



CEF Digital
Connecting Europe

The Building Blocks

Connecting Europe in the Digital Age

Index



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The rise of digital technologies and the Digital Single Market

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3 The Building Blocks

Bundles of legal and technical support for the development of secure, interoperable digital services

4 Choosing CEF Digital

How can we help your digital endeavor and who is already benefiting from our support

The Digital Age

The internet and digital technologies are transforming our world.

- **Public administrations**

are increasingly offering digital services, as they gain the same legal validity as traditional paper processes

- **Businesses and supply chains**

are growing beyond borders, as the internet facilitates international trade

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These trends have led us in an interesting direction...

The Digital Single Market

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| 992 | 000 | 216 | 000 |
| 002 | 000 | 821 | 363 |
| 244 | 111 | 993 | 831 |
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| 000 | 221 | 227 | 992 |
| 000 | 345 | 662 | 993 |
| 001 | 001 | 522 | 883 |
| 000 | 932 | 729 | 333 |

What is the Digital Single Market?

A vibrant cross-border, cross-sector digital ecosystem throughout Europe that will help public administrations, private enterprises and citizens make the most of the single market.



What can be done to help public administrations and businesses make the most of the digital world?

- **Regulate**

European regulations should be interoperable and take into consideration the impact and use of digital technologies worldwide

- **Enable**

Public administrations and businesses should have access to secure and standardized tools they can use to function in the digital world

CEF Digital

The background of the slide features a stylized map of Europe composed of a grid of dots. Overlaid on this map is a network of interconnected nodes and lines, representing a digital or data network. The text is centered over the map.

For the Digital Single Market to come to fruition,
we need **common standards and specifications**
for digital technologies so businesses, public
administrations and citizens can enjoy the benefits of
interconnectedness across borders, industries and sectors.



Since 2014, we have been providing precisely that

Regulating

to support the adoption of European-wide specifications and standards

eIDAS, OOP, SDG... are the new regulatory frameworks for the Digital Age

Enabling

by providing ready-made reusable digital solutions based on common standards, called Building Blocks

By adopting Building Blocks, actors in the Single Market become bridges that connect National and European digital infrastructures, automatically complying with EU regulation

How can CEF Digital help you

Our mission is to increase the interconnection between trans-European networks by helping public administrations, businesses and citizens fully benefit from what digital has to offer.

We promote the adoption of common digital standards by:

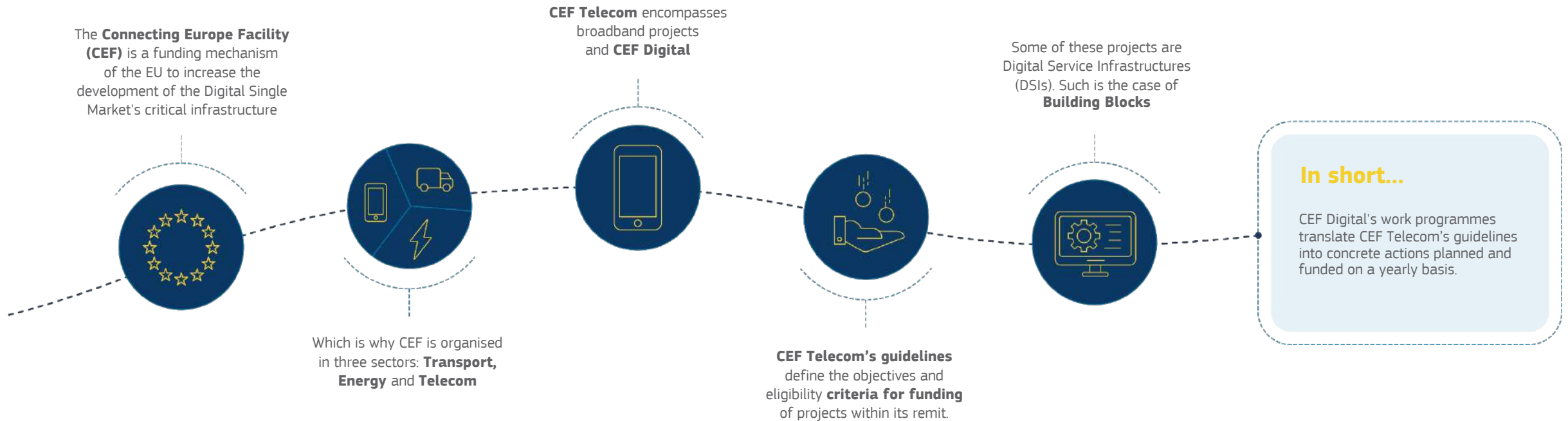
- Providing **technical support** to Public Administrations and businesses in their digital transition;
- Helping them develop **secure, interoperable digital services**;
- Providing funding to projects that can contribute to a more connected Europe;

This support package comes in the form of **Building Blocks**.



Where does the funding come from?

Let's take a look at CEF Digital's origin and how the Building Blocks' funding is organized



The Building Blocks

Building Blocks help create this vibrant cross-border and cross-sector ecosystem for the Digital Age



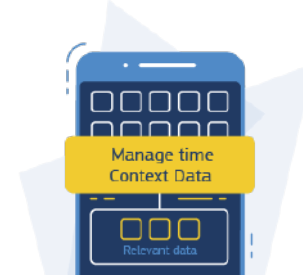
Meet the Building Blocks

Find the one you need.



Big Data Test Infrastructure

Explore and experiment with Big Data for improved performance and decision-making.



Context Broker

Gather, manage and share context data, in real time, throughout Europe.



eArchiving

Facilitates the preservation, migration, reuse and trust of your data.



European Blockchain Services Infrastructure

Harness the power of a European-wide network of blockchain services, increasing trust through data security, privacy and transparency.



eInvoicing

Promote the implementation of the European standard for electronic invoicing across borders.



eID

Allow citizens to prove who they are across borders, making it easier to access online services in another EU Member State.



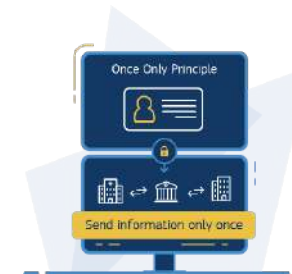
eDelivery

Exchange online data and documents reliably and securely.



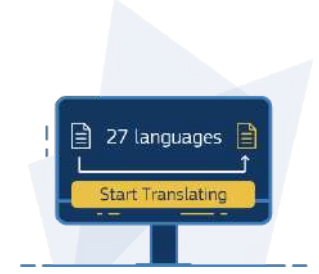
eSignature

Create and verify electronic signatures between businesses and EU citizens.



Once Only Principle

Re-use data held by Public Administrations.



eTranslation

Use machine translation to translate your documents and web content into any official EU language, Norwegian or Icelandic

Meet the Building Blocks

Introduction to eInvoicing



eInvoicing

Send and receive electronic invoices across borders in line with the European Directive.



Solène

Onboarding Manager

What is eInvoicing?



eInvoicing

Send and receive electronic invoices across borders in line with the European Standard.



Cost reduction

As an automated invoicing tool, eInvoicing reduces processing costs and operational services.



Faster payment

By removing the need of manually reading and entering information, eInvoicing lessens administrative burdens and time-to-payment for individual invoices.



Boosting B2G eProcurement

eInvoicing helps companies manage their contracts in any EU country, making public procurement businesses more appealing for everyone.



Facilitating cross-border trade

The timely and automatic processing of companies' invoices in the EU facilitates cross-border trade operations between countries.

Who can benefit from eInvoicing?



Public Entities

Public sector contracting
authorities

Our services can help you start
receiving electronic invoices from all
across Europe.



