Connecting the dots…

Interoperability in the new Europass

Document for the
1ˢᵗ meeting of the Europass Advisory Group
28 September 2018

1   Purpose of the document

With this document the Commission wants to launch a discussion with the Europass Advisory Group on the envisaged approach for increased interoperability in the new Europass. The document also suggests a way forward for testing the potential use of ESCO in Europass.

The Commission invites the members of the Europass Advisory Group to provide any comments on the suggested approach.

2   Background: Importance of interoperability

When users search and apply for jobs or training on the Internet, they need to access information from various providers. Such information or services may be provided by employment services, education and training providers, job boards, social media, employers or government institutions.

Interoperability refers to the ability of IT systems to exchange information to meet the needs of the user. Some practical examples for interoperability in a labour market and education context are:

- A jobseeker is using a job search engine to find jobs as nurse in Amsterdam. Interoperability between the search engine, job boards and employer websites ensures the user can access job vacancies from different providers. For employers it increases the chances that their vacant jobs are found by relevant candidates.
- A jobseeker applies for her dream job as marketing manager using her professional profile on social media. Interoperability between the social media service and the employer's e-recruitment solution means that the user does not need to go through a lengthy process of copying and pasting her data into an online application form. Instead, the potential employer can directly process the parts of the professional profile that the user decided to share.
- A student is studying in two different universities in order to complete a Bachelor degree in computer science. If the student management systems of the two universities are interoperable they can exchange the education records (such as the courses completed by the student and the grades) without a need to manually re-enter it in each system.

3   Added value of an interoperable Europass

In the case of Europass, interoperability means that the online platform can interact with other systems to provide a better user experience.

Interoperability was established as a key operating element of Europass in the 2004 Decision. Europass has since connected with a number of organisations (including job boards such as Eures, "Monster", Xing, Indeed, and a number of Universities) and the Europass portal offers support for interoperability[1] (e.g. reference material and web services) to enable other organisations to connect with Europass.

The element of interoperability is retained as a main principle and feature in the new Decision.

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[1] https://interop.europass.cedefop.europa.eu/

Europass web-based tools shall support and ensure technical interoperability and synergies with other relevant instruments and services offered at Union and, where appropriate, national levels.

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Article 4(8) Europass Decision

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By building Europass in an interoperable manner, users will not use the platform as an "island". Instead they are able to connect with information and services elsewhere on the Internet, when they manage their learning and their career. The benefits of an interconnected Europass are potentially huge across all major user groups:

- **End users (such as learners and jobseekers):**
    - Receive suggestions for jobs and other opportunities that match their profile and that are provided on external platforms such as EURES;
    - Receive suggestions for learning opportunities or (additional) qualifications that are relevant for their profile;
    - Can use their e-Portfolio to directly apply online for a job or training, without a need to copy/paste the information elsewhere;
    - Can easily import or export their e-Portfolio to another service.
- **Employers:**
    - Can have job vacancies that they publish on job boards, such as EURES, suggested to relevant candidates on Europass;
    - Can directly receive applications for vacancies from candidates via Europass.
- **Education and training providers:**
    - Can better reach interested learners, as Europass can suggest their learning offers and the qualifications they award to users;
    - Can receive online applications launched through Europass.
- **Member States:**
    - Support easier, more automatic processes for information provision by Member States to Europass rather than manually uploading data (e.g. uploading of learning opportunities by Euroguidance centres).

4 Building blocks for interoperability

Over the coming months, the Commission will work on the concept and elements of a Europass interoperability system. The system will build on the established interoperability between Europass, EURES and other services. In Europass, interoperability will be achieved by two main elements:

- **Open standards** enable collection, use and sharing of information in a consistent way between systems. The new Europass Decision refers to use of open standards as follows:

Europass web-based tools shall use open standards to be made available free of charge, for reuse by Member States and other stakeholders on a voluntary basis.

