

# Module Introduction to E-Government, Summer term 2025

## The Once-Only Principle project & the Single Digital Gateway Regulation

# The Once-Only Principle (TOOP) project and the Single Digital Gateway Regulation (SDGR)

## Agenda

- ❖ The Once-Only Principle (TOOP) project
- ❖ TOOP federated architecture
- ❖ Exemplification of the TOOP architecture with a pilot example
- ❖ Single digital gateway regulation (SDGR), Commission Implementing Act and Technical Design Documents
- ❖ TOOP federated architecture as reference solution for SDGR implementation



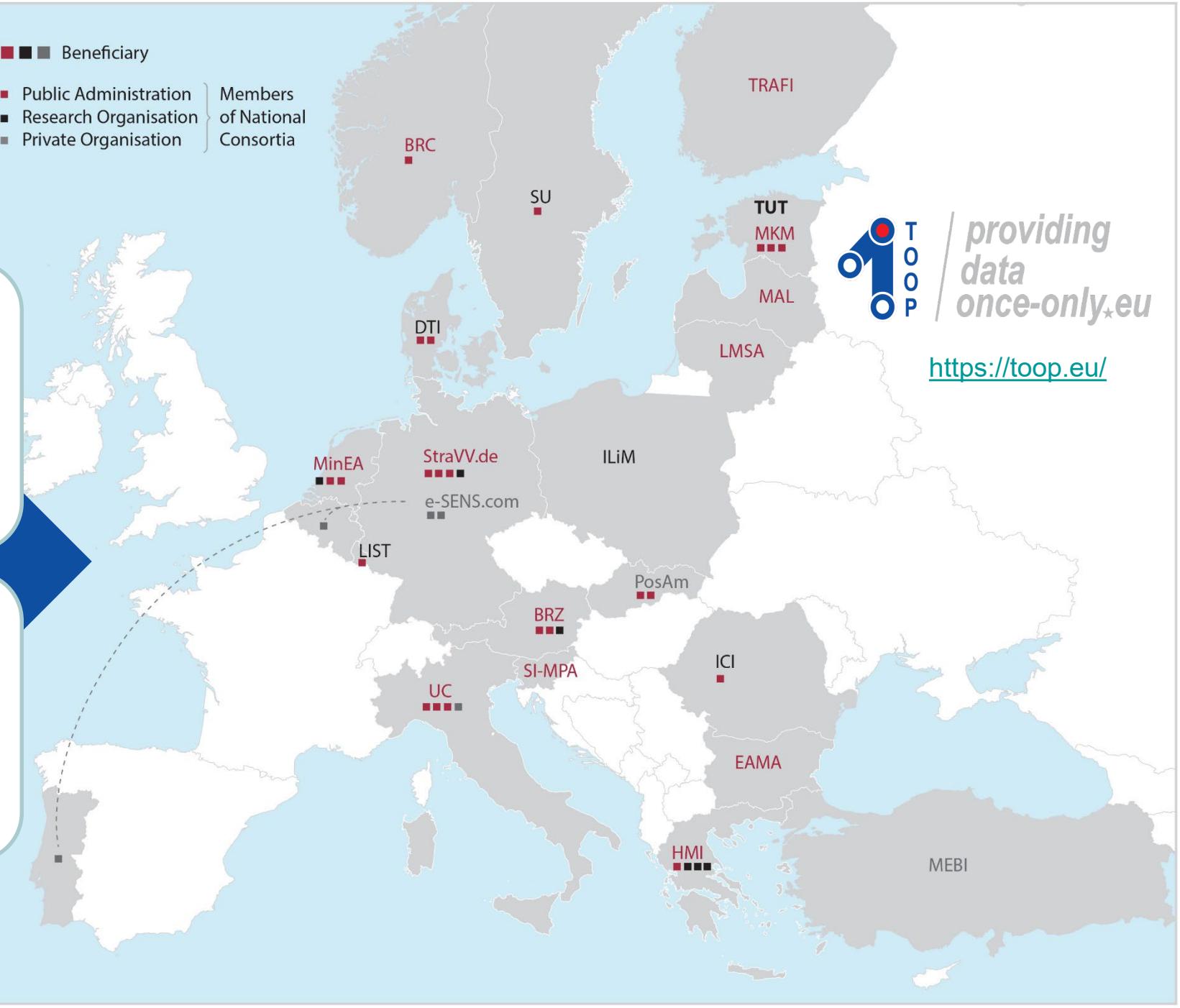
# Objectives & Partners in TOOP

Investigate and demonstrate OOP for businesses

Pilot cross-border data exchange

Reduction of administrative burden

Focus on businesses and public administrations





# Overview of TOOP project

- ❖ 49 Months, 1.1.2017 – 31.1.2021
- ❖ 50+ partners from 21 countries
  - Public Administrations
  - Universities
  - Companies
- ❖ Connecting 60+ information systems
- ❖ Open Access book: <https://link.springer.com/book/10.1007/978-3-030-79851-2>
  - Cite as: Robert Krimmer, Andriana Prentza, Szymon Mamrot (Eds.). The Once-Only Principle. The TOOP Project. Springer LNCS, volume 12621, 2021



## Three pilot areas

### TOOP Pilots



#### Cross-border e-Services for Business Mobility

The first TOOP pilot area – Cross-border e-Services for Business Mobility – is composed of different usage scenarios that are of interest to the participating states, for example participation in public procurement procedures across borders



#### Updating Connected Company Data

The second TOOP pilot area – Updating Connected Company Data – foresees a central role for the business registers



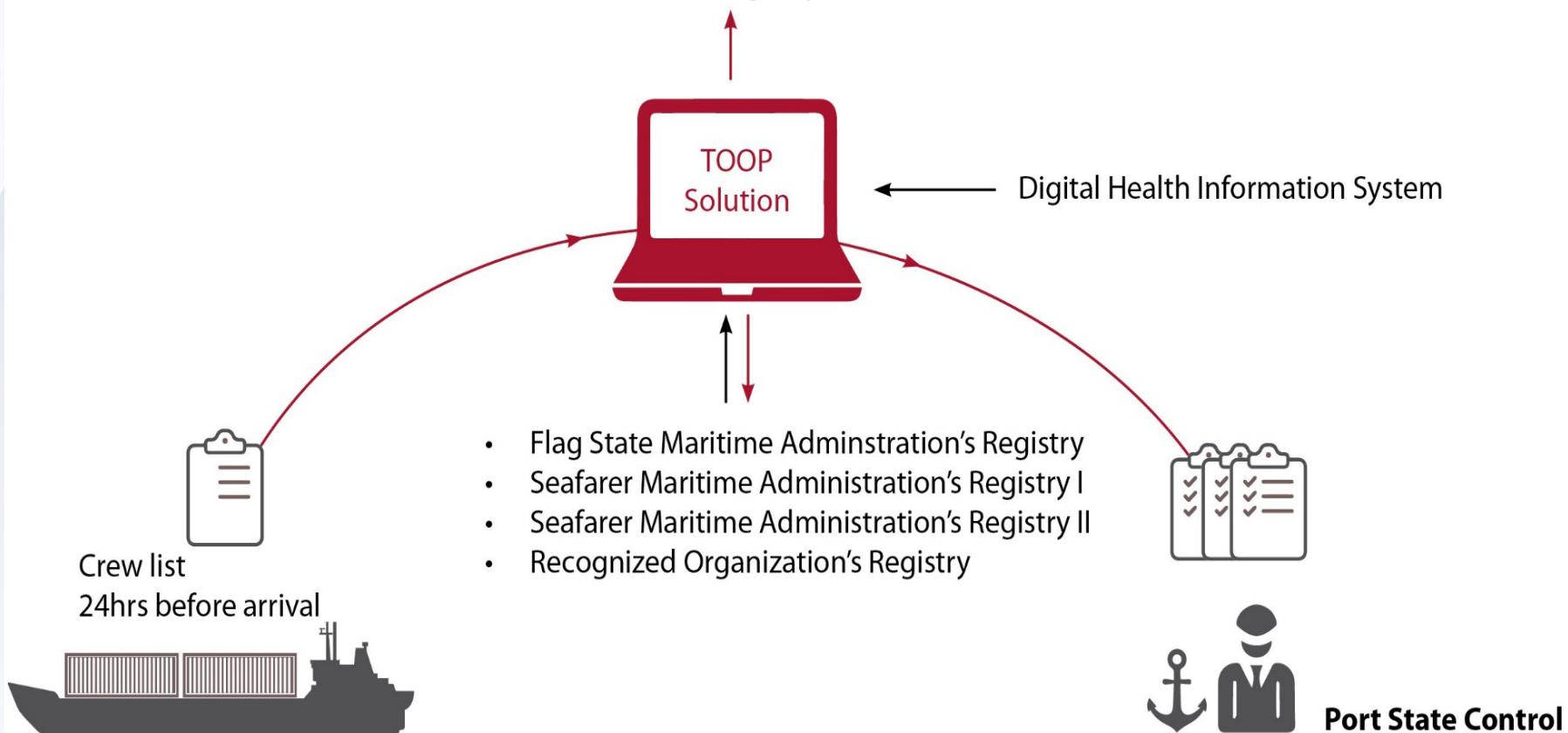
#### Online Ship and Crew Certificates

The third TOOP pilot area – Online Ship and Crew Certificates – addresses the need for simplification in the area of ship and crew certificates, which are currently issued and maintained in paper format and stored by national Maritime Administrations

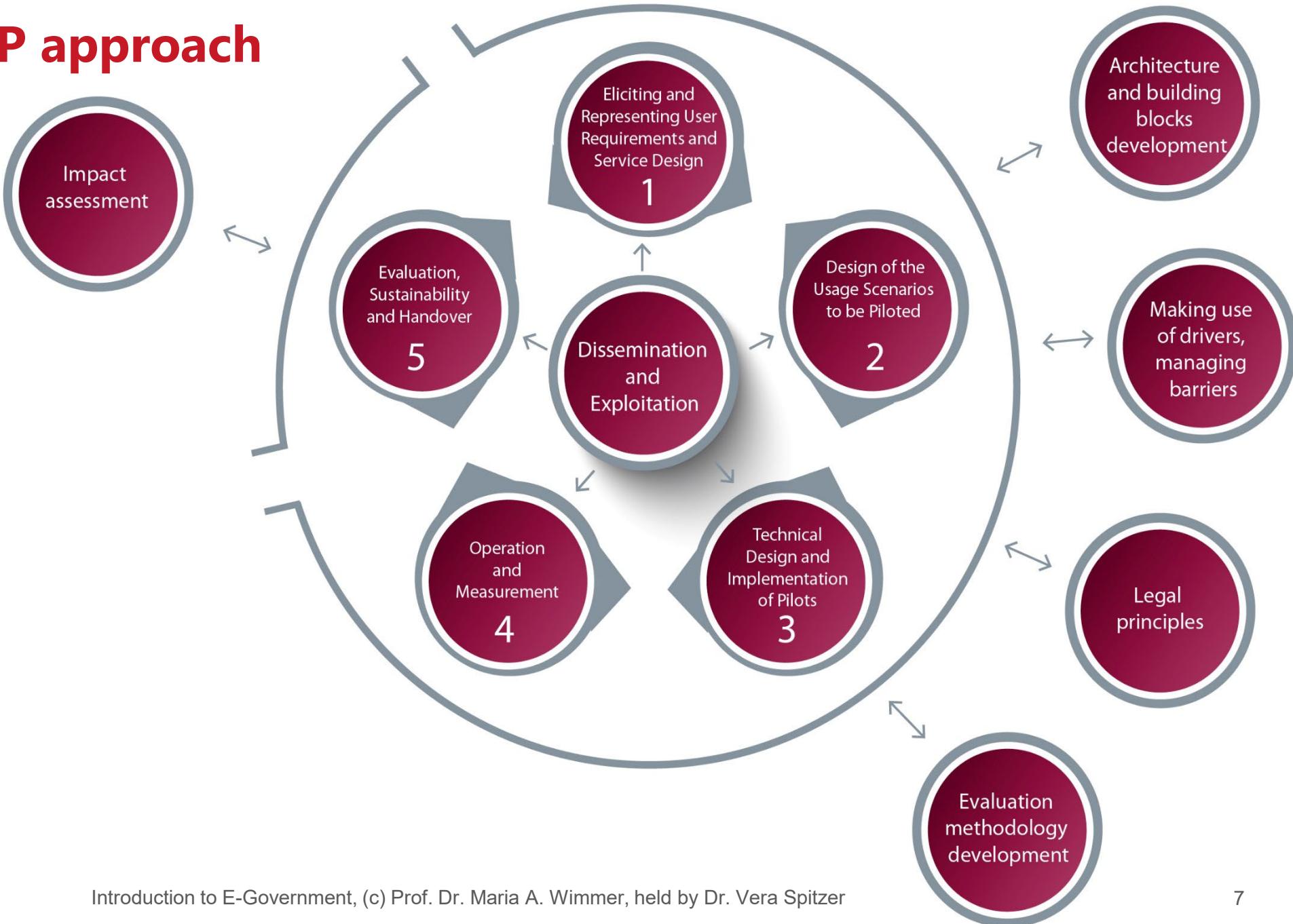


## Example: Ship & Crew Certificates

- Police
- Border Guard
- Port Authorities
- Charter companies
- Vetting inspection



# TOOP approach





# TOOP expected results

**Contributing to major e-government strategies of the EU**

**Saving time and costs for business and public administrations**

**Scalable and extensible pilots**

**Generate valuable insights how OOP can work successfully**

**Contributing to European Union frameworks, norms and regulations**

**Dramatic reduction of costs for future e-government piloting projects and establishment of OOP-based services**



# Main Actors in a TOOP Transaction

- ❖ Data Subject (DS):
  - Is the subject whom the data requested concern
    - Legal Person or Natural Person
- ❖ Data Consumer (DC):
  - The System initiating a transaction requesting data for consumption in its processes
- ❖ Data Provider (DP)
  - The system providing data (Base Registry, Authoritative sources etc) for the specific data subject

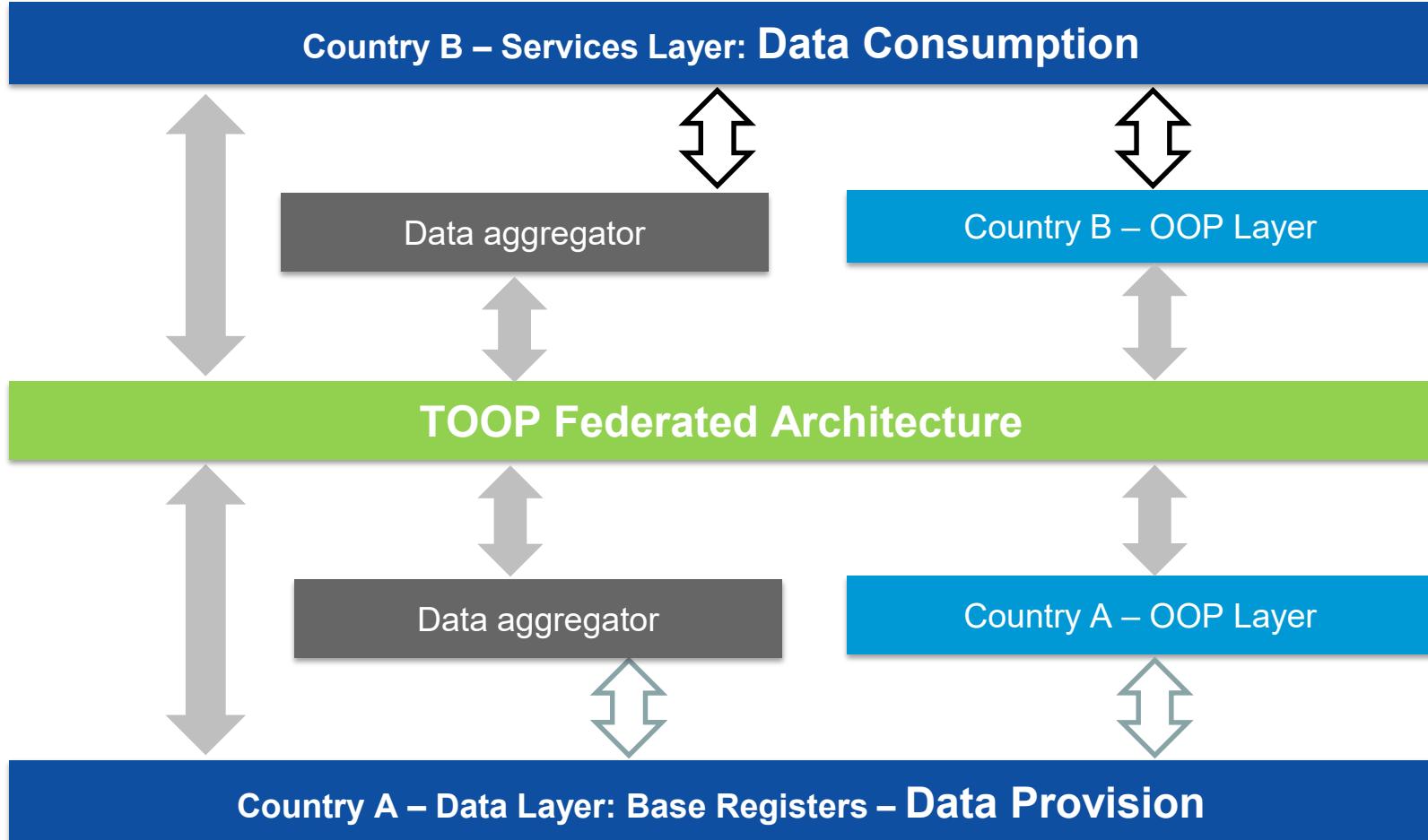
# The Once-Only Principle (TOOP) project and the Single Digital Gateway Regulation (SDGR)

