by-Design Learning Materials Methodology

The badge is awarded to participants that have successfully completed the complete FAIR-by-Design Learning Materials Methodology course including all assessment activities. Participants that have earned this badge can be considered as FAIR-by-Design Learning Materials Designers that have accomplished the following learning outcomes: - Define FAIR learning objects - Adapt and mix FAIR learning objects - Identify licenses and attribute correspondingly - Structure comprehensive learning materials - Manage open file formats and tools - Define learning materials metadata using a schema - Create and publish FAIR-by-Design learning materials - Collaborate with other instructors - Assess the FAIR-ness of existing learning objects

Criteria



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Issuing Open Badges

Can be integrated with a Learning Platform

Prepare the image using templates

Fill out the badge details

Issuing criteria

- Manual
- Automatic

Badge details

Name: FAIR instructor

Version: 2.0

Language: English

Description: The badge is awarded to participants that have successfully completed the complete FAIR-by-Design Learning Materials Methodology course including all assessment activities. Participants that have earned this badge can be considered as FAIR-by-Design Learning Materials Designers that have accomplished the following learning outcomes:
- Define FAIR learning objects
- Adapt and mix FAIR learning objects
- Identify licenses and attribute correspondingly

Current image:

New image: Choose a file... Maximum size for new files: 256 KB
You can drag and drop files here to add them.

Accepted file types: Image (GIF).gif, Image (JPEG).jpg.jpeg.jpg, Image (PNG).png

Image author's name: Skills4EOSC project

Image author's email: info@sts.skills4eosc.eu

Image author's URL: https://www.skills4eosc.eu/

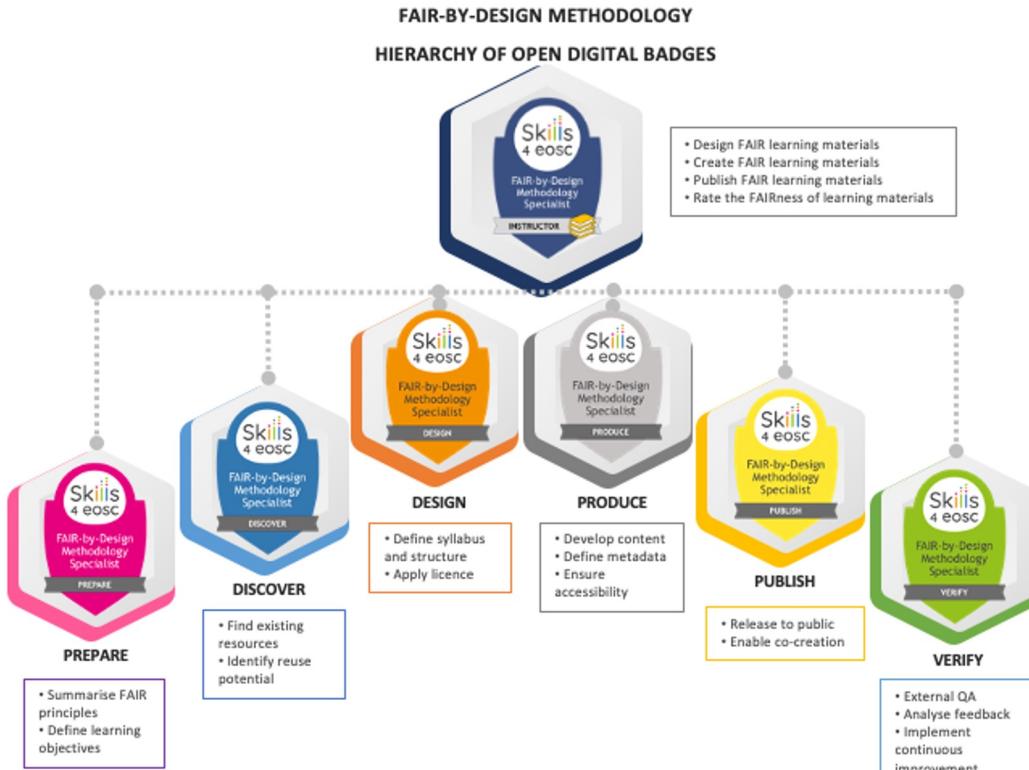
Image caption: FAIR-by-Design Learning Materials Designer

Badge expiry

Expiry date: Never
 Fixed date
29 February 2024
 Relative date
0 days after the date of issue.