Suppliers

Companies doing business
with public entities

We can help you prepare and send
electronic invoices compliant with
European standards.



Solution Providers

Services and software providers

We can help you develop and deliver
eInvoicing services and software that
are compliant with EU standards.

How to start using the solution



Check the requirements for your type of user:
Public Entity, Supplier or Solution Provider.

Get familiar with the **eInvoicing Directive** and the European Standard **in your own country.**

Implement your solution, with the provided documentation and our team's support.

Test the conformance of your service and start using it.

Benefits of eInvoicing

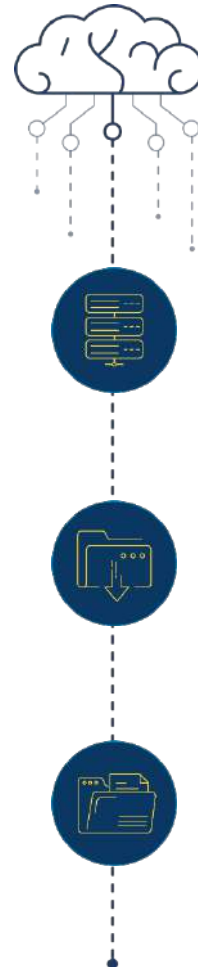
How do we help?

Benefits

Support in the implementation of the eInvoicing Directive (2014/55/EU)

Reduced learning curve to implement B2G eInvoicing

Improved integration with other eProcurement processes



How CEF Digital helps

Providing tools and services to support you in the implementation of eInvoicing

Including effective and ongoing support, from the CEF Digital Team

Offering a knowledge base that provides insight, such as Member State statutes

elInvoicing in Poland

How Poland implemented automated elInvoicing in line with the European standard.

1

Challenge

Poland's single national e-invoicing platform could send structured e-invoices, but how to enable it to automatically send, receive and process electronic invoices?

2

Solution

Poland created a national reference model for advanced automated e-invoicing between public purchasing authorities and their suppliers, in line with the European Directive on elInvoicing.

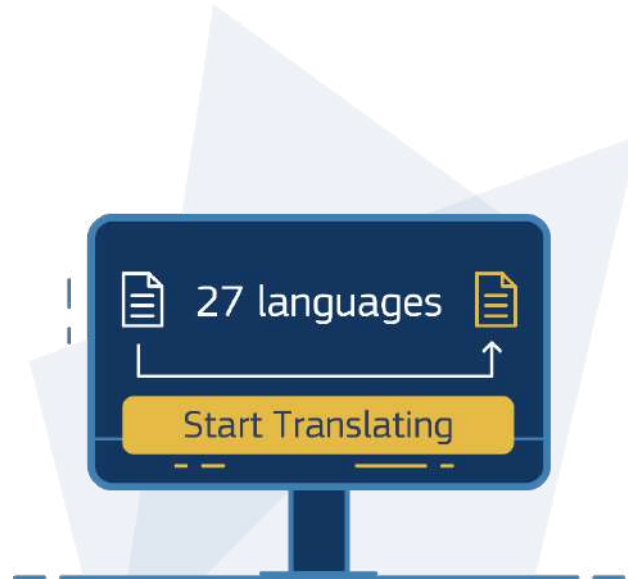
3

CEF Building Block

The existing ICT solutions of Poland's single platform were upgraded with support from the CEF elInvoicing Building Block, ensuring a fully automated and EU-compliant elInvoicing solution for public authorities.

Meet the Building Blocks

Introduction to eTranslation



eTranslation

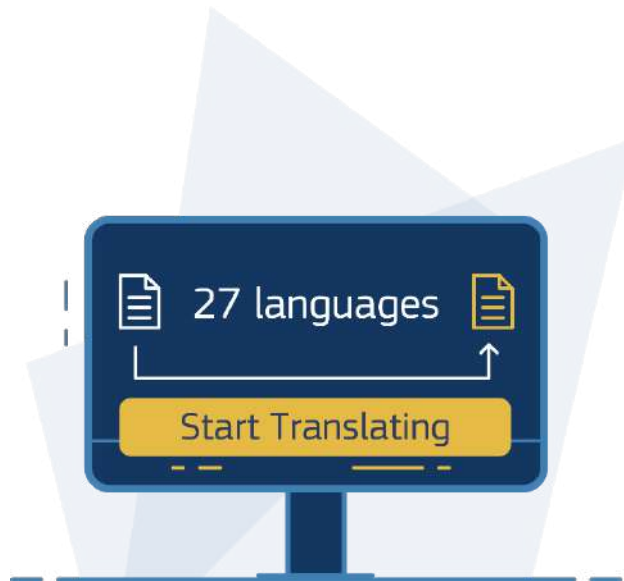
Use machine translation to translate your documents and web content into any official EU language, Norwegian or Icelandic.



Pawel

Onboarding Manager

What is eTranslation?



eTranslation

Use machine translation to translate your documents and web content into any official EU language, Norwegian or Icelandic.



Covers 24 official languages and more

The tool is designed to translate to and from more than 24 languages in different domains, including Russian and simplified Chinese.



Easy to use or adopt

You can integrate eTranslation into your systems to make your digital content and services multilingual and accessible to anyone in the EU.



Secure and free of charge

Using eTranslation is free and safe, and you keep ownership of your data at all times.

Who can benefit from eTranslation?



SMEs

European small and medium-sized enterprises

Boost your international business with the help of an automatic translation tool.



Public Service Officials

Employees of Public administrations across the EU

eTranslation makes it easy to communicate by automatically translating digital text in 24 EU languages and more.



Public Sector Service Providers

Information System Owners (IT Teams)

We can help you integrate machine translation capabilities into your digital services through an API.

How to start using the solution



Create an **EU login account**

Create your **eTranslation profile**, using the same email address as in the previous step

Access the eTranslation Page and choose between translating text or documents

Benefits of eTranslation

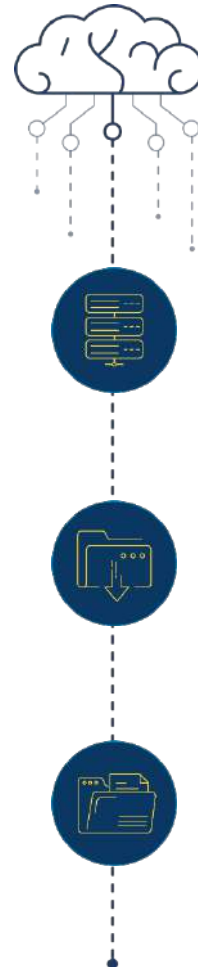
How do we help?

Benefits

High quality machine translations drawing on decades' worth of work by EU translators

Intellectual Property Rights of the translation remain with the owner of the original text

Fast translation into multiple languages at once



How CEF Digital helps

Access to the eTranslation web service, for on-demand translations or to integrate into your digital platform

Providing dedicated service desk to support you in the integration

The European Language Resource Coordination (ELRC) network identifies and gathers language resources to improve translation quality

The EU Council Presidency Translator

Introducing the EU Council Presidency Translator, developed for the German EU Council Presidency by the CEF eTranslation Building Block



Challenge

The German Presidency of the Council of the EU needs to overcome the challenge of providing clear and transparent communication in around the activities and priorities in all official languages of the European Union



Solution

The creation and maintenance the EU Council Presidency Translator, by the CEF eTranslation building block which makes all public communications related to the Presidency automatically available in any EU language.



CEF Building Block

The German EU Council Presidency translator is based on collaboration between the private and public sector. It combines the know-how of research and practical application as well as the translation expertise of the Federal Government and the CEF translation tool.



