SKILLAB: Creating a Skills Supply and Demand Space
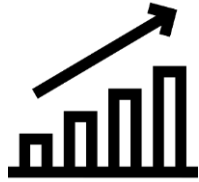
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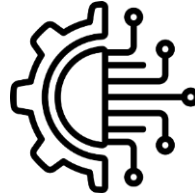
The labour market today

The labour market **is evolving** in rapid rates

New **technologies** are incorporated in the labour landscape

Specific **skills** are required from the workforce

SKILLS Matter

SKILLS Matter

Skills?

Collaboration   **Creativity**

Communication   **Leadership**

Soft Skills

Hard Skills

Programming   **Statistics**

Machine Learning   **Data Analytics**

"Skills Gap"

Demand

Supply

Surplus of skills in the job
advertisements that are posted

Deficit of skills that are provided
from potential workforce

VS

European Commission | HORIZON EUROPE 2021-2027

Monitoring the demand and supply of skills in the European labour market

CONSORTIUM
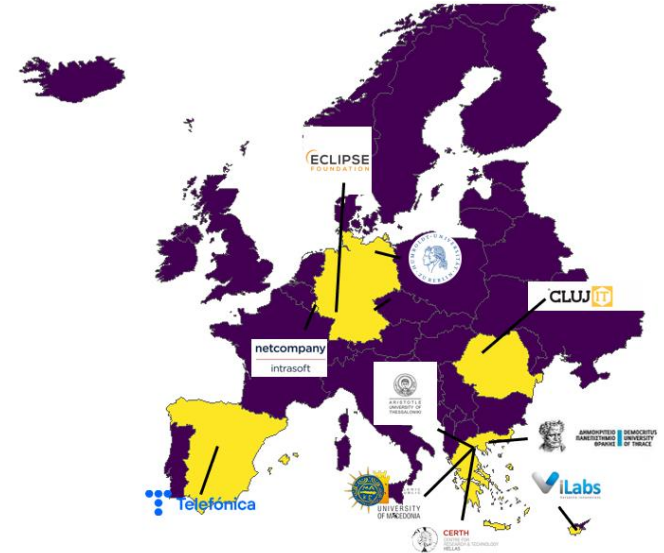
PROJECT AIM

Deliver an open-source skill demand/supply identification, analysis and prediction hub for citizens, enterprises, academia, and policy makers.

A HOLISTIC APPROACH

Develop a skills management and skills shortage identification platform

REGIONAL

Gauge and monitor the European labour market

SECTORAL

Propose strategies, curricula development, policies
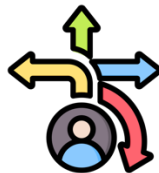
TEMPORAL

SKILLAB
SKILLS MATTER

SKILLAB Objectives

identify skills shortages and gaps

skills training & upskilling

HR recruiting

Learning pathways for EU citizens

Job retainability

SKILLAB TECHNOLOGY

Development and deployment of a holistic, open-source skills management and shortage identification platform.