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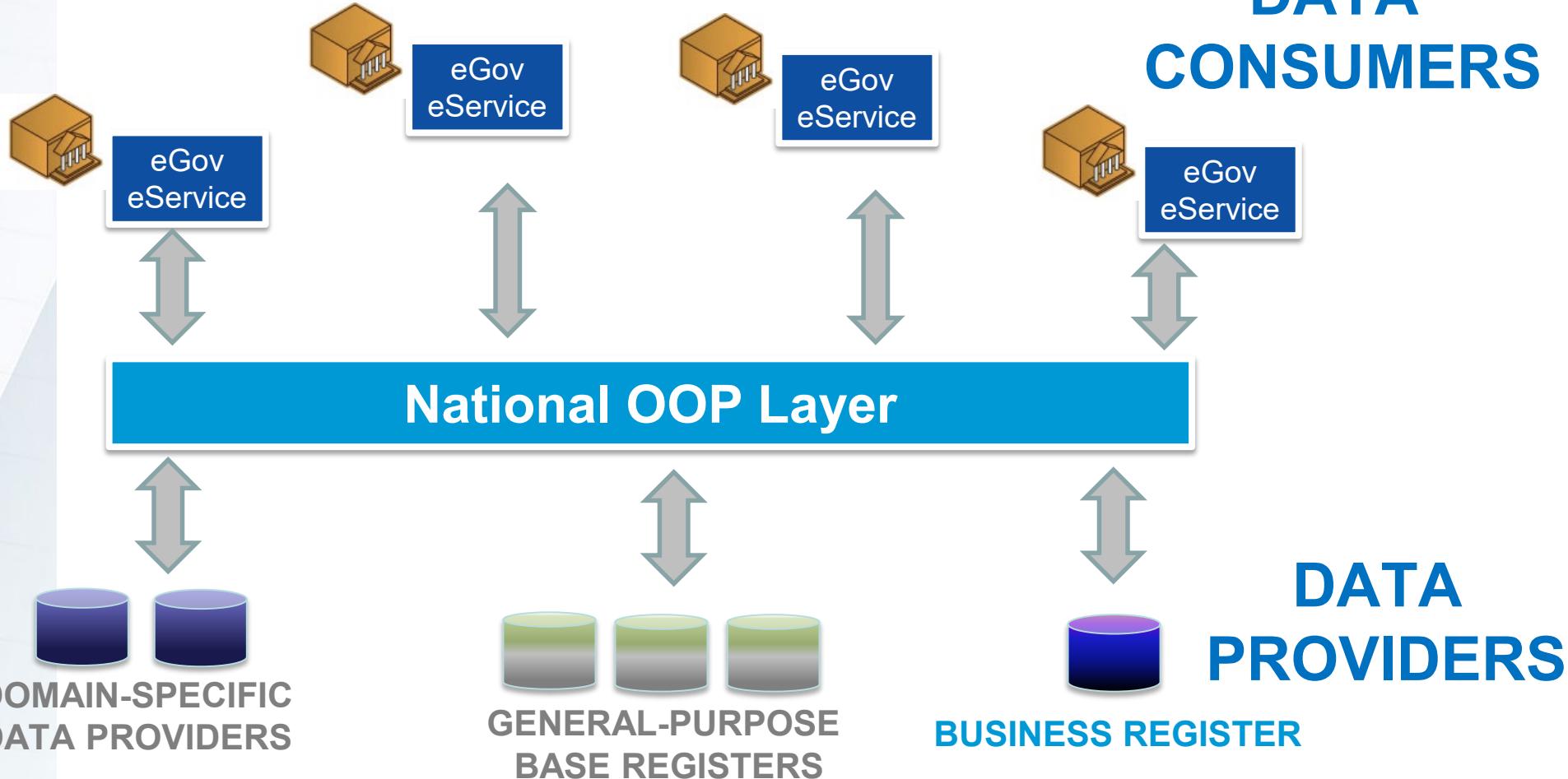


# Cross-border data exchange: TOOP Federated Architecture



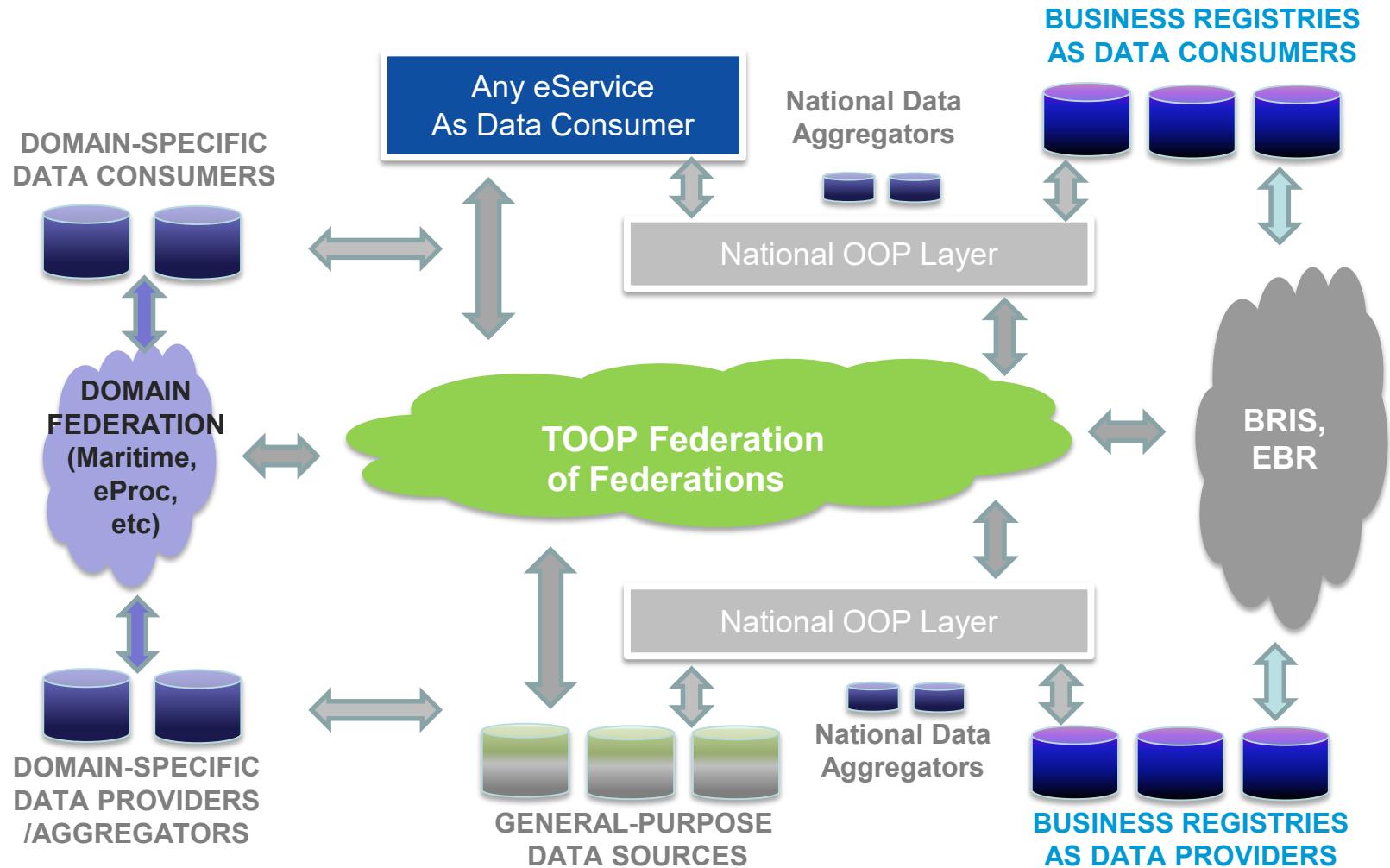


# National Once-Only Layer





# Pan-european OOP landscape with TOOP Federation





## Main functionality requirements for TOOP federated architecture

# Legal Entity / Natural Person Identification



- ❖ Data subject must be identified at the DC Level
- ❖ ID attributes must be propagated to the Data Providers to enable proper record matching and to provide the actual requested values (with certainty)

# Dynamic Data and Participant Discovery



- ❖ Data Consumer must be able to make a data request knowing only:
  - The Country of the data subject
  - The type of data that it wants to request
- ❖ Key Functionality:
  - Discovery of all the data providers (who) and their routing metadata (where) that have the capability to provide certain type of data in a specific country



# Semantic Mapping

- ❖ Data Consumer must be able to make a data request using its own known vocabulary, independent of the vocabulary used by the data providers under request
- ❖ Key Functionality:
  - Map the Data Request Elements from the DC vocabulary to the DP Vocabulary



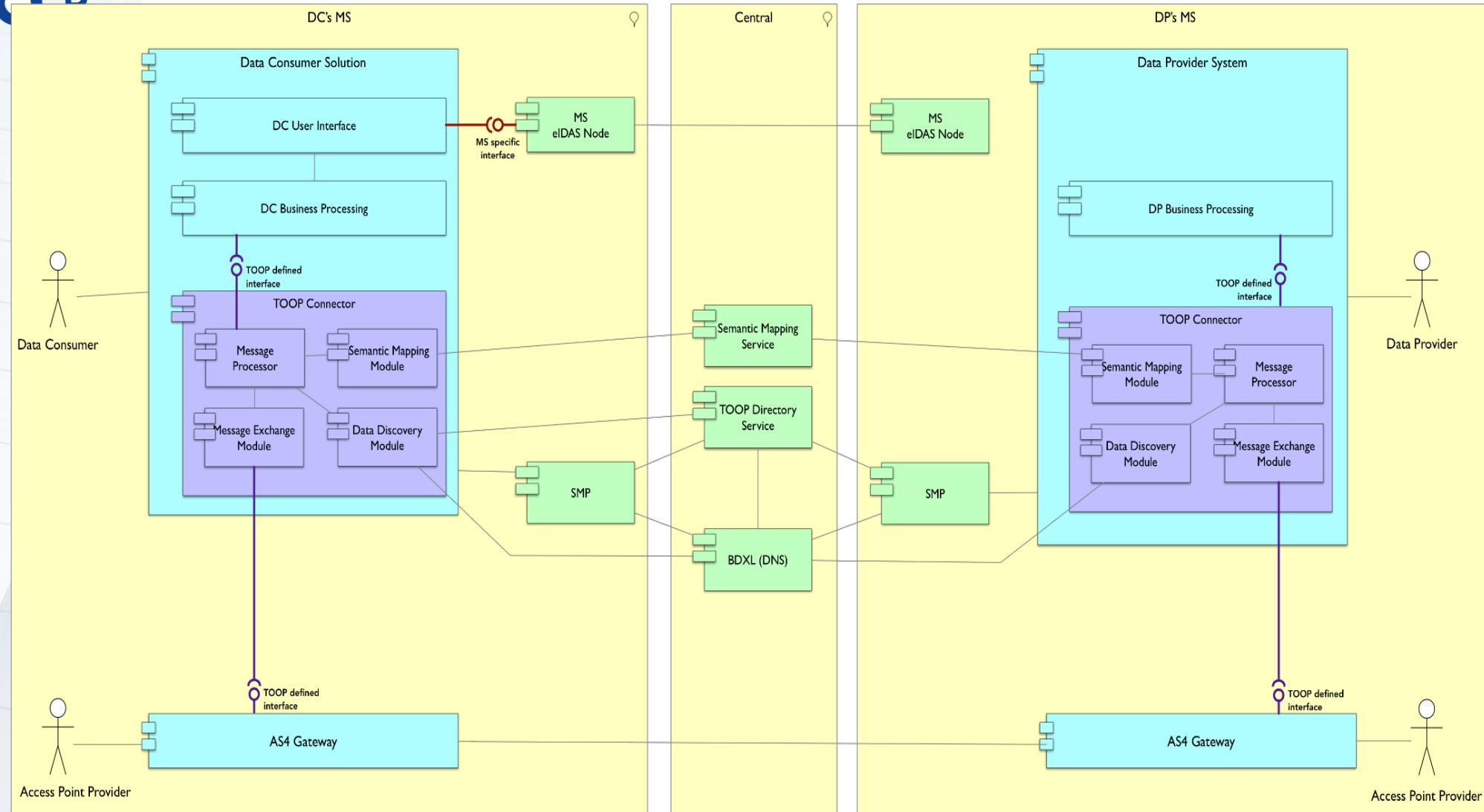
## Secure And Reliable Messaging

- ❖ Communication Channel between the DC and the DP must be secured, with Guaranteed Integrity, Privacy and Reliable
- ❖ Key Functionality:
  - Use a proper transport protocol that is able to sign, encrypt and reliably send the messages from the DC to the DP and vice versa, providing non-repudiation of delivery



## **TOOP solution architecture with core central components of the federation**

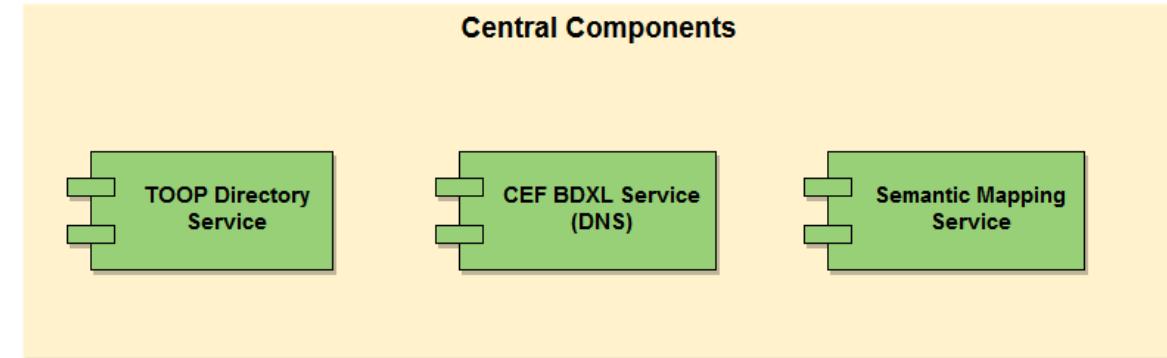
# Solution Architecture: Component Overview





# Solution Architecture: Central Components

- ❖ TOOP Directory Service
  - Based on PEPPOL Directory
  - Provides Services Required for the Data Discovery
    - Input: Country, Data Domain (Document Type)
    - Output: List of Participant Identifiers, serving data under the specific data domain and country
- ❖ BDXL Service (DNS)
  - Provided by Connecting Europe Facilities (CEF)
  - Provides services required for Data Discovery
    - Input: DC / DP Identifier
    - Output: the SMP URL that contains service metadata for the specific DC/DP
- ❖ Semantic Mapping Service
  - Provides concept mappings between concepts of the Common Semantic Model and Member state concepts
    - Input: a source data domain (e.g. Member state, TOOP), a source data concept and its target mapping
    - Output: the target mapped concept

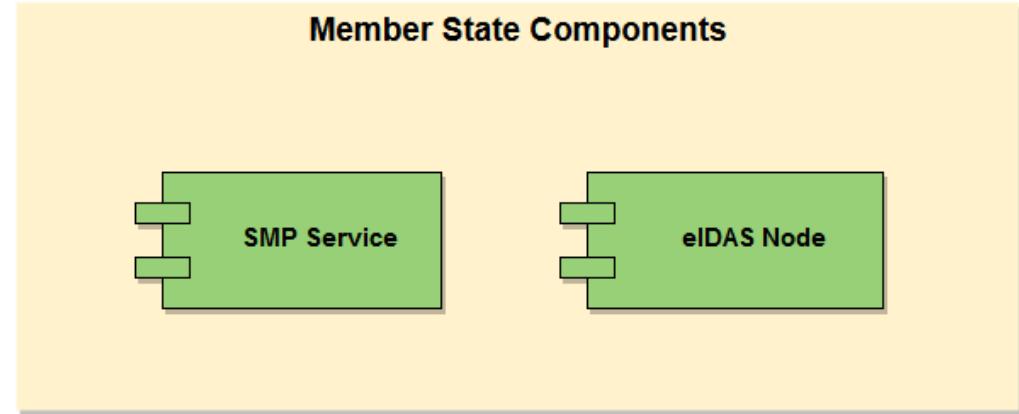


(BDXL: OASIS [Business Document Metadata Service Location](#))

# Component Architecture: MS Infrastructure Components



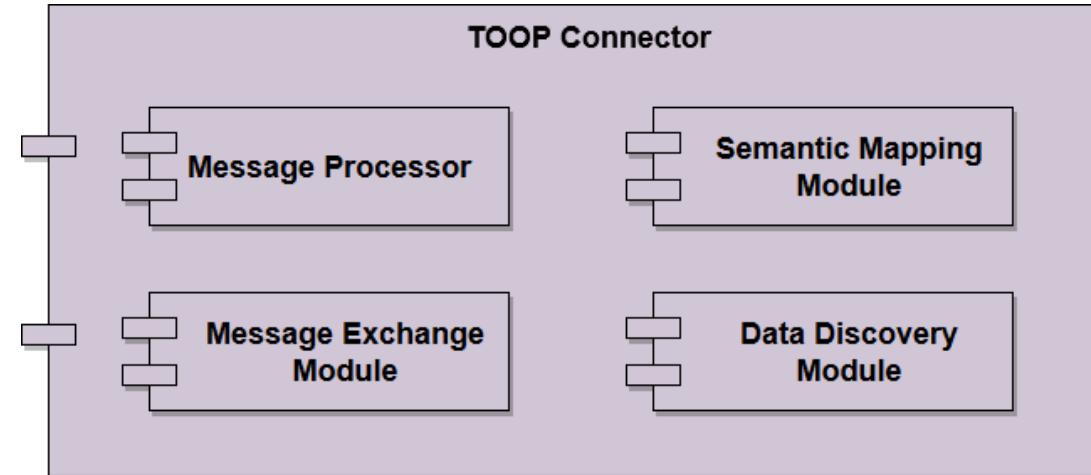
- ❖ Service Metadata Publisher (SMP) Service
  - Based on CEF SMP, used for Data Discovery
    - Input: DP/DC Identifier, Data Domain (document Type)
    - Output: Routing Metadata used for AS4 (e-delivery transport protocol)
- ❖ MS eIDAS Node
  - Deployed in MS, connected with the DC User Interface
  - Used to provide identification attributes to the DC User Interface





# Component Architecture: TOOP Connector

- ❖ Message Processor
  - Main Orchestration Engine
- ❖ Semantic Mapping Module
  - Communicates with the Semantic Mapping Service to get mappings between different concepts
- ❖ Dynamic Discovery Module
  - Communicates with TOOP Directory, BDXL ([Business Document Metadata Service Location](#)) and SMP (Service Metadata Publisher), to get the Routing Metadata for the Message to be submitted
- ❖ Message Exchange Module
  - Creates the AS4 Message and submits it using the CIT Interface to a compliant AS4 Gateway

