DIGIT Support to Data Spaces

Reusable, interoperable, trust-building solutions to support the Digital Single Market

May 2023

Index

What is the index of this presentation?

Why

Understanding the policy context

European Commission

Policy Context

- Europe's digital future will be enabled by a **data-driven economy** and the use of **Artificial Intelligence**, fully respecting EU values and regulations. The public sector also needs to become more data-driven; improve the capability of developing policies and services through the management, sharing and use of data.

- The European Data Strategy aims to create a single market for data through common European data spaces that benefit from common standards and interoperability protocols.

- AI legislation and coordinated plan to foster the development and use of AI in Europe, highlighting the public sector as a trailblazer for using AI.

- The Interoperable Europe Act complements the EU data and digital policy landscape on data availability and data exchange, from a public sector angle. It implements interoperability by design and fosters the sharing and reuse of interoperable solutions.

What

Understanding the role and services from DG DIGIT

European Commission

DG DIGIT's role and services

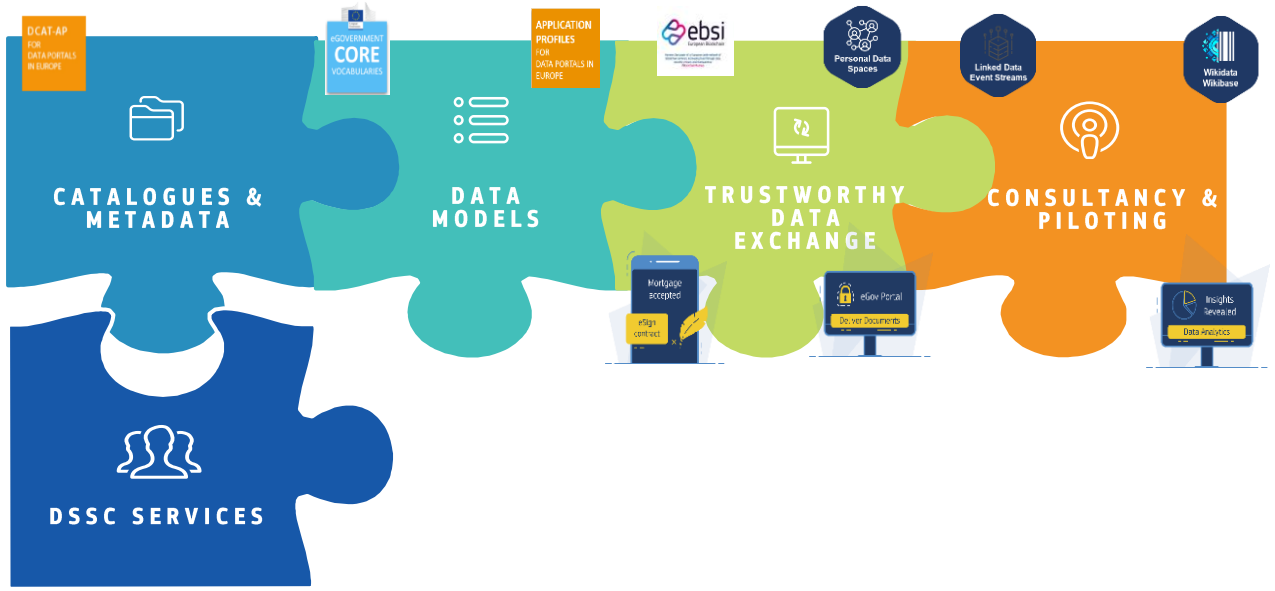
DG Informatics is ready to support data spaces with existing assets and services, as well as to establish synergies with stakeholders active in this field to provide a more comprehensive support.

European Commission DG Informatics

- Interoperability
- Analytics
- Trust & Identity

→ Interoperable

Support to data spaces



Data spaces

- Health
- Tourism
- Mobility
- Manufacturing
- Green Deal
- Skills
- Agriculture
- Energy
- Public procurement
- Finance
- Cultural heritage
- Languages

Data Spaces Support Centre

DATA SPACES SUPPORT CENTRE

BDV BIG DATA VALUE ASSOCIATION

FIWARE

INTERNATIONAL DATA SPACES ASSOCIATION

KU LEUVEN

gaia-x

GALLIMH GALWAY

European Commission

European Commission

DG DIGIT's roadmap towards a co-development approach

We help match your needs to the appropriate solution(s) via a single point of contact

GET in touch | Understand **YOUR needs** | **Co-DESIGN** the technical solution | **Co-DEVELOP** the solution | **TEST** the solution | **GO LIVE**

Explain your needs

Requesting service

Match to appropriate solutions

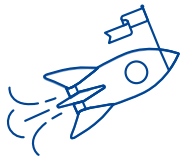
DIGIT B team

Ideate

Develop Solution

DIGIT B Solution team

Projectathons, PlugFest, TestBed, etc



How

Learning more about DG DIGIT’s services and solutions to support data spaces

European Commission

Overview of services

DG DIGIT provides a set of services and solutions divided into three layers of support to data spaces.

Interoperability

- Reference architecture
- SEMIC
  - SEMIC specifications
  - SEMIC Pilots
  - SEMIC Knowledge Hub
- Access to Base Registries
- Interoperability Test Bed

Trust & Identity

- eID
- eSignature
- eDelivery
- EBSI Framework
- TESTA Network
- EU Digital Identity Wallet (in the future)

Analytics

- Data Advisory Services
- Big Data Test Infrastructure

European Commission

Interoperability

European Commission

Supporting cross-border and cross-domain interoperability

Supporting cross-border and cross-domain interoperability

01

A portfolio of mature specifications enabling interoperability

Our specifications enable interoperability within and across data spaces, in a cost-effective way, based on open standards and in respect of EU values and regulations.

02

Contributing to ‘interoperability by design’ through piloting

Our offering is tested with early-stage pilots based on use cases from MS to showcase cross-border data exchange.

03

A well-established knowledge hub which fosters community building

Our way of working engages communities with technical experts and stakeholders to exchange experiences, good practices and knowledge.

Promoting interoperability within and across data spaces

Promoting interoperability within and across data spaces

What does DIGIT have to offer at the moment?