Integrate Advanced **Machine Learning** and **Natural Language Processing** into the analysis of competences.
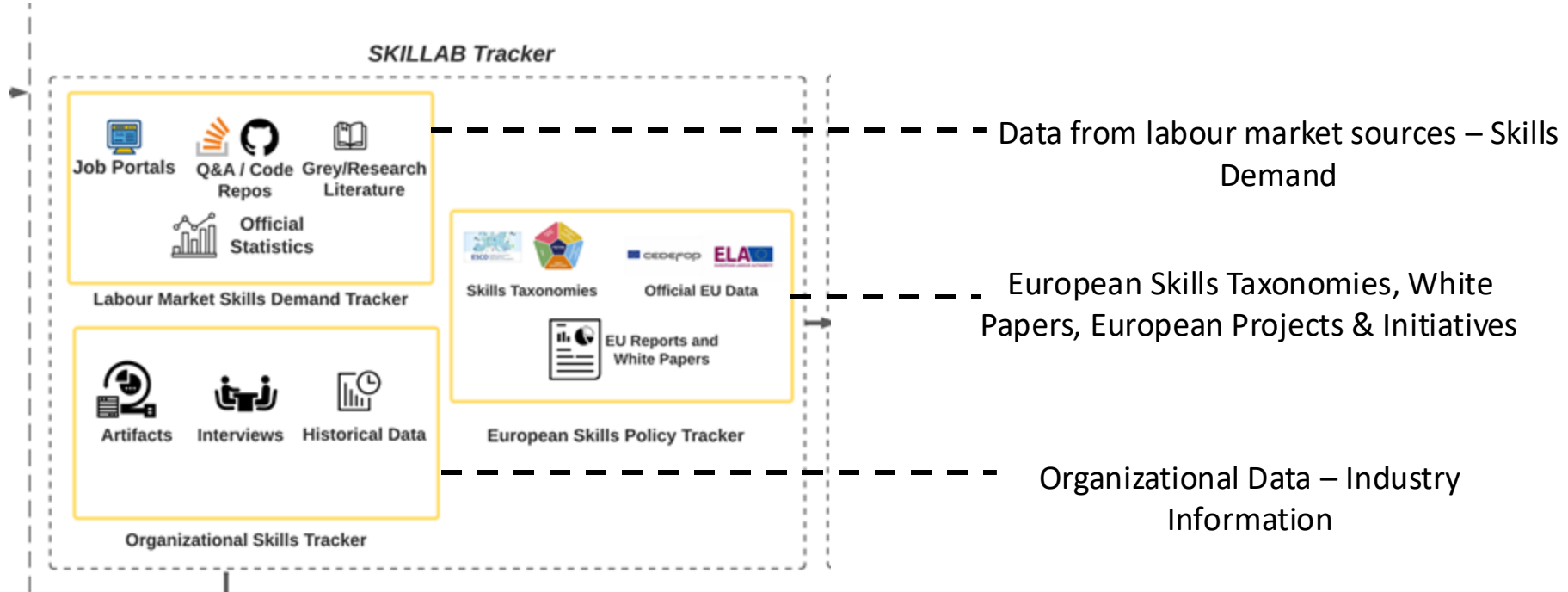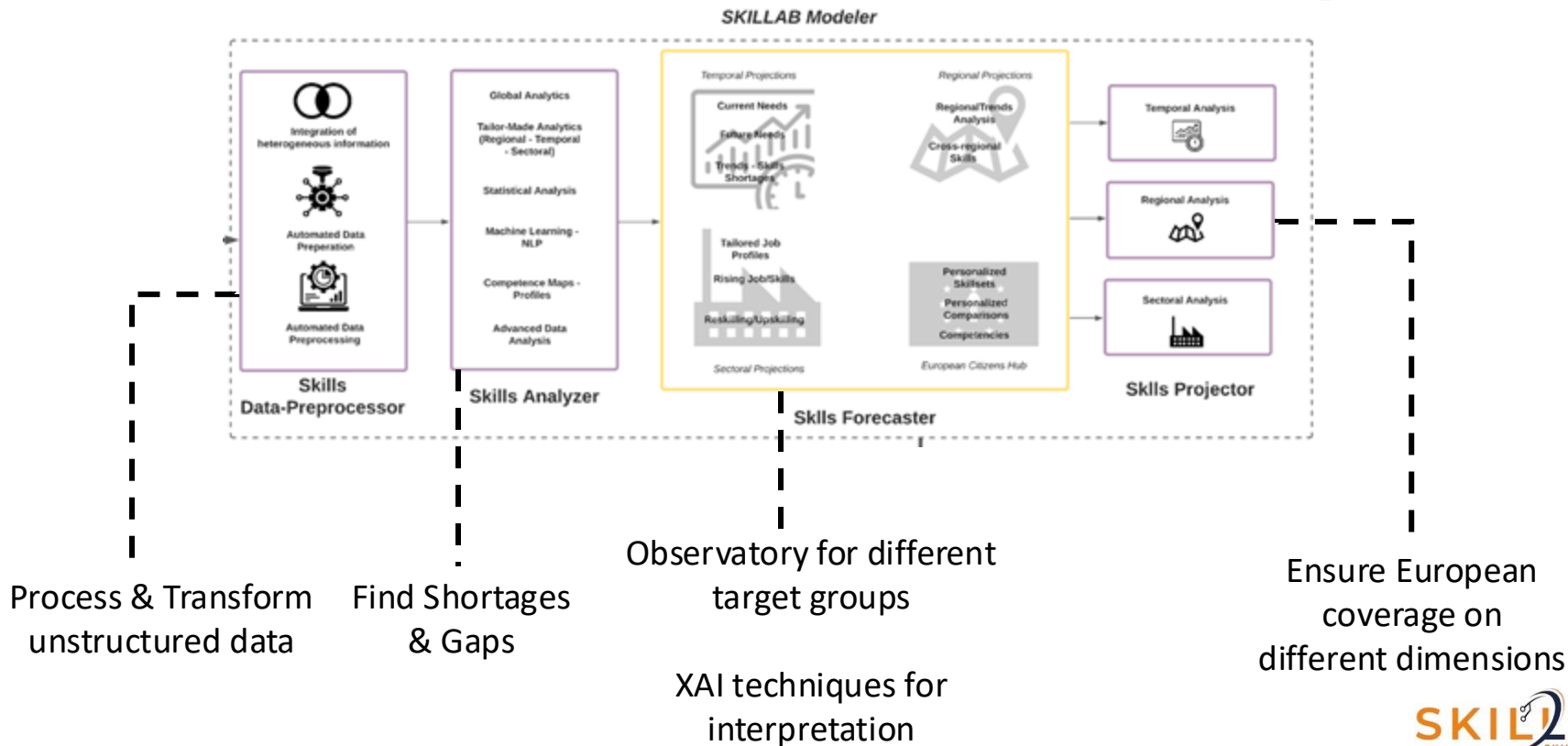
SKILLAB TRACKER