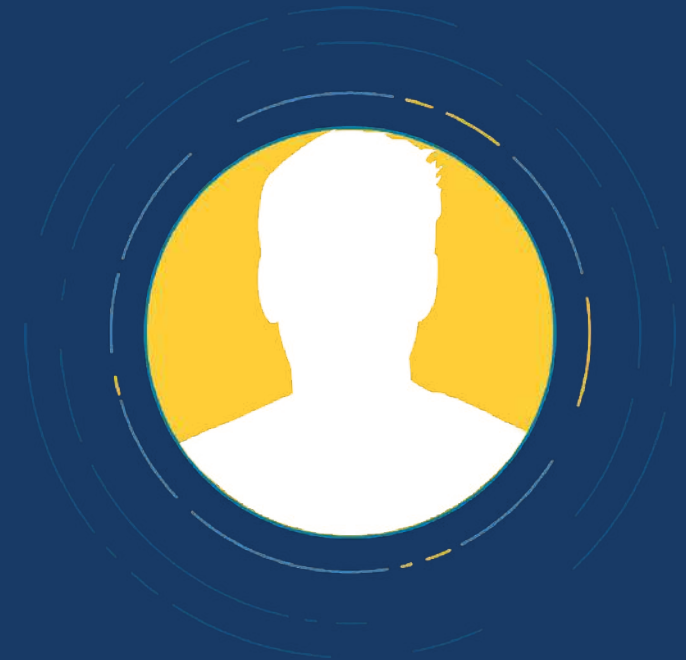
Meet the Building Blocks

Introduction to BDTI



Big Data Test Infrastructure

Experiment with Big Data in a safe, virtual environment to improve your decision-making and performance.



Erbil

Onboarding Manager

What is Big Data Test Infrastructure?



Big Data Test Infrastructure

Experiment with your Big Data in our analytics sandbox, free of charge.



Experiment with data tools

Test and play around with software tools without wasting time on installation and settings.



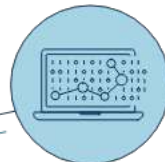
Collect insights

Explore data and collect useful insights that might challenge and redirect your moves.

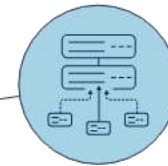


Free-of-charge pilot

We help you set up a pilot project for creating, testing and implementing your own services based on big data.



Generate Data



Collect & Aggregate Data



Analyse Data



Preserve Data

Who can benefit from BDTI?



Public Sector

If you are a public sector entity or agency, discover how we can help you find new ways to draw data-driven insight for strategic decision-making. We will provide you with the necessary technical documentation and support services to prototype Big Data solutions before deploying them in your own production environment.

How to start using the solution



Get familiar with the **test infrastructure services** that you can use to start experimenting with data

Consider what kind of data you wish to analyse and which results you hope to retrieve from your analytic experiments.

After you have determined your data analytics use case, you are ready to request to run a pilot project on the BDTI platform!

Benefits of BDTI

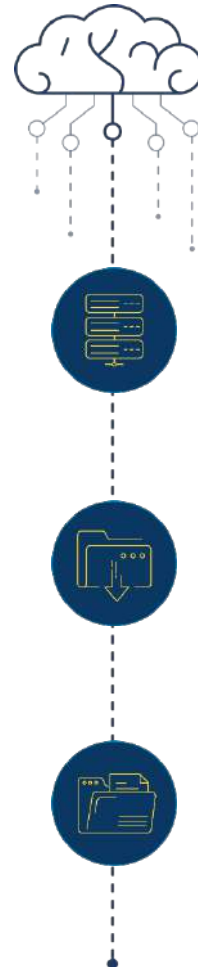
How do we help?

Benefits

Access to a **ready-to-use** data analytics environment **free of charge**

Share and re-use data across organisations and policy domains

Access to best practices and knowledge-sharing on big data



How CEF Digital helps

Offering various data sources, software tools and big data techniques

Including an onboarding service, advice and ongoing support from the CEF BDTI team

Access to the BDTI community and knowledge space, providing insight into the platform and big data techniques

European Big Data Hackathon

How CEF Big Data Test Infrastructure is helping to modernise official statistics.



Challenge

The improvement of the statistical services provided by Eurostat, in order to modernize statistics with automated data collection and get more accurate indicators to better support policy decisions.



Solution

Experiment with big data from mobile devices to create smart surveys for more accurate statistical indicators. Creation of the Big Data Hackathon (collaboration with third party developers).



CEF Building Block

With the BDTI, we could very quickly set up a substantial infrastructure for the European Big Data Hackathon 2019 and get great support!

