



DE4A Final Event showcased project results and Member State testimonials

DE4A held its Final Event on April 12th 2023. The presenters shared a pleasant and informative morning with over eighty attendees, with sessions on the following topics:

DE4A Multipattern Architecture:

Session description: DE4A has developed and piloted a multi-pattern architecture for eGovernment interoperability with a focus on digital-by-default procedures for citizens and businesses and the full implementation of the Once-Only Principle. The presentation gives an overview of the different patterns and sketches a target architecture that evolves from the solid basis provided by the OOTS into a broader EU interoperability ecosystem.

The legal framework for once-only in Europe: where do we go from here?

Session description: DE4A has been able to pioneer a multitude of e-government services in the past few years, also from a legal perspective. European legislation – including in relation to the once-only principle and privacy/data protection – has been one of the foundational inputs for DE4A, and as a result the project has learnt a lot about what the law allows and doesn't allow. What exactly are the foundational legal principles, and how has DE4A

implemented them? And perhaps equally important: how could European legislation evolve further in the future to enable even more effective and equitable digital public administration?

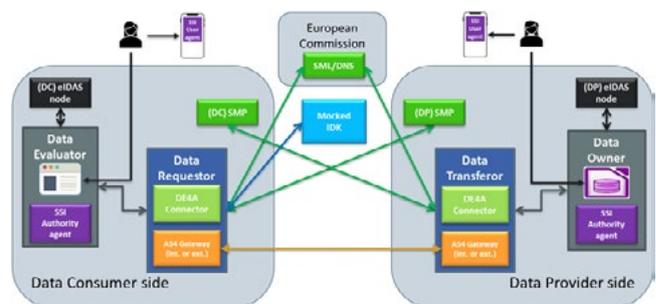
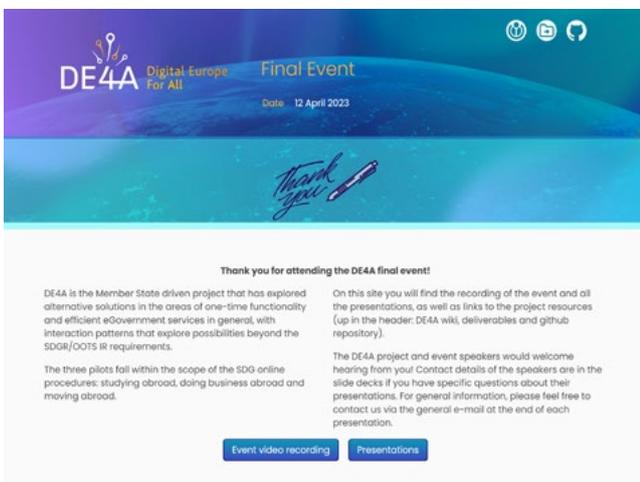
DE4A Main common components

Lessons learnt from the DE4A Connector

Session description: The most technical session of the Final Event focussed providing on a summary about the development and usage on the DE4A Connector in the pilots. This includes lessons learnt and will highlight the reusable parts of the DE4A Connector for implementing the European SDG Directive.

Information Desk: catalogues for interoperability

Session description: EU-wide OOP for public services requires EU-wide interoperability in all its dimensions. The interoperability agreements between the DE4A project Member States are consolidated in catalogues that form the Information Desk. The data in the Information Desk enable the functioning of the OOP technical system across borders, administrations and sectors, and are the basis for the common components.



D4EA Pilot demonstrations and lessons learnt

Session description: This session provided an overview of the work done by the three pilots:

Studying Abroad pilot – demonstration and lessons learnt:

The Studying Abroad pilot has implemented and validated three cross-border SDG procedures that facilitate student mobility within the EU: applying to public higher education, applying for study grants, and diploma recognition. The procedures are based on the once-only principle, the use of electronic identities, the use of trusted sources of electronic evidence, and the system for the exchange of evidence between competent authorities. Other approaches, such as the use of digital wallets, have also been piloted. We will present lessons learnt from the piloting and highlight the benefits for various stakeholders, e.g. students, universities and public authorities.