Save changes Cancel

Using Hierarchical Badges



- Define multiple badges within one training
- Link each badge to a different set of micro-credentials
- Higher-level badges are obtained once **all** lower-level badges are issued



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Open Badges

PROs

- **Portability**
 - Easily shared and verified across different platforms and institutions
- **Simplicity**
 - Already implemented in a broad range of learning platforms
 - The threshold for starting to use them is fairly low
- **Transparency**
 - The open standard and verifiable nature increases transparency and trust
- **Customisation**
 - Can be highly customised to reflect specific learning outcomes or achievement levels

CONs

- **Value**
 - Some employers may not yet recognize the value of digital badges, especially compared to traditional qualifications
- **Interoperability**
 - Ensuring interoperability between different badge systems can be complex
- **Quality**
 - There is a risk of badge inflation or the issuance of low quality-content badges
- **Recognition**
 - Widespread adoption and formal recognition in the HE sector varies
 - More widespread among informal education providers



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European Digital Credentials for learning

standardised

tamper evident

electronic documents

describing that their owner

has certain skills or has achieved certain learning outcomes

through formal, non-formal or informal learning context



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A European Digital Credential for Learning contains information about



Metadata
(data about the credential)



Issuer



Subject
(claims about person)



e-Seal

describes claims relates to



Activities



Achievements



Entitlements



Attestations



Learning Outcomes



Assessments

150 hours of coursework

100 hours of apprenticeship

DE Qualification as a Painter

Entitlement to work as a painter

Recognition of qualification in FI

LO of skill of painting

Final Examination Grade B

Image taken from
<https://europa.eu/europass/en/stakeholders/european-digital-credentials>

Credential example

FAIR-by-Design Instructor

Issuing date: 29/02/2024 | Valid from: 23/02/2024 | Type: Generic | Credential id: urn:credential:ca1f363a-c265-40ee-b933-f2aba2a02b13

Credential summary | Export | Upload another credential | Share

Sonja Filiposka | Issuer | FAIR-by-Design Instructor

FAIR-by-Design Instructor
certifies that
Sonja Filiposka
Issued for FAIR by Design Instructors that have passed the FAIR by Design 101 course

« < 1 / 1 > »

Can be stored in a
wallet integrated
with **europass**

FAIR-by-Design Instructor

Sonja Filiposka | Issuer | FAIR-by-Design Instructor

Skills for the European Open Science commons: creating a training ecosystem for Open and FAIR science

info@lists.skills4eosc.eu

Legal ID: GA 101058527

Awarding Date: 23/02/2024

Learning outcome summary: create FAIR-by-Design learning materials

Learning Outcomes

FAIR-by-Design methodology

Reusability Level: cross-sector skills and competences

Related ESCO Skills: plan learning curriculum , develop educational resources

Related Skills:

Show less ▲

Achievement information

Learning Settings: non-formal learning | Mode of Learning: Online | Language: English

Type: Course

The European Learning Model (ELM)