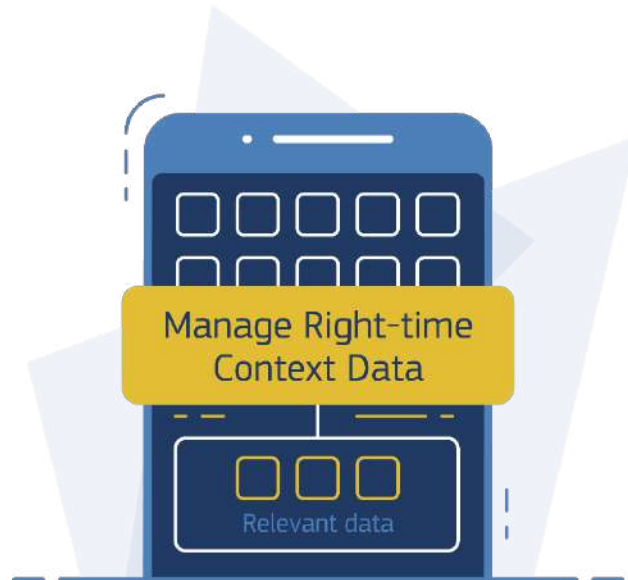


EUROPEAN
STATISTICAL
SYSTEM



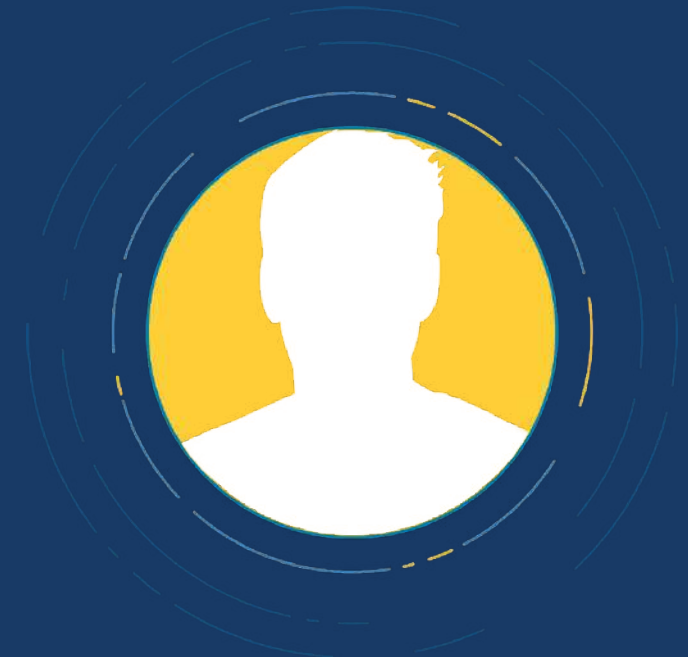
Meet the Building Blocks

Introduction to Context Broker



Context Broker

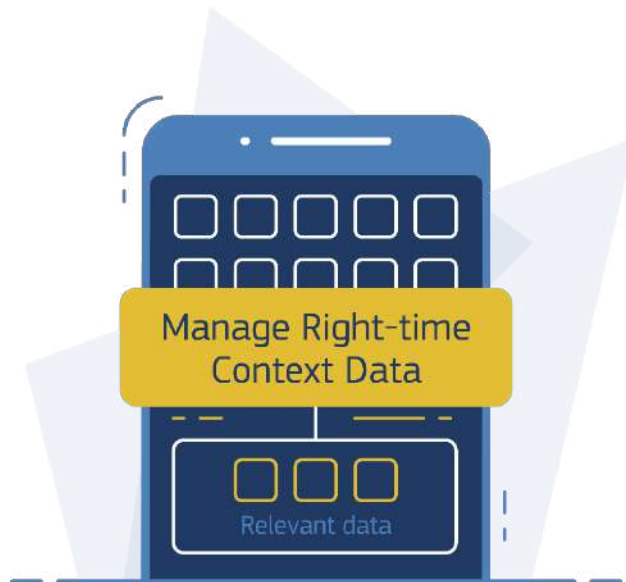
Gather, analyse and share context data from multiple sources in real-time, throughout Europe.



Erbil

Onboarding Manager

What is Context Broker?



Context broker

Gather, analyse and share context data from multiple sources in real-time to make smart, data-driven decisions.



Data Broker

Assemble information from different systems, eventually belonging to different organisations, instead of having them perform in separate silos.



Leverage Investments

Enable the creation in the Digital Single Market (of portable and interoperable solutions) a data marketplace.



Easy Development

Reduce costs and time in the development of context information based platforms and solutions. Experience has shown that it is possible to create meaningful dashboards in a few days!

Who can benefit from Context Broker?



Public Administrations

Any private or public entity

Based on your specific needs and analyses, we can help you start making insightful, data-driven decisions.



Solution providers

Software and service providers

Our team has the tools and support you need to expand your offering around smart applications.



Developers

Technical enablers

We provide software components, documentation and a variety of support services to help you develop and design your smart application.

Benefits of Context Broker

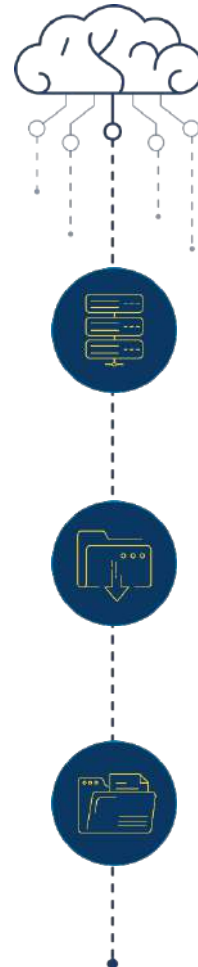
How do we help?

Benefits

Make smarter decisions faster by leveraging contextualized data in real-time from various sources

Use standards-based ecosystems exploiting the same data, ensuring you can scale up

Take your product to market faster thanks to compliance support, through specifications and reference implementations



How CEF Digital helps

Offering a set of standards and sample software with clear documentation

Ensuring connectivity and conformance-testing services in our data analytics sandbox

Supporting your project through our service desk and online community

Data-driven Smart Cities

How Vienna became the #1 Smart City using the Context Broker thanks to Vienna's VeroCity platform.

1

Challenge

Like any bustling city, Vienna's activities are varied and constant. The VeroCity platform gathers data from a variety of sources, but how can they collect and consolidate data for enhanced public services and innovation?

2

Solution

A context-aware open data platform that monitors the success of multiple ongoing projects all over the city, enabling integrated solutions for environment, mobility, education or healthcare.

3

CEF Building Block

The Context Broker allows the VeroCity's platform to offer real-time information on visual dashboards that gather the needs of all stakeholders, from residents to city officials and software developers.

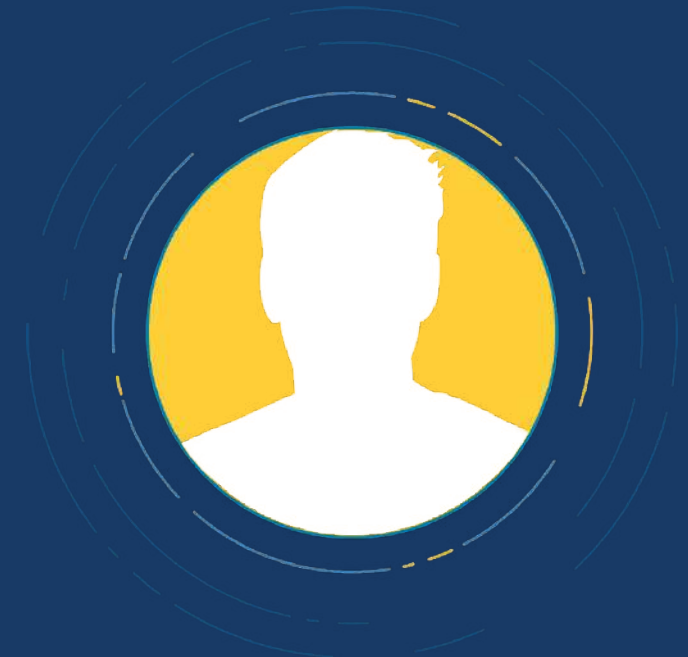
Meet the Building Blocks

Introduction to Once Only Principle



Once-Only Principle

Reduce administrative burdens
on citizens and businesses.



Rena

Onboarding Manager

What is Once-Only Principle?



Once Only Principle

Reduce administrative burdens on citizens and businesses.



Less administrative burden

When you execute an online procedure, the Website can use Once-Only to fetch and reuse supporting evidence that you already provided to another public administration. You no longer have to manually upload the same data and documents again and again.



Increased efficiency

eDelivery will maintain high quality and performance levels, even if the number of participants in the network grows exponentially, as well as the number of exchanged messages.



Protecting personal information

Websites will ask the user's approval before using Once-Only. They will only request evidences that they need for the procedure and are required to obey data protection and privacy rules.



Communication across borders

The Once-Only Principle will enable public administrations in a Member State to use information that citizens or businesses provided in another Member State, thus facilitating online procedures across borders.



Part of the Single Digital Gateway

OOP contributes to the Single Digital Gateway Regulation which promotes online access to everything citizens and businesses need in order to get active in EU Countries.

Who can benefit from the Once Only Principle?



Citizens

We will help reduce administrative burden on citizens that execute procedures across the EU.



Businesses

The Once-Only Principle will facilitate starting, running and closing a business across the EU.



Public Administrations

Public administration procedures throughout the EU will become more efficient and reliable

Benefits of the Once-Only Principle

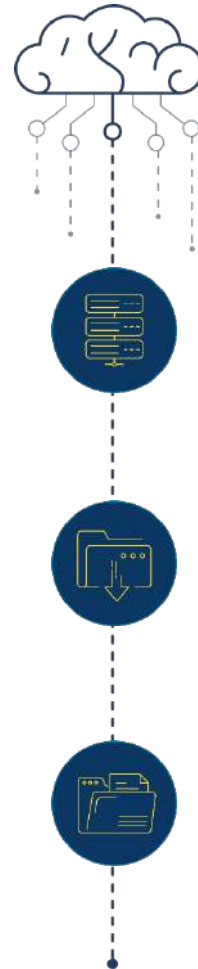
How do we help?

Benefits

Save time by avoiding manual and duplicated work.

Reduce the administrative burden for public organisations, citizens and business.

Use the latest trustworthy data only.



How CEF Digital helps

We will define common standards to share the data.