- **Reference architecture** which provides a blueprint to ease data exchange
- **Reference data models** as a cornerstone of semantic interoperability
- **Application Profiles** for tailored and specific applications
- **Principles and methodology** to bring people from different backgrounds to agree on data models based on concrete use cases
- **Tools** to support this methodology, create and publish data models, edit online and validate data according to data models
- **Linked Data consulting services** to structure DBs to support innovative, cost-cutting services
- Develop and propose interoperable solutions for managing the **exchanges and the reuse of personal data** within the data spaces

What is DIGIT looking further into?

- **Catalogue of concepts** supporting different use cases
- **Collaborative environments** for sharing practices and reuse in modelling
- **Translation capabilities**
- **Automation** of modelling activities

Reference architecture

Blueprint supporting i) the identification and formulation on business agnostic requirements and ii) the design of the solution building blocks (i.e. connectors) so that it makes it easier to exchange data with other organisations in a data space.

Benefits of a business agnostic data spaces reference architecture

- Identifies building blocks to create interoperable digital government systems
- Helps reduce silos and adopt a user centric and service-delivery approach
- Promotes solutions based on re-usable components to reduce unnecessary redundancy by taking a whole-of-government approach

- Reduces technology lock-in and promotes innovation across government services
- Facilitates reuse and interoperability across government
- Follows an approach which focuses on interoperability and is business agnostic (built upon the IDS RAM v4.0 and EIRA - eGovERA provides a Business Agnostic reference architecture, v.2.0.0).

SEMIC specifications

SEMIC specifications enable interoperability by:

- Making data transparent and available
- Supporting coherent implementation of laws and policies
- Helping implement cost efficiencies
- Helping digitalisation and harmonising processes

Core Vocabularies

The cornerstone for semantic interoperability

Core Vocabularies provide a standardised approach for describing key concepts such as locations, businesses, organisations and natural persons.

Application Profiles

A tailored data model for specific applications

Application Profiles make use of vocabularies for a detailed set of use cases to define mandatory relations, constraints and relationships.

We adopt a balanced approach providing flexibility, customisation and solid indications to ensure a high degree of semantic interoperability.

Examples

SEMIC Core Vocabularies are reused in various implementations and extensions across domains and countries, from INSPIRE regulation to national databases (e.g. organisation registers) and private initiatives (Smart Data Models from Fiware).

DCAT-AP is a standard model to describe data catalogues. It is used by all open data portals in Europe. We have already made available extensions for statistics, geospatial and base registries.
We are currently supporting the **European Health Data Space and the Mobility Data Space** to extend DCAT-AP in their respective domains. This will ensure that minimum data descriptions will flow across data spaces.

CPSV-AP is a reusable and extensible data specification used for harmonising the way public services are described in a machine-readable format. Public administrations and service providers use this approach to describe their services and guarantee a level of cross-domain and cross-border interoperability at European, national and local level.

SEMIC pilots

SEMIC sets up pilots to showcase the value of new approaches and ecosystems, which can be leveraged across public administrations to scale up their interoperability maturity. Pilots usually involve participants from several Member States and sector-specific DGs co-creating solutions with SEMIC's support.

Wikidata / Wikibase

Supporting community-driven efforts

Tools to enable the co-creation of semantic data models emerging from a community of users.

Linked Data Event Streams

A new data publishing approach

A publishing strategy by which a data provider allows multiple third parties to stay in sync with the latest or historical versions of the data source in a cost-effective manner.

Personal Data Spaces

Empowering individuals and supporting the data economy

There is a need for more coordination and synergies between Personal Data Spaces implementations to ensure interoperability between existing and potential solutions in this emerging market.

Examples

Wikidata Wikibase

SEMIC organised a dedicated hands-on workshop about community-driven data spaces in 2022. As a result of this workshop, we developed a training module about Wikibase and Semantic MediaWiki for data-driven semantics. Another relevant example related to Wikidata/Wikibase is Kohesio, an implementation supported by SEMIC.

Linked Data Event Streams

The European Railways Agency has deployed a solution based on the LDES technology which allowed them to save costs and efficiently transfer only the data that has changed, together with what has changed and when, for historic records.

Personal Data Spaces

SEMIC is collaborating closely with a selected group of experts and practitioners to coordinate efforts and foster synergies towards an **interoperable roadmap for Personal Data Spaces** (which will feed into the various data spaces initiatives).

SEMIC Knowledge Hub

SEMIC acts as an enabler to exchange experiences, good practices and insights. By sharing knowledge we aim to facilitate the development and use of data specifications, as well as to discuss the latest technological trends, and present expert views on semantic interoperability topics.

Community building

Experience exchange and building consensus

Organisation of webinars, workshops and other events to understand user and market needs, foster experience and good practice exchange, and help reach consensus between stakeholders.

Studies & other materials

Setting trends and providing guidance

Over the years SEMIC has published many reports, studies and other guidance materials revolving around semantic interoperability.

Training

Providing online learning materials

SEMIC contributes to advancing digital skills in the area of interoperability to support policy, service delivery and impact evaluation.

Examples

SEMIC is organising a series of three workshops revolving around personal data spaces. Each workshop focuses on a different aspect of personal data spaces, with the aim of boosting their sustainable development and implementation in Member States or any other organisation to enable improved interoperability.

This series of workshops will result in the co-creation of a roadmap to support the advancement of EU-wide interoperable personal data spaces, as well as a white paper to describe the state-of-play of personal data spaces and related interoperability challenges.

Access to Base Registries

SEMIC and Access to Base Registries joined forces to boost interoperability across public administrations in the EU.

Semantic assets

Core Vocabularies and BregDCAT-AP as key trusted tools.

Support centre

Resources, helpdesk and pilots on interoperability topics (incl. Data spaces, SDG, LDES...).

Monitoring interoperability

Following up on interoperability and approaches to Base Registries, preparation of factsheets and dialogue with MS.

Knowledge Sharing

Guidelines, good practices and case studies on the benefits of semantic interoperability.

Examples

BregDCAT-AP is dedicated to an application profile of DCAT-AP for base registries, aiming to provide a standard data model / specification for base registries access and interconnection.

BregDCAT-AP is an extension of DCAT-AP, a standard model to describe data catalogues used by all open data portals in Europe.

Interoperability test bed

The Interoperability Test Bed is a service to facilitate conformance testing of IT systems. The Test Bed is a software system that can be both downloaded and installed locally, but also reused through a shared online installation operated by DIGIT.

How does it work?

Test Bed is a complete platform consisting of both software and hardware components to facilitate testing.

When to use it?

The particular focus is conformance and interoperability testing, ensuring that tested systems conform to a specification's requirements and can interoperate consistently with conformant peer systems.