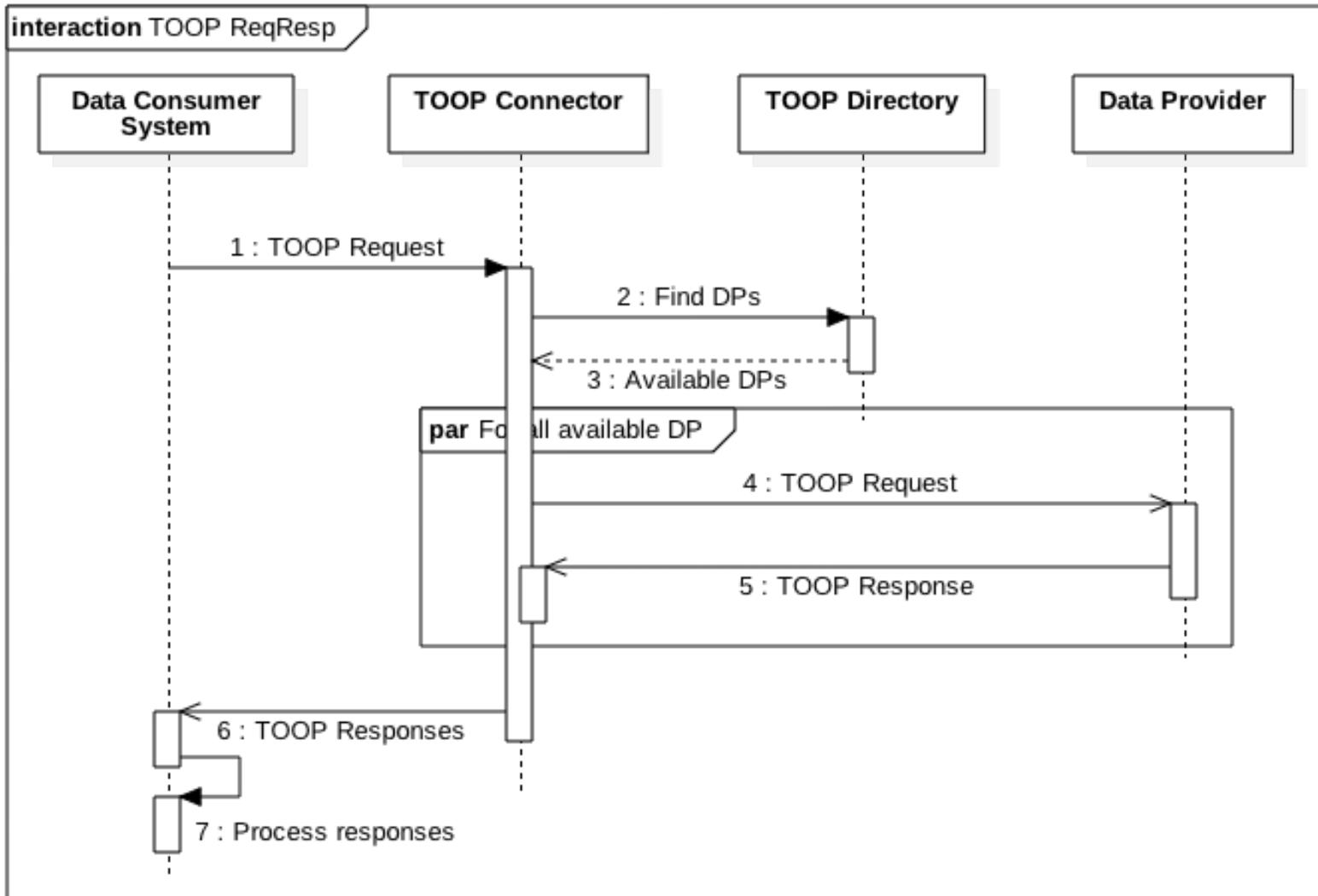




## Different interaction models in TOOP federated architecture

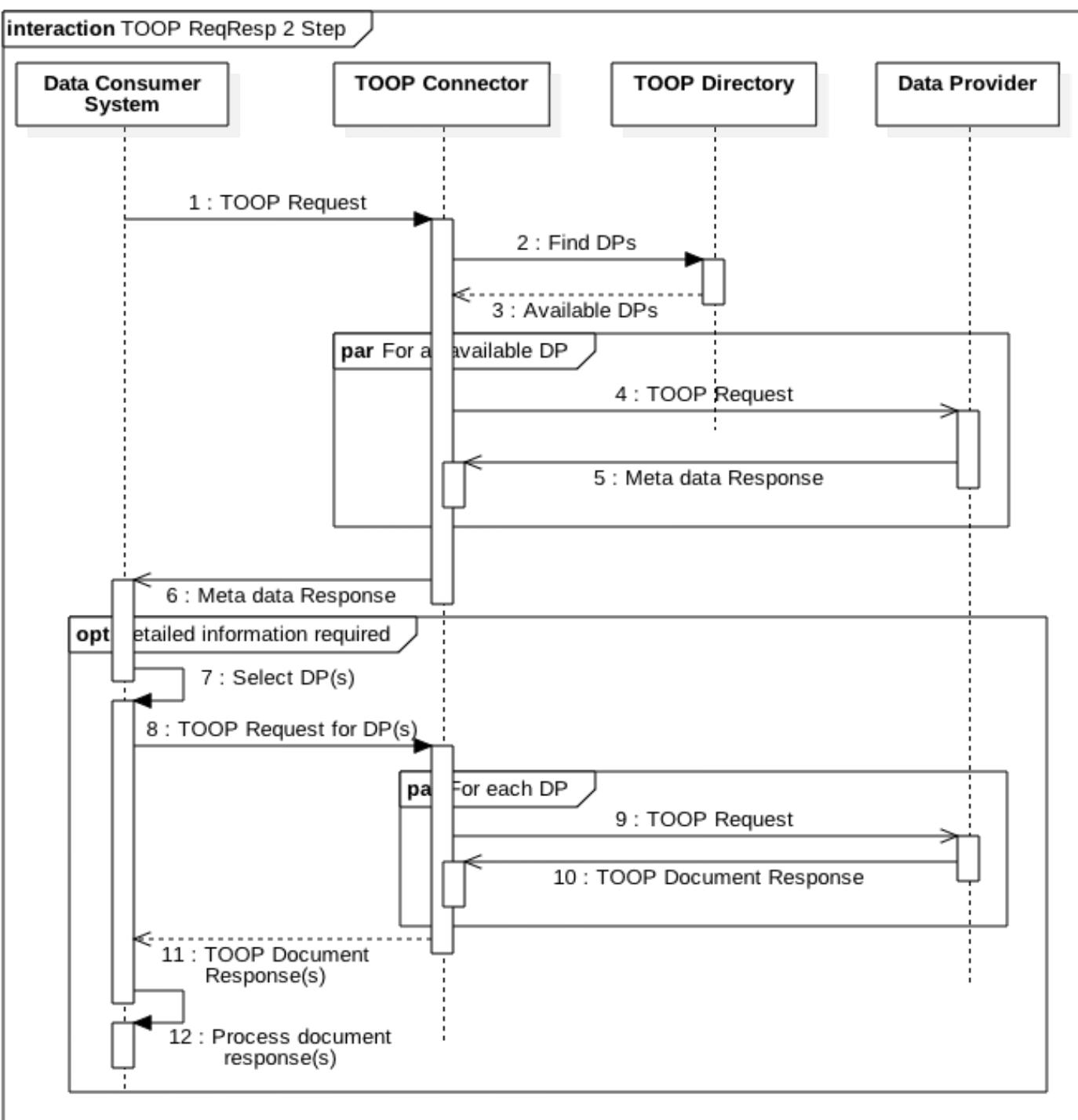


# Simple PULL



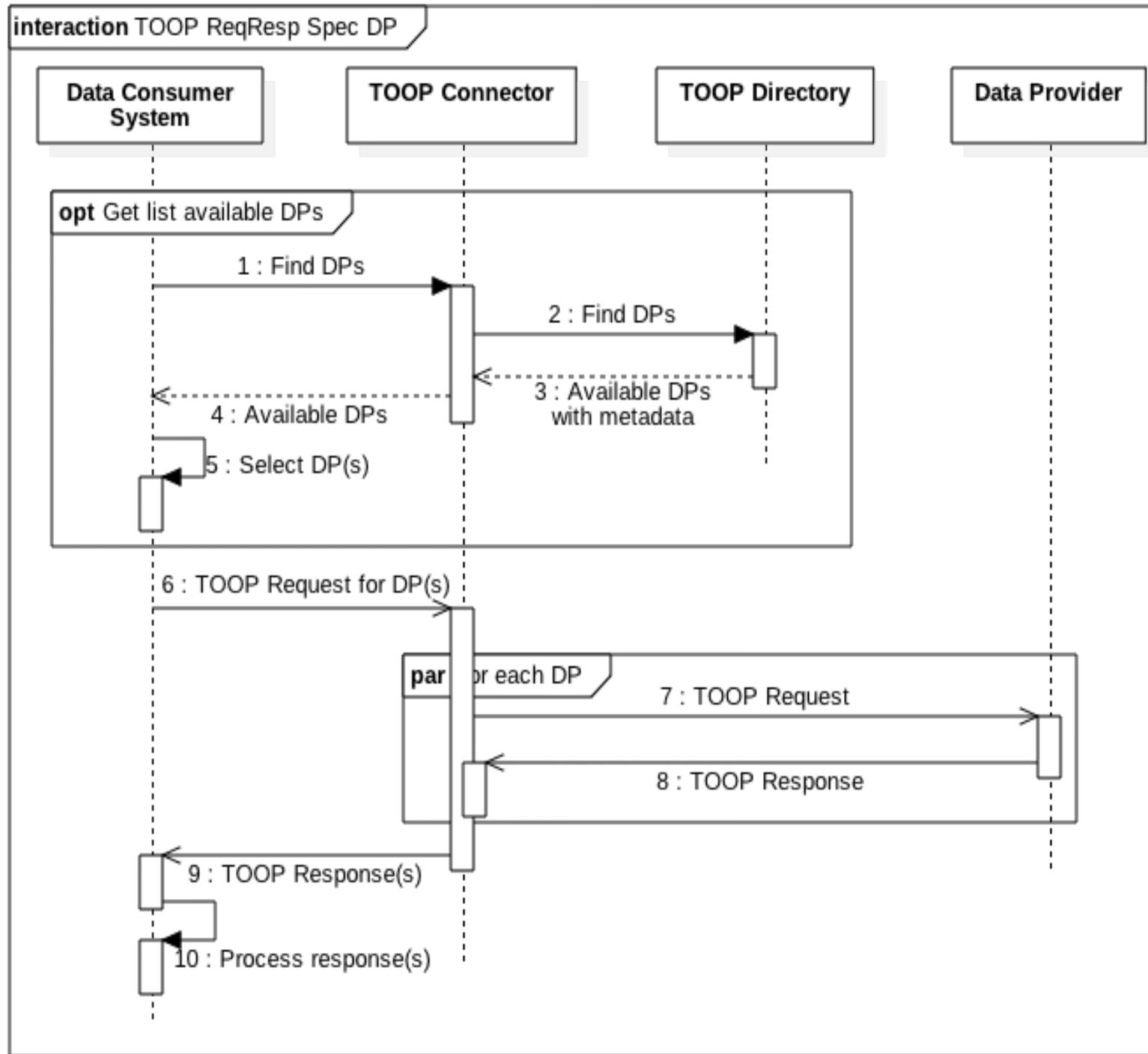


# Two Step Retrieval Process





# DP Metadata Based Pre-Selection





## Use of Identifiers



## Use of Identifiers - Overview

- ❖ Identifiers are information elements that establish the identity of objects
  - organizations, products, places, etc.
- ❖ TOOP Solution Architecture uses many identifiers in both
  - its transport infrastructure
  - within the documents exchanged across that infrastructure
- ❖ Two of the significant identifiers are
  - Party Identifiers (organizations, persons, etc.)
  - Services / Capabilities (business profiles, document types, etc.)
- ❖ These are the “who” and the “what” of TOOP business exchanges



## TOOP Policy on Identifiers

- ❖ TOOP Policy on Identifiers is a document that outlines the policy for using the correct identifiers for
  - Participant IDs
  - Services (Document Type IDs)
  - Processes (Process Type IDs)
- ❖ Implementers failing to adhere to these policies seriously jeopardize the interoperability of the information being exchanged
- ❖ TOOP Policy adherence is a requirement of any TOOP participation agreements

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## Pilot Illustration Scenario 1 – E-Procurement: Get Evidence (along Pre-qualification process of Economic Operator)



## Objectives and requirements in the pilot

- ❖ Main objective of the pilot was to provide evidence fulfillment, required by the ESPD (European Single Procurement Document), using TOOP Infrastructure
- ❖ ESPD Services must be able to create and send TOOP Requests, based on the input provided by the Economic Operator (EO)
- ❖ Authoritative sources and pre-qualification bodies (PQs) must be able to accept and respond to TOOP Requests, providing either evidence or evidence metadata

# Actor Definitions in the E-Procurement Pilot

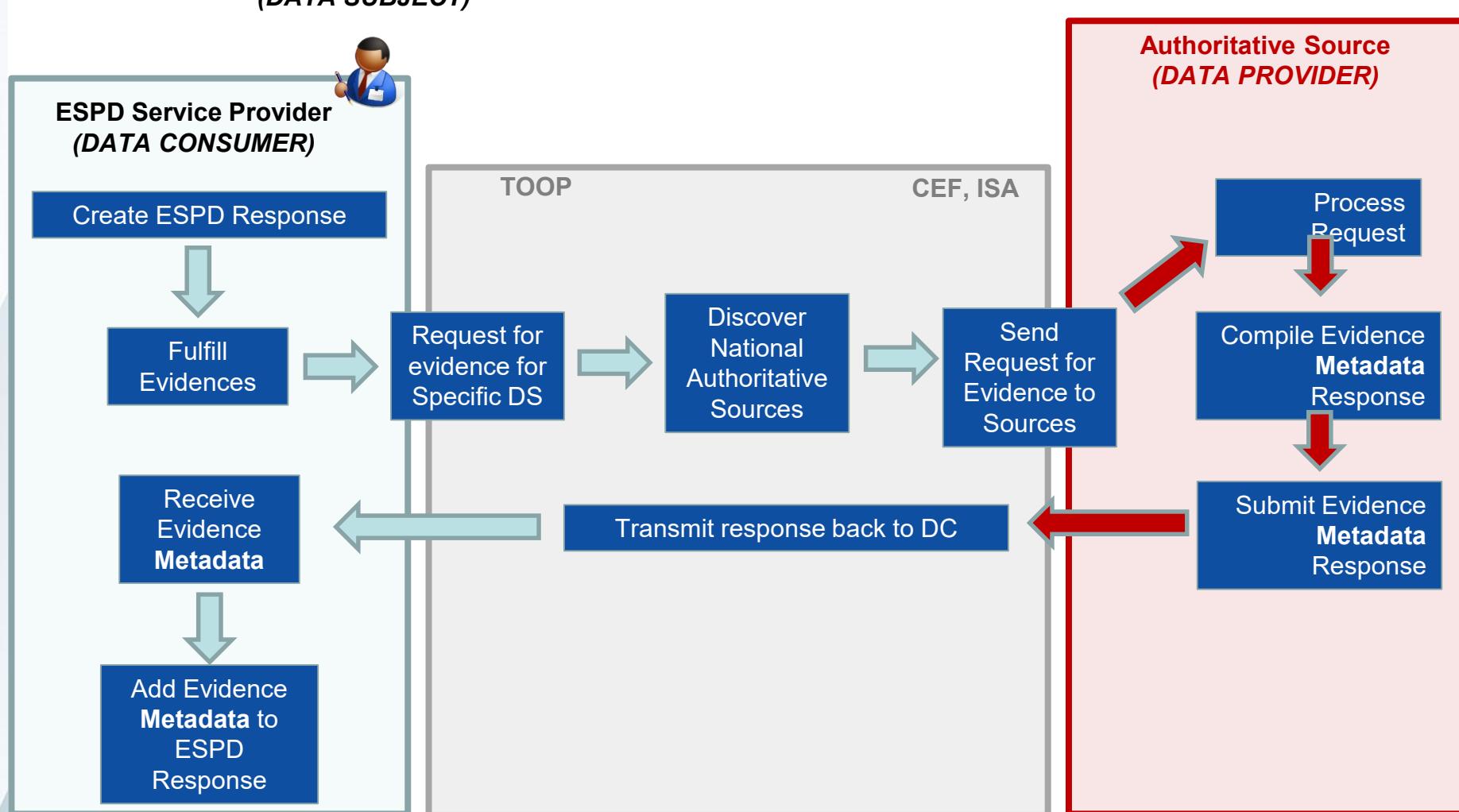


- ❖ Data Subject (DS):
  - Economic Operator (EO) which creates an ESPD Response
- ❖ Data Consumer (DC):
  - 1st step: ESPD System that will create the ESPD Response
  - 2nd step: ESPD System of the Contracting Authority (CA), which reads the ESPD Response and fetches Evidences for validation of the EO
- ❖ Data Provider (DP)
  - Authoritative source that will provide the evidences to the DCs
    - It can also be a pre-qualification body (PQ), based on the scenario variation (e.g. in Germany)