Lessons learnt in the Doing Business Abroad pilot:

After shortly explaining the 2 use cases and the quantitative results of the Doing Business Abroad pilot, the main lessons learnt will be discussed per actor in the SDG-processes. We will see that many advantages the SDG is aiming for, were confirmed for users (companies) and public authorities acting as Data Evaluators. Also, we will find that certain prerequisites must be met in order to maximise their advantages.

Moving Abroad Pilot demonstration:

This presentation outlines how to more easily move to another member state and obtain key canonical evidence such as address data and civil status certificates.

The Final Event concluded with Member State testimonials from the Slovenia, Netherlands, and Luxembourg.

Short take aways from testimonials session



Muhamed Turkanović,
University of Maribor,
Slovenia

Using these approaches [in DE4A], students are more organized because they can collect their diplomas and other types of evidences on their mobile phones. They save a lot of time because they can do it only once and reuse this evidence, and they have the full control of their data because they choose which diploma to send and to whom they want to send it. Students are usually the early adopters of new technologies, and are naturally connected to end devices like smartphones.

And there are also benefits for the university. The most important part is that they are now actually processing data in a machine readable form, the most important advantage for them is the data processing part, which was usually previously manual. Because the evidence is in a machine readable form and there is no manual validation of evidence required anymore by these universities, they gained confidence that the quality of the data is affirmed and they can also believe in the integrity of the data they receive, and they can then continue with it automatically.



Hans van der Burght
Ministry of the Interior and Kingdom
Relations, Netherlands

There are two perspectives: one is the company perspective and the other one is the perspective of the public authority. For the company's perspective, there are two success stories. Or one could maybe say testimonials. The first one is that of a Romanian entrepreneur participating in one of the pilot runs selling trainings in Romania and other European countries. He was, of course, very familiar with the current procedures of foreign public authorities, which could take days or even weeks on paper-based, and when piloting the entrepreneur completed the e- procedure that was including authentication via eIDAS and authorization, also via eIDAS, within two minutes. And of course, he was very surprised that the e-procedure was completed in such a short time frame, and he told us he couldn't wait for the SDG solution to be implemented all over Europe.

The other perspective is that of the public authority. What positive aspects do they see? The first one is that when we look at the Subscription and Notification pattern that we piloted, it is considered as valuable work by public authorities to have the possibility to stay informed about the relevant events happening to a company that receives the service, I mean when a company goes bankrupt or something else happens to a company they move to another address or whatever it will be difficult to complete the service delivery and by receiving updates regarding the company from the Business register abroad, it's easier to deliver better services to the company. And moreover, we found out that the piloted mechanism was even more advanced than existing mechanisms on a national level, and the pilot gave these national authorities some ideas for possible upgrades of these national systems.

Thanks to the experience and the knowledge we gained during the Digital Europe for All project, I guess it would not have been possible without the experience we gained during the last three years.





Gérard Soisson
Ministère de la Digitalisation,
Luxembourg

What makes for us here in Luxembourg, Digital Europe for All, a true success story is mainly the fact that Digital Europe for All was and is an essential preparation and pilot implementation of many core elements and solutions that we have to put in place anyway until December, in fact 12th of December this year, for the Single Digital Gateway Once Only technical system that is defined in Article 14 of the Single Digital Gateway regulation.

The many discussions and preparatory work done in this context allowed us and the other participants to gain hugely in maturity and in understanding of the issues involved. This allowed Luxembourg and other Member States participating in Digital Europe for All to provide essential and valuable input also in the context of the SDG OOTS discussions and meetings that took place at the EU level. The main input of DE4A to the SDG OOTS is probably in this context: that the SDG OOTS finally also uses, after many and sometimes controversial discussions on the topic, essentially the USI pattern. We are convinced that the User Supported Intermediation pattern is the most appropriate pattern to fit the requirements needs defined in Article 14 of the Implementing

Regulation and are therefore also happy that finally, DE4A contributed to make it possible to use also this pattern in the context of the Single Digital Gateway Once Only Technical System.



Digital Europe for All also made it possible on a more national level to put in place many national solutions and building blocks that we will be able to reuse to a large extent in the context of the Single Digital Gateway Once Only technical system.

So to sum up, Digital Europe for All for all was for us an essentially important preparation step in direction of what we have to do in the Single Digital Gateway Once Only technical system and for the obligation to comply to the obligations of the thing digital gateway regulations in general.

