

D3.2. A precise blueprint to roll out the skills dataspace covering all topics and clear use cases propositions

DS4Skills



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About DS4Skills

The Data Space for Skills (DS4Skills) is a 13-month project aiming to prepare the ground for the development of an open and trusted European Data Space for Skills that supports sharing and accessing skills data, and engage with the broad community of skills stakeholders.

DS4Skills aims to identify relevant data sources for the skills data space based on stakeholders' needs and propose conceptual approaches for the future deployment of the European Data Space for Skills.

Project consortium

The DS4Skills consortium brings together 10 full partners and 4 associated partners with solid experience in data ecosystem and community building, a wide network of stakeholders from diverse backgrounds, including researchers, training providers, companies, and associations representing industry and data ecosystems.

Partners

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1. Overall introduction to the web version deliverable

The DS4Skills blueprint unfolds a visionary roadmap for the future European Skills & Education Data Space, propelling it into the forefront of digital innovation. Rooted in collaboration, trust, and open data exchange, this blueprint elucidates a comprehensive framework that addresses important aspects ranging from business models and governance to technical architecture, user experience, as well as growth and roll out strategy.

1.1. A blueprint rooted in concrete cases

Data spaces are essential for improving lives and creating value for individuals, organizations, and governments, with usage scenarios playing a crucial role in their design. Usage scenarios encompass theoretical descriptions of how data spaces are used, while use cases represent practical implementations of these scenarios. It's vital to design usage scenarios with scalability in mind to anticipate future expansions and avoid scalability-related challenges.

The DS4Skills Blueprint focuses on the European Skills and Education Data Space and identifies five key usage scenarios: Prepare, Digitalise, Map, Match, and Forecast – to bring value to stakeholders. These scenarios are central to the strategic value of a skills data space, with Match facilitating matches between individuals and organizations and Forecast predicting future skill needs. The future European Skills Data Space will solve a wide range of the present issues accessing to the most relevant training and job offers, creating added value services for different actors and in all thematic areas. The data space is necessary because it allows real-time access to data from various sources, fosters trust through a common protocol, and enables a decentralized approach to data sharing, fostering the development of innovative digital services.

1.2. Fostering an ecosystem of collaboration

At its core, DS4Skills underscores the paramount importance of collaboration among diverse stakeholders in the European Skills & Education Data Space. In an era of exponential data growth, fostering an ecosystem that harmonizes the interests of data providers, service providers, orchestrators, and end-users is pivotal. The blueprint recognizes that the intricate web of relationships within this ecosystem necessitates a delicate balance between financial incentives, ethical considerations, and data sustainability. Striking this balance is challenging yet indispensable for sustainable growth.

To navigate these complexities, the blueprint outlines a multi-layered business framework, encompassing Data Space Infrastructure, Data Space Use Cases, and Data Space Use Cases. This approach provides a comprehensive view of the data space, enabling effective management and growth. Furthermore, the blueprint identifies various business models and pricing strategies, catering to the diverse needs of participants. These models, including transaction, subscription,

aggregation, freemium, advertisement, and marketplace models, underscore the flexibility and adaptability required in the dynamic data landscape.

1.3. Governance for trust

Governance is the cornerstone of the Skills & Education Data Space's sustainability and trustworthiness. The blueprint recognizes the multi-layered and multi-dimensional nature of governance, involving diverse stakeholders from public and private sectors. To ensure trust and adoption, decisions are made on standards, access rules, participant roles, business models, and use cases across three levels: data space, data space use case, and participant levels. Each are detailed throughout the blueprint.

The governance framework encompasses important documents such as the Data Space Governance Framework, Contractual framework, Accession Agreement, Data Space Use Case Description, Code of Conduct, and Access and usage policies. These documents provide the structure and rules necessary to create a trusted infrastructure for data sharing. The blueprint also details the functioning of the Data Space Governance Authority and the obligations of each role in the data space.