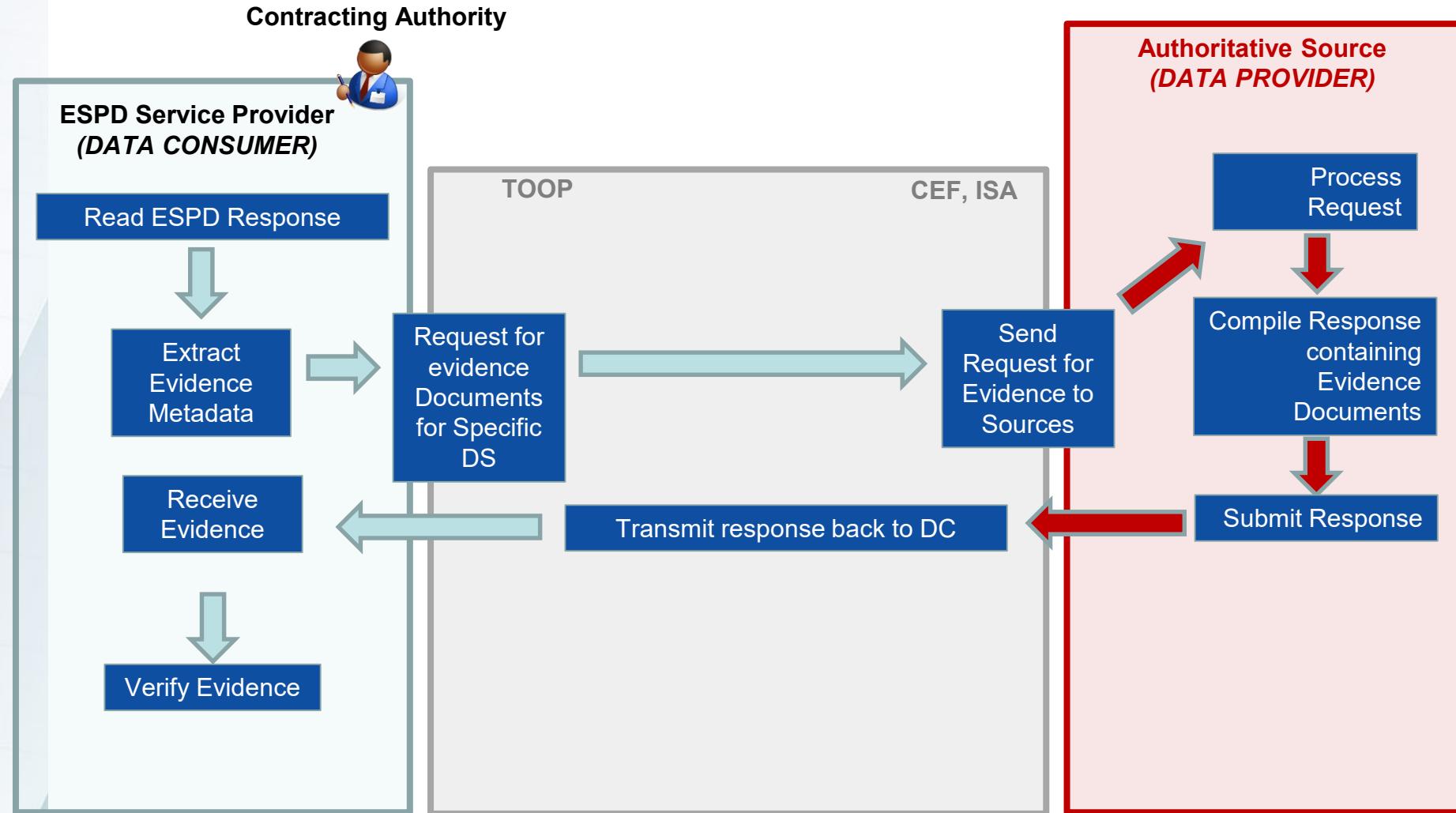
# Main Process flow for Evidence Provision in step 1 (1)

EO  
(DATA SUBJECT)





# Main Process flow for Evidence Provision in step 1 (2)



# Main Drivers for the E-Procurement Pilot



1. ESPD and ESPD systems
  - Each exclusion and selection criterion in the ESPD contains a section for providing the evidences electronically
2. eCERTIS (<https://ec.europa.eu/tools/ecertis/>)
  - eCertis is an authoritative source that supports in identifying different certificates requested in procurement procedures across the EU based on exclusion and selection criteria.
  - Many ESPD systems are connected to eCERTIS

# Criterion Layout retrieved through eCERTIS



## Participation in a criminal organisation

Has the economic operator itself or any person who is a member of its administrative, management or supervisory body or has powers of representation, decision or control therein been the subject of a conviction by final judgment for participation in a criminal organisation, by a conviction rendered at the most five years ago or in which an exclusion period set out directly in the conviction continues to be applicable? As defined in Article 2 of Council Framework Decision 2008/841/JHA of 24 October 2008 on the fight against organised crime (OJ L 300, 11.11.2008, p. 42).

### Participation in criminal organisations( LAW 4412/2016 Article 73(1)(a) )

The economic operator has been the subject of a conviction by final judgment for participation in criminal organisations, as defined in Article 2 of Council Framework Decision 2008/841/JHA of 24 October 2008 on the fight against organised crime.

#### 1. [Extract of criminal record](#)

Issued By : National Criminal Records

[Less information](#)

### Your answer?

Yes  No

### Is this information available at no cost to the authorities from an EU Member State database?

Yes  No

URL \*

Issuer \*

Reference/Code \*

# Evidence Provision Response



## Participation in a criminal organisation

Has the economic operator itself or any person who is a member of its administrative, management or supervisory body or has powers of representation, decision or control therein been the subject of a conviction by final judgment for participation in a criminal organisation, by a conviction rendered at the most five years ago or in which an exclusion period set out directly in the conviction continues to be applicable? As defined in Article 2 of Council Framework Decision 2008/841/JHA of 24 October 2008 on the fight against organised crime (OJ L 300, 11.11.2008, p. 42).

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1. [Extract of criminal record](#)

Issued By : National Criminal Records

[Less information](#)