Registered attendee profile was predominantly Public Body (70%) with lesser representation from the scientific community (10%), Industry (9%) and other (12%).

There were attendees from the following countries, including: Austria, Belgium, Denmark, France, Finland, Germany, Greece, Hungary, Italy, Luxembourg, Netherlands, Portugal, Romania, Slovenia, Spain, and Sweden.

All of the presentations as well as a video of the event can be found on the [Final Event microsite](#).

Last take-aways from the legal and technical workpackages

Legal

DE4A has continued working on legal issues associated with the Single Digital Gateway and the Once Only System. To conclude, Time.lex, as the partner leading the legal analysis activities, organised an internal workshop to gather feedback from the Member States and with the received inputs has produced the document DE4A D7.4 Report on Legal Sustainability

This deliverable is the final output of the Legal and ethical compliance and consensus building workpackage of the DE4A project. Its objective is to capture the possibilities, requirements and opportunities for the sustainability of the project from a legal perspective. The report focuses on some of the realisations of the DE4A project that are more challenging to sustain from a legal perspective, principally because the project's general ambition is to explore and pilot optimal approaches to create effective once-only information exchanges, and to generally improve the efficiency and user friendliness of eGovernment in Europe, without necessarily focusing exclusively on the direct implementation of the EU legal framework (namely the SDGR). This has led to a number of useful innovations in the project, such as the multi-pattern evidence exchanges, the use of mobile wallets and

verifiable credentials, and fine-grained powers validation - none of which have comprehensive and mature legal frameworks at the EU level at the present time.

Architecture

In the last months, the Architecture team has released two deliverables D2.7 Interoperability Architecture for Cross-border Procedures and Evidence Exchange in light of the Single Digital Gateway Regulation and D2.8 Beyond interoperability: One Network for Europe (ONE)

D2.7 Interoperability Architecture for Cross-border Procedures and Evidence Exchange in light of the Single Digital Gateway Regulation: Taking the first version of the Once-Only Technical System (OOTS) (due 12.12.2023), as a starting point, a mid-term future, multi-pattern, target architecture is sketched in terms of high-level business processes and application flows.

D2.8 Beyond interoperability: One Network for Europe (ONE): One objective of DE4A is to envision different target architecture states at different time horizons that provide guidance to the further development of European governmental interoperability solutions and platforms. This deliverable presents a

consolidated architecture vision for the long-term time horizon, specifically the time beyond this Digital Decade. The starting hypothesis is that the digital transformation of European administrations, national governments and public authorities has a profound impact on the development of the data-driven economy and the social and economic reality of the single market and its global competitive position.

Technical view

The technical team has also released several deliverables in the final months of the project.

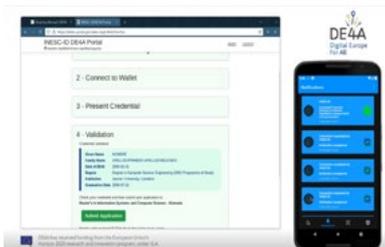
D5.4 Final technical design of interfaces and common specifications: This deliverable provides the technical design of the interfaces between the DE4A components that facilitate the integration among different technologies used by Member

States. These interfaces include the ones required to communicate with the Data Consumers, with the Data Providers and with the common intermediation components, such as the DE4A Connector and the components of the Information Desk (IDK). D5.4 also defines the common specifications that must be known and complied with by all DE4A network participants to exchange messages, including DE4A-specific protocols and third-party protocols and components.

D5.6 Final release of DE4A common components: This document describes the common components developed by the project: the common libraries, the DE4A Connector, the DE4A Directory and the Central IAL. It also describes the DE4A Playground, a set of predefined and pre-deployed components designed to help pilot partners to onboard the DE4A network.