Validators

The Test Bed also has standalone validation services, operated independently from the Test Bed, which focus specifically on receiving content via various channels and validating it against specifications to produce reports.

Case studies

Data.Europa.eu

Data.Europa.eu offers uniform, central access to open data from public authorities. The data published on data.Europa.eu is harvested from various data providers who are expected to make their datasets available in DCAT-AP. As a means of verifying the quality of provided data and reporting issues, data.Europa.eu is using the DCAT-AP validator, a validator instance hosted by the Test Bed.

CEF eInvoicing Building Block

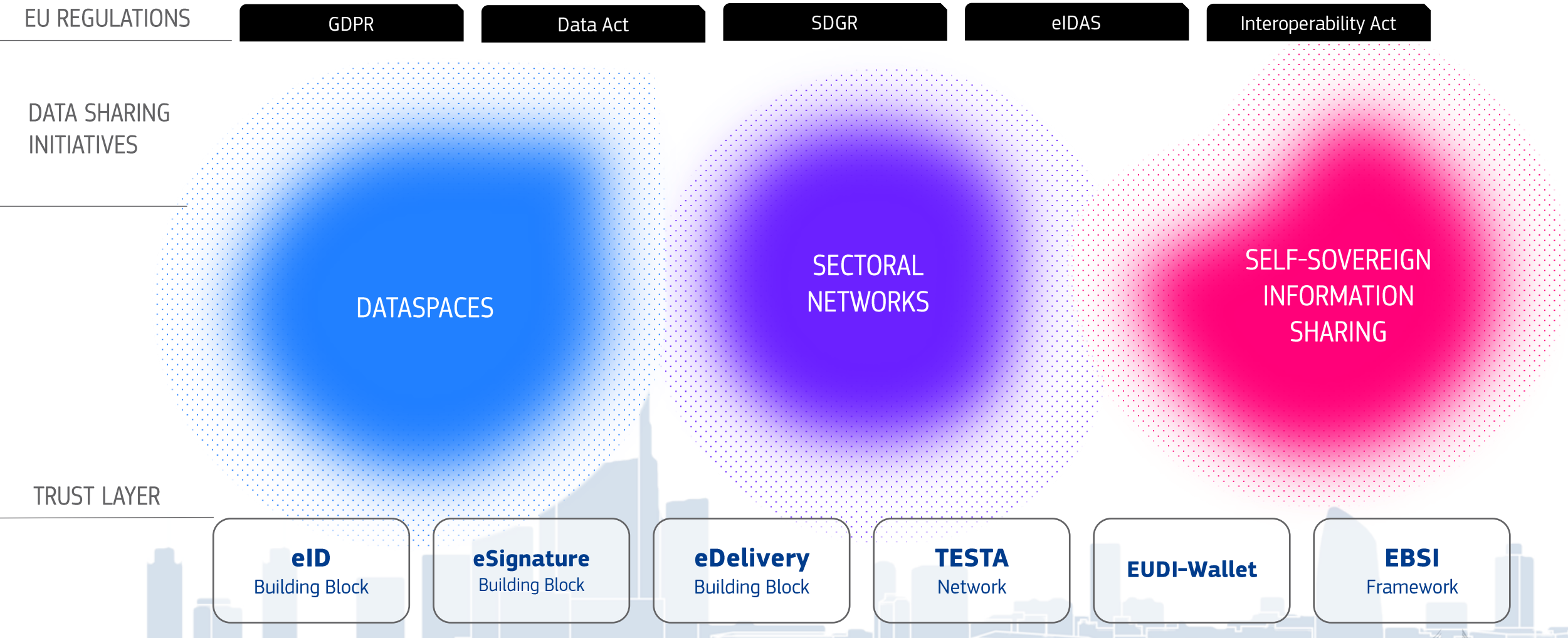
The validation of invoices against the European standard's core invoice is the central objective of the eInvoicing conformance testing service. Given that the supported syntaxes are XML-based, this was realised by means of the Test Bed's core XML validation service that was used to create a new validator supporting the validation of invoices and credit notes for each syntax.

Trust & Identity

European Commission

Building Blocks are relevant in all EU data sharing initiatives

Building Blocks are relevant in all EU data sharing initiatives



Reusable solutions are key to enable trusted data sharing, while **preserving citizens' privacy**

The challenge

Ensuring trust, user-centricity and respect for privacy in compliance with EU Regulations.

Value proposition

- Data-centric
- Cross-border
- Privacy / User Centricity

Data Sharing initiatives

- **Dataspaces**
- **Sectoral networks**
- **Self-sovereign information sharing**

Regulations

- GDPR
- Data Act
- eIDAS
- Interoperability Act
- SDGR

Standard-based Offering

- eID
- eSignature
- eDelivery
- EUDI Wallet
- TESTA
- EBSI

Why are reusable solutions the best choice?

DG DIGIT's interoperability solutions – building blocks – are domain and technology neutral, making them ideal to support dataspaces, sectoral networks, or SSI projects.

Authenticate

01

eID
Building Block

Federated authentication and identification using national identification means across borders.

E-sign

02

eSignature
Building Block

Sign and seal documents using qualified certificates

File exchange

03

eDelivery
Building Block

Send documents and files securely over the internet, encrypted and signed, using standards-based protocols:.

Citizen wallet

04

EUDI

Coming soon

The EU Digital Identity wallet will be the result of the revision of eIDAS.

Secure connection

05

TESTA
Network

The TESTA network service provides a backbone network for data exchange between a wide variety of public administrations.

Verification

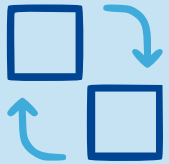
06

EBSI
framework

The pan-European blockchain services infrastructure makes information hard to fake but easy to verify using W3C Verifiable Credentials.

What are the benefits of reusing these solutions?

Reuse



Reuse a proven and secure solution

Costs

Save Development costs

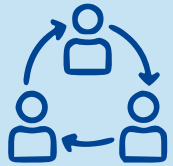
Focus

Focus on your core business

Security

Benefit from highly secure implementation of standards

Services



Services and support at your disposal

eID Building Block

Secure authentication and authorisation using the eIDAS network

Ready-to-use **Standards based** **Support services** **Sample software**

What is eID?

eID is a set of services provided by the European Commission to enable the mutual recognition of national electronic identification schemes (eID) across borders. It allows European citizens to use their national eIDs when accessing online services from other European countries.