We will propose implementation solutions to enable an application of OOP.

We will support you through our service desk.

Improving cross-border cooperation

How the Once-Only Principle allows Member States to share data, reducing administrative burden for businesses and citizens.



Challenge

Reducing administrative burden for citizens and businesses as well as making cross-border mobility and access to public services easier.



Solution

Sharing and re-using data among public administrations so citizens and businesses only have to share it once.



CEF Building Block

The Once-Only Principle, a key tenet of the EU's eGovernment action plan, has led to the creation of an architecture connecting information systems across Member States, reducing administrative burden, increasing ease of cross-border mobility and access to public services for citizens.



*providing
data
once-only.eu*

Meet the Building Blocks

Introduction to eArchiving



eArchiving

Facilitates the preservation, migration, reuse and trust of your information.



Pawel

Onboarding Manager

What is eArchiving?



eArchiving

Facilitates the preservation, migration, reuse and trust of your data.



Openness and transparency

Having a common set of open specifications for packaging and archiving digital information promotes a high level of transparency and confidence among all participants in the information lifecycle.



Interoperability by default

Following international standards and specifications for packaging digital information enables organisations to transmit documents and information across borders, for short-, medium- and long-term storage (and subsequent access and reuse) regardless of the platform they use.



Sustainability and legal compliance

With eArchiving, digital archival systems can be successfully deployed, implementing reusable modular components that are compliant with various national legal backgrounds.

Who can benefit from eArchiving?



Data Producers

Anyone with information that needs to be preserved and reused

Learn how you can apply international standards and specifications to your data, to be able to preserve and reuse it on the long-term.



Archives

Organizations responsible for digital archiving activities

We will assist you on following the standardised specifications to keep interoperable and secure the data you have been trusted with.



Solution Providers

Software and service providers

Make sure your development of components or end-to-end solutions preserve data safely and in line with European standards, so your clients can trust your applications.

How to start using the solution



Determine your digital archiving: what information to keep, for how long (legislation) and who can access it. The answers will translate into your solution's requirements.

Decide which eArchiving **components** you want to use to implement the solution.

With the support of our Service Desk, implement, integrate and test your solution!

Benefits of eArchiving

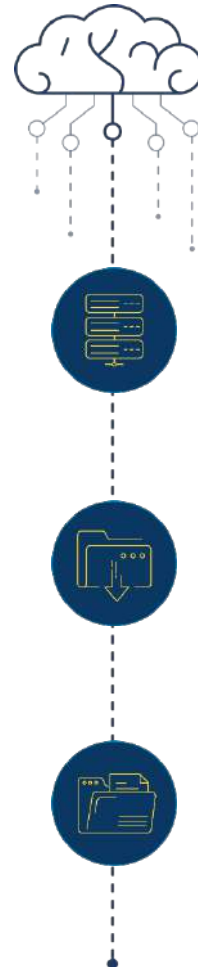
How do we help?

Benefits

A high level of security ensured by standards

Interoperability, to package and transmit archival data between different systems

Digital archival systems that are scalable, from small to large



How CEF Digital helps

Offering a set of standards and sample software

Access to a community for knowledge sharing, the latest digital preservation and archival technologies

Including consultancy and training in digital preservation risks and their mitigation

The EU Publications Office

How the EU Publications Office based its long-term preservation on international archiving standards.



Challenge

How to electronically preserve EU information in the long term whilst ensuring conformity with applicable legislation?



Solution

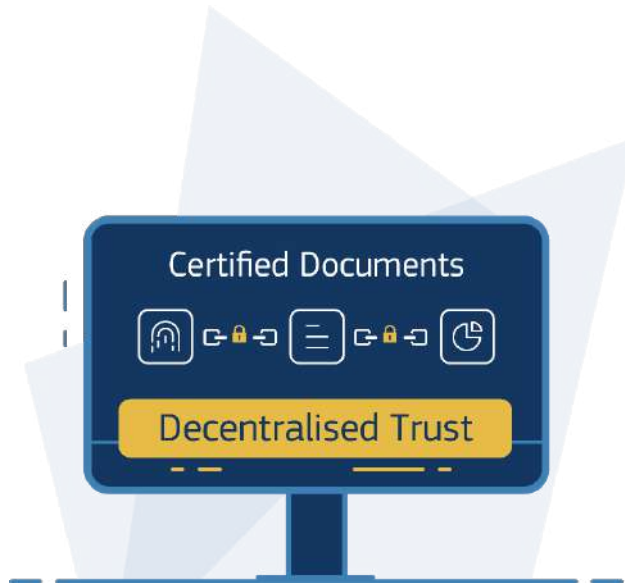
Implement relevant archiving standards whilst benefiting from community-based development.



CEF Building Block

eArchiving is a service package complete with sample software, technical specifications, support services and a community. It is based on the global Open Archival Information System (OAIS).

Introduction to EBSI



European Blockchain Services Infrastructure

Harness the power of a European-wide network of blockchain services, increasing trust through data security, privacy and transparency.



Grégory & Zaïra
Onboarding Managers

What is EBSI?



European Blockchain Services Infrastructure

Harness the power of a European-wide network of blockchain services, increasing trust through data security, privacy and transparency.



Notarisation

The power of blockchain is being leveraged to create trusted digital audit trails, automate compliance checks and prove data integrity.



Diplomas

Citizens gain digital control of their educational credentials, significantly reducing verification costs and improving trust in documents' authenticity.



Self-Sovereign Identity

EBSI is helping to implement a Self-Sovereign Identity model in Europe, allowing users to create and control their own identity across borders.



Trusted Data Sharing

Blockchain technology is being used to securely share data (e.g. IOSS VAT identification numbers and import one-stop-shop) among customs and tax authorities in the EU.

Who can benefit from EBSI?



Citizens

Use public services in the European Union, easily and securely, even across borders.



National public administrations

Simplify administrative processes, increase efficiency and instill trust in citizens.

Benefits of EBSI

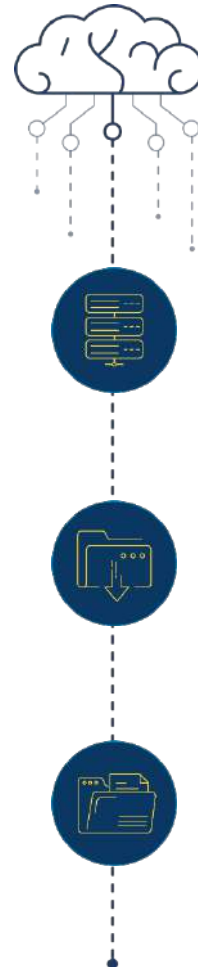
How do we help?

Benefits

“Gold standard” to support the launch of EU-wide cross-border services

Decentralised trust, enabling transparent, user-centric public services

Promoting user trust, putting citizens at the centre of their data management



How CEF Digital helps

Creation and maintenance of EBSI open technical specifications

Provision of services that facilitate the adoption of the EBSI (such as deployment packages or testing and training services).

Offering ongoing support and making or making CEF Digital's communication materials available

How to start piloting with EBSI



Discover the opportunity

Explore the challenge of Digital Trust and the opportunities given by blockchain technology

Design pilot concept

Shape the pilot by defining and describing what and how you are going to organize it.

Build pilot implementation

Integrate your applications and systems to EBSI and confirm your expectations.

Launch pilot story

Launch the pilot, connect to the community, share your story and help us shape EBSI's future.

