DC4EU

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Project abstract

Europe is facing unprecedented changes, in which digital transformation and the green transition are two key backbones of Europe's future. The eIDAS trust framework is undoubtedly one of the pillars of the European Union, which has laid the foundations of identity and trust in the digital world. The revision of this framework extends its scope of competence beyond identity, encompassing the electronic attestation of attributes (EAA). Establishing the technical measures, the processes and procedures for establishing trust frameworks in sectoral areas will be key to the construction of Europe. In this sense, DC4EU will focus on identifying and applying all these aspects in the fields of Education (Ed) and Social Security (SS). Specifically, the issuance of educational credentials and professional qualifications in the Education sector, and the issuance of the portable document A1 (PDA1) and the European Health Insurance Card (EHIC) in the Social Security sector.

The European Digital Identity Wallet (EUDIW) will be a key element of hybridization for cross-sectoral and cross-border use cases (Identity, Signature, educational credentials and Social Security). Beyond the development of cross-border Large-Scale Pilots (LSPs) and recommendations for issuing institutions, relying parties, Member States (MS) and citizens, DC4EU will contribute to new paradigm to citizens in the field of education and social security.

DC4EU is formed by 82 organizations from 23 States (21 EU MS + Norway and Ukraine). For this purpose, it will develop 4 use cases (UCs) with work planned for 24 months and divided in 9 work packages. The project counts with the backing 43 public organizations and 49 private entities, including relevant sectoral institutions, ministries, and digitalization agencies of various Member States governments, developing a comprehensive governance model and an ambitious dissemination plan, guaranteeing the relevance and impact expected.

Project Large Scale Pilots

Education

- · Educational credentials to support lifelong learning (including primary, secondary, higher education, TVET, micro-credentials)
- Non-foundational IDs (e.g. European Student Identifier(ESI), MyAcademicID, InAcademia)
- · Professional qualifications
- In addition, and to have a real impact, especially in cross-border mobility, a set of elements will be developed to allow the interaction of the EUDIW with existing mobility services (European Student Initiative, European Digital Credentials, Europass, European Learning Model, eduGAIN, Erasmus Without Paper services, EMREX, ELMO)

Social security

- PDA1 (portable documents A1)
- EHIC (European Health Insurance Card)

Workplan and work packages

The DC4EU project organises its activities into seven Work Packages aligned with the activities and objectives described in section 1.1. DC4EU work plan runs along a project timespan of 24 months, whose schedule is reported in section 4.3. WP1 Project Management and coordination WP1 Project management and coordination WP2 Planification, analysis and design WP2 WP3 collaboration and alignment Analysis, planification and design WP3 Internal and External Collaboration and Alignmer WP4 Onboarding Base Identity Onboarding base identity Educational credentials and professional WP5 WP5 qualifications WP6 **Educational credentials and** Social Security professional qualification WP6 Social Security Internal and external WP7 Integrations and Development WP8 Ecosystem building, policy support and WP8 sustainability Ecosystem building, policy support and sustainability WP9 Communications and dissemination

Work package	Objectives & scope	Outputs
1	All management and coordination activities (meetings, project monitoring and evaluation, financial management, progress reports and assurance, quality control and data protection).	Project Management Handbook, meeting minutes, quality assurance & risk management plan, periodic reports.
2	Core planning, design, and analysis activities to be developed around agents and systems identification, requirements gathering, alignment with Architecture Reference Framework (ARF) and other ongoing activities.	Requirements' analysis, user journeys, information flows, logical architecture, and piloting playbook.
3	Coordination with the Commission for iterative eIDAS reference wallet releases, coordination with other ongoing cross-border initiatives and LSP alignment and coordination.	DC4EU Collaboration & Cooperation Strategy and Activities Report and Coordination report with eIDAS Expert Group.
4	Implementation and support of onboarding process, identify business scenarios and interoperability requirements for identity and coordinate related activities with other ongoing cross-border initiatives.	Onboarding and issuance legal analysis, ID info guidelines, Attestation's guidelines, onboarding management process and issuance design.
5 & 6	Key design and implementation activities for LSPs in the education credentials, professional qualifications (WP5) EHIC and PDA1 (WP6) use- cases.	Key design and implementation activities for LSPs in the education credentials, professional qualifications (WP5) EHIC and PDA1 (WP6) use- cases.
7	Construction of an open source EIDAS compliant toolkit(s) for (Q)EEA issuers and its continuous integration with the wallet releases.	Open-Source architecture and its consequent Intellectual Property Rights Policy.
8	Design ecosystems for each UC to facilitate interoperability across different MS, provide policy support for the UCs and define the business strategy for sustainability.	Registers and guidelines for ecosystem member enrolment ecosystem auditing and sustainability guidelines.
9	Development of a strategy to optimize the visibility of the project, create a community of practice and disseminate findings, also levering on the extensive networks available to the consortium team members.	Dissemination, communication, visibility plan and dissemination final report.