Interoperability

The eID Building Block ensures interoperability on 4 fronts: legal, organisational, semantic and technical interoperability, providing a powerful enabler of digital operations that require cross-border identity recognition.

Security & Trust

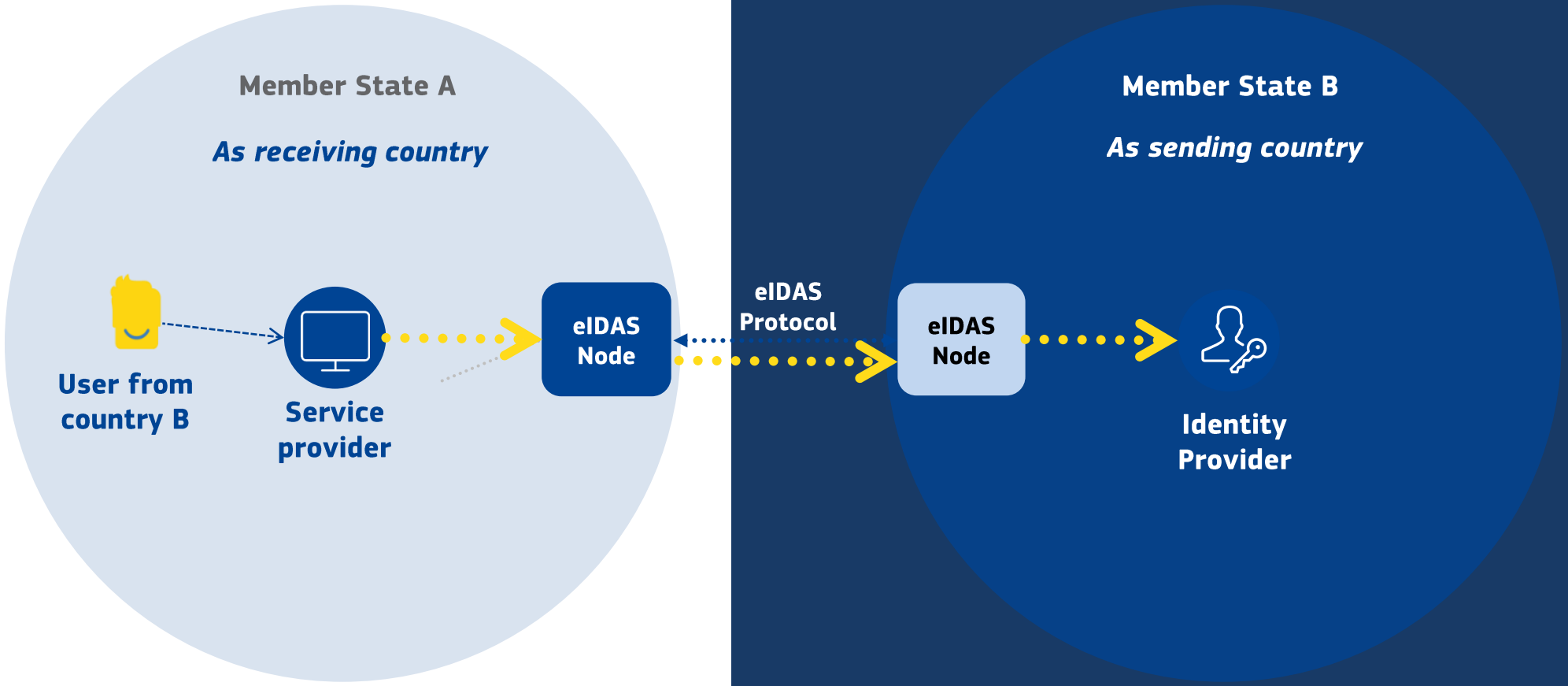
The high levels of assurance, possible with eIDAS eIDs, result in a reduced risk of identity theft and misuse of personal information. DIGITAL eID ensures the legal validity of cross-borders transactions, providing the same legal status as traditional paper based processes.

Cross-border

The solution drastically reduces the administrative burden, in terms of time, expenses and effort, associated with the use of foreign public services — a necessity for many in an increasingly globalised world.

How does it work?

Identity provider must be connected to the eIDAS Node in "Member State B". Service provider must be connected to the eIDAS Node in "Member State A"



eID Service Offering

eID Service Offering Canvas

ENABLING SERVICES *enable the adoption of the core services*

SOFTWARE

- Sample software
  - eIDAS-Node integration package (C)

OPERATIONS

- Managed Services
- Testing
  - Conformance testing (C)
- Support
  - Service Desk (C)
  - Training (C)

ENHANCING SERVICES *enhance customer experience*

STAKEHOLDER MANAGEMENT

- Onboarding
- Follow-up
  - Community Management (C, E, P)
  - Knowledge Base (C, E, P)

TECHNICAL SPECIFICATIONS

- European Profiles
  - eIDAS profile of SAML standard (C)
- Implementing Acts
- Implementing Guidelines

STANDARDS OF ESOs

- CEN Standards
- ETSI Standards

AUDIENCE

- (C) Cooperation network & node operators
- (E) Expert groups & Communities
- (P) ID / Attribute / Solution Providers

CORE SERVICES *facilitate cross-border/ cross-sector technical interoperability among heterogeneous information systems*

eSignature Building Block

Sign and seal documents using qualified certificates

Ready-to-use | Standards based | Support services | LIbraries

What is eSignature?

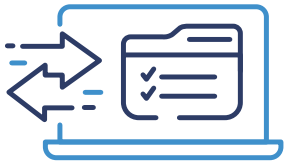
eSignature is a set of free standards, tools and services that help public administrations and businesses accelerate the creation and verification of electronic signatures that are legally valid in all European Member States.

Boost your digital transactions

By removing the need for paper to obtain a signature or seal, the solution facilitates the digitalisation of business processes, eliminating the time, costs and risks of dealing with paper formats.

Cross-border legal assurance

eSignature is compliant with the eIDAS Regulation, meaning that it ensures the legal recognition and cross-border interoperability of the electronic signatures and seals produced by solutions based on this building block.



Guaranteed documents' integrity

With eSignature, you reduce risk of document duplication or alteration. The signer's identity is bound to each specific document, ensuring that signatures and seals are verified, authentic and legitimate for that document alone.