## Your answer?

Yes  No

**Is this information available at no cost to the authorities from an EU Member State database?**

Yes  No

URL \*

<http://GR:TOOP-Authoritative-Source-Identifier>

Issuer \*

GR:IssuerName

Reference/Code \*

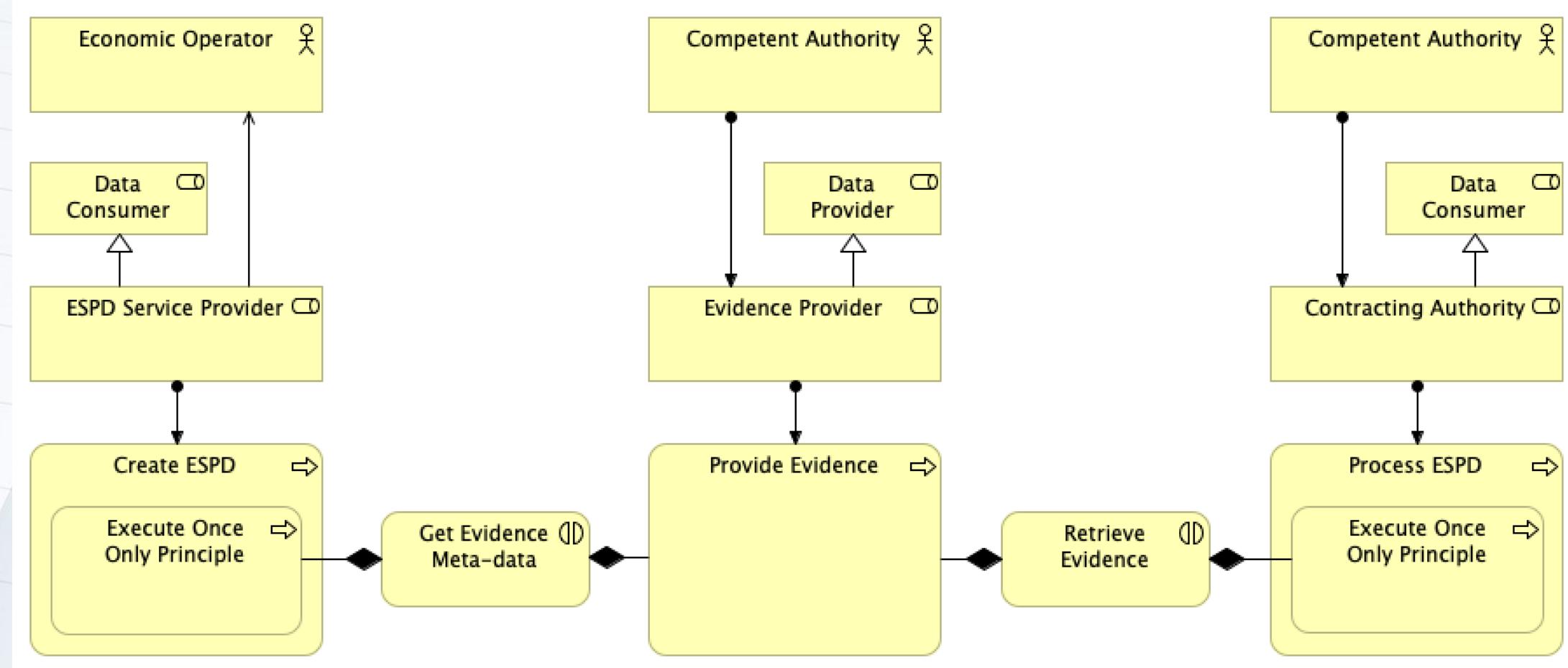
TOKEN:CXVLBKTYPOUISAEIRJTTHGHMKNTYUO



## Transactions and Process Flows

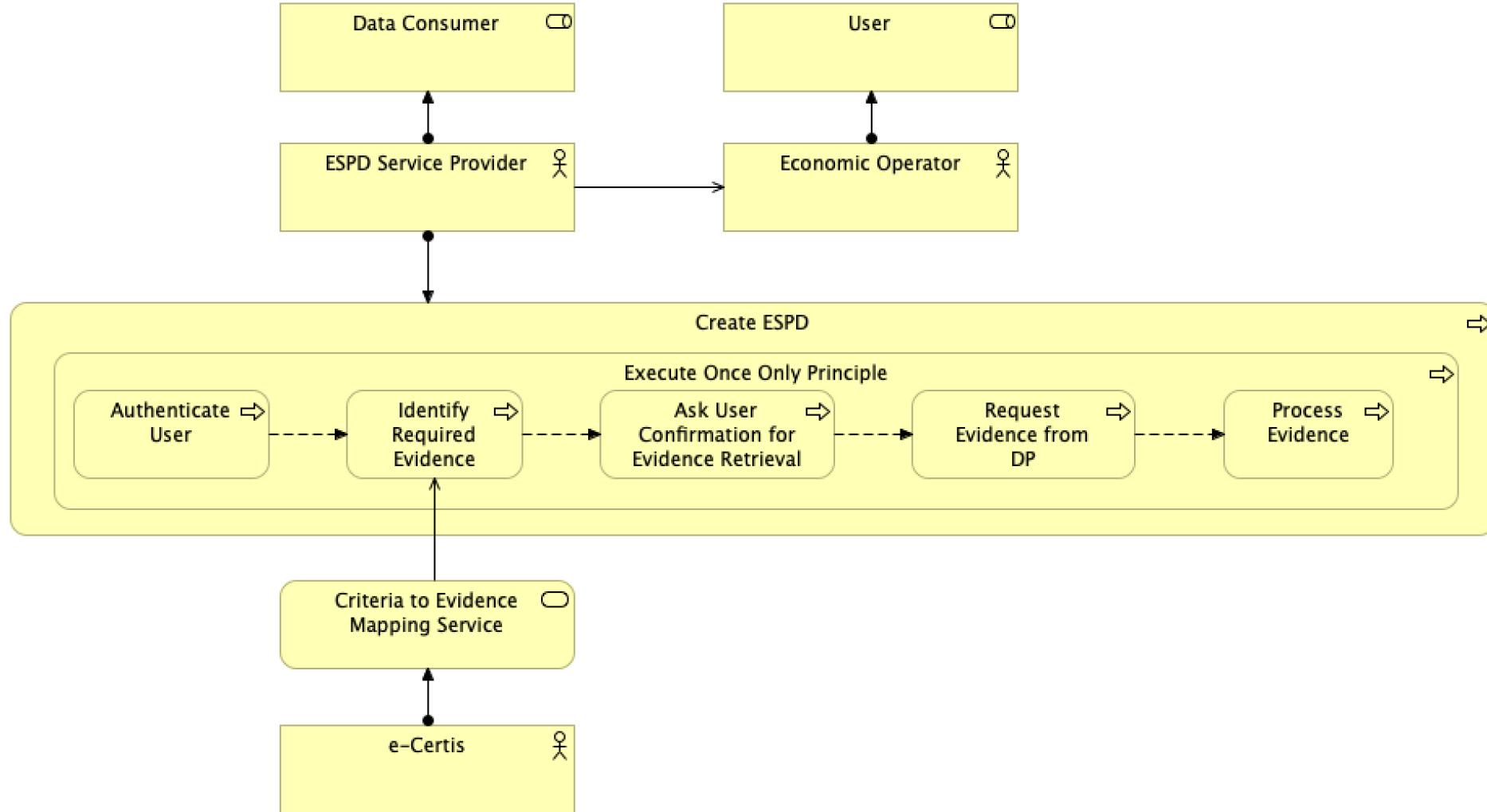


# Process using TOOP



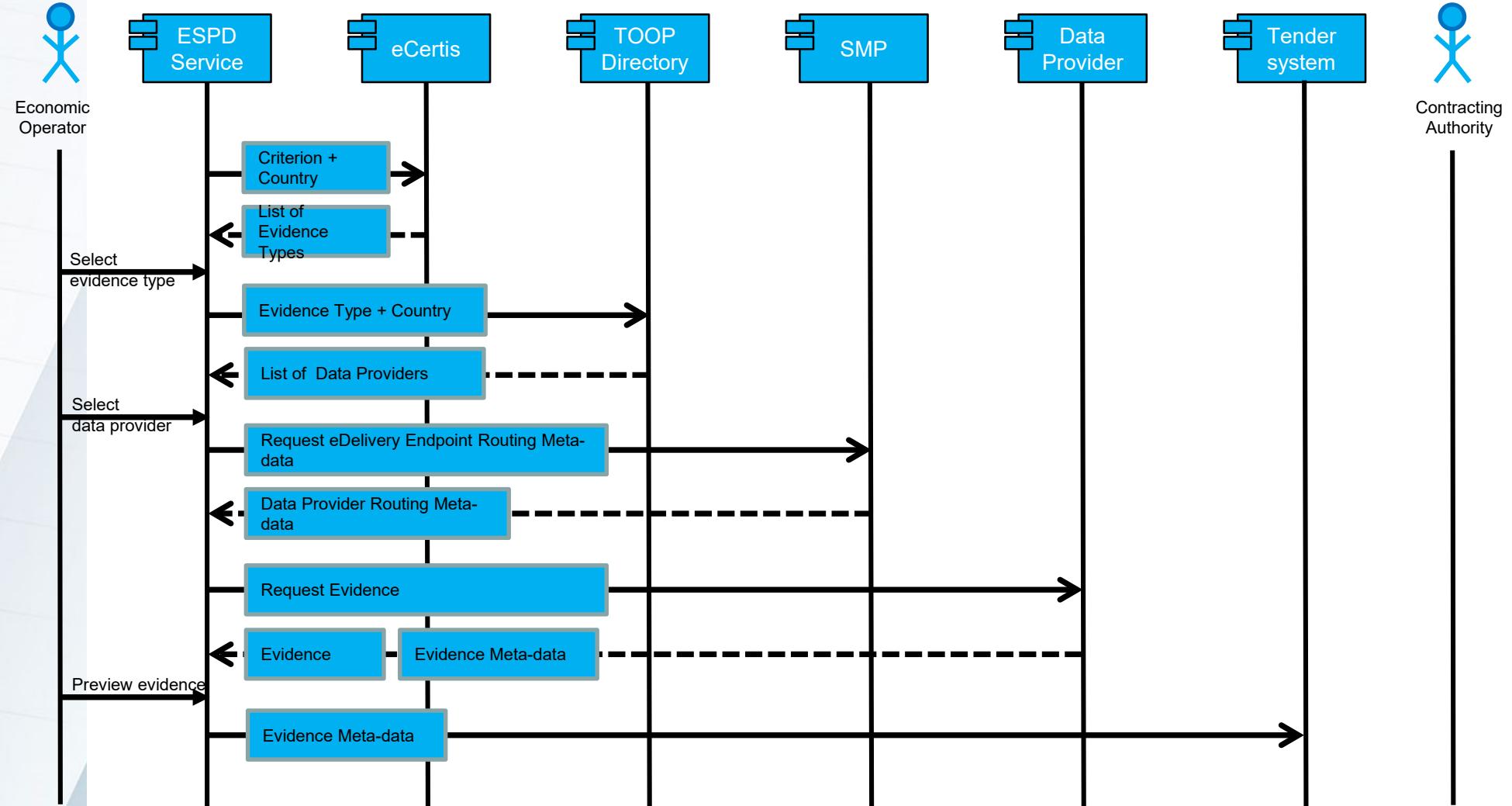


# Use of e-Certis in TOOP

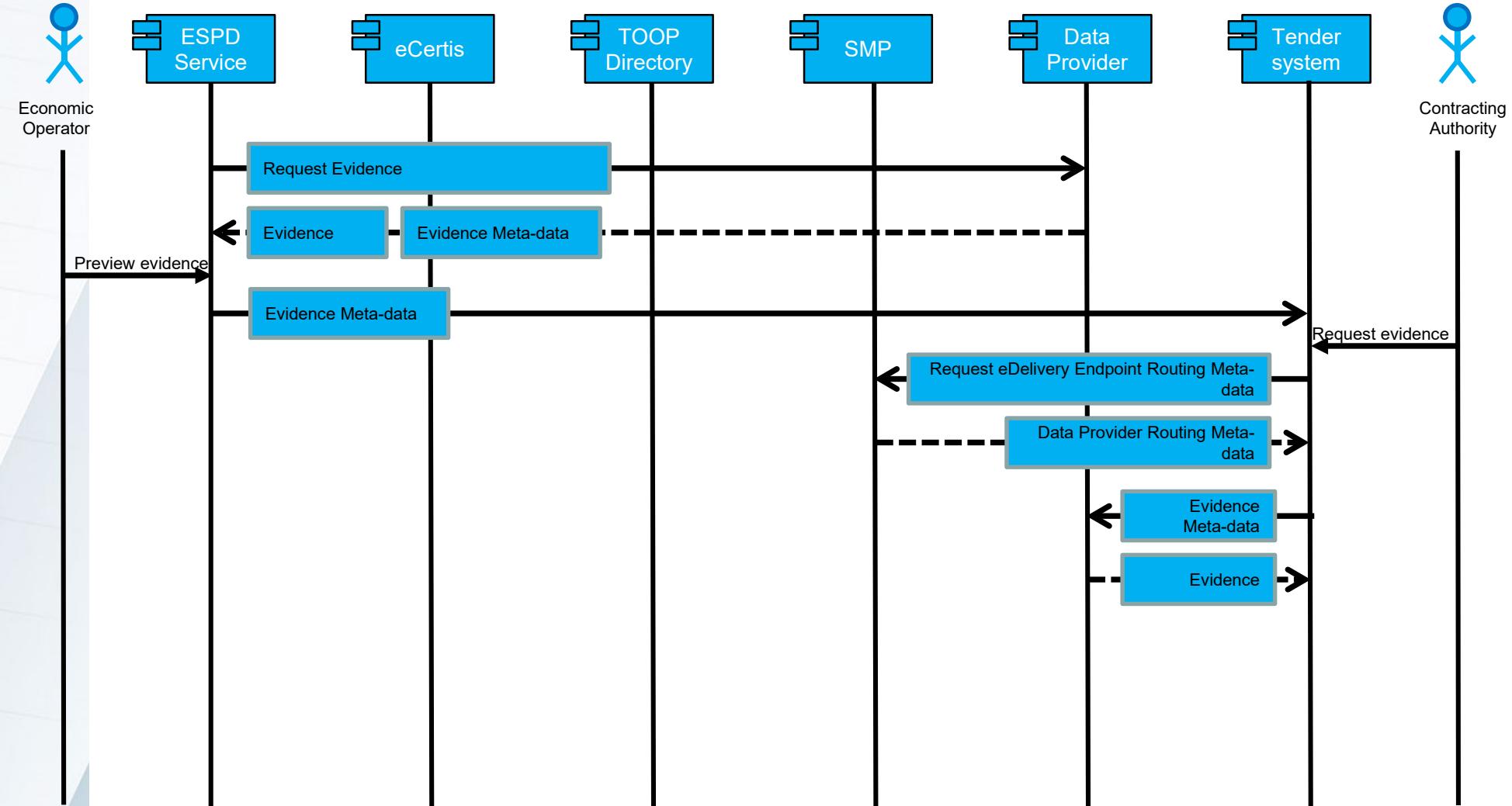




# Detailed process flow



# Detailed process flow





## Pilot Illustration Scenario 2 – E-Procurement: Connected Company Data

# TOOP Exemplification with fictive countries „Freedonia“ and „Elonia“

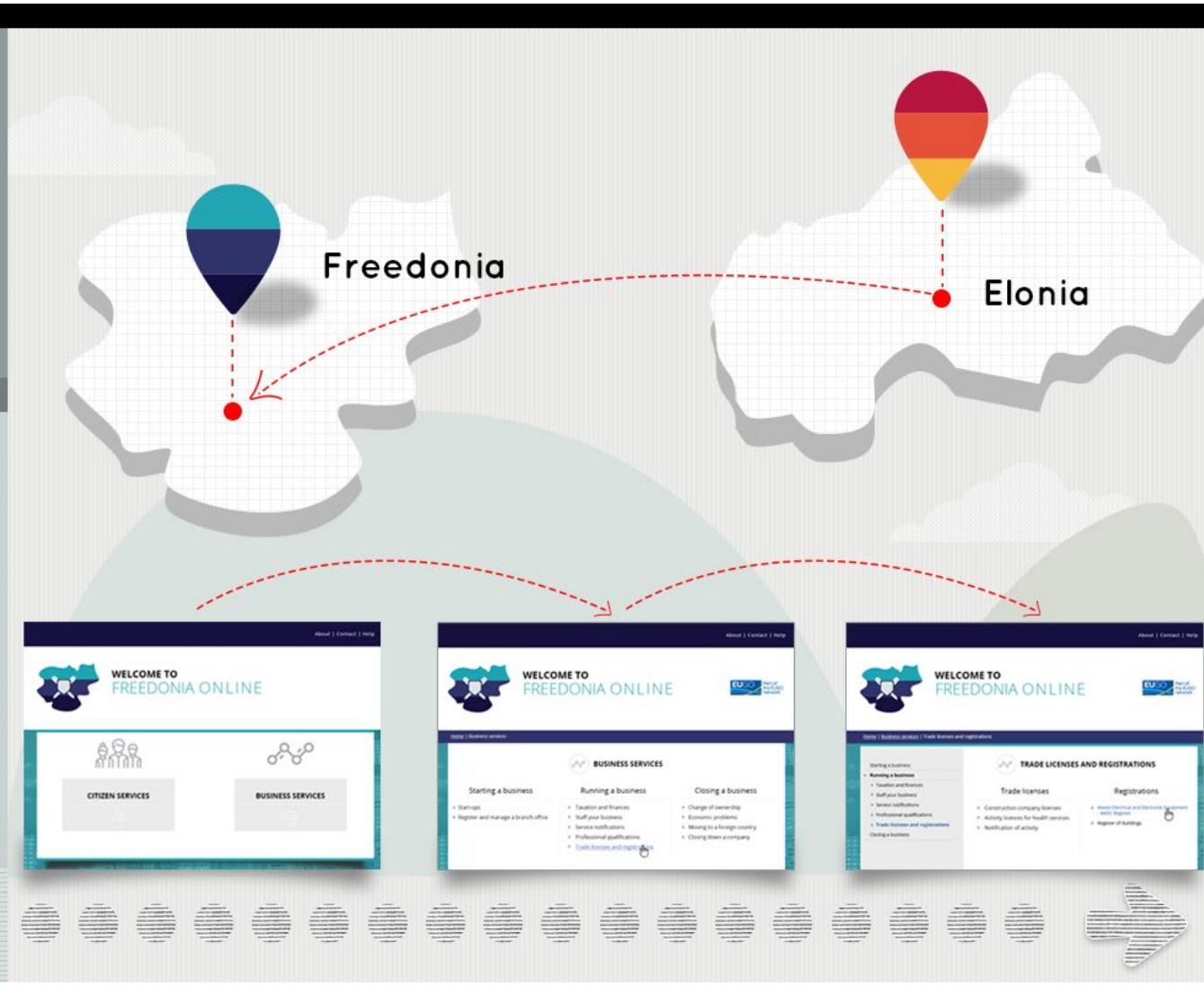


**screen 1**



Maximillian is from Elonia, he is the CEO of Zizi Mat Ltd, an electronic equipment manufacturing business.

Zizi Mat wants to expand their trade to Freedonia, they have assigned Max to register with the WEEE environmental data base in Freedonia in compliance with EC regulations.



The map shows two landmasses, Elonia and Freedonia, separated by a body of water. A red dashed line connects a location in Elonia to a location in Freedonia. Each location is marked with a pin: a yellow pin in Elonia and a blue pin in Freedonia.

Below the map are three screenshots of the "WELCOME TO FREEDONIA ONLINE" website:

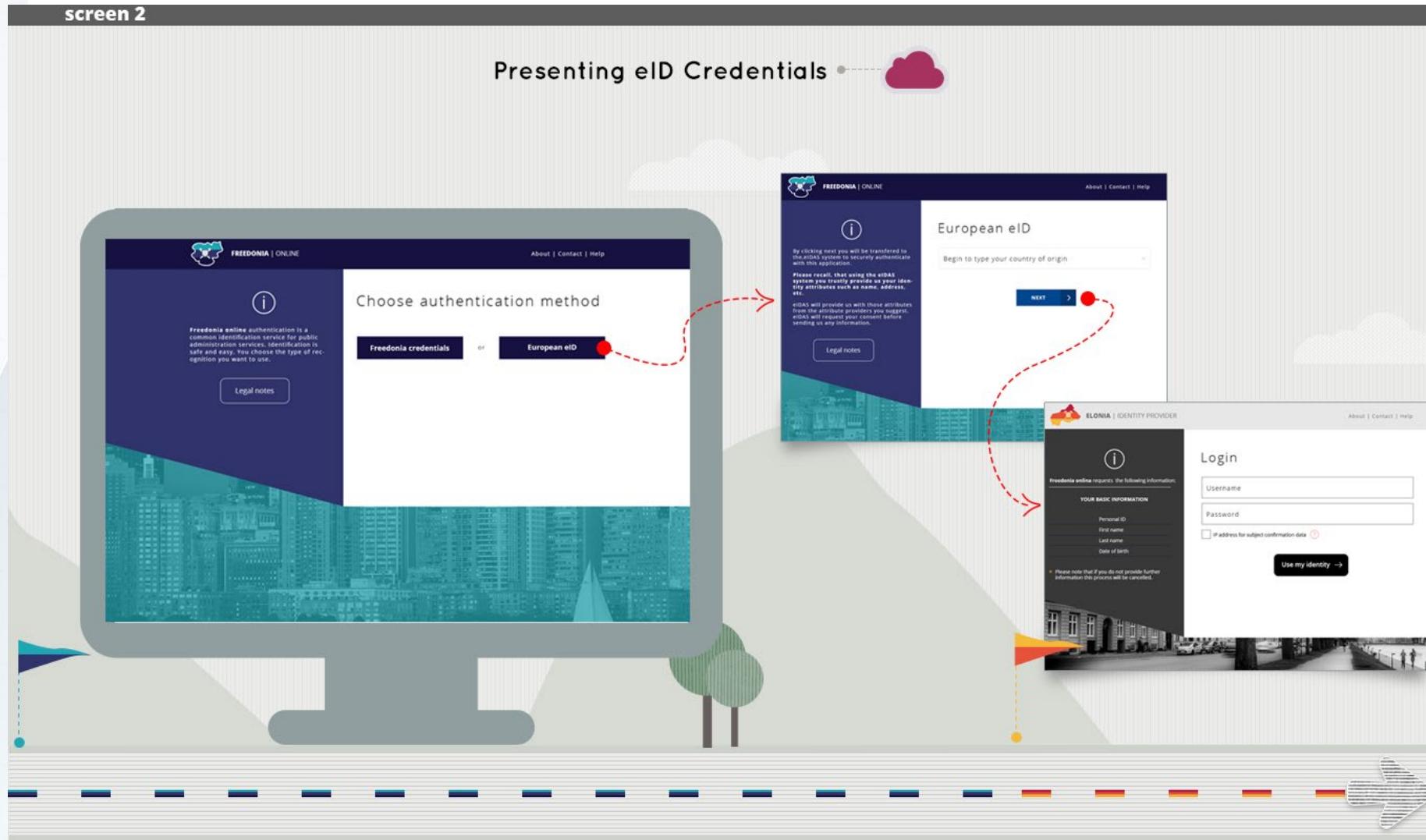
- Citizen Services:** Shows icons for birth/death registration and tax services.
- Business Services:** Shows sections for Starting a business, Running a business, and Closing a business. The "Starting a business" section includes links for Taxation and finances, Register and manage a branch office, Service notifications, Professional qualifications, and Trade licenses and registrations.
- Trade Licenses and Registrations:** Shows sections for Trade licenses and Registrations. The "Trade licenses" section includes links for Export/import company licences, Activity licences for health services, and Notification of activity.

A series of circular progress indicators and a large right-pointing arrow are at the bottom of the screen.



# Connecting to eIDAS node in Elonia

screen 2

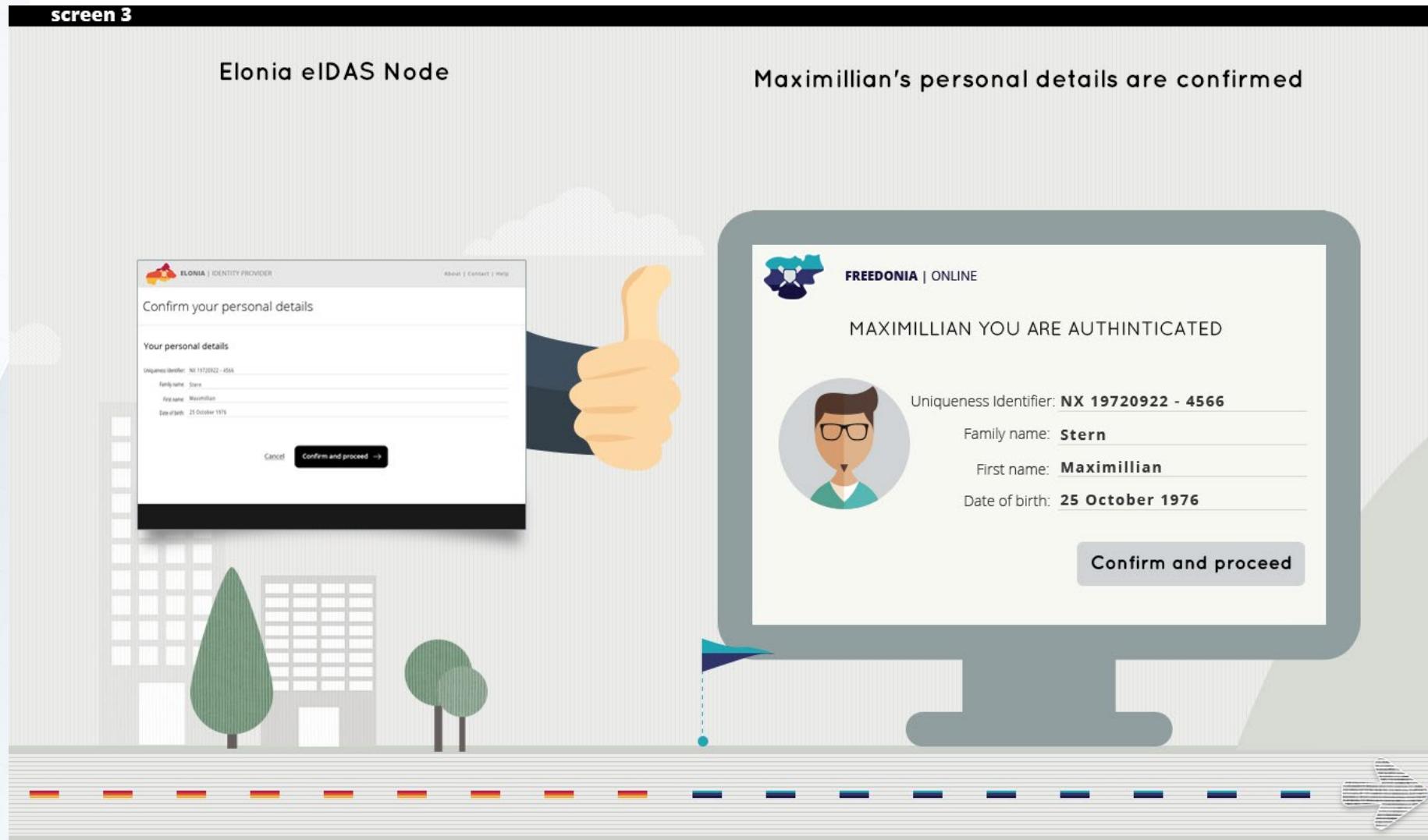




# Authentification through eIDAS

screen 3

Elonia eIDAS Node      Maximillian's personal details are confirmed



The diagram illustrates the eIDAS authentication process between two nodes: Elonia eIDAS Node and Freedonia Online.

**Elonia eIDAS Node:** A screenshot of a web interface titled "ELONIA | IDENTITY PROVIDER". It shows a confirmation message: "Confirm your personal details". Under "Your personal details", it lists: Unique identifier: NX 19720922 - 4566; Family name: Stern; First name: Maximilian; Date of birth: 25 October 1976. There are "Cancel" and "Confirm and proceed" buttons. A large yellow thumbs-up icon is overlaid on the screen.

**Freedonia Online:** A screenshot of a web interface titled "FREEDONIA | ONLINE". It displays the message "MAXIMILLIAN YOU ARE AUTHENTICATED". Below it is a user profile picture of a man with glasses. Personal details are listed: Uniqueness Identifier: NX 19720922 - 4566; Family name: Stern; First name: Maximilian; Date of birth: 25 October 1976. A "Confirm and proceed" button is at the bottom.

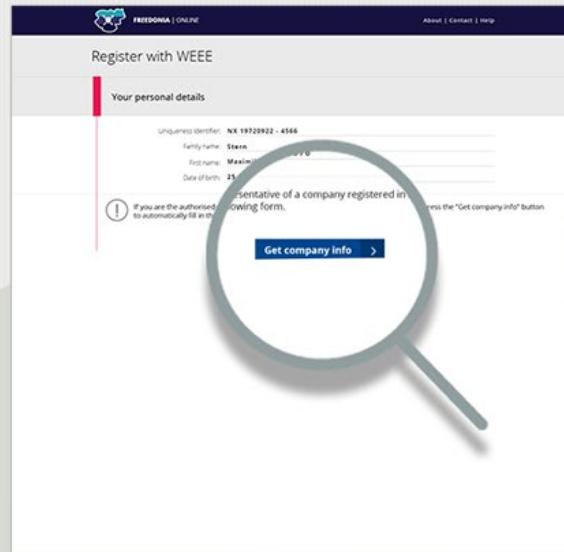
A dashed arrow points from the Elonia node to the Freedonia node, indicating the flow of authentication data.