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Article 4(3) Europass Decision

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Open standards ensure that systems are able to interpret information in the same way e.g. information on learning opportunities in Europass and other systems can be presented in the same consistent format. The current Europass is already using an open and standardised format for that purpose. Using open standards will increase interoperability with existing systems, and it will enable stakeholders to connect easily with Europass. Over the past years the EU has put in place several open standards and reference systems in the labour market and in education and training. The Commission will use existing open standards and building blocks that are already in use in the labour market and education and training EU. Annex I provides an overview of relevant European open standards.

▪ **Reusable information and components** of the new Europass can add value for Member States and stakeholders. For example, Member States can use information from Europass on their own websites, or embed components such as the CV editor in their own systems. This voluntary reuse can be enabled through a Europass API[2] which provides access to public information on Europass, and by publishing components with a high level of reusability as open source.

5   Testing the use of ESCO in Europass

ESCO is the multilingual classification of European Skills, Competences, Qualifications and Occupations. The Commission released the first full version of ESCO during the negotiations on the new Europass Decision (July 2017). ESCO provides a common European reference terminology that can be used for employment and education, e.g. for job matching, talent management and big data analysis. It includes about 2,900 occupations and 13,500 knowledge, skill and competence concepts, as well as qualifications (currently 2,400)[3]. ESCO is available in 27 languages.

Concerns were raised on use of ESCO in Europass during negotiations of the new Decision, including the need for in-depth testing before using ESCO widely in the world of education and training. This is reflected in recital 17 of the new Decision:

> *The multilingual European Skills, Competences, Qualifications and Occupations classification ('ESCO'), developed and continuously updated by the Commission, in close cooperation with Member States and stakeholders, aims to promote the transparency of skills and qualifications for education and training, as well as for work-related purposes. Following appropriate testing, and having due regard for the position of Member States, ESCO could be used by the Commission within the Europass framework; the use of ESCO by Member States is on a voluntary basis, following testing with, and evaluation by, the Member States.*

Recital 17 Europass Decision

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[2] Application Programming Interface. An API enables communication between two IT systems.
[3] Qualifications are provided by other parties (currently exclusively by Member States). Their total number depends on the data provided and is expected to increase considerably in the coming months.

Following a unanimously positive opinion by Member States, the Commission adopted an Implementing Decision[4] in July 2018 which makes ESCO the standard for data exchange in EURES. For the purposes of EURES, all Member States will until 2021 either introduce ESCO on a national level, or map[5] their national classifications of occupations, knowledge, skills and competences to ESCO. ESCO is also used for labour market analysis, in particular in the scope of the Big Data Analysis of job vacancies conducted by Cedefop[6]. Considering the adoption of the Implementing Decision, and the increasing use of ESCO in cross-border and other labour market activities, ESCO has become widely accepted by Member States and other users.

Therefore the Commission suggests following a two-pace approach for testing the use of ESCO in Europass:

Short-term: Interoperability with labour market applications - Testing in 2018/19 with Europass AG and stakeholders, with the goal to release by end of 2019.

- Introduce ESCO in the current Europass platform for autocomplete[7] of job titles in the Europass CV (replacing ISCO[8]);
- Test the use of ESCO when developing the new e-Portfolio for autocomplete of job titles and skills;
- Test the use of ESCO when developing the new e-Portfolio for analysing the skills of a Europass user for the purpose of suggesting to the user relevant job posts (in particular from EURES) and other opportunities such as training and volunteering
- Test the use of ESCO when developing the new e-Portfolio to improve the quality when users export or import their portfolio from/to EURES. This would allow to retain more of the information since following the implementation of the new EURES Regulation[9] in EURES it needs to be stored using ESCO;
- Test the use of ESCO when developing a feature to transmit online applications based on the user's e-Portfolio to employers or learning providers.

Longer term: Interoperability with education and training applications – Exploration and testing phase in 2019

- In the context of the EQF and ESCO, the Commission is currently conducting a study on linking learning outcomes of qualifications and ESCO skills terminology. The Commission will discuss the results of the study with the EQF Advisory Group, the ESCO Member States Working Group and the Europass Advisory Group.

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[4] Commission Implementing Decision (EU) 2018/1020 of 18.7.2018 on the adoption of the list of skills, competences and occupations of the European classification for the purpose of automated matching through the EURES common IT platform. COM(2018) 4543 final.