Improved user experience

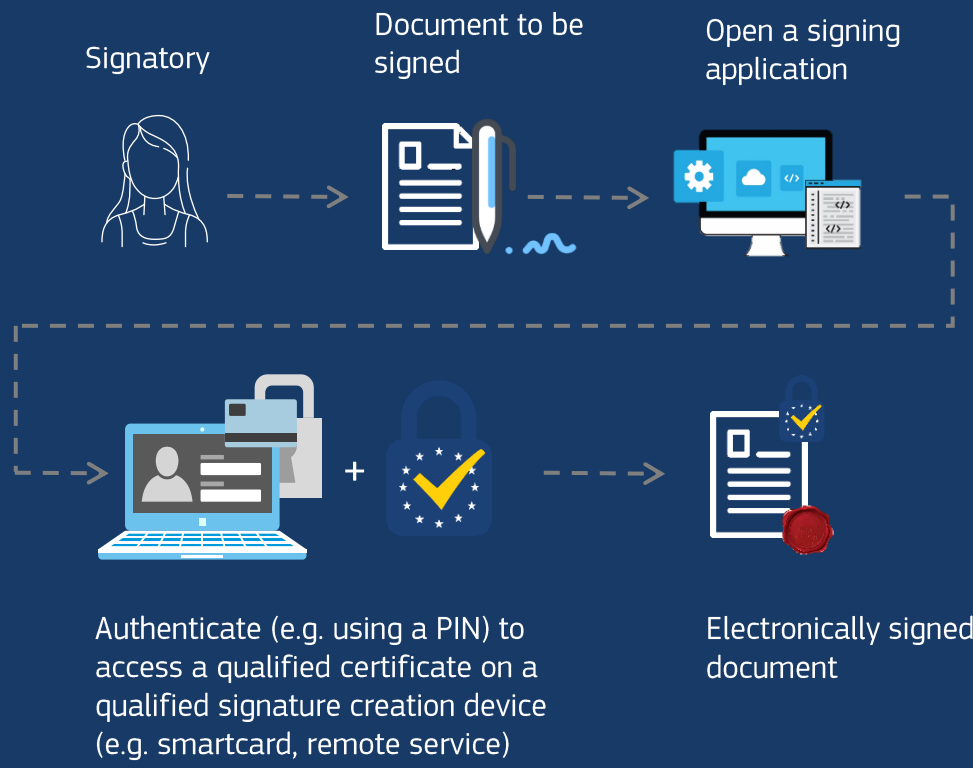
Shorter approval times, thanks to faster document signing processes, which leads to higher satisfaction rates.

How does it work?

eSignature is conformed of a series of reusable software components, standards and libraries that enable out-of-the-box compliance with the eIDAS Regulation.

eSignature is composed of **three main components**:

- The Digital Signature Software (DSS) Open-Source library is an open-source software library for electronic signature creation and validation. DSS supports the creation and verification of interoperable and secure electronic signatures in line with European legislation, and it can be re-used in an IT solution for electronic signatures to ensure its alignment with European legislation and standards.
- The Trusted List Browser is an online tool provided by the European Commission that allows for searching qualified trust service providers in Europe.
- The TL Manager is a web application for browsing, editing, and monitoring Trusted Lists used by the Trusted List Operators of each Member State.



eSignature Service Offering

eSignature Service Offering Canvas

ENABLING SERVICES *enable the adoption of the core services*

SOFTWARE

- Sample software
  - Digital Signature Services (DSS) e-signature tool (I)

OPERATIONS

Managed Services

- List of trusted lists (U, T, I)
- Trusted List Browser (EU Trust Services Dashboard) (U)
- TL-Manager tool for managing trusted lists (N, T)
- Pilot for the International Compatibility of Trust Services (O)
- Notification tool (EU Trust Services Dashboard) (N)

Testing

- ETSI Signature Conformance Checker (I)
- eSignature validation test cases (I)

Support

- Service desk (U, T, I)
- Monitoring of national trusted lists (T)

ENHANCING SERVICES *enhance customer experience*

STAKEHOLDER MANAGEMENT

- Onboarding
- Follow-up
  - TLSO Community (T)

TECHNICAL SPECIFICATIONS

- European Profiles
- Implementing Acts
- Implementing Guidelines

STANDARDS OF ESOs

- CEN Standards
- ETSI Standards
  - E-signature standards (I)
  - Trusted list standard (T)

AUDIENCE

- (U) E-signature users (general public)
- (T) E-signature solution providers
- (T) Trusted List Scheme Operators (TLSOs)
- (N) eIDAS list notifiers
- (O) Third countries representatives

CORE SERVICES *facilitate cross-border/ cross-sector technical interoperability among heterogeneous information systems*

eDelivery Building Block

Send documents and files securely

Ready-to-use | Standards based | Support services | Sample software

What is eDelivery?

eDelivery provides technical specifications and standards, installable software and ancillary services to allow projects to create a network of nodes for secure digital data exchange.

Interoperability

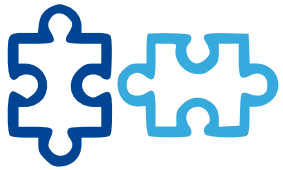
eDelivery enables the exchange of documents and data among heterogeneous information systems using a standardized protocol, thereby laying the foundation for cross-domain and cross-project interoperability.

Scalability and performance

eDelivery solutions ensure sustainable levels of performance and maintainability even as the number of participants and/or messages in a network grows.

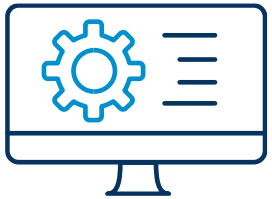
Security and accountability

eDelivery ensures data integrity and confidentiality in every transmission through the use of digital signatures and encryption. eDelivery also guarantees legal assurance and accountability by mandating that the recipient of a message must send a digitally signed acknowledgement of receipt for every message received.



Vendor and platform agnostic

Because this is a vendor and platform neutral solution, its specifications are not proprietary or controlled by one vendor alone. Also, eDelivery is available in multiple products and solutions from different vendors you can choose from.



Flexible and configurable

eDelivery supports multiple types of data exchanges and is easy to adjust to each organisation's needs, since it can be configured using parameters and doesn't solely rely on programming.

Data sharing through eDelivery in the HealthData@EU

HealthData@EU Pilot: building a pilot version of HealthData@EU using eDelivery, eID (and DCAT-AP)

- eDelivery Access Points to ensure interoperability for cross-border data sharing
- eDelivery PKI service to obtain the certificates to establish trust and ensure security
- Information about data users and data holders will be managed in a dynamic manner by publishing it in the (central) eDelivery SML service
- 17 partners, among which:
  - health data access bodies
  - health data sharing infrastructures
  - European agencies

How does it work?