EBSI's perspective

1

Challenge

Governmental entities are important intermediaries of many transactions happening in our society. The documents they issue or certify are a common way to verify information about people and goods. All of these documents will become digital in the near future. However, in the era of misinformation, it is essential to address the challenge of digital fraud. Governments (including the EC) need technology to verify the authenticity of the information they handle every day. Today, as the Commission puts in place the European regulatory framework to move society from paper to digital in a cross-border friendly way, a key question arises: How will governments share official documents in digital format in a way that information can be trusted?

2

Solution

Having this opportunity in mind, the Commission is currently developing the European Blockchain Services Infrastructure (EBSI) to accelerate the creation of cross-border services and put blockchain at the service of public administrations for the purpose of verification of information, making official documents and other information trustworthy. EBSI aims at being the first EU-wide blockchain infrastructure, driven by the public sector, in full respect of European values. EBSI is supported by 29 countries* and the EC forming the European Blockchain Partnership (EBP).

3

CEF Building Block

EBSI is designed as a market-friendly distributed blockchain network based on open standards and transparent governance model. EBSI is being built alongside a fully distributed three-tier architecture: [The Infrastructure layer](#) (is EBSI's network of interconnected nodes hosted by the European Commission and the Member States), [The Storage layer](#) (is where the data that is not kept on-chain is stored) and [The Core Services layer](#) (are the interfaces exposed by the EBSI nodes enabling them to support the integration of business applications with EBSI. These interfaces are associated to EBSI's first Use Cases (that we will present later)



Meet the Building Blocks

Introduction to eDelivery



eDelivery

Exchange data and documents
online reliably and securely.



Manon

Onboarding Manager



What is eDelivery?



eDelivery

Exchange data and documents online reliably and securely.



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.



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.



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.



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.

Who can benefit from eDelivery?



Government

Public sector entities and agencies

Find out how we can help you set up a secure data and documents' exchange system in your organisation.



Businesses

Private sector entities

Discover the benefits of having a secure, digital message exchange network that can support your business goals.



Solution Providers

Services and software providers

We can help you develop and offer services that enable the secure transmission of large amounts of digital data.

How to start using the solution



Gather business needs and requirements with the help of our documentation and a self-assessment tool.

Choose if you want to create your eDelivery network using conformant software, EC sample software, external providers or a combination thereof.

When creating your eDelivery network, there are several CEF eDelivery services that you can use.

After deploying and testing your solution, you'll be ready to start operating and promoting it! If you have questions or need further help, contact us.

Benefits of eDelivery

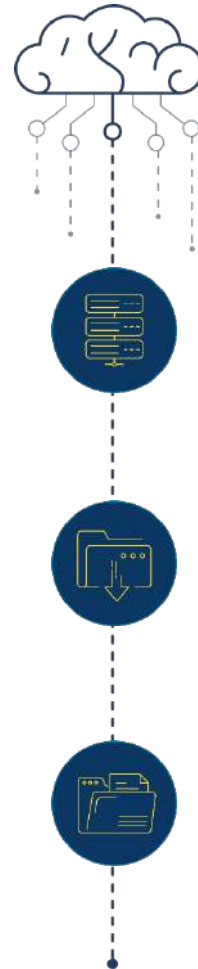
How do we help?

Benefits

Interoperability lets you exchange data and documents with a variety of organisations

Security, legal assurance and accountability promoting trust, transparency and confidence

Scalability and performance, regardless of the number of participants or messages exchanged



How CEF Digital helps

Offering a set of specifications and sample software with clear documentation

Including services to test the deployment and configuration of the AS4 Access Point

Supporting your project through our service desk and online community

Coordinating port activity with eDelivery

How Portuguese port administrations use eDelivery to communicate

1

Challenge

How to simplify and reduce the cost of exchanging information across borders and between the different entities and ways of transport involved in cargo transportation?

2

Solution

e-Freight provided a single framework for information exchange in transport and logistics, meaning the various entities involved could all communicate in a standardised, coordinated way.

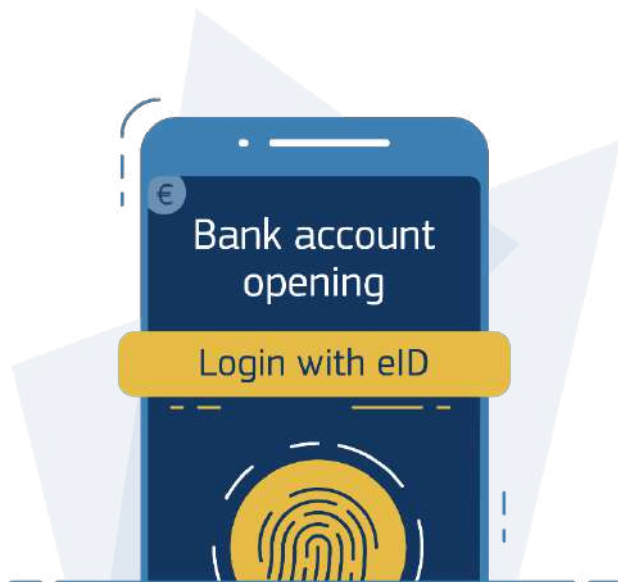
3

CEF Building Block

E-Freight uses an eDelivery message exchange network to exchange information across borders and different systems securely, efficiently and reliably, saving money in the process. **Portugal decided to adopt eDelivery in all its ports.**

Meet the Building Blocks

Introduction to eID



eID

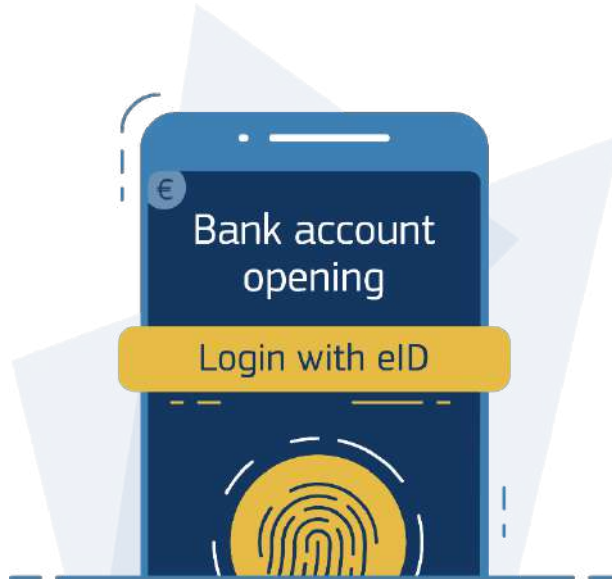
Offers digital services capable of electronically identifying users from all across Europe..



George

Onboarding Manager

What is eID?



eID

Offers digital services capable of electronically identifying users from all across Europe.



Interoperability

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



Streamline cross-border operations

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.



Security and trust

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

Who can benefit from eID?



Node Providers

eIDAS-Node implementers

To be able to recognize eIDs from different countries, each Member State has to implement an eIDAS-Node. We can help you connect to the eIDAS network..



Identity Providers

Companies or public authorities

Ensure that your identity scheme can be used to access public services in other EU countries, by connecting to the eIDAS network.



Service Providers

Public and Private service providers

Expand the reach of your public or private organisation — offer online services to citizens and consumers from other Member States.

Benefits of eID

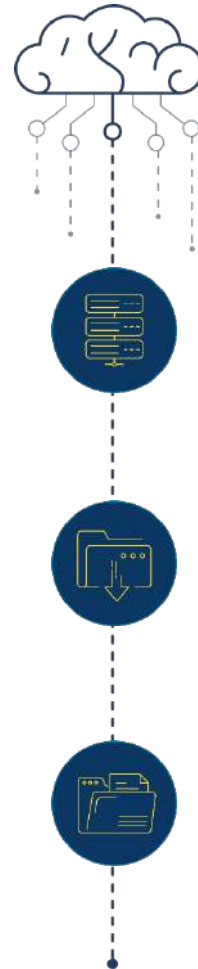
How do we help?