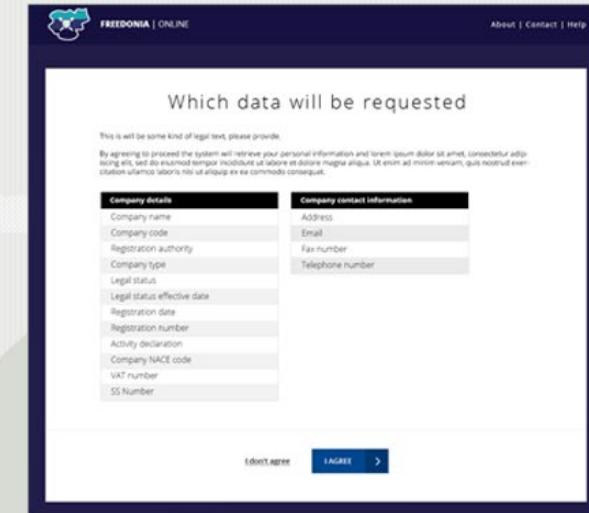
# Achieving consent for data request

screen 4

Once-only principle in action

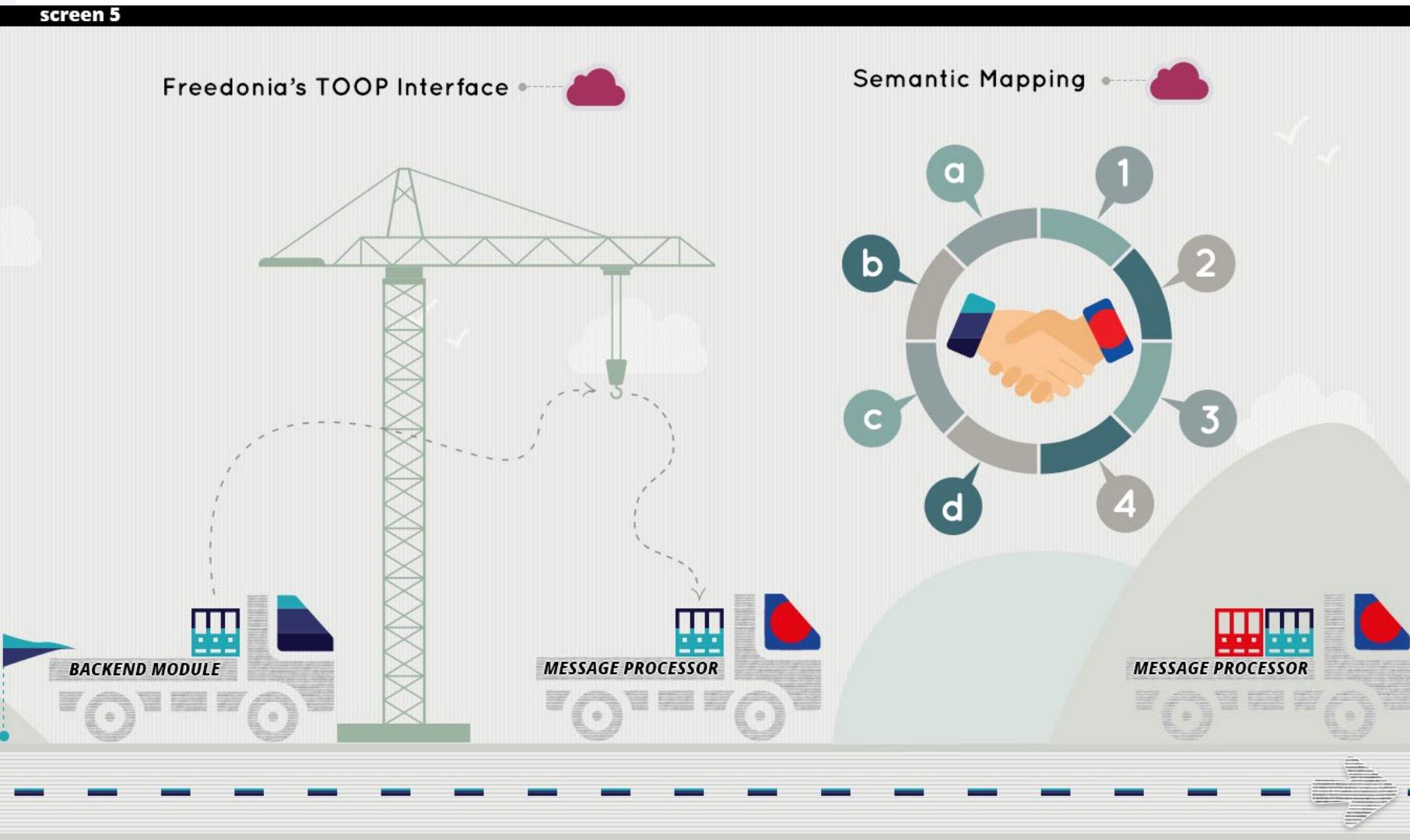



Consent to retrieve information



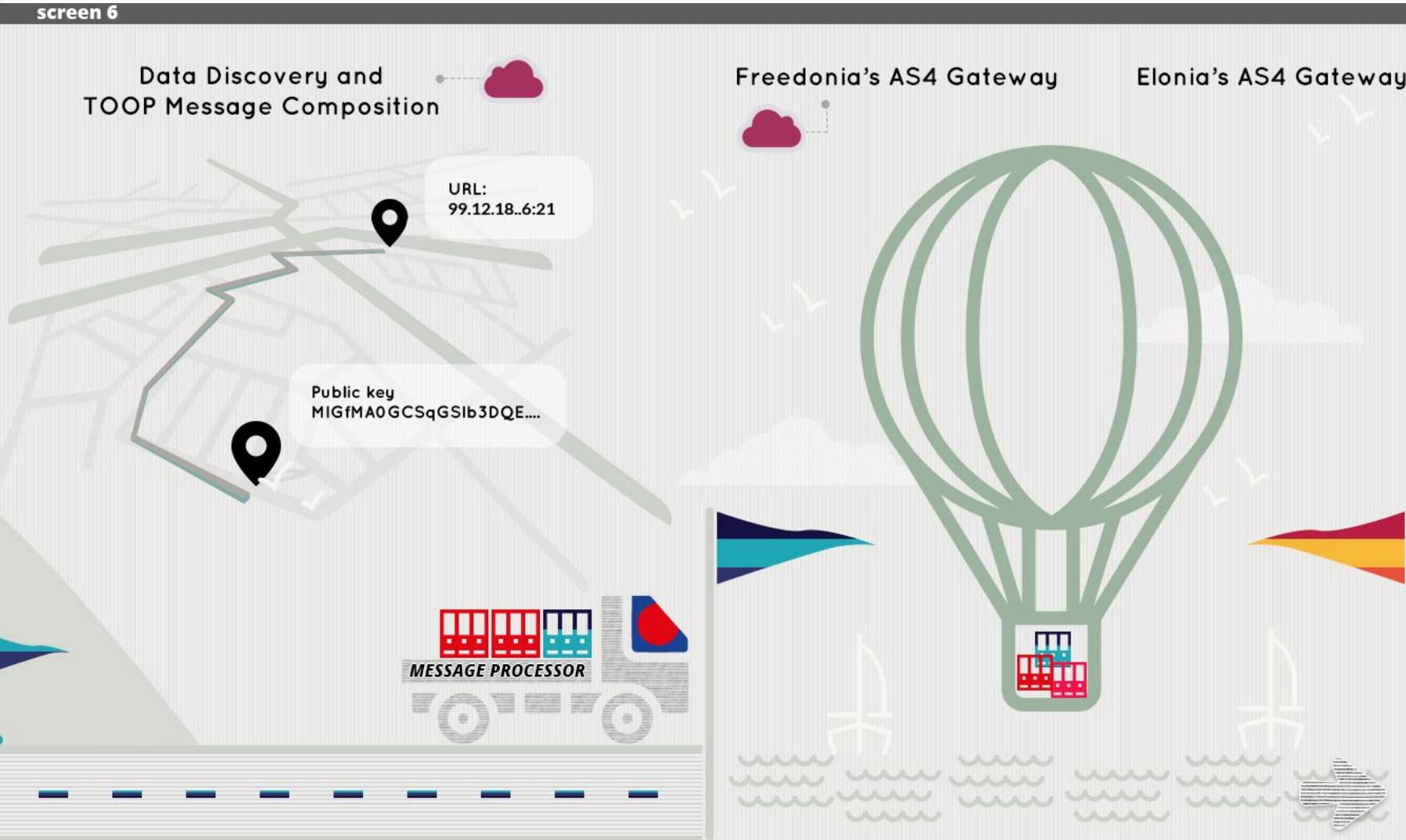


# Semantic Mapping of Freedonia concepts





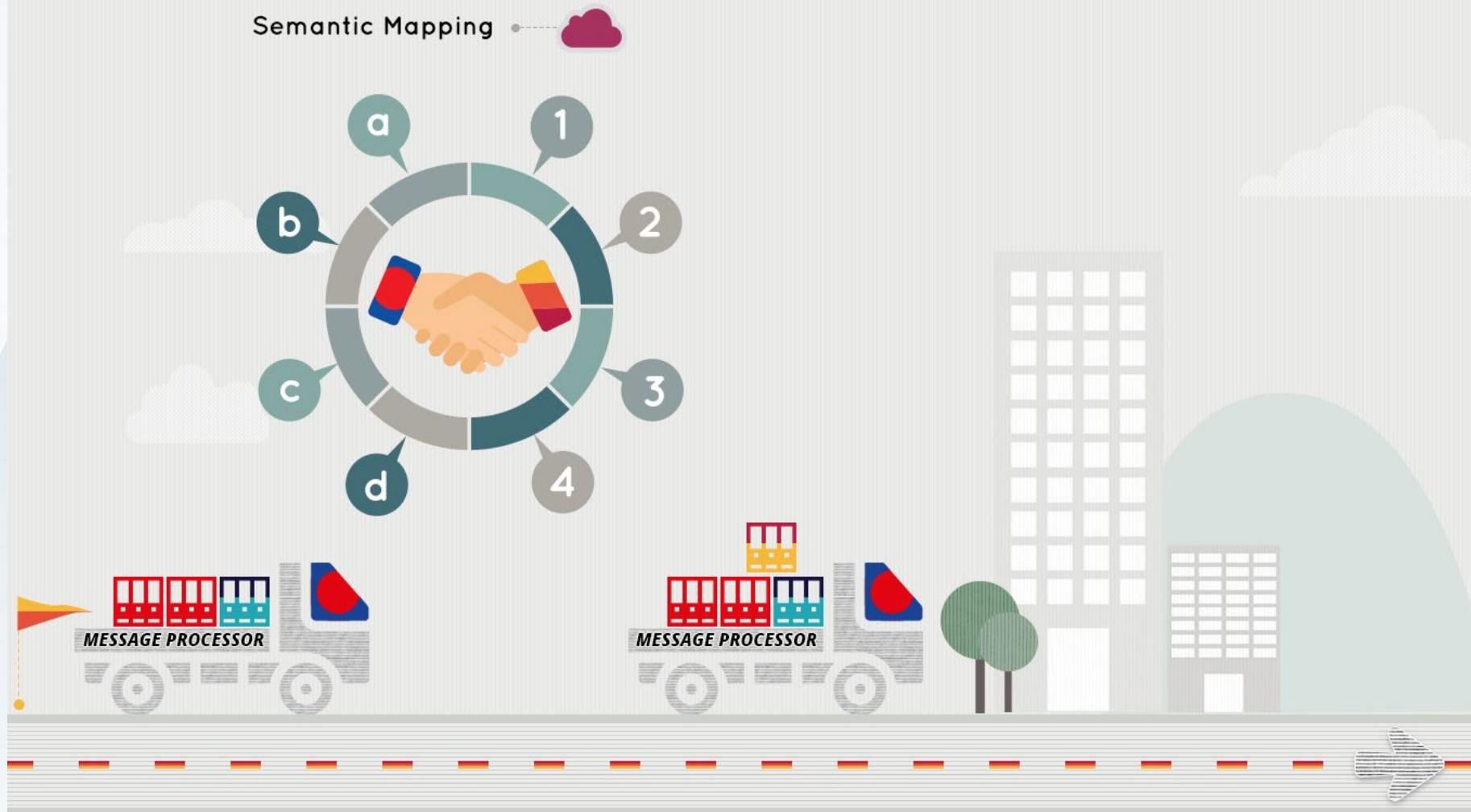
# Delivery and receipt of request via eDelivery