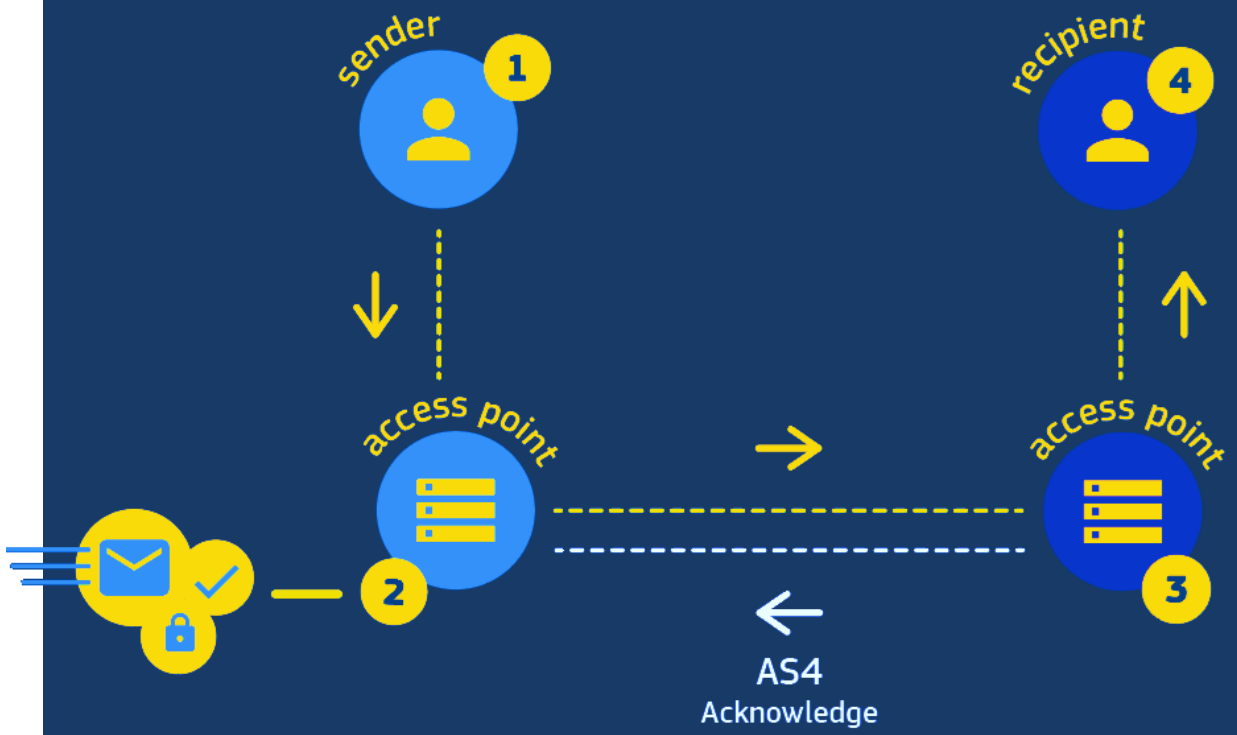
A four-corner model

1 **Submit**
Sender sends message to sending AP

2 **Send**
Sending AP processes message
a) Validation and compression of the user message;
b) Signing of the compressed message;
c) Encryption of the signed compressed message.

3 **Receive**
Receiving AP processes message
a) Receives and decrypts the encrypted message;
b) Verifies the sender's signature;
c) Decompresses the decrypted message;
d) Validates the original user message;
e) Sends the acknowledgement to the sending AP;
f) Stores the user message for download.

4 **Deliver**
Recipient receives message from receiving AP



eDelivery Service Offering

eDelivery Service Offering Canvas

ENABLING SERVICES *enable the adoption of the core services*

SOFTWARE	OPERATIONS SERVICES		
Sample software maintained by the EC	Managed services	Testing services	Supporting services
Access Point (AP)	Public Key Infrastructure (PKI Service)	Connectivity testing	Training & Deployment
Service Metadata Publisher (DomiSMP)	Service Metadata Locator (SML Service)	Conformance testing	Service Desk
Service Metadata Locator (DomiSML)			

ENHANCING SERVICES *enhance customer experience*

STAKEHOLDER MANAGEMENT	
Onboarding services (for stakeholders)	Community management services
Self-assessment tool	Developers community
Onboarding of new stakeholders	Market guide
Cost estimation tool	

TECHNICAL SPECIFICATIONS					
Access point specifications	SMP specifications	SML specifications	Security control guidance	Trust models guidance	Guidance on digital certificates

STANDARDS OF SOs
Standards monitoring

CORE SERVICES *facilitate cross-border/ cross-sector technical interoperability among heterogeneous information systems*

EU Digital Identity Wallet

Part of the ongoing eIDAS Revision

Ready-to-use | **Standards based** | Support services | Sample software

Coming soon

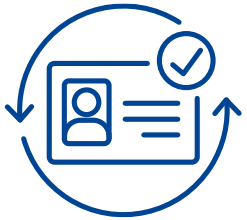
EBSI Framework

A pan-European blockchain services infrastructure that makes information hard to fake but easy to verify using W3C Verifiable Credentials.

Ready-to-use **Standards based** **Support services** **Libraries**

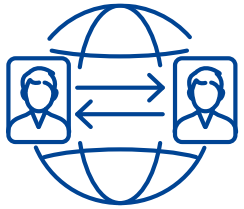
What is EBSI?

A pan-European blockchain services infrastructure that makes information hard to fake but easy to verify using W3C Verifiable Credentials.



Cross-border friendly format.

With our standardised Verifiable Credentials data model, information's format and structure is unified across borders and domains – making it less costly for an ecosystem to form.



Self-sovereignty, privacy & usability.