Pilots

The project has successfully run the second iteration of the pilots from October 2022 until the end of the project:



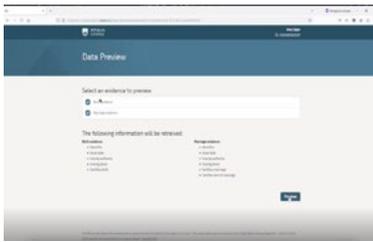
Studying Abroad

[The Studying Abroad \(SA\) pilot](#) that focuses on Higher Education students with virtual or physical mobility needs in the European Higher Education Area has successfully piloted three use cases (Application to public higher education UC#1, Applying for a study grant UC#2, and Diploma recognition UC#3) that validate processes/procedures (c.f. Annex II of SDGR[5]) for students from the three participating Member States (Portugal, Slovenia, and Spain) for registration to higher education abroad and eventually applying for a student grant as well as for studies recognition. 12 planned cross-border combinations between Data Evaluators and Data owners or Issuers and Verifiers were successfully piloted with real students: 6 combinations in UC#1, 2 in UC#2, and 4 in UC#3.



Doing Business Abroad

[Doing Business Abroad \(DBA\)](#) successfully piloted in real-life conditions two use cases. Use Case 1 concerns registering a new business activity in another Member State (using the intermediation pattern), while UC2 focuses on the possibility for Data Evaluators (DE) to stay informed about changes in the foreign companies that registered a business activity with them (using the Subscription & Notification pattern). Both use cases make use of the DE4A Once Only Principle Technical System (OOTS) and eIDAS pilot infrastructure. In this second iteration Use case 1 has been piloted in 6 cross-border combinations within DBA, using a 50-50% mix of full powers validation and fine-grained powers validation. Six real company representatives piloted with real data while a total of 13 real representatives were involved in interviews for UC1. Additionally, 4 real representatives piloted in a side-project where Germany and The Netherlands piloted UC1. With this, in iteration 2 the involvement of companies more than doubled over the first iteration. Use Case 2 was piloted with 6 cross-border combinations as well and 3 Data Evaluators were interviewed.



Moving Abroad

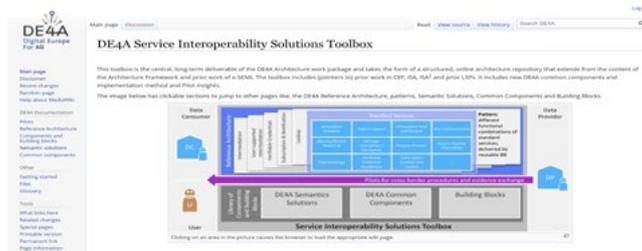
The [Moving Abroad pilot \(MA\)](#) involves five Member States (Luxembourg, Portugal, Romania, Slovenia and Spain) and successfully launched and piloted in real-life conditions two cross-border combinations corresponding to two use cases aimed at covering needs from citizens moving to another Member State: Change of Address and Request of Civil Status Certificates. This involved different citizen services from Spain tested with 28 end-users from Slovenia and Portugal, retrieving Domicile, Birth and Marriage evidences from their countries of origin. Other combinations were successfully tested across borders in test environment of the project. The DE4A infrastructure has been integrated with population registries and public authorities providing modern services for citizens and the pilot has generated important lessons relevant for future adopters, as it has piloted the User Support Intermediation Pattern, which is the most similar DE4A evidence exchange pattern to that specified in the Implementing Regulation for the Once Only Technical System of the Single Digital Gateway. Among these, is the confirmation of this pattern as the most appropriate to fit the requirements and needs defined in Article 14 of the SDGR allowing, to the highest extent, for the reuse of MS national solutions, achieving the highest level of interoperability and efficiency and making identity matching as easy as possible.

DE4A Resources released during the project's lifetime

- All the deliverables produced by the project are available in the web site: [Project Deliverables | Digital Europe For All](#).
- The code can be found in [Github](#).
- The [academic publications](#), here.

DE4A wiki

The DE4A wiki brings together DE4A documentation from all aspects of the project, spanning technical and legal topics. The [DE4A wiki can be found here](#)



In the works....

DE4A partners continue to prepare papers and conference participation. We look forward to seeing you at these events...

Implementers Café #5: Ana Rosa Guzmán (Secretariat-General for Digital Administration (SGAD) of the Spanish Ministry of Economic Affairs and Digital Transformation will present "DE4A, Multilingual Ontology Repository and User Interface"

at the Implementers Café #5 on May 5th 2023. [For more information](#)

ICEGov 2023 Digital Governance for Democratic, Equitable, and Inclusive Societies – call for papers is open until May 7th, but DE4A participants are preparing a paper submission for the [2023 ICEGov conference](#) taking place in Brasil in September...



DE4A

Member States



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