# Semantic Mapping of Elonia concepts

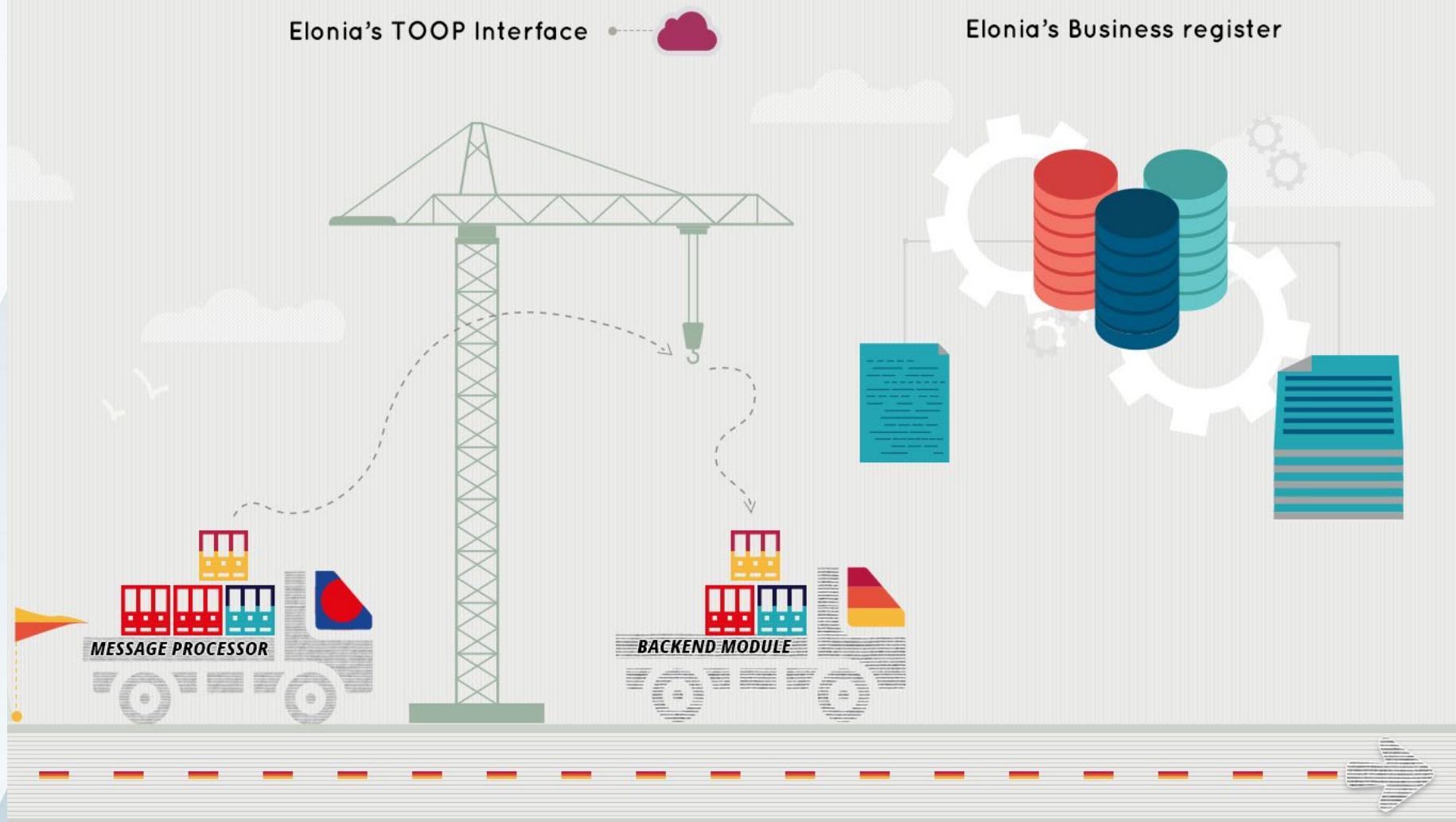
screen 7





# Processing the request by the responsible Register

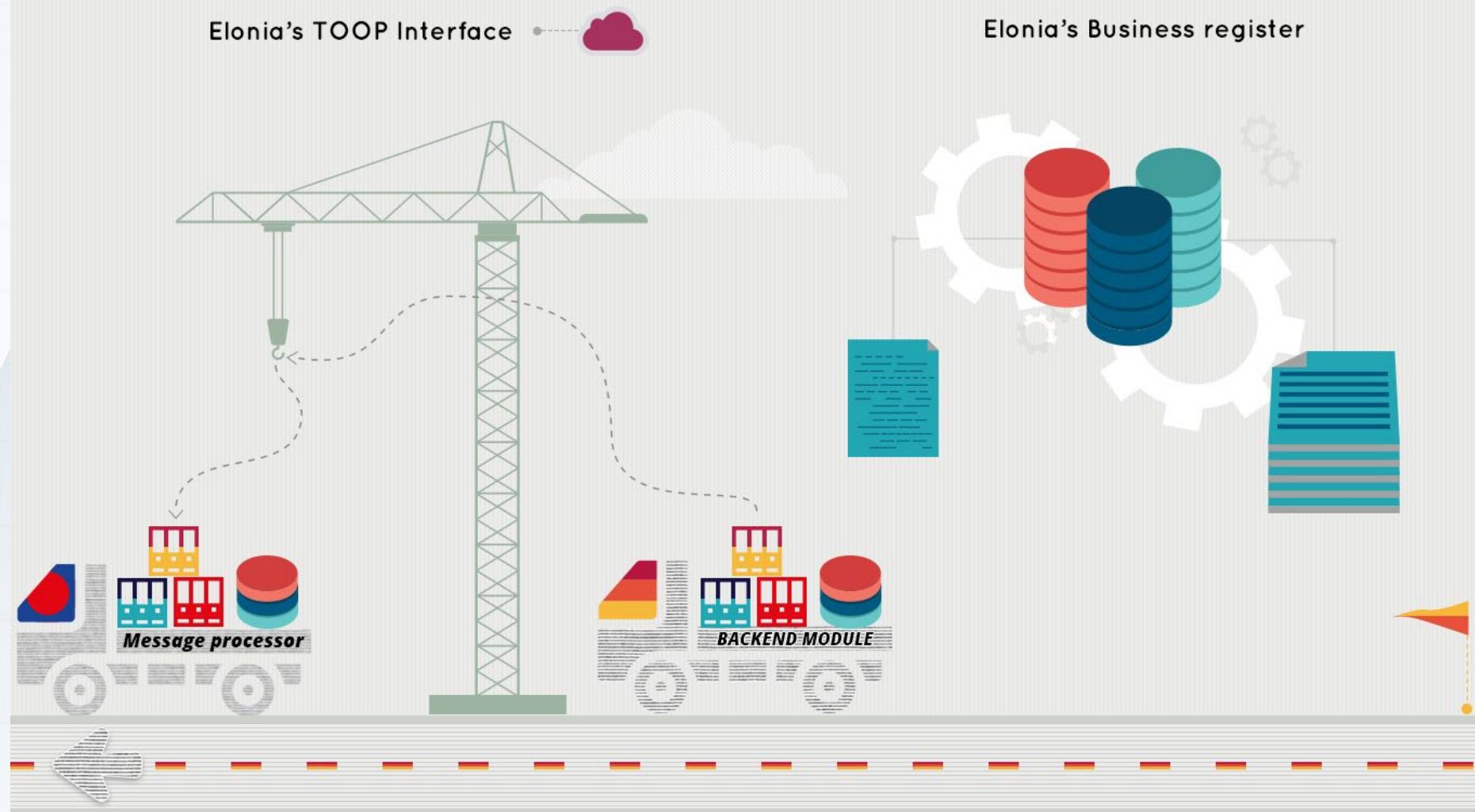
screen 8





# Composing the response

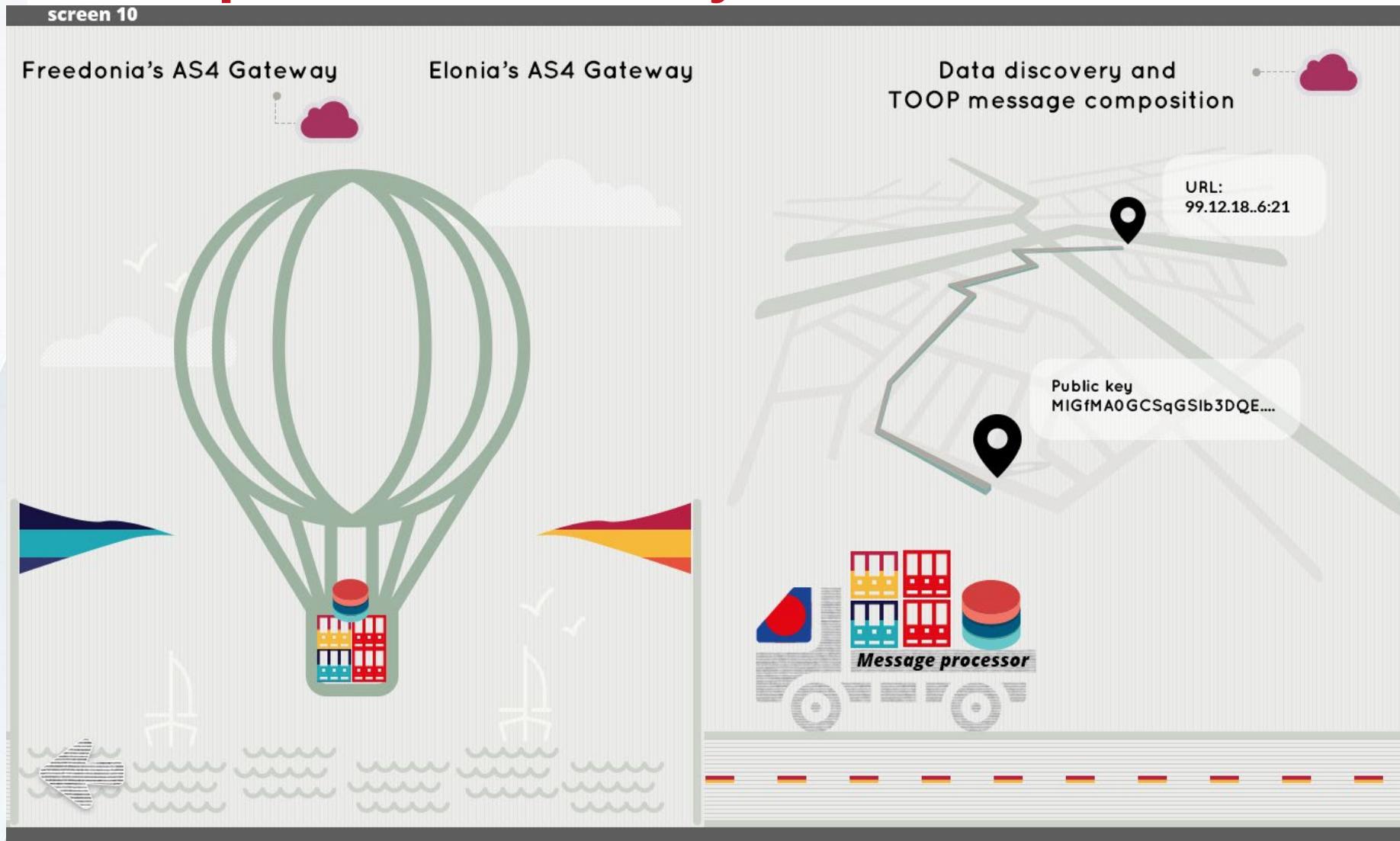
screen 9





# Delivery and receipt of response via eDelivery

screen 10

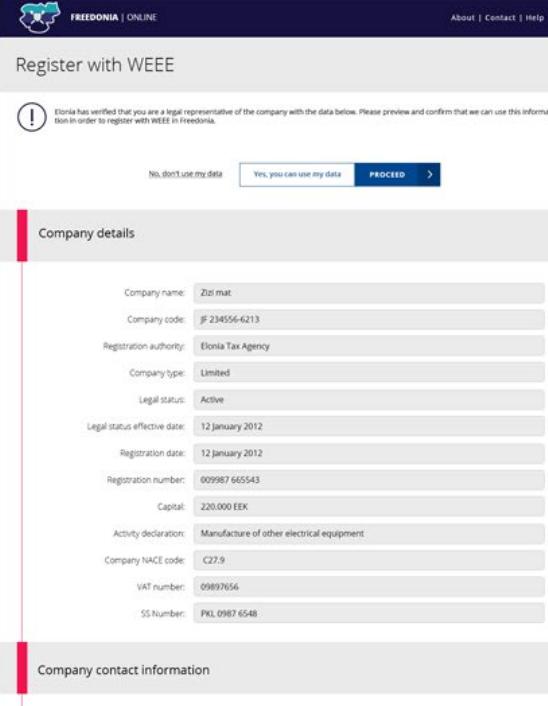




# Processing the response

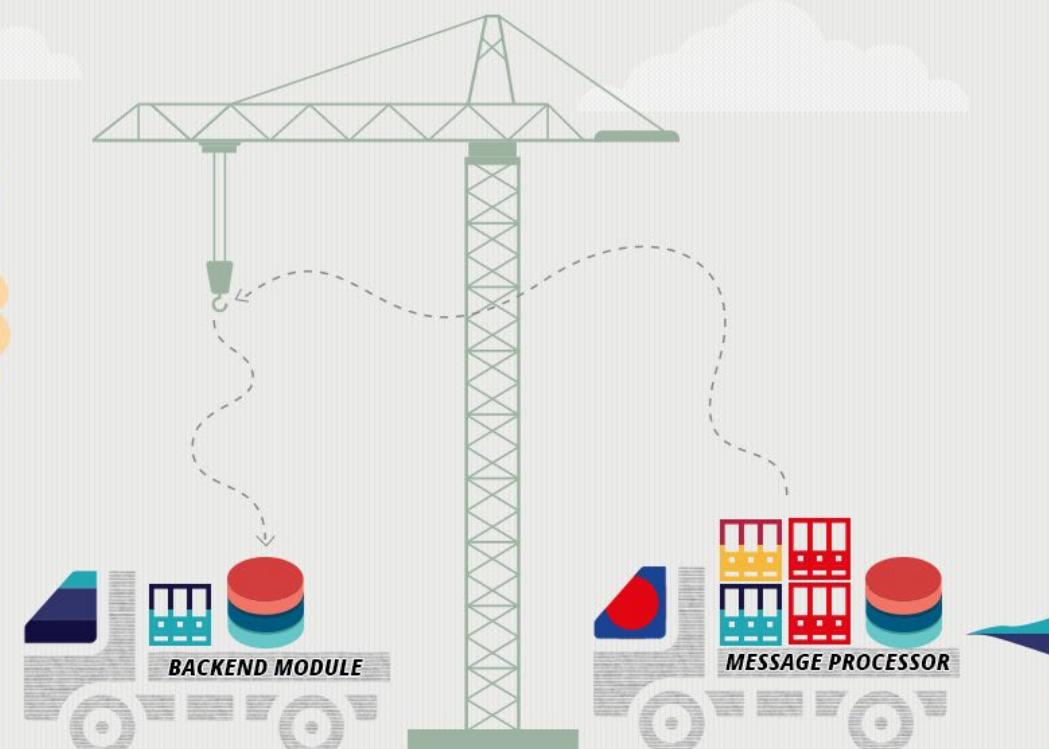
screen 11

Preview of retrieved information



The screenshot shows a registration form for 'Zizi mat' with fields for company name, code, registration authority, type, legal status, capital, activity declaration, NACE code, VAT number, and SS Number. A note at the top states: 'Elonia has verified that you are a legal representative of the company with the data below. Please preview and confirm that we can use this information in order to register with WEEE in Freedonia.' Buttons include 'No, don't use my data', 'Yes, you can use my data', and 'PROCEED >'.

Freedonia's TOOP Interface



The diagram features a green construction crane against a background of white clouds. A large yellow thumbs-up icon is positioned to the left of the crane. Two grey rectangular boxes at the base represent 'BACKEND MODULE' and 'MESSAGE PROCESSOR'. Dashed arrows show data flowing from the backend module to the crane and then to the message processor. A small blue arrow points towards the bottom left corner.



# Use of the data

screen 12

## Additional information

**FREEDOMIA | ONLINE**

Register with WEEE

The following additional information is required

Waste disposal process:	Manufacture and distribution
Hazardous materials:	Electronic equipment
Exemptions:	None
Producer Compliance Scheme:	PCS 12345 / 2018

**PROCEED >**

## Submit completed form

**FREEDOMIA | ONLINE**

Register with WEEE

**! Review your information before submitting!**  
Please make sure that the information you have added below and the information retrieved by the system are correct.

**PROCEED >**

**Your personal details**

Uniqueness Identifier:	NX 19720922 - 4566
Family name:	Stern
First name:	Maximilian
Date of birth:	25 October 1976

**Additional information**

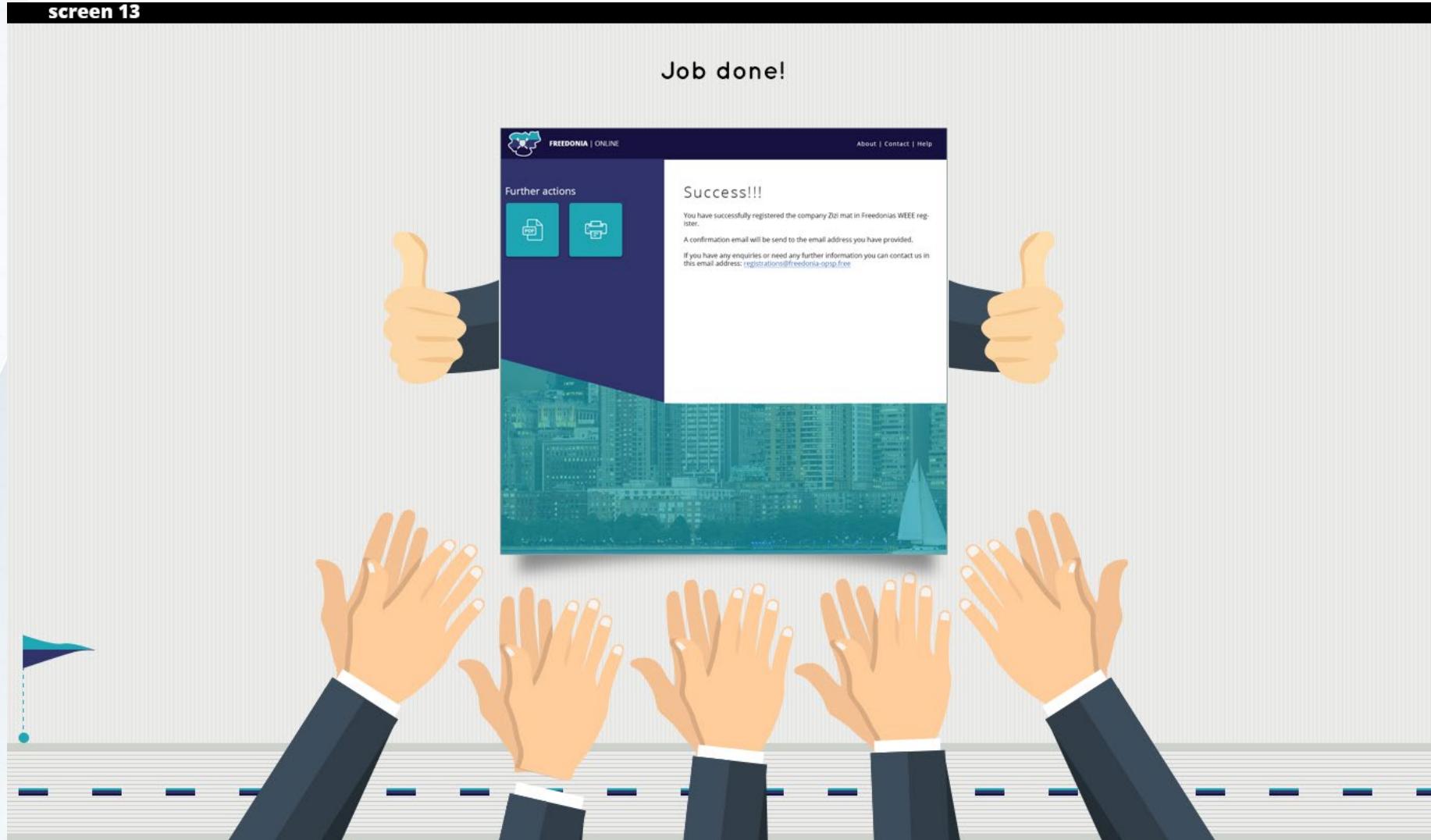
Waste disposal process:	Manufacture and distribution
Hazardous materials:	Electronic equipment
Exemptions:	None
Producer Compliance Scheme:	PCS 12345 / 2018

**Company details**

Company name:	Zi zi mat
Company code:	JF 234556-6213
Registration authority:	Estonia Tax Agency
Company type:	Limited

# Done !

screen 13



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# Single Digital Gateway Regulation

## Regulation (EU) 2018/1724

to provide access to information, to procedures  
and to assistance and problem-solving services



[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2018.295.01.0001.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.295.01.0001.01.ENG)

### REGULATION (EU) 2018/1724 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 2 October 2018

establishing a single digital gateway to provide access to information,  
to procedures and to assistance and problem-solving services and  
amending Regulation (EU) No 1024/2012

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE  
EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union,  
and in particular Article 21(2) and Article 114(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social  
Committee (<sup>1</sup>),

Acting in accordance with the ordinary legislative procedure (<sup>2</sup>),

Whereas:

(1) The internal market is one of the Union's most tangible achievements.  
By allowing people, goods, services and capital to move freely it offers



## SDGR Contents

[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2018.295.01.0001.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.295.01.0001.01.ENG)

### CHAPTER I - GENERAL PROVISIONS

### CHAPTER II - GATEWAY SERVICES

### CHAPTER III - QUALITY REQUIREMENTS

SECTION 1 - Quality requirements related to information on rights, obligations and rules, on procedures and on assistance and problem-solving services

SECTION 2 - Requirements related to online procedures

SECTION 3 - Quality requirements related to assistance and problem-solving services

SECTION 4 - Quality monitoring

### CHAPTER IV - TECHNICAL SOLUTIONS

### CHAPTER V - PROMOTION

### CHAPTER VI - COLLECTION OF USER FEEDBACK AND STATISTICS

### CHAPTER VII - GOVERNANCE OF THE GATEWAY

### CHAPTER VIII - FINAL PROVISIONS

### ANNEX I

### ANNEX II

### ANNEX III

## Look into the Regulation

[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2018.295.01.0001.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.295.01.0001.01.ENG)



**Note: the whole regulation is relevant for examination**



# SDGR Annex I: List of areas of information relevant for citizens exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
A. Travel within the Union	<ul style="list-style-type: none"> <li>1. documents required of Union citizens, their family members who are not Union citizens, minors travelling alone and non-Union citizens when travelling across borders within the Union (ID card, visa, passport)</li> <li>2. rights and obligations of travellers by plane, train, ship, bus in and from the Union, and of those who buy travel packages or linked travel arrangements</li> <li>3. assistance in case of reduced mobility when travelling in and from the Union</li> <li>4. transport of animals, plants, alcohol, tobacco, cigarettes and other goods when travelling in the Union</li> <li>5. voice calling and sending and receiving electronic messages and electronic data within the Union</li> </ul>

# SDGR Annex I: List of areas of information relevant for citizens exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
B. Work and retirement within the Union	<ul style="list-style-type: none"> <li>1. seeking employment in another Member State</li> <li>2. taking up employment in another Member State</li> <li>3. recognition of qualifications with a view to employment in another Member State</li> <li>4. taxation in another Member State</li> <li>5. rules on liability and mandatory insurance linked to residence or employment in another Member State</li> <li>6. terms and conditions of employment, including for posted workers, as stipulated by law or statutory instrument (including information on working hours, paid leave, holiday entitlements, rights and obligations regarding overtime work, health checks, termination of contracts, dismissal and redundancies)</li> <li>7. equal treatment (rules prohibiting discrimination in the workplace, rules on equal pay for men and women and on equal pay for employees on fixed-term or permanent employment contracts)</li> <li>8. health and safety obligations in relation to different types of activity</li> <li>9. social security rights and obligations in the Union including those related to getting pensions</li> </ul>

# SDGR Annex I: List of areas of information relevant for citizens exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
C. Vehicles in the Union	<ul style="list-style-type: none"> <li>1. taking a motor vehicle temporarily or permanently to another Member State</li> <li>2. acquiring and renewing a driving licence</li> <li>3. taking out mandatory motor vehicle insurance</li> <li>4. buying and selling a motor vehicle in another Member State</li> <li>5. national traffic rules and requirements for drivers, including general rules for the use of the national road infrastructure: time-based charges (vignette), distance-based charges (toll), emission stickers</li> </ul>

# SDGR Annex I: List of areas of information relevant for citizens exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
D. Residence in another Member State	<ul style="list-style-type: none"> <li>1. moving temporarily or permanently to another Member State</li> <li>2. purchasing and selling of immovable property, including any conditions and obligations related to taxation, ownership, or use of such property, including its use as a secondary residence</li> <li>3. participating in municipal elections and elections to the European Parliament</li> <li>4. requirements for residence cards for Union citizens and their family members, including family members who are not Union citizens</li> <li>5. conditions applicable to the naturalisation of nationals from another Member State</li> <li>6. rules applicable in the case of death, including rules on the repatriation of remains to another Member State</li> </ul>

# SDGR Annex I: List of areas of information relevant for citizens exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
E. Education or traineeship in another Member State	<ul style="list-style-type: none"> <li>1. education system in another Member State, including early childhood education and care, primary and secondary education, higher education and adult learning</li> <li>2. volunteering in another Member State</li> <li>3. traineeships in another Member State</li> <li>4. conducting research in another Member State as part of an education programme</li> </ul>
F. Healthcare	<ul style="list-style-type: none"> <li>1. getting medical treatment in another Member State</li> <li>2. buying prescribed pharmaceutical products in a Member State other than the one where the prescription was issued, online or in person</li> <li>3. health insurance rules applicable in the case of short-term or long-term stays in another Member State, including how to apply for a European Health Insurance Card</li> <li>4. general information on access rights or obligations to participate in available public preventive healthcare measures</li> <li>5. services provided through national emergency numbers, including '112' and '116' numbers</li> <li>6. rights and conditions for moving to a residential care home</li> </ul>

# SDGR Annex I: List of areas of information relevant for citizens exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
G. Citizens' and family rights	<ul style="list-style-type: none"> <li>1. birth, custody for minor children, parental responsibilities, rules on surrogacy and adoption, including second-parent-adoption, maintenance obligations in relation to children in a cross-border family situation</li> <li>2. living in a couple with different nationalities, including same-sex couples (marriage, civil or registered partnership, separation, divorce, marital property rights, the rights of cohabitants)</li> <li>3. rules of gender recognition</li> <li>4. rights and obligations in relation to succession in another Member State, including tax rules</li> <li>5. rights and rules applicable in the case of cross-border parental child abduction</li> </ul>

