CEF Building blocks

Joao Rodrigues Frade
DIGIT.B4

CEF Project and Architecture Office
Directorate-General for Informatics
AGENDA

• CEF at a glance

• CEF reuse logic

• CEF building blocks
A fully functioning Digital Single Market could contribute as much as 4 % of EU GDP GROWTH over the next ten years

**Source:** Enabling the full potential of the digital single market - stocktaking paper (22.04.2014)
JUMP START GROWTH IN EUROPE
CEF

at a glance
CEF Telecom

€1.14 billion
Regulation no 283/2014

Work Programmes

€170 million  €970 million
Broadband  DSIs

Building block  Sector-specific
Core Service Platforms  Generic Services  Core Service Platforms  Generic Services

Legend:

DIGIT focus
**CEF DSIs**

**Policy Projects**
- LSPs
- ISA
- H2020

**EVERY YEAR**

**Criteria**
- Sufficient maturity
- Sustainable
- Support EU policies
- Compliance with standards/ open specifications and orientations for interoperability
- Reuse of building blocks

**Building block DSIs**
DSIs that can be re-used in sector-specific DSIs
- Core Service Platform (EU level)
- Generic Services (National level)

**Sector-specific DSIs**
DSIs attached to a specific policy domain or sector
- Core Service Platform (EU level)
- Generic Services (National level)

**Technology**
- Dev. & Piloting

**CEF**
- 2014 to 2020

**Time**
DSIs - Work Programme 2014

Approaching maturity
- Automated translation
- Cyber Security

Mature
- eDelivery
- eID & eSig
- eInvoicing
- Open Data

Well established
- Europeana
- Safer Internet

Legend:
- CSP Core Service Platforms
- GS Generic Services
CEF at a glance

CEF DSIs at a glance

Core Service Platform

Auxiliary services

Specifications & software

Central Service

Public Administrations

Member States

Private Sector

Generic Services

Informatics
Core Service Platform (CSP)

DSI

Central Service

Specifications & deployable software

Auxiliary Services

Architecture Management
Stakeholder Management
Training
Support
Maintenance
CSP of eDelivery building block DSI

SML

Test tools

Central Service

Access Point

SML

SMP

Specifications & deployable software

Auxiliary Services

eDelivery

Architecture Management

Stakeholder Management

Training

Support

Maintenance
CSP of eID building block DSI

eID Integration package

Specifications & deployable software

Central Service

Auxiliary Services

Architecture Management

Stakeholder Management

Training

Support

Maintenance
CSP of eSignature building block DSI

List of Trusted Lists
Demonstration Platform

Central Service

SD - DSS
TL Manager

Specifications & deployable software

Auxiliary Services

Architecture Management
Stakeholder Management
Training
Support
Maintenance
CSP of eSignature building block DSI

List of Trusted Lists

Central Service

eSignature

Specifications & deployable software

SD - DSS

TL Manager

Auxiliary Services

Architecture Management

Stakeholder Management

Training

Support

Maintenance
CSP of Open Data sector-specific DSI

Pan-European Open Data Portal

Open Data

Central Service

Specifications & deployable software

Auxiliary Services

Architecture Management

Stakeholder Management

Training

Support

Maintenance
CEF

reuse logic
What are the 'CEF building blocks'?

CEF building block

1. basic infrastructural capability
2. ready to be (re)used

- as Software
- as a Central Service
- Specifications
- Auxiliary Services
The technology adoption lifecycle

- Innovators
- Early Adopters
- Early Majority
- Late Majority
- Laggards
The CEF reuse logic

**Building block (DSIs)**
- Take-up channels:
  - Reuse by CEF's sector-specific DSIs
  - Reuse outside CEF
  - Traction created through Generic Services
  - Adoption by the private sector

**Sector-specific (DSIs)**
- Take-up channels:
  - Legislation (top-down)
  - Traction created through Generic Services

Diagram:
- Users
- Time
- CEF
- Maturity
- Take-up
- 2014
- 2020
- Sustainability
Why does 'reuse' matter?

Creation costs
- Typical: 15% - 30%
- CEF thinking: Distribution of costs over a broad base of projects

Maintenance costs
- Typical: 60% - 80%

Operation Costs
- Typical: 25% - 50%

CEF thinking
Why does 'reuse' matter?

- Increase Interoperability
- Reduce Technical Risks
More benefits

Economic

- Reduction of the size and risk of domain-specific developments
- Rationalisation of solutions portfolio
- Distribution of costs over a broad base of projects
- Accelerate implementation of EU policies

Technical

- Fostering interoperability at all levels
- Harmonization of working methods and procedures to address similar business problems
- Incremental Innovation

Incremental Innovation

Reuse
Buy-in
Reuse
Understanding
Awareness

Benefits
Ask yourself the right questions

**Technical questions**
- What purpose/requirements?
- What functionality/services?
- What building blocks do I need?

**Economic questions**
- Build vs. Reuse?
- Control Costs vs. Coordination Costs?
CEF

building blocks
Common challenges

Secure exchange of data and documents without setting up bilateral channels

Validate and recognise the legal value of electronic documents from other countries of origin

Sign or seal documents electronically also when sending them across national borders

Access online services provided by public and private organisations from other EU Member States, using your own national eID

Comply with different EU regulations and directives (such as eIDAS, eInvoicing, IMI, etc)

Send electronic invoices to public administrations, across national borders
Catalogue of CEF building blocks

Information at your fingertips

Learn more >

https://joinup.ec.europa.eu/community/cef/home
CEF building block DSIs

- eID
- e-Invoicing
- Automated Translation
- eSig
- e-Delivery

Central Service
Stakeholder Management
Training
Support
Maintenance

Specifications & deployable software

Project and Architecture Office
Stakeholder Management Office
CEF building block DSIs

- e-Delivery
- e-ID
- e-Signature
- e-Invoicing
- Automated Translation

What is it about?

Examples of use?

What can be reused?
What is it about?
Transport layer for delivering electronic documents (and data in general)

Examples of use?
PEPPOL (11 Countries), e-Codex (16 Countries)

What can be reused?
Access Points, Discovery Service, Specifications (e.g. ebMS 3.0)
What is it about?
Mutual recognition of electronic identification (eIDAS)

Examples of use?
STORK 1.0 (14 Countries)

What can be reused?
Pan European Proxy System (PEPS), EU PEPS (ECAS-STORK)
What is it about?
Creation and validation of e-signatures (eIDAS)

Examples of use?
Implementation of the Services Directive (DG MARKT)

What can be reused?
Trust List Manager, Digital Signature Services (DSS)
What is it about?
Electronic transfer of Invoices

Examples of use?
PEPPOL (11 Countries), e-PRIOR (55 EU Bodies)

What can be reused?
Reusable tools (test, validate, transfer e-Invoices)
What is it about?
Automated translation of content into any relevant EU language

Examples of use?
Commission Machine Translation service (MT@EC)

What can be reused?
MT@EC system
Information Sessions with DIGIT

In your Member State, in Brussels or online

Contact us

DIGIT-CEF@ec.europa.eu
Contact us: DIGIT-CEF@ec.europa.eu

Join the CEF Community: https://joinup.ec.europa.eu/community/cef/home
Thank you!

Joao Rodrigues Frade
CEF Project & Architecture Office

European Commission
Directorate-General for Informatics (DIGIT)
Information Systems for policy support and activity management (DIGIT.B.4.002)
Rue Belliard 28, 1040 Brussels/Belgium
B-28 04/159 | +32-2-295.02.40
joao.rodrigues-frade@ec.europa.eu