1.4. Building a trustworthy technical foundation

The technical design of the Skills & Education Data Space aligns with key DSSC requirements [DSSC-Blueprint draft], emphasizing a human-centred approach, semantic and conceptual interoperability, data quality, and AI integration. The blueprint presents a reference architecture that provides a clear framework for interconnecting thousands of data sources and services, in a trustworthy way. Notably, it addresses the critical role of the Personal Data Intermediary (PDI) [Prometheus-X architecture] in ensuring secure and controlled management of personal data while upholding individual privacy and compliance with regulations.

The PDI, a cornerstone of human-centricity, embodies principles of decentralization, consent, legal compliance, and security. Its technical building blocks include consent management, user identity, distributed data visualization, data discovery, access controls, and privacy measures. PDIs serve as a trusted intermediary, empowering individuals to manage and share their data securely.

1.5. Elevating user experience and compliance

User experience is an important requirement. This acknowledges that user interfaces, especially within a data space composed of multiple components from various organizations, can be complex and confusing. Recognizing the significance of user experience, the blueprint highlights the need for clear, trustworthy interfaces that comply with usability and accessibility requirements, ensuring inclusivity for all individuals, overcoming the risks of digital exclusion in this new technological field.

While emphasizing compliance with existing usability and accessibility regulations (Web Accessibility Directive and the Accessibility Act), the blueprint emphasizes the rapid evolution of the digital services sector. It advocates continuous

reconnaissance and intelligence work to stay abreast of user experience trends and innovations. This approach ensures that the Skills & Education Data Space remains user-friendly, promotes adoption, and garners positive user feedback.

1.6. A Strategic growth and rollout plan

To ensure the success of the Skills & Education Data Space, DS4Skills lays out a growth and rollout strategy that revolves around two pivotal axes.

Firstly, it underscores the importance of nurturing a trusted Data Space Governance Authority (DSGA). This DSGA is responsible for developing open-source building blocks and certifying trusted Data Intermediaries, thus facilitating interoperability and fostering trust within the ecosystem. The EDGE-Skills project [EDGE-Skills], project starting in January 2024 with some common partners with DS4Skills, plays a pivotal role in funding these building blocks and launching a DSGA.

Secondly, the blueprint advocates launching high-value use cases to drive adoption and showcase the model's efficacy. It recommends focusing on upskilling European workforce in AI, a domain of paramount importance across the EU. Public funding, partnerships, and coordinated communication campaigns are critical for these endeavours. The DS4Skills consortium partners have already supported the European Artificial Intelligence Sector Skills Alliance (ARISA), a project also led by DIGITALEUROPE, in analysing the AI related job offers across Europe and connect the results with some occurrences or the ESCO classification.

1.7. Conclusion

The DS4Skills blueprint lays the foundation for a vibrant and sustainable European Skills and Education Data Space. Its holistic approach, encompassing business models, governance, technical architecture, user experience, and more, ensures a comprehensive and resilient ecosystem. Through strategic growth and collaboration, this blueprint envisions a future where the European Skills and Education Data Space empowers individuals, fosters innovation, and contributes to a thriving digital economy.

2. The Blueprint interactive web platform and the wiki tool

In the framework of the project DS4Skills, the partners in agreement with the EC Project Officer decided to produce deliverable 3.2 in a more interactive and sustainable format. The deliverable was created in an online format with a structure aimed at facilitating the user experience and helping the reader to access contents easily.

If you do not know who Matilda is.... now it is the time to discover it. She will help all data spaces stakeholders across Europe and beyond to understand how to develop added value services in the context of the skills and education data space.

From the DS4Skills consortium, we have established contact with the DSSC and other data spaces to suggest them to benchmark the good practice that we are fostering: to create an online interactive version of the Blueprint and to include a “persona approach” to be able to provide very specific examples on how the data space will work in practice.

To visit the Blueprint web platform and the wiki tool produced under the deliverable 3.2, please visit the following links:

D3.2 Blueprint Platform: [Development of the blueprint for the skills data space - DS4Skills](#)

D3.2 Wiki tool: [DS4Skills Blueprint \(skillsdataspace-blueprint.eu\)](#)

www.skillsdataspace.eu



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