Benefits

Interoperability to ensure that other countries' national eID schemes can be used to access your public services

Trust in the legal validity and status of online transactions across borders

Security and low risk of identity theft by choosing a higher Level of Assurance (LoA)



How CEF Digital helps

Our country overview documentation allows you to learn more about your Member State's....

Find your country's Single Point of Contact

Offering extensive documentation detailing how eID works and its benefits for Europeans

Public services using eID in Estonia

How Estonia made its online public and private services accessible to Europeans using eID

1

Challenge

Open Estonia's online public and private services to residents of other Member States, while complying with the eIDAS Regulation.

2

Solution

A CEF grant helped to implement an eIDAS node, connecting Estonia to the eIDAS network, the technical infrastructure connecting national eID schemes.

3

CEF Building Block

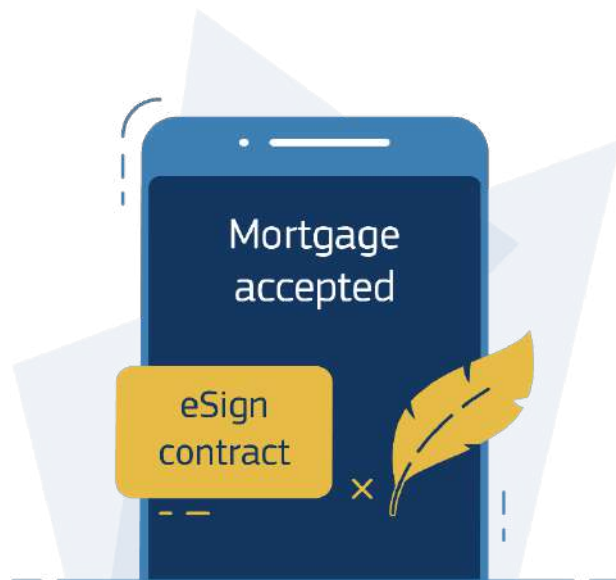
The eID and eSignature Building Blocks connect Estonian authentication and trust services to the eIDAS network, allowing both Estonians and residents from other Member States to validate their identity and signature when they access Estonian services online.



REPUBLIC OF ESTONIA
INFORMATION SYSTEM AUTHORITY

Meet the Building Blocks

Introduction to eSignature



eSignature

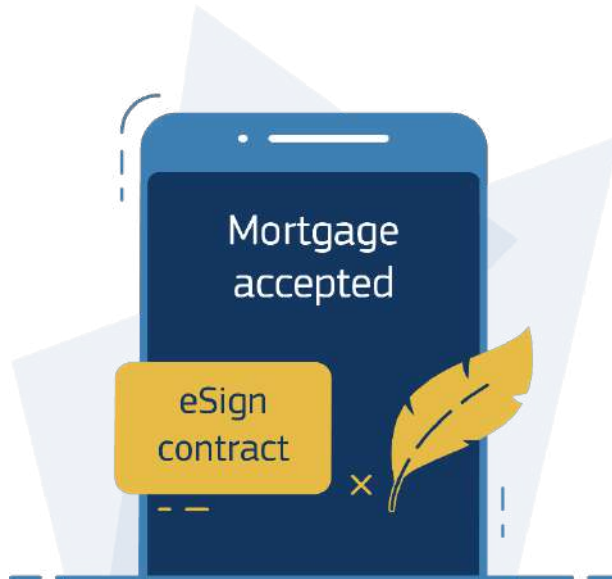
Create and verify electronic signatures in line with European Standards.



Athina

Onboarding Manager

What is eSignature?



eID

Create and verify electronic signatures for interactions between businesses and EU citizens.



Boost 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.



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.



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.



Improved user experience

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

Who can benefit from eSignature?



Citizens

**Citizens of EU countries,
Iceland, Norway and
Liechtenstein**

Discover how we are making the
signing of digital documents
possible for everyone.



Governments and Businesses

Public and Private entities

Let us show you how to adopt
electronic signatures and seals,
ensuring EU-wide validity.



Service Providers

**Service and Solution
providers**

We can help you develop
eSigning solutions that are
compliant with the eIDAS
Regulation.

How to start using the solution



Get familiar with the **eIDAS Regulation** and other important Directives, as well as the necessary **standards** to implement an eSignature compliant solution.

Gather your business needs and requirements to decide if you want to use an external provider, our **Digital signature Services** Digital signature Services

Obtain a suited and interoperable eSignature structure that builds on our open source library. Check out the documentation and **support services** available to help you.

After testing the interoperability and conformance of your solution, you will be ready to start offering and promoting it!

Benefits of eSignature

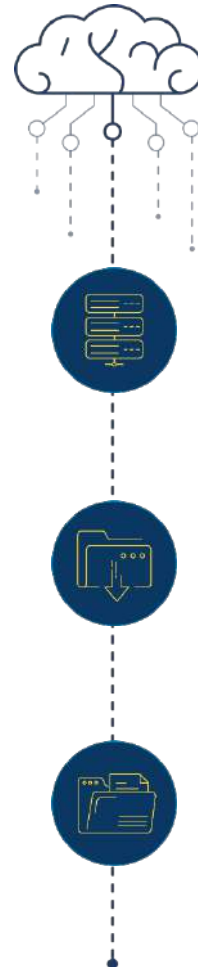
How do we help?

Benefits

Reduces time, costs and environmental impact by not having to print and send paper documents

Protects documents from duplication or alterations

Improved user experience thanks to fast response times and document processing



How CEF Digital helps

Offering a free service package with the open-source DSS library, or support in the use of EU Sign (for Commission agents and agencies)

A solution based on sustainable and secure European standards

Support through our service desk

EU Regulations signed with eSignature

How an EU Regulation was signed using eSignature for the first time.

1

Challenge

How to streamline the signing of legislation, saving time and paper and avoiding unnecessary travel.

2

Solution

The European Parliament and the Council set an example for Member States by e-signing the 'Security of Gas Supply Regulation'.

3

CEF Building Block

The document was e-signed with an application based on the eSignature Building Block's open specifications. eSignature solutions comply with eIDAS Regulation, meaning they are interoperable and are recognised and valid in any Member State.



So, you've met the Building Blocks.

**It's time to learn how
to use them**

How to use a Building Block?

There are 3 options: **buy**, **build** or **reuse** and you can always **co-develop** your solution with other parties.



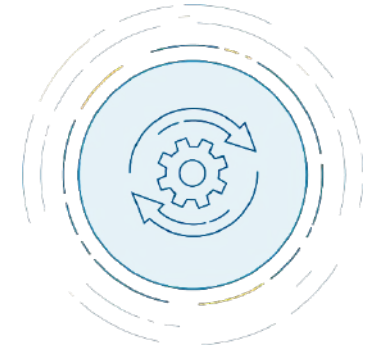
Buy

Buy a compliant, interoperable solution from the market.



Build

Build an EU-compliant solution from scratch based on Building Block standards. We'll help you test it for compliance and interoperability.



Reuse

Reuse sample software available through CEF Digital.

Whatever you choose, **the relevant CEF Digital team will support you** in implementing the Building Block into your project.

Choosing CEF Digital

Why choose CEF Digital

Here are some of the benefits of using a Building Block in your digital project.



Faster

- The Building Blocks are mature, **ready-to-deploy** digital solutions;
- **This saves you time and money;**
- The CEF Digital website has details on a **range of services available** to help your Building Block implementation.