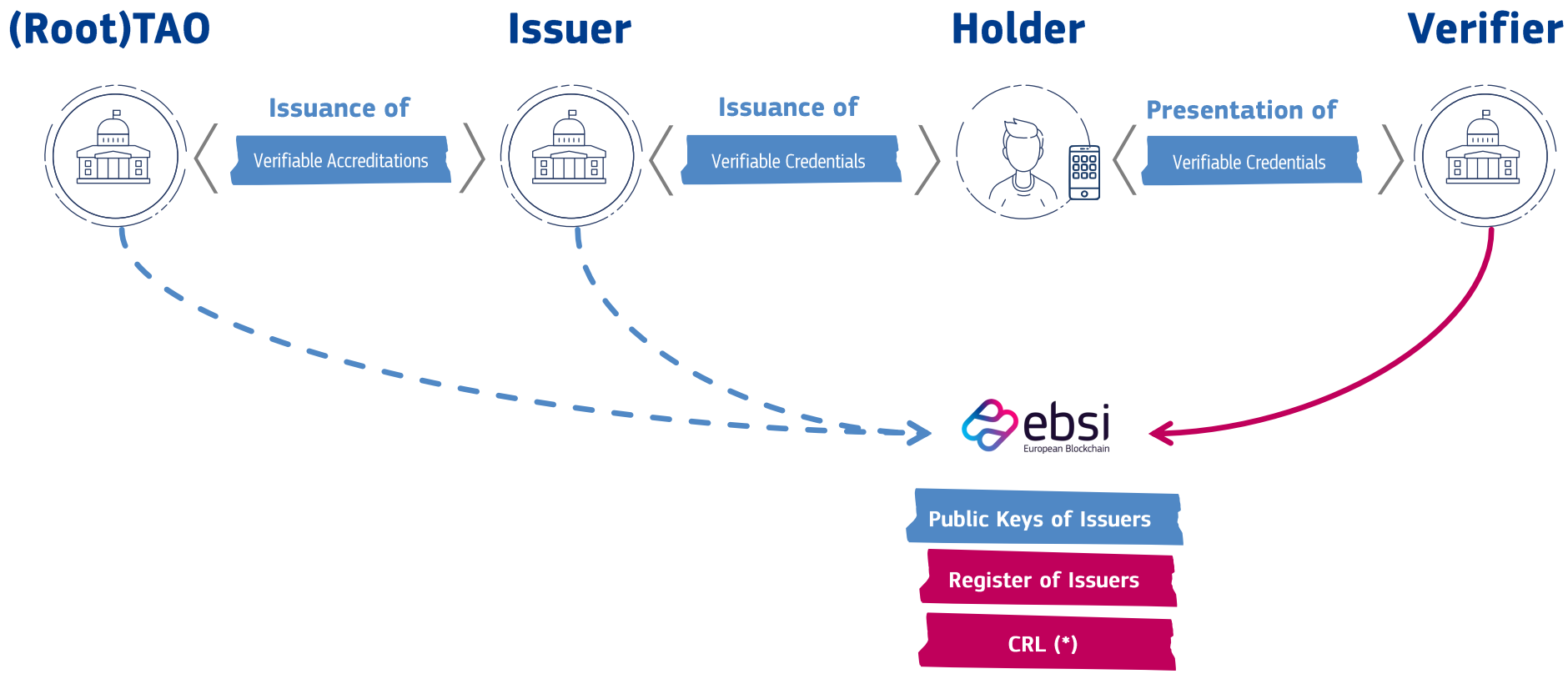
Holders of data are in control of what data they share, and when, with verifiers, thanks to their digital wallets. They can also prove that the information they share belongs to them.

Easier & faster verification.

The Verifiable Credentials model allows verifiers to trust the data without needing to trust the source of it and to easily identify holders.

How does it work?

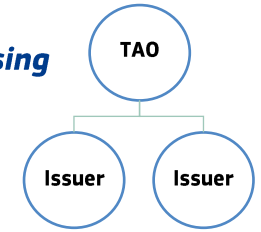
Three-step self-sovereign information exchange enables holders to share their information with anyone they want



EBSI provides the elements of a Web 3.0 trust model

for sharing of **Verifiable Credentials** between Public Administrations, Citizens and Businesses

Digitalizing trust using Trust Model of Issuers



Exchanging information using Verifiable Credentials Framework

Applied to Use Cases in different Sectors

EBSI Verifiable Credentials Playbook

EBSI DID methods for Natural and Legal Persons

ebsi
European Blockchain

Achieving interoperability using Conformance Testing Service of Digital Wallets

Highly available and resilient source of information using permissioned Trust Registers deployed on EBSI's Blockchain supported by EBSI's Smart Contracts

European Commission

EBSI Service Offering

EBSI Service Offering Canvas

ENABLING SERVICES *enable the adoption of the core services*

SOFTWARE

- ✓ Sample Software
- EBSI Node Software Image
- Use Case- specific libraries

OPERATIONS

- ✓ Managed services
  - EBSI Trusted Issuers Registry
  - EBSI Trusted Schemas Registry
  - ○ *Standard ledger registry capability*
  - EBSI Use Case Piloting Service
- ✓ Testing services
  - EBSI Node Connectivity Testing
  - Holder Wallet Conformance testing v2
  - ○ Entreprise Wallet Conformance testing v2
  - Verifiable Credential Validator (self-service)
  - DID resolver (self-service)
- ✓ Supporting services
  - 1st line support to Node and Software providers
  - Node Setup support
  - Node telemetry & monitoring

ENHANCING SERVICES *enhance customer experience*

STAKEHOLDER MANAGEMENT

- ✓ Stakeholders follow-up & onboarding
  - Node onboarding service
  - New Use Case impact assessment
  - ○ Verifiable Credentials implementation toolkits
  - Trainings, webinars
- ✓ Community management services
  - Use Case Pilot community
  - Wallet Provider community
  - Open Innovation Events

TECHNICAL SPECIFICATIONS

- ✓ Use Case profiles
  - EBSI Verifiable Credentials Profile
- ✓ Node Operator Guidelines
  - Minimum Technical Requirements, SLAs & operational guidelines
- ✗ Implementing Acts & Guidelines

STANDARDS OF ESOs

- ✓ ISO Standards
  - Node Operators: ISO 27001
- ✓ Other international standards
  - W3C verifiable Credentials and DID
  - OIDC protocol

LEGEND

- ✓ This category of service is provided (or will be in the future)
- ✗ This category of service is not (and will not be) provided
- ○ This service will be provided in the future

CORE SERVICES *facilitate cross-border/ cross-sector technical interoperability among heterogeneous information systems*

TESTA Network

To be completed

Ready-to-use | Standards based | Support services | Sample software

What is TESTA?

TESTA connects more than 750 public entities in the EU and abroad. Is meant for sensitive pan-European information exchanges between public authorities requiring guaranteed service levels for network availability, performance and/or security, including confidentiality, integrity, authentication and availability.