Work package details

Work package 2: Analysis, planification and design

Duration: M1 - M23

Lead Beneficiary: Poste Italiane

Description

Work Package 2 covers the process of planning, design, and analysis to be developed around agents and systems identification, requirements gathering, alignment with ARF and other ongoing activities, user journeys design and APIs alignment. The outcome is a technical design document that, together with a planification document, will guide the iterative development of the ecosystem. The main objectives of this WP are the following:

- Provide a complete analysis of the business requirements for use cases in other WPs
- Stakeholders' analysis and User Journey definition
- Technical specification of the ecosystem
- · A playbook for adoption

Tasks

Task No.	Task Name	Description	Participants
T2.1	Analysis	This task will be focused on the analysis of ARF (as an output from WP3) and all related topics emerging form the work of WP5 and WP6, in particular: • Functional and non-Functional Requirements gathering • Analysis of alignment with other ongoing cross-border initiatives and synergies with other domain related activities • Stakeholder analysis and mapping • Analysis of current APIs with project implementations • Analysis of requirements for EAAs, QEAAs	Poste SUNET CERTSIGN NEUMANN GUNET
T2.2	Design	This task will produce a high-level logical and physical architecture of the ecosystem by collecting the results of the following sub- tasks: • Identify target systems and wallet interoperability requirements • Cross-border user journey conceptualization, design, and acceptance criteria.	Poste SUNET CERTSIGN NEUMANN GUNET
T2.3	Planification	Integration plan design and alignment with Architecture Reference Framework (ARF)	Poste SUNET CERTSIGN NEUMANN GUNET

Work package 5: Education and Professional Credentials

Duration:

M1 - M24

Lead Beneficiary:

CRUE

Description:

Work Package 5 covers the key design and implementation activities for Educational credentials and professional qualifications UC including onboarding customization and execution, interoperability preliminary tasks and identification of opportunities and synergies with domain related activities and its relation with WP2 activities. The main objectives of this WP are the following:

- ARF Onboarding proceedings analysis and adaptation for education
- Implementation of onboarding management process for educational (Q)EAA, providers and relaying parties in trusted registries
- Provision of elements to enable a hybrid scenario using the potential of the EUDIW for existing cross-border initiatives
- Implementation of onboarding management process for wallet users
- Onboarding support process execution
- Identification of business requirements, business scenarios, credentials lifecycle and interoperability requirements alignment (organizational, legal, technical, and semantic) with special identification to eID related friction points
- Coordination with other ongoing cross-border initiatives and synergies with other educational related activities
- Comprehensive testing of defined cross-border journeys in a pre-production environment of the target systems
- Monitoring and evaluation of piloting processes (KPIs)
- LSP coordination plan execution

Tasks

Task No.	Task Name	Description	Participants
T5.1	Business Blueprint Definition	Identification of business requirements, business scenarios, credentials lifecycle and interoperability requirements alignment (organizational, legal, technical, and semantic) with special identification to eID related friction points and cross-border dimension.	
T5.2	Onboarding and preliminary activites	ARF (Architecture and Reference Framework) (Architecture and Reference Framework) Onboarding proceedings analysis and adaptation for education, alignment and coordination, implementation of onboarding management process for (Q)EAA providers and relying parties in trusted registries, onboarding management for wallet users and onboarding support process execution.	
T5.3	Piloting execution	Comprehensive testing of defined cross-border journeys in a pre-production environment of the target systems (Piloting activity), Monitoring and evaluation of piloting processes (KPIs (Key performance indicators)) – Piloting activity, LSP (Large Scale Pilots) coordination plan execution – Piloting activity.	
T5.4	Identification of opportunities and synergies	Coordination with other ongoing cross-border initiatives and synergies with other educational related activities: related DGs (H4, F3, EAC, EMPL), EU, Key education players.	