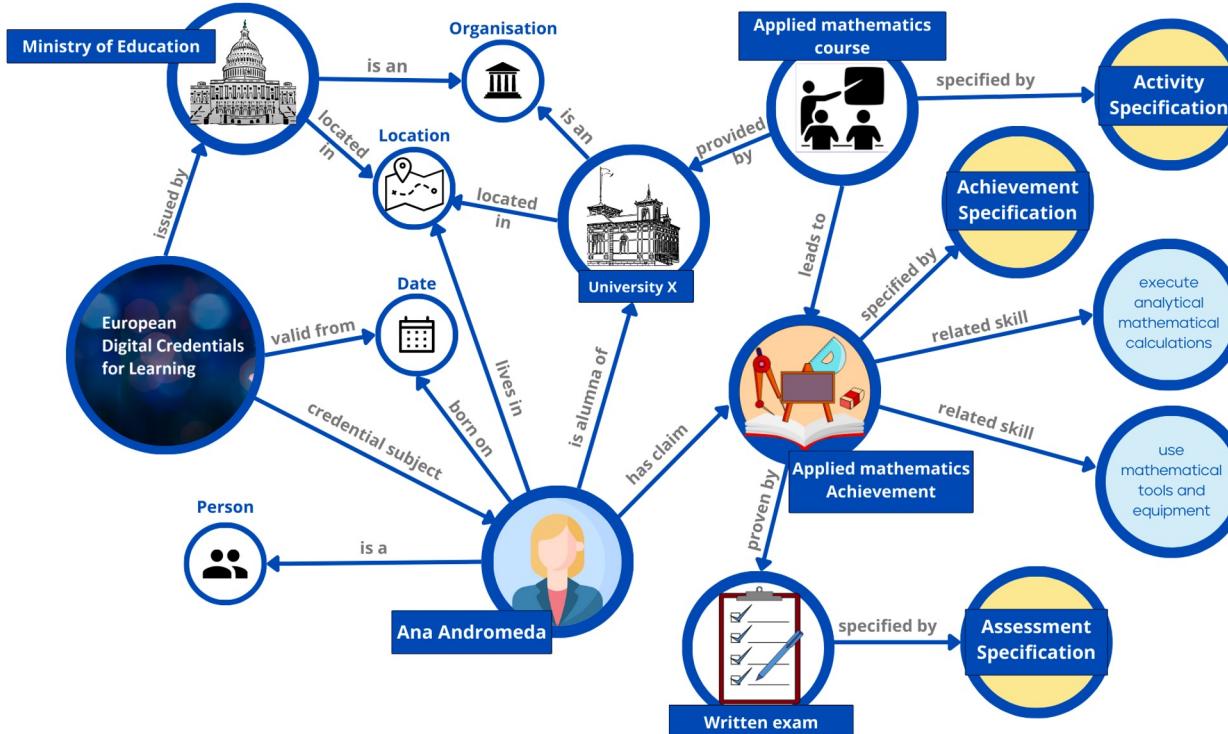


Image by Europass taken from <https://europa.eu/europass/en/node/2128>



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To issue an EDCs

- The issuing institution needs to obtain a **Qualified eSeal**
- Understand the ELM
- Define (and customise) a template
 - Use the **credential builder** online
- Prepare a list of receivers



The screenshot shows the Europass Credential Builder interface. At the top, there's a header with the Europass logo, the European Union flag, and language selection (EN). Below the header is a navigation bar with links: europass, Learn in Europe, Work in Europe, About Europass, Contact us, Sonja FILIPOSKA, and Logout. The main content area has a breadcrumb trail: European Digital Credentials for Learning > Credential Builder. Below the breadcrumb is a horizontal process bar divided into four steps: 1. Prepare (with a pencil icon), 2. Customise (with a gear icon), 3. Seal (with a seal icon), and 4. Send (with a send icon). Step 1 is highlighted. The 'Customise' tab is selected under 'Credential templates'. A sub-section titled 'Credentials' provides instructions for building multilingual reusable templates. It includes a 'New Credential Template' button and a 'Filter by' search bar. Below this, a table lists a credential entry: DATE: 28/02/2024, TITLE: FAIR-by-Design Instructor, LANGUAGE: EN, ISSUE, and EDIT buttons.

Defining a template (multilingual support)

Edit Achievement

Awarding date ⓘ

23/02/2024 00:00 calendar icon

Description

Learning Outcomes ⓘ

Start typing the title of linked template Create new

FAIR-by-Design methodology x

Summary of learning outcomes ⓘ

create FAIR-by-Design learning materials

Further details

Thematic area ⓘ

Start typing... calendar icon

Language(s)

Start typing... calendar icon

English x

Mode of learning ⓘ

Start typing... calendar icon

Type ⓘ

Start typing... calendar icon

Online x Course x

Edit Learning Outcome

Please provide details about the learning outcomes using the data fields below. Hover over the ⓘ icon to see what the expected data/information is.

