CompLeap.eu documentation

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Project

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We build competences throughout our lives through education, work, hobbies and other means. Understanding our competences and future competence needs, is a good starting point for building fruitful lifelong individual learning paths. This is where CompLeap comes into play.

CompLeap was an EU-funded project that aims to create new EU-wide digital services that help individuals in competence development.

CompLeap approaches competence development as a lifelong process. Lifelong learning enhances individuals adaptability and flexibility to train and retrain, enabling individuals to answer to changing labor market needs. CompLeap builds a learner-centered ecosystem of digital services around the development of skills and competences to better match competence supply and demand. This serves individual citizens, employers and decision-makers.

The CompLeap framework forms a platform for a flow of modular services for competence development. Our conceptual framework will support the creation, evolution and implementation of a structured, digitalized lifelong learner pathway integrating competence mapping, comparing education offer, labour market needs and learning analytics. To find an optimal solution for competence development, we focus on the needs of diverse groups, such as NEETs, migrants and those who change jobs.

Learner Centered Framework

Available for Uptake throughout Europe

The learner-centered CompLeap framework architecture can be used by decision makers throughout Europe to provide a vision and a concrete roadmap for creating useful, interoperable digital services for lifelong competence development. At the same time, the framework architecture acts as a roadmap for the collection and interconnection of needed services and data.

The main benefits for utilising the CompLeap Framework Architecture:

1. **Visualizing Aims on a contextual level**
   - We modeled and visualized a strategy map which includes the strategic goals, strategic outcomes and capabilities that are needed.
2. **Describing users, stakeholders and services in conceptual level**
   - With the help of business architecture, we described stakeholders and main actors and their roles in order to map out who are the customers and users of the CompLeap services.
3. **Creating Learner's pathway in conceptual level**
   - The learner's pathway describes from a learner perspective the users path and needs in competence development. It can be seen as a value stream, which increments learner's competences. The value stream is described from learner's perspective.
4. **Designing the most needed parts of application architecture in logical level**
   - The purpose of the layered architecture views is to show what kind of information systems and application services we need for realizing new digital services – competence mapping, guidance et cetera. The services that the learner uses on the path can be produced by various actors but need to be interoperable through APIs.
5. **Ensuring Interoperability**
   - Interoperability is a crucial point in all levels. We have paid special attention to designing integrations and data flows between the most important information systems, which in return helps us to understand and notice the necessary technical interfaces and APIs.

Enterprise Architecture as a Method

Enterprise architecture (EA) is has been used as the planning method to create the CompLeap framework architecture design for lifelong competence development. The objective of the EA work is to improve interoperability of activities and services of public administration and private organizations. EA is a structure that defines an entity consisting of activities, processes, services, data and information systems as well as the services produced by them. The EA method is a systematic working method and procedure for identifying, analyzing, planning and describing elements of a given entity and their interdependencies. Thus, it realizes interoperability in all architecture levels from contextual level to implementation.

Prototypes

In CompLeap we have built learner-centered digital service prototypes that are available for further development and. The aim of the potential services is to provide learners of all ages a clear, intelligent and useful method to map and enhance their current competences.

The CompLeap Learner Path Prototype aims to link the processes of **competence mapping** and **educational opportunity comparison** together into one fluid personalized process, using data from both the learners themselves and national data registries. Data is collected on user interests and competencies and visualized for **user guidance**.

CompLeap thinking has evolved around the idea of having a lifelong **Competence Profile,** where information on past studies can be collected from existing data sources, and relevant competence development options can be suggested to the user. A prototype version of this type of a profile has been developed and tested in the CompLeap project, it operates in the Finnish context and utilizes datasources maintained by the Finnish National Agency for Education.

Users can form a competence profile including previous education from a National database, and include their own interests. From this data, combined with up-to-date course catalogue or study opportunity information, relevant study recommendations can be created using natural language processing.

With an up-to-date competence profile, the user can see and compare educational opportunities matching with their competence needs and interests.

Interested in how it works?

The prototype could also utilize other, pre-existing national and Europe-wide registries and services to provide the learner with an up-to-date selection of educational opportunities. The open source code and technical documentation is available at Github.

What is the use of this for educators?

The system would let educators know more about user needs – what kind of options their students or learners could have planned for their future. With local data sources it would benefit guidance situations, as the information moves with the learner and is not spread around in different systems.

Partners

CompLeap was a two year long EU-project that was led by the following partners:

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