Milestones

Milestone No.	Milestone Name	Description	Lead Beneficiary	Due Date	Means of Verification
MS5.1	Completion of deliverable for work packages 2, 4, 7	Full BBP issued and agreed. Relevant specifications and requirements validated	CRUE	M09	Technical and reference use case and workflows documentation validated
MS5.2	Onboarding processes customized and executed	Onboarding management process for education implemented and tasked registries fulfilled.	CRUE	M13	Result report for the onboarding process with QEAA providers and wallet users
MS5.3	1st user journey roll- out. DG-EMPL Europass EUDI alignment report	First pre-production testing and deployment initiated	CRUE	M13	Deployment and results report for first testing scenario
MS5.4	All user journeys rolled out	Last deployment and testing finished	CRUE	M22	Deployment and results report for testing testing scenario

Deliverables

Deliverable No.	Deliverable Name	Description	Lead Beneficiary	Due Date
D5.1	Business Blueprint	Document regarding business requirements, scenarios and interoperability requirements and use-case governance model design (English)	CRUE	M08
D5.2	Deployment and Testing Scenarios Results Library (DTSRL)	DTSRL (hosted in participants intranet section) with searchable contents regarding testing scenarios results and conclusions (English)	CRUE	M22
D5.3	Initiatives mapping, documentation, and final report on LSP	Individual initiatives and activities checklists published at participants intranet section (English)	CRUE	M24

Work package 7: Integrations and development

Duration:

M1 – M24

Lead Beneficiary:

SUNET

Task executors:

National Infrastructures for Research and Technology (GR) GRNET Istituto Poligrafico e Zecca dello Stato S.p.A. (IT) IPZS GEANT Association (NL) GEANT Fábrica Nacional de Moneda y Timbre (ES) FNMT Stichting Internet Domeinregistratie Nederland (NL) SIDN Atos (ES) ATOS

Observers:

Ministry of Finance of Finland (FI) VM
CRUE Universidades Españolas (ES) CRUE
Deutsche Rentenversicherung Bund (DE) DRV
Styrelsen for Arbejdsmarked og Rekruttering (DK) STAR
SURF BV (NL) SURF
Poste Italiane (IT) Poste
CertSIGN (RO) CERTSIGN
Ministry of economic development and technology of Slovenia (SI) MEDT

Description

Work Package 7 covers the construction of an EIDAS complaint toolkit for (Q)EEA providers and its continuous integration with the wallet releases. The main objectives of this WP are the following:

- Build and distribute reference open-source implementation (providers of electronic attestations of attributes EAA, and qualified electronic attestations of attributes QEAA)
- Integration of target systems with reference open-source implementation of others
- Change Management Plan Maintenance and execution

The success of the EU digital wallet will depend on freely available and easy to use provider/verifier implementations. The verifier will be based on a pluggable architecture that can handle a wide range of signature mechanisms and APIs. We produce an open-source verifier that presents a standard SIOP2 interface to an RP which makes it easy to integrate the EU digital wallet in existing IAM ecosystems via a standard OpenID Connect interface. The interoperability lab will provide a basis for rapid testing of the new EU wallet reference implementation and will also focus on fast deployment and testing of new features as they are made available.

Technical coordination between the various pilot consortia will be critically important for the EU digital pilot. To this end WP7 will create a technical coordination activity where the other pilot consortia will be invited to participate and establish interoperability baseline specifications for relying parties and issuers.

Tasks

Task No.	Task Name	Description	Participants
T 7.1	Technical coordination	Technical coordination with other consortia.	SUNET , GRNET, IPZS GEANT, FNMT & ATOS
T 7.2	Opensource Provider and Verifier	Implement an opensource EAA/QEAA provider and verifier (RP).	SUNET , GRNET, IPZS GEANT, FNMT & ATOS
T 7.3	Interop Lab	Establish and operate an interoperability lab for the reference wallet and the software developed in T7.2.	SUNET , GRNET, IPZS GEANT, FNMT & ATOS
T 7.4	Integration support	Support integration of the software within the use case groups.	SUNET , GRNET, IPZS GEANT, FNMT & ATOS
T 7.5	WP Management	Support and management activity for WP7.	SUNET , GRNET, IPZS GEANT, FNMT & ATOS

Milestones

Milestone No.	Milestone Name	Description	Lead Beneficiary	Due Date	Means of Verification
MS7.1	Verifier released	First version of generic verifier released as open source	SUNET	M6	Software available on public opensource repositories
MS7.2	Publisher released	First version of generic publisher released as open source	SUNET	M12	Software available on public opensource repositories
MS7.3	Interop Lab established	Interoperability lab established as a collaboration between WP5 and WP6 and WP7	SUNET	M5	Working principles for the interop lab established and published.

Deliverables

Deliverable No	Deliverable Name	Description	Lead Beneficiary	Due Date
D7.1	Open Source Architechture	A description of the opensource implementation strategies	SUNET	M4
D7.2	IPR Policy	An IPR (OpenSource) policy for the project.	SUNET	M4
D7.3	Interop Lab guide	Interoperability guide document written to explain how stakeholders can participate in the interoperability lab.	SUNET	M5