# SDGR Annex I: List of areas of information relevant for citizens exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
H. Consumer rights	<ol style="list-style-type: none"> <li>1. buying goods, digital content or services (including financial services) from another Member State, online or in person</li> <li>2. holding a bank account in another Member State</li> <li>3. connection to utilities, such as gas, electricity, water, household waste disposal, telecoms and the internet</li> <li>4. payments, including credit transfers, delays in cross-border payments</li> <li>5. consumer rights and guarantees related to buying goods and services, including procedures for consumer dispute resolution and compensation</li> <li>6. safety and security of consumer products</li> <li>7. renting a motor vehicle</li> </ol>

# SDGR Annex I: List of areas of information relevant for citizens exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
I. Protection of personal data	1. exercising data subjects' rights in relation to the protection of personal data

# SDGR Annex I: List of areas of information relevant for business exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
J. Starting, running and closing a business	<ul style="list-style-type: none"> <li>1. registering, changing the legal form of or closing a business (registration procedures and legal forms for carrying out business)</li> <li>2. moving a business to another Member State</li> <li>3. intellectual property rights (applying for a patent, registering a trademark, a drawing or a design, getting a license for reproduction)</li> <li>4. fairness and transparency in commercial practices, including consumer rights and guarantees related to selling goods and services</li> <li>5. offering online facilities for cross-border payments when selling goods and services online</li> <li>6. rights and obligations arising under contract law, including late payment interests</li> <li>7. insolvency proceedings and liquidation of companies</li> <li>8. credit insurance</li> <li>9. mergers of companies or selling a business</li> <li>10. civil liability of directors of a company</li> <li>11. rules and obligations regarding the processing of personal data</li> </ul>

# SDGR Annex I: List of areas of information relevant for business exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
K. Employees	<ol style="list-style-type: none"> <li>1. terms of employment stipulated by law or statutory instrument (including working hours, paid leave, holiday entitlements, rights and obligations regarding overtime work, health checks, termination of contracts, dismissals and redundancies)</li> <li>2. social security rights and obligations in the Union (registering as employer, registering employees, notifying the end of contract of an employee, paying social contributions, rights and obligations related to pensions)</li> <li>3. employment of workers in other Member States (posting of workers, rules on freedom to provide services, residency requirements for workers)</li> <li>4. equal treatment (rules prohibiting discrimination in the workplace, rules on equal pay for men and women and equal pay for employees on fixed-term or under permanent employment contracts)</li> <li>5. rules on staff representation</li> </ol>

## SDGR Annex I: List of areas of information relevant for business exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
L. Taxes	<ol style="list-style-type: none"><li>1. VAT: information on the general rules, rates and exemptions, registering for and paying VAT, obtaining a refund</li><li>2. excise duties: information on the general rules, rates and exemptions, registration for excise tax purposes and payment of excise tax, obtaining a refund</li><li>3. customs duties and other taxes and duties collected on imports</li><li>4. customs procedures for imports and exports under the Union Customs Code</li><li>5. other taxes: payment, rates, tax returns</li></ol>

# SDGR Annex I: List of areas of information relevant for business exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
M. Goods	<ol style="list-style-type: none"> <li>1. obtaining CE marking</li> <li>2. product rules and requirements</li> <li>3. identifying applicable standards, technical specifications and getting products certified</li> <li>4. mutual recognition of products not subject to Union specifications</li> <li>5. requirements regarding classification, labelling and packaging for hazardous chemicals</li> <li>6. distance/off-premises selling: information to be given to customers in advance, confirmation of the contract in writing, withdrawal from a contract, delivering of the goods, other specific obligations</li> <li>7. defective products: consumer rights and guarantees, after-sale responsibilities, means of redress for an injured party</li> <li>8. certification, labels (EMAS, energy labels, Eco-design, EU eco-label)</li> <li>9. recycling and waste management</li> </ol>

# SDGR Annex I: List of areas of information relevant for business exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
N. Services	<ul style="list-style-type: none"> <li>1. acquiring licences, authorisations or permits with a view to starting and operating a business</li> <li>2. notifying the authorities of cross-border activities</li> <li>3. recognition of professional qualifications, including vocational education and training</li> <li>4. <i>information on rules governing the provision of short-term accommodation rental services, including the lists referred to in Article 13 of Regulation (EU) 2024/1028 of the European Parliament and of the Council.</i></li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <span style="color: #1a237e;">Date of effect 06.05.2026</span> </div>
O. Funding a business	<ul style="list-style-type: none"> <li>1. obtaining access to finance at the Union level, including Union funding programmes and business grants</li> <li>2. obtaining access to finance at national level</li> <li>3. initiatives addressed to entrepreneurs (exchanges organised for new entrepreneurs, mentoring programmes, etc.)</li> </ul>

# SDGR Annex I: List of areas of information relevant for business exercising their internal market rights referred to in point (a) of Article 2(2)

Area	INFORMATION REGARDING RIGHTS, OBLIGATIONS AND RULES ARISING FROM UNION AND NATIONAL LAW
P. Public contracts	<ul style="list-style-type: none"> <li>1. participating in public tenders: rules and procedures</li> <li>2. submitting a bid online in response to a public call for tender</li> <li>3. reporting irregularities in relation to the tender process</li> </ul>
Q. Health and safety at work	<ul style="list-style-type: none"> <li>1. health and safety obligations in relation to different types of activity, including risk prevention, information and training</li> </ul>

## SDGR Annex II: Procedures referred to in Article 6(1)

Life events	Procedures	Expected output subject to an assessment of the application by the competent authority in accordance with national law, where relevant
Birth	Requesting proof of registration of birth	Proof of registration of birth or birth certificate
Residence	Requesting proof of residence	Confirmation of registration at the current address
Studying	Applying for a tertiary education study financing, such as study grants and loans from a public body or institution	Decision on the application for financing or acknowledgement of receipt
	Submitting an initial application for admission to public tertiary education institution	Confirmation of the receipt of application
	Requesting academic recognition of diplomas, certificates or other proof of studies or courses	Decision on the request for recognition

## SDGR Annex II: Procedures referred to in Article 6(1)

Life events	Procedures	Expected output subject to an assessment of the application by the competent authority in accordance with national law, where relevant
Working	Request for determination of applicable legislation in accordance with Title II of Regulation (EC) No 883/2004 <a href="#">(1)</a>	Decision on applicable legislation
	Notifying changes in the personal or professional circumstances of the person receiving social security benefits, relevant for such benefits	Confirmation of receipt of notification of such changes
	Application for a European Health Insurance Card (EHIC)	European Health Insurance Card (EHIC)
	Submitting an income tax declaration	Confirmation of the receipt of the declaration

[\(1\)](#) Regulation (EC) No 883/2004 of the European Parliament and of the Council of 29 April 2004 on the coordination of social security systems ([OJ L 166, 30.4.2004, p. 1](#)).

## SDGR Annex II: Procedures referred to in Article 6(1)

Life events	Procedures	Expected output subject to an assessment of the application by the competent authority in accordance with national law, where relevant
Moving	<p>Registering a change of address</p> <p>(2) This covers the following vehicles: (a) any motor vehicle or trailer as referred to in Article 3 of Directive 2007/46/EC of the European Parliament and of the Council (<a href="#">OJ L 263, 9.10.2007, p. 1</a>); and (b) any two- or three-wheel motor vehicle, whether twin-wheeled or otherwise, intended to travel on the road, as referred to in Article 1 of Regulation (EU) No 168/2013 of the European Parliament and of the Council (<a href="#">OJ L 60, 2.3.2013, p. 52</a>).</p>	Confirmation of deregistration at the previous address and of the registration of the new address
	<p>Registering a motor vehicle originating from or already registered in a Member State, in standard procedures <a href="#">(2)</a></p>	Proof of registration of a motor vehicle
	<p>Obtaining stickers for the use of the national road infrastructure: time-based charges (vignette), distance-based charges (toll), issued by a public body or institution</p>	Receipt of toll sticker or vignette or other proof of payment
	<p>Obtaining emission stickers issued by a public body or institution</p>	Receipt of emission sticker or other proof of payment
Retiring	<p>Claiming pension and pre-retirement benefits from compulsory schemes</p>	Confirmation of the receipt of the claim or decision regarding the claim for a pension or pre-retirement benefits
Sub	<p>Requesting information on the data related to pension from compulsory schemes</p>	Statement of personal pension data

# SDGR Annex II: Procedures referred to in Article 6(1)

[https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L\\_.2018.295.01.0001.01.ENG](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.295.01.0001.01.ENG)

Life events	Procedures	Expected output subject to an assessment
Starting, running and closing a business	Notification of business activity, permission for exercising a business activity, changes of business activity and the termination of a business activity not involving insolvency or liquidation procedures, excluding the initial registration of a business activity with the business register and excluding procedures concerning the constitution of or any subsequent filing by companies or firms within the meaning of the second paragraph of Article 54 TFEU	Confirmation of the receipt of notification or change, or of the request for permission for business activity
	Registration of an employer (a natural person) with compulsory pension and insurance schemes	Confirmation of registration or social security registration number
	Registration of employees with compulsory pension and insurance schemes	Confirmation of registration or social security registration number
	Submitting a corporate tax declaration	Confirmation of the receipt of the declaration
	Notification to the social security schemes of the end of contract with an employee, excluding procedures for the collective termination of employee contracts	Confirmation of the receipt of the notification
	Payment of social contributions for employees	Receipt or other form of confirmation of payment of social contributions for employees

# Implementing Regulation for the SDGR



**Commission Implementing Regulation (EU) 2022/1463 of 5 August 2022 setting out technical and operational specifications of the technical system for the cross-border automated exchange of evidence and application of the 'once-only' principle in accordance with Regulation (EU) 2018/1724 of the European Parliament and of the Council (Text with EEA relevance)**

C/2022/5628

OJ L 231, 6.9.2022, p. 1–21 (BG, ES, CS, DA, DE, ET, EL, EN, FR, GA, HR, IT, LV, LT, HU, MT, NL, PL, PT, RO, SK, SL, FI, SV)

● In force

ELI: [http://data.europa.eu/eli/reg\\_impl/2022/1463/o](http://data.europa.eu/eli/reg_impl/2022/1463/o)

▼ Expand all ▲ Collapse all

▼ Languages, formats and link to OJ

	BG	ES	CS	DA	DE	ET	EL	EN	FR	GA	HR	IT	LV	LT	HU	MT	NL	PL	PT	RO	SK	SL	FI	SV
HTML	<a href="#">HTML</a>																							
PDF	<a href="#">PDF</a>																							
Official Journal	<a href="#">FIC</a>																							

# Implementing Regulation for the SDGR Regulation (EU) 2022/1463 of 5 August 2022

SECTION 1 - GENERAL PROVISIONS

SECTION 2 - SERVICES OF THE OOTS

SECTION 3 - EVIDENCE REQUESTERS

SECTION 4 - EVIDENCE PROVIDERS

SECTION 5 - LOG SYSTEM OF THE OOTS

SECTION 6 - GOVERNANCE OF THE OOTS

SECTION 7 - TECHNICAL SUPPORT

SECTION 8 - COOPERATION WITH OTHER GOVERNANCE STRUCTURES

SECTION 9 - RESPONSIBILITY FOR MAINTENANCE AND OPERATION OF COMPONENTS OF  
THE OOTS

SECTION 10 - SECURITY

SECTION 11 - FINAL PROVISIONS

# SDG Technical Design Documents (TDD) - Once-Only Technical System (OOTS) High Level Architecture v. 1.00 (released in December 2023)

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Bereiche ▾ Foren ▾ Personen Kalender

OOTS Technical Design Documents

Seiten > OOTS Technical Design Docum

## 1. Once-Only Technical System

Erstellt von Boris BREMMERS am Jun 01, 2023



**Objective(s)**

- Introduce and position the Once-Only Technical System in the context of the SDG Regulation and OOTS Implementing Act.
- Provide a high-level overview of the main components in the system and the functionality they provide.
- Provide a description of the evidence exchange process.

**Audience**

- Member State representatives in SDG Coordination Group and other designated experts.
- Participants in Once-Only Large-Scale Pilots.
- European Commission DG CNECT and GROW policy units in the area of the "once-only" principle (OOP) and of the Single Digital Gateway (SDG).
- European Commission Digital Building Blocks team.

**Output**

- Functional description of components in Once-Only Technical System.
- Identification of roles and responsibilities of the European Commission and the Member States in Once-Only.
- Sample OOP flows.

### Single Digital Gateway (SDG) High Level Architecture Version 1.00

- Purpose of the document
- Acronyms
- References
- 1. Introduction
  - 1.1. Once-Only Technical System
  - 1.2. Context
  - 1.4. Scope
  - 1.5. Extensibility
  - 1.6. Structure of this document
- 2. Requirements
- 3. Once-Only Technical System Architecture
  - 3.1. Context
  - 3.2. Approach
  - 3.3. Overview
  - 3.4. Core and Extension Architectural Elements
  - 3.5. Governance
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- 4. Evidence Requester Architecture Elements
  - 4.1. Introduction
  - 4.2. Online Procedure Portal
  - 4.3. Online Procedure Portal Access Point
  - 4.4. eIDAS Node of Evidence Requesting Member State
- 5. Evidence Provider Architecture Elements
  - 5.1. Introduction
  - 5.2. Data Service
  - 5.3. Preview Space
  - 5.4. Data Service Access Point
  - 5.5. eIDAS Node of Evidence Issuing Member State
- 6. Once-Only Common Services
  - 6.1. Introduction
  - 6.2. Evidence Broker
  - 6.3. Data Service Directory
  - 6.4. Semantic Repository
  - 6.5. Life Cycle Management
  - 6.6. Deployment Options
- 7. Evidence Exchange and eDelivery
  - 7.1. Introduction
  - 7.3. Evidence Request Response
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  - 7.5. Configuration of eDelivery
  - 7.6. Use in complex scenarios
  - 7.7. Intermediary Platform
  - 7.8. Evidence Exchange Logging
  - 7.9. Evidence Exchange integration in Member States
- 8. Identification and Authentication
  - 8.1. Introduction
  - 8.2. eIDAS Node
  - 8.3. Identification and authentication
  - 8.4 Identity Matching
  - 8.6. Representation
  - 8.7. Additional OOTS eID security services
- 9. System Operation
  - 9.1 Introduction
  - 9.2 Log System
- 10. Sample Once-Only Flows
  - 10.1. Sample Flow

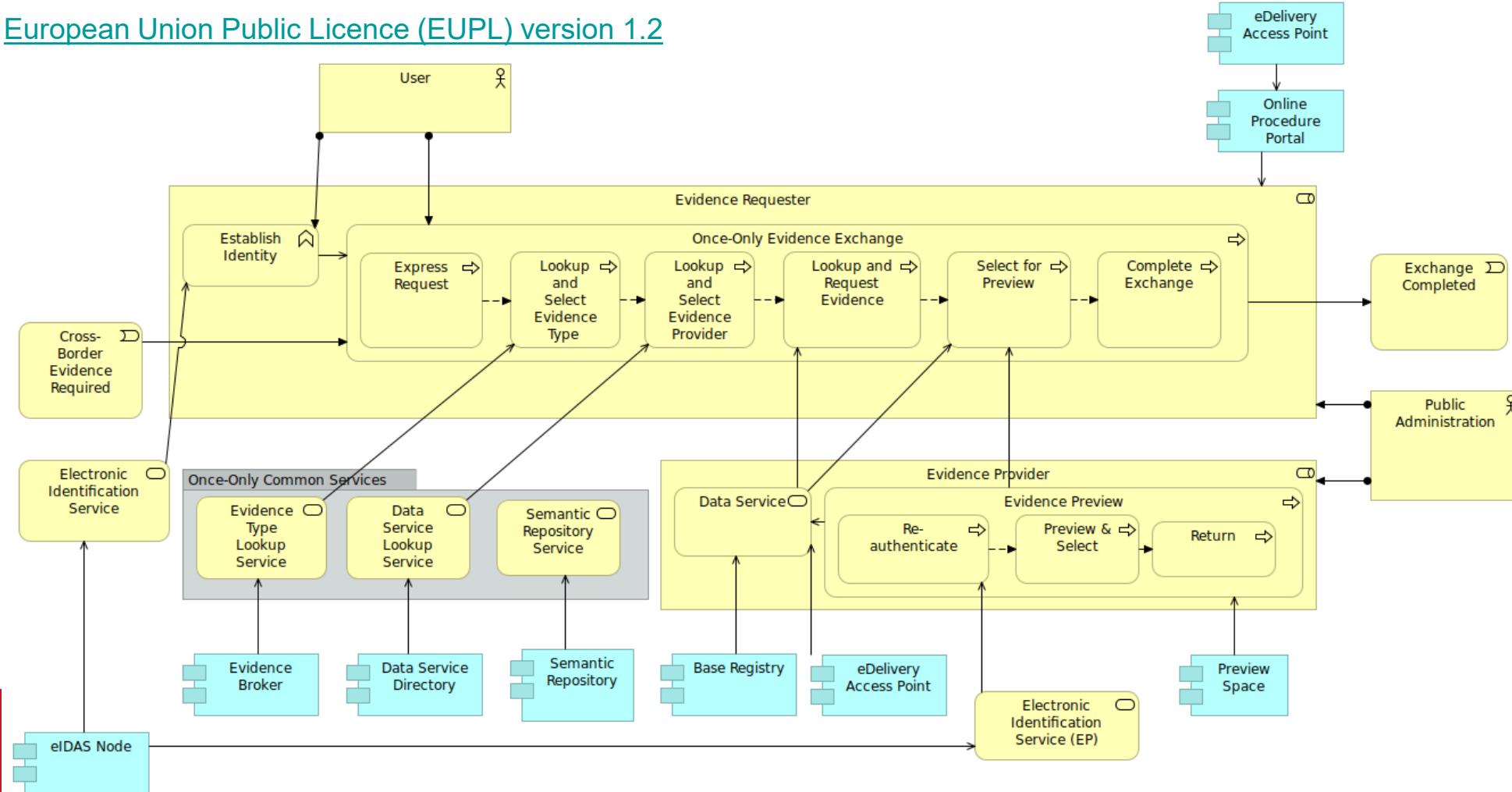
<https://ec.europa.eu/digital-building-blocks/wikis/display/TDD/1.+Once-Only+Technical+System+High+Level+Architecture+Snapshot+Q2>

# Once-only Technical System (OOTS) – high level view

Technical Design Document (TDD) (v 1.00, released in December 2023)

<https://ec.europa.eu/digital-building-blocks/sites/pages/viewpage.action?pagId=706382128>

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