Benefits for a public authority

TESTA allows the Member States to work together more effectively. It supports **cross-border** and **cross-sectoral interoperability**, it creates interoperability at the EU level, offers significant **reduction in complexity** in terms of setup and **guarantees** the same overall service level between all administrations,

Financial benefits

This solution consolidates existing networks, **prevents a proliferation** of parallel network infrastructures, allows **economy of scale**, promotes synergies and a **reduction in time to market** and delivers greater efficiency and reduces transaction costs.

Make life easier for your users

EU institutions & agencies, national, regional or local public administrations located in the MS, EFTA & candidate countries rely on TESTA as a **dedicated and private infrastructure** with a **proven and mature secured infrastructure** offering dedicated services, a central helpdesk and project management & service management.

How does it work?

How does it work?

01. Get access to

End-users located within the EU, EFTA & candidate or acceding countries can get access to a number of added- value services such as secure video conferencing, secure email, secure SMS, secure FTP, Mail relay, NTP, DNS, web portal, PKI.

02. Auditability / QoS / Support

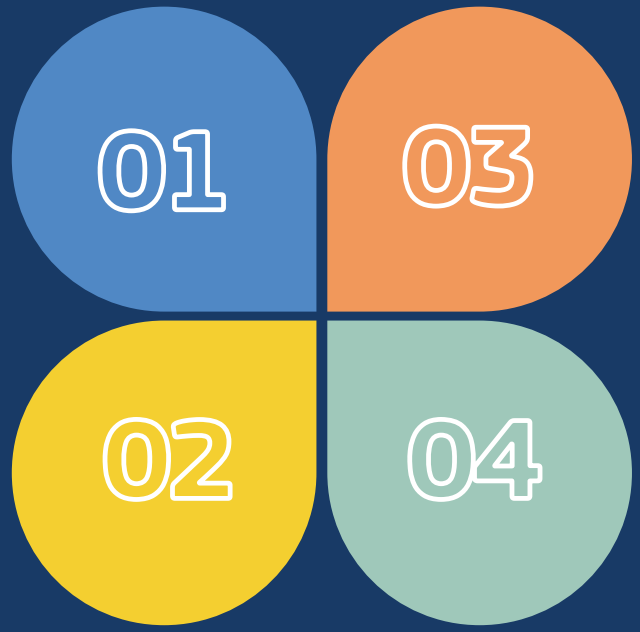
- Relies on the ITIL best practices
- Full compliance with international information security standard ISO 27001.
- 24/7 and 365 days support with personalised communication, handling incident and reporting.
- Guaranteed & stringent SLAs.

03. Security & Level of confidentiality

- Higher availability, security and reliability
- Information confidentially and integrity through traffic encryption.
- Can handle a level of confidentiality up to EU Restricted.
- Level of security depends on the classification of the end-points behind the gateway.

04. Short time-to-market and Easy connect

- By sharing and reusing you ensure economy of scale, synergy and you reduce the time to market at no cost for the IS owners.
- Centrally regulated by the EC which manages the FwC. No further agreements required with TESTA to operate additional data exchange.



TESTA Service Offering

TESTA Service Offering Canvas

ENABLING SERVICES *enable the adoption of the core services*

SOFTWARE

- ✗ Sample software

OPERATIONS

- ✓ Managed services
  - Network services
  - Security related services (e.g. PKI services)
  - Mail relay services and Secured mail services
  - Secured FTP, NTP and DNS services
  - Web portal services and cooperation tools
  - Hosting services
- ✗ Testing services
- ✓ Supporting services
  - TESTA help desk
  - TESTA Network and Security Operations services

ENHANCING SERVICES *enhance customer experience*

STAKEHOLDER MANAGEMENT

- ✓ Stakeholders follow-up
  - Consultancy services
  - Stakeholder meetings
  - Project and Service Management services
- ✓ Community management services
  - TESTA community

TECHNICAL SPECIFICATIONS

- ✗ European Profiles
- ✗ Implementing Acts
- ✗ Implementing Guidelines

- ✗ CEN Standards
- ✗ ETSI Standards

LEGEND

- ✓ This category of service is provided (or will be in the future)
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CORE SERVICES *facilitate cross-border/ cross-sector technical interoperability among heterogeneous information systems*

Analytics

Data Advisory Services

Data Advisory Services

Data expertise on

- Data architecture
- Linked data, knowledge graph
- Data quality and pipelines creation
- Data visualisation
- Innovative solutions using AI: Machine learning, NLP, speech to text

Use case: data space advisory service for the **Public Procurement Data Space**

Contact: DIGIT-DATA-SERVICES@ec.europa.eu

Big Data Test Infrastructure (BDTI)

Big Data Test Infrastructure (BDTI)

Set of services in and sandbox mode to help the public sector **to derive insights from its data** and accelerate transition towards **data- driven decision making**

Six months free of charge service
for the EU public sector

Ready-to-use
data analytics stack and support

Cloud platform based on
open-source tools

Who can request BDTI?

Who can request BDTI?

European Public Administrations

All European Public Administrations at **local, regional and national level** can independently apply for a BDTI pilot project

Ecosystem with academia and private sector

Academia, spin-off, startups can apply for develop pilot projects if there is a **clear collaboration** with a Public Administration/European Agency that will represent the main point of contact for the project

Open-source code available for all

BDTI artefacts will be available as open-source elements in code.europa.eu

Where

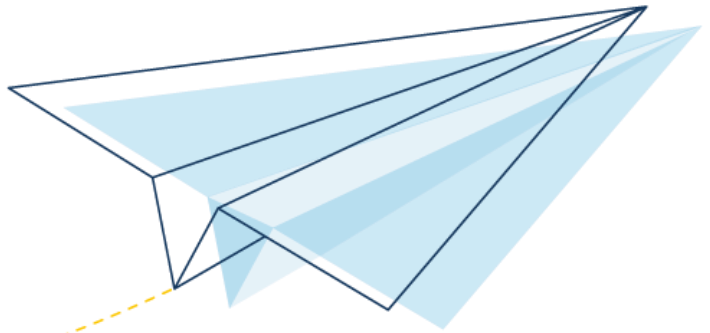
Reaching out to us through a single entry point

European Commission

Contact us

Find more information and contact us through a single entry point:

https://joinup.ec.europa.eu/collection/semic-support-centre/data-spaces




Thank you !