Safer

- The Building Blocks are based on open European standards, so you **avoid vendor lock-in;**
- Our Building Block team ensures your project is **EU-compliant and interoperable.**



Future-proof

- Access a **larger market** thanks to interconnectivity
- Building Blocks **can be used in any digital European project;**
- Building Blocks are based on standards and ensure you comply with EU regulation.



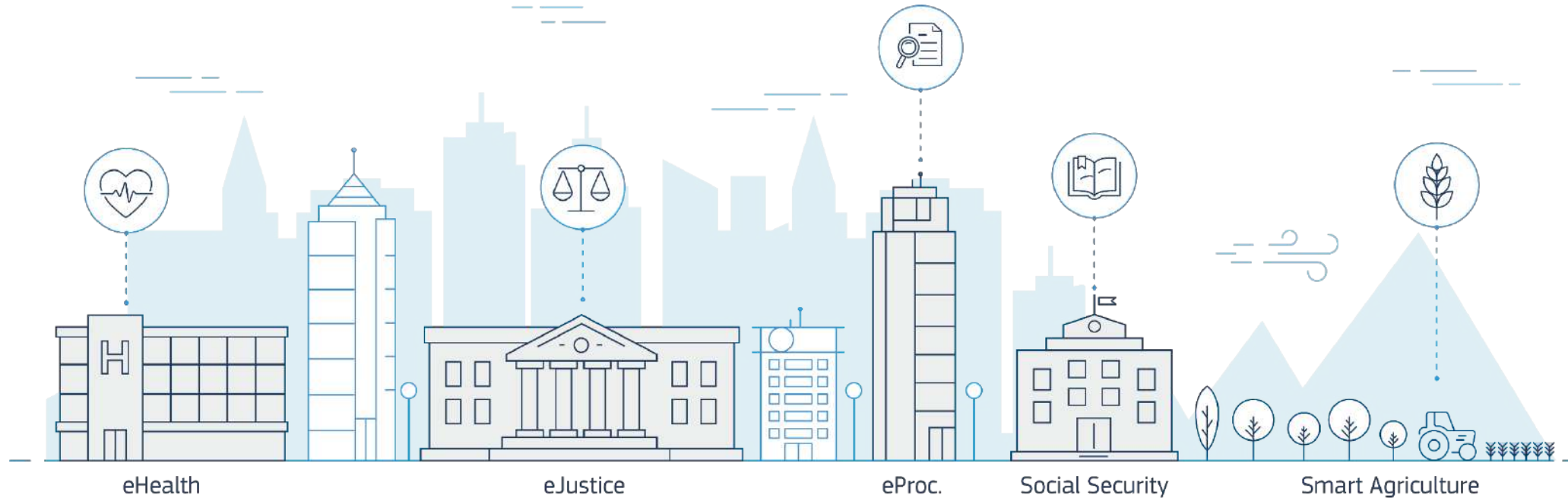
Funding

- You can visit INEA's website for more information on how to apply, or you can contact the Building Block's onboarding manager.
- Up to 75% of your costs are eligible for funding.

These benefits tell us why the Building Blocks have been used across several sectors throughout the years.

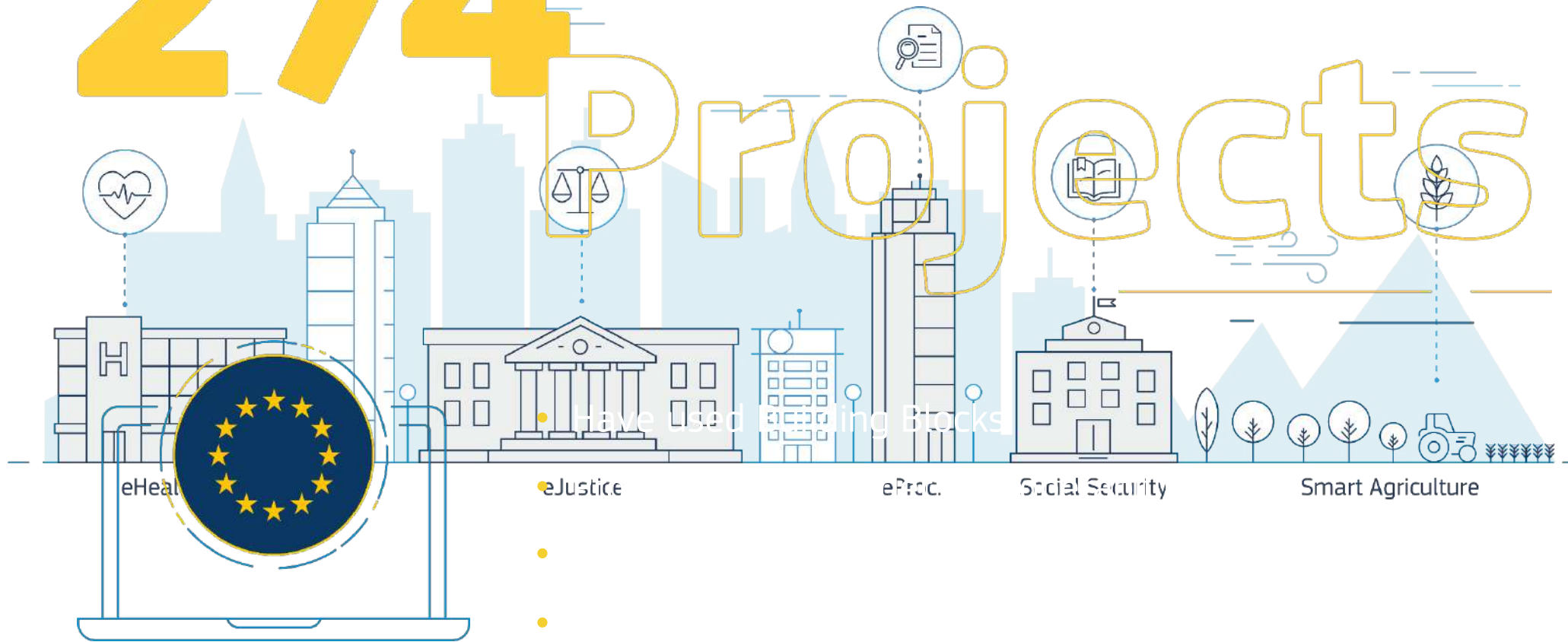
2014

2020



- **167** projects reusing a Building Block.
- **37** projects committed to reuse.
- **70** projects committed to analyse.
- **150%** increase in reuse since 2018.

274 Projects



**And here are some of our
success stories**

Helping create a secure, fast and reliable data exchange platform

CEF eID

has improved the collection of traffic penalties across France and The Netherlands using eCodex (the eJustice Communication via Online Data Exchange).



Enabling important advances in science & technology

eTranslation

has made it possible to overcome **language barriers** and provide secure and instant access to multilingual information, using **AI** and **Machine Learning**.

Enhancing health sector's invoicing system to save time and money

eInvoicing

helps public health care providers to implement the standards to be compliant with the EU Directive.

Today, some EU institutions already use the service provider's platform to generate and send electronic invoices across Europe.

Helping foster innovation and smart cities knowing that data is the new oil

The number one smart city in the world, Vienna, uses CEF Context Broker and BDTI to foster innovation. Citizens and city officials benefit from the platform's web services that can facilitate daily activities, from urban mobility to environmental monitoring.

**Help us write the
next chapter of this
story by using our
Building Blocks**



Ready to get started?

Reach out to us to learn more!

Visit us at www.ec.europa.eu/cefdigital

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Connected Europe