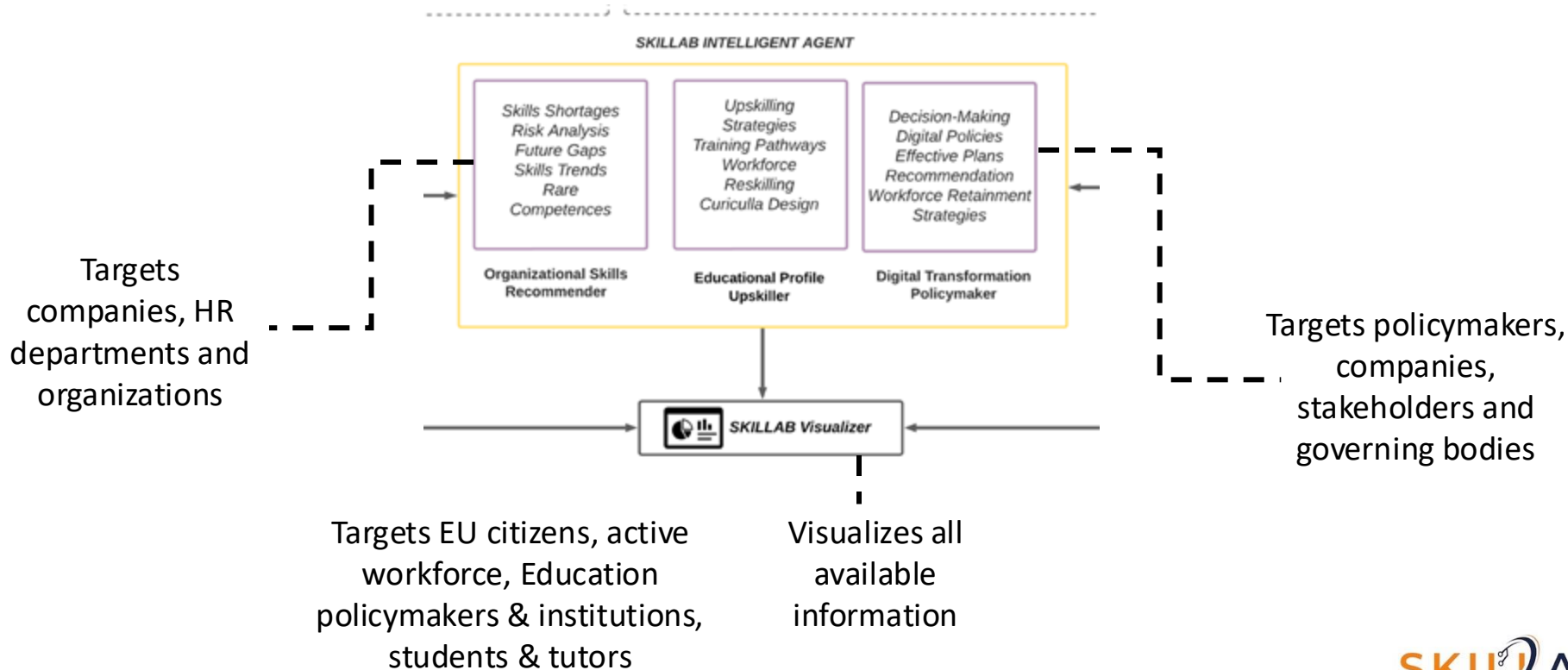SKILLAB MODELER

SKILLAB INTELLIGENT AGENT

SKILLAB TRACKER

Data from labour market sources – Skills Demand

European Skills Taxonomies, White Papers, European Projects & Initiatives

Organizational Data – Industry Information

SKILLAB MODELER

Process & Transform unstructured data

Find Shortages & Gaps

Observatory for different target groups

XAI techniques for interpretation

Ensure European coverage on different dimensions

SKILLAB INTELLIGENT AGENT

General Data Sources

European Project Databases

Job Postings

Academic Literature

User Profiles – CVs – Software Repositories

Industrial Literature

European Indicators

Educational Data

Online courses

Curricula & Syllabi

EU educational policies

PILOTS

Open-Source Pilot Case

Empowering Open-Source Communities

- Structure and organize knowledge about available and demanded skills in open-source communities to understand, use, or contribute to project code

- Identify skills demands / shortages / future trends in open-source communities

Private Sector Pilot Case

Implementation of SKILLAB platform in the company

- Improve the recruitment process

- Enhance employee skills and optimize training programs

- Obtain relevant feedback related to the recruitment process improvement using the SKILLAB platform

- Identify hiring needs, trending skills

- Perform competition analysis

Public Authorities Pilot Case

Addressing future skills needs in the labour market of Greece and Cyprus

- Bridge the gap between evidence and decision-making by assessing the impact that the SKILLAB platform will have to the skills anticipation process of Greece and Cyprus (public bodies and organizations)

- Present an added value for policy and decision makers at national (and even EU) level by enabling the labour market stakeholders to engage with evidence-based insights and make informed decisions.

SKILLAB and Data Spaces

The SKILLAB project can be transformed into a DS by incorporating decentralized technologies, federated learning or open data sharing in its services, with emphasis on bridging skill gaps and mismatches