EN

Learning outcome information

Learning outcome title* FAIR-by-Design methodology

Further details

Type skill Reusability Level cross-sector skills and competences

Related ESCO Skills

Start typing... plan learning curriculum develop educational resources manage findable accessible interoperable and reusable data

Related skills ⓘ

Framework URI URI Name Add

Support for ontologies-based description of skills

EDCs

PROs

- **Political support and standardisation**
 - Provides a consistent framework for recognizing qualifications across Europe. The solution has strong support from the European Commission.
- **Trustworthy**
 - Issued by accredited institutions and signed with an electronic seal, ensuring they are verifiable.
- **Interoperability**
 - Recognized across all EU member states, facilitating mobility and cross-border employment.
- **Compatibility**
 - Can be easily aligned with national and EU-level qualifications frameworks and the ESCO skills vocabulary.

CONs

- **Integration and automation**
 - Credentials issuing is currently a fairly manual process. Integrating EDC with existing learning systems and processes needs to be implemented by the issuer. Integration with popular learning platforms is currently still under development.
- **Bureaucracy**
 - The process of acquiring the necessary eSeal and issuing and verifying EDCs can be complex and time-consuming.
- **Flexibility**
 - Less flexible compared to open digital badges, particularly for informal learning achievements.
- **Limited adoption**
 - Not yet widely adopted compared to Open Badges



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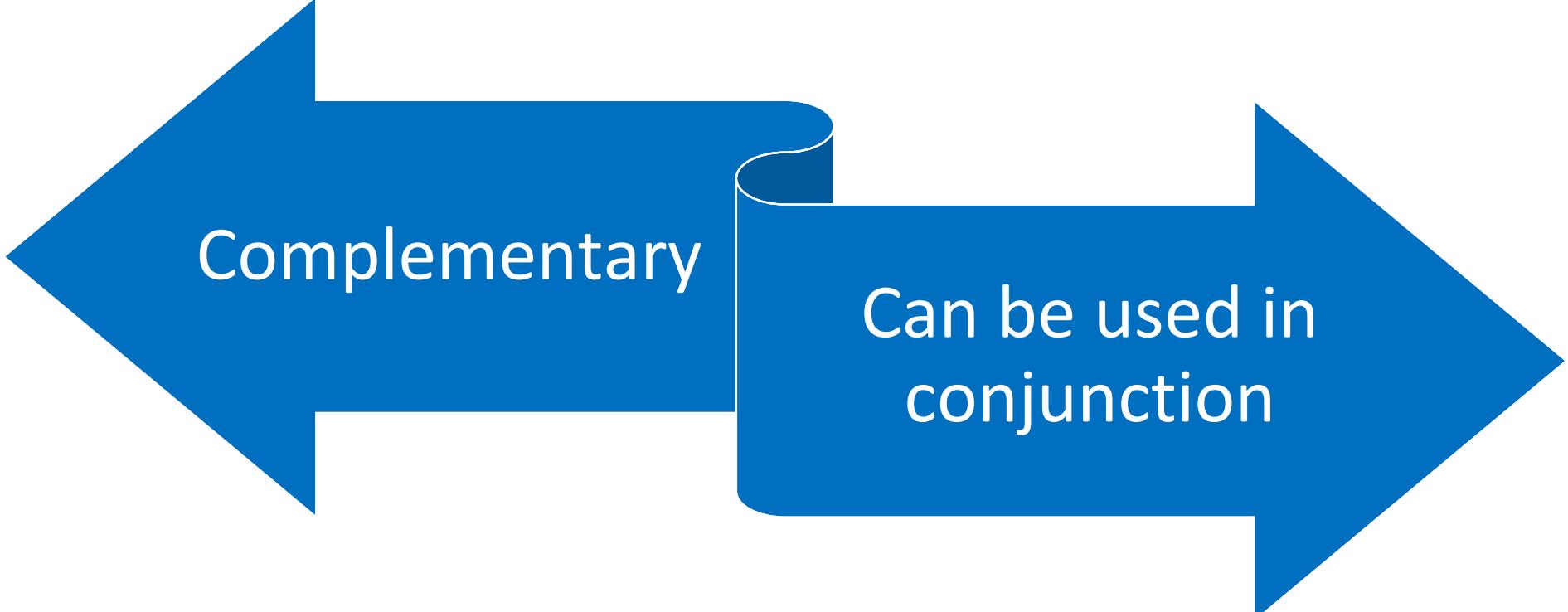


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The approaches are



Complementary

Can be used in
conjunction



Open Badges or EDCs

Requirement	Open Badges	EDCs
Flexibility	Mostly used to represent informal and non-formal learning experiences.	Can be used to represent formal education in addition to informal and non-formal .
	Current implementations provide a high-level description of the achievements in a less structured way.	Include rich and flexible metadata that can be used to capture the details of the learning experience.
	Interoperable with various systems and platforms, widely accepted and recognized .	Compatible with other digital credential systems and aligned with European regulations .
Inexpensive	The standard is free and open , anyone can adopt and use it without any cost. There might be costs associated with the use of commercial platforms or services .	Organizations can issue EDCs without any licensing fees or subscription costs . There is a cost for acquiring the eSeal needed to issue the EDCs. It varies depending on the country and issuer. There are costs related to setting up and maintaining a local infrastructure and integration with learning platforms .



Open Badges or EDCs

Requirement	Open Badges	EDCs
Easy to implement	<p>Based on an open standard, technical expertise and development is required if you want to implement from scratch.</p> <p>However, many readily available user-friendly tools and platforms already exist.</p>	<p>Good understanding of the underlying data model is required when developing credential templates.</p> <p>EC provides a user-friendly platform and detailed guidelines to facilitate the definition and issuing.</p> <p>Using a local installation that allows for more automation, requires much higher technical expertise.</p>
Trustworthy	<p>Earned badges can be stored in personal digital wallets or backpacks with personal control over the credentials and with whom they share them.</p> <p>Open Badges can be issued as digitally signed documents that can be independently verified. When following the newest standard, the structured data within Open Badges enables automated verification and recognition by systems.</p>	<p>Individuals can store their EDCs in Europass, then choose to share them with authorized parties.</p> <p>When an institution issues an EDC, it applies an eSeal to the digital document. A recipient can verify the eSeal to confirm that the credential has not been altered or compromised.</p> <p>The qualified eSeal is the highest level of electronic seal that equals to handwritten document.</p>



Guidelines for Use

- Advice from four different perspectives:
 - **learners'** perspective,
 - **course managers'** perspective,
 - **platform administrators'** perspective, and

Hands-on activity

Apply your understanding of the Skills4EOSC framework and digital credentials (Open Badges and EDCs) to a practical scenario

Discuss the advantages and disadvantages of different credential types in the specific scenario context

Consider how the Skills4EOSC framework can help you with credential design and evaluation



Part 1: Choose a scenario

Scenario A: Upskilling Course Development

A training center wants to develop a new self-paced online course on "Data Visualization for Research." They plan to offer digital credentials upon successful completion.

Scenario B: Trainer Recruitment

A research institute is looking to hire a trainer to deliver a workshop on "Research Data Management." Applicants are asked to provide examples of their previous training experience, often including digital credentials.



Part 2: Small group work

Discuss the scenario

Answer the guiding questions provided on the worksheet

Focus on different perspectives



Part 3: Group Sharing & Discussion

Share your key findings and recommendations

- reasoning behind the choices related to digital credential types
- how the Skills4EOSC framework influenced your thinking

Common themes and contrasting approaches?

What are the key considerations for choosing one type of digital credential over another?

How can the Skills4EOSC framework help both training providers and those seeking training?





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- Open Science
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Thank you! Questions?



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