[5] Mapping two classification systems means creating a machine-readable correspondence table that allows transcoding from one system to the other and vice versa.

[6] http://www.cedefop.europa.eu/en/events-and-projects/projects/big-data-analysis-online-vacancies

[7] Autocomplete functionality predicts the rest of a word while a user is typing and is offering suggestions to the user. It is frequently used in modern user interfaces.

[8] International Standard Classification of Occupations.

[9] Regulation (EU) 2016/589 of the European Parliament and of the Council of 13 April 2016 on a European network of employment services (EURES), workers' access to mobility services and the further integration of labour markets, and amending Regulations (EU) No 492/2011 and (EU) No 1296/2013 (Text with EEA relevance).

- In the course of 2019 the Commission would like to explore together with the Europass Advisory Group the potential for the use of ESCO in education/training applications. This could include supporting online search for qualifications and learning opportunities, improving the functionality of student information systems, and processing of online applications. The Commission would also like to discuss with Member States how a thorough testing of ESCO in this context should be organised.

6   Next steps

In October 2018 the Commission will discuss the scope of interoperability in the new Europass in the Joint Network Meeting.

In January 2019 the Commission will organise an expert workshop to review a draft concept for the Europass interoperability system. To this end, the Commission is looking for experts in one or more of the following fields:

- Systems in e-Recruitment, e.g. HR suites, job boards, social media or applicant tracking systems
- Systems used for admission and management of learners, e.g. student information systems
- Interoperability of information on qualifications or learning opportunities
- Search and matching engines
- Open standards in the labour market or in education and training

Members of the Europass Advisory Group who have expertise in one or more of these fields and are interested to join the expert workshop are kindly asked to express their interest by e-mail to EMPL-EUROPASS@ec.europa.eu

The Commission will discuss the concept for the Europass interoperability system with the national services (Joint Network Meeting, February 2019) and at the third meeting of the Europass Advisory Group (March 2019).

Annex I. Important European or international reference systems relevant for Europass

Common European Framework of Reference for Languages (CEFR)

https://www.coe.int/en/web/common-european-framework-reference-languages/

Widely accepted reference standard by the Council of Europe for grading a person's language proficiency

Digital Competence Framework for Citizens (DigiComp)

https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework

European reference framework for digital competences

Entrepreneurship Competence Framework (EntreComp)

https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/entrecomp-entrepreneurship-competence-framework

European reference framework for entrepreneurial competences

EURES Standards

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017D1257

Technical standards and formats required for a uniform system to enable matching of job vacancies with job applications and CVs on the EURES portal

Europass XML

https://interop.europass.cedefop.europa.eu

The format currently used by Europass for interoperability

European Qualifications Framework (EQF)

https://ec.europa.eu/ploteus/en/content/descriptors-page

European reference framework to describe levels of qualifications and qualification systems

European Skills, Competences, Qualifications and Occupations (ESCO)

http://ec.europa.eu/esco

Multilingual classification system covering 3,000 occupations, 13,500 knowledge, skills and competences as well as qualifications (currently 2,400). ESCO is available in 27 languages and fully aligned with ISCO, the International Standard Classification of Occupations

International Standard Classification of Education, Fields of Education and Training (ISCED-F)

http://uis.unesco.org/en/topic/international-standard-classification-education-isced

Classification by UNESCO describing the fields of education programmes and their related qualifications

Labour Market Metadata Schemata

https://joinup.ec.europa.eu/collection/labour-market-interoperability[10]

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[10] Results will be published shortly.

Project to develop a common information model for job vacancies and CVs, financed through the Interoperability Solutions for Public Administrations (ISA) programme

Qualifications Metadata Schema (QMS)

https://ec.europa.eu/esco/portal/escopedia/Qualifications_metadata_schema

Technical format for describing qualifications in electronic systems. QMS is based on annex VI of the EQF Recommendation.

In addition, other reference systems outside the domain of employment and education will be relevant for interoperability in Europass. These include e.g. NUTS for geographical regions, standardised lists of languages or NACE for sectors of economic activity.