SKILLAB and Data Spaces

The development of a SKILLAB DS could benefit the market by

- Encouraging open data sharing on skills development

- Exchanging of data and knowledge among stakeholders

- Enhancing upskilling and reskilling opportunities across the EU

The SKILLAB Data Space
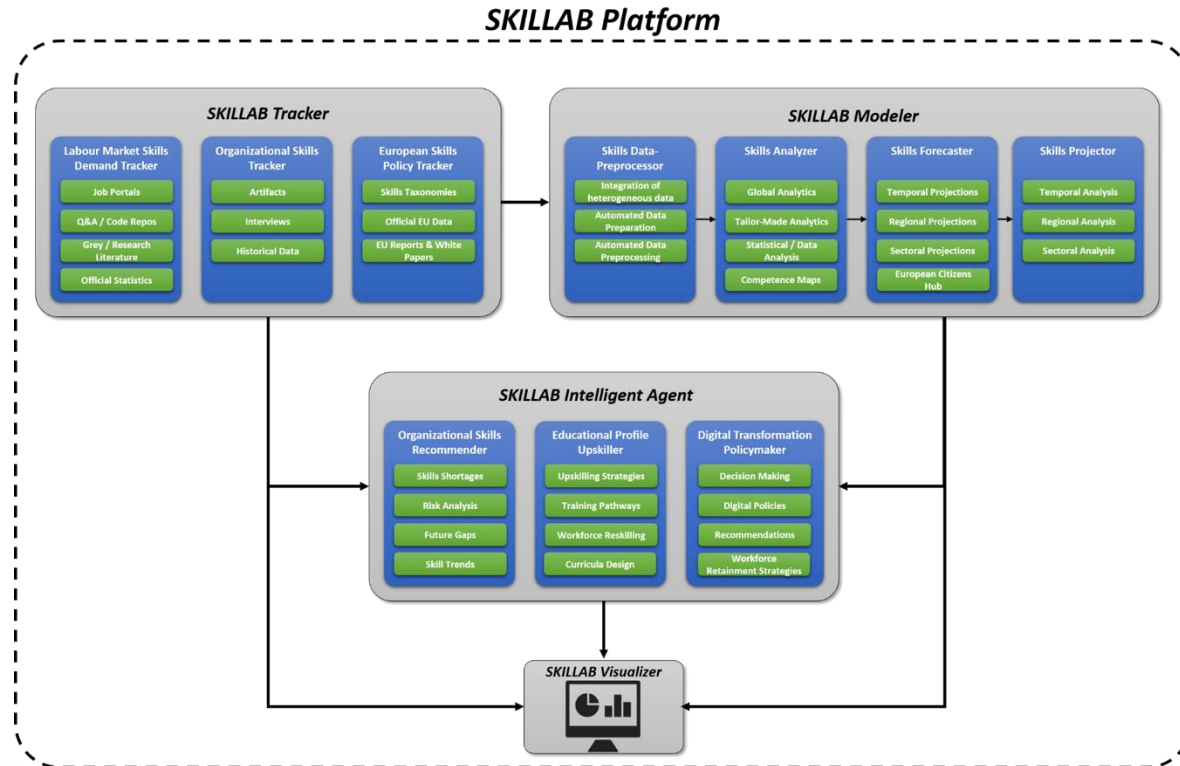
SKILLAB Data Space Layers

Business Layer

- Define roles of participants in the DS

- Formulates interaction strategies and plans

- Citizen, Industrial, Educational, Policymaker roles with interactions between them

SKILLAB Data Space Layers

Functional Layer

- Functional requirements of the DS

Trust

Security & Data Sovereignty

Ecosystem of Data

Standardized Interoperability

Value Adding Apps

Data Markets

SKILLAB Data Space Layers

Information Layer

- Define Vocabulary Units that define the data sources used

- Portrayal of ontologies and relationships

- Structure of backend services

SKILLAB Data Space Layers

Process Layer

- Specify data sharing interactions

- Data Analysis with Data Apps

- SKILLAB analytics platforms and services/microservices

SKILLAB Data Space Layers

System Layer

- Connective routines between participants

- Brokers for metadata and data exchange

- Services for interaction

PILOTS using the DS

Open-Source Pilot Case

Empowering Open-Source Communities

- ECL and similar companies would benefit from using a DS with structured skills data, shared among participants

- Acceleration of identifying open-source skills with great added value for foundations

Private Sector Pilot Case

Implementation of SKILLAB platform in the company

- Leverage the analysis components of the DS by safely accessing insights

- Derive recommendations from the DS

- Establishment of internal data sharing within the CLUJ IT ecosystem

- Linkage of CLUJ with ideal candidates

Public Authorities Pilot Case

Addressing future skills needs in the labour market of Greece and Cyprus

- Liaison between SKILLAB and the envisioned DS, with policy data provided and shared in the DS

- The offer of a DS with full anonymity can aid agencies in Greece and Cyprus to analyze SKILLAB insights

- Accelerating decision-making processes

Thank you !

Thank you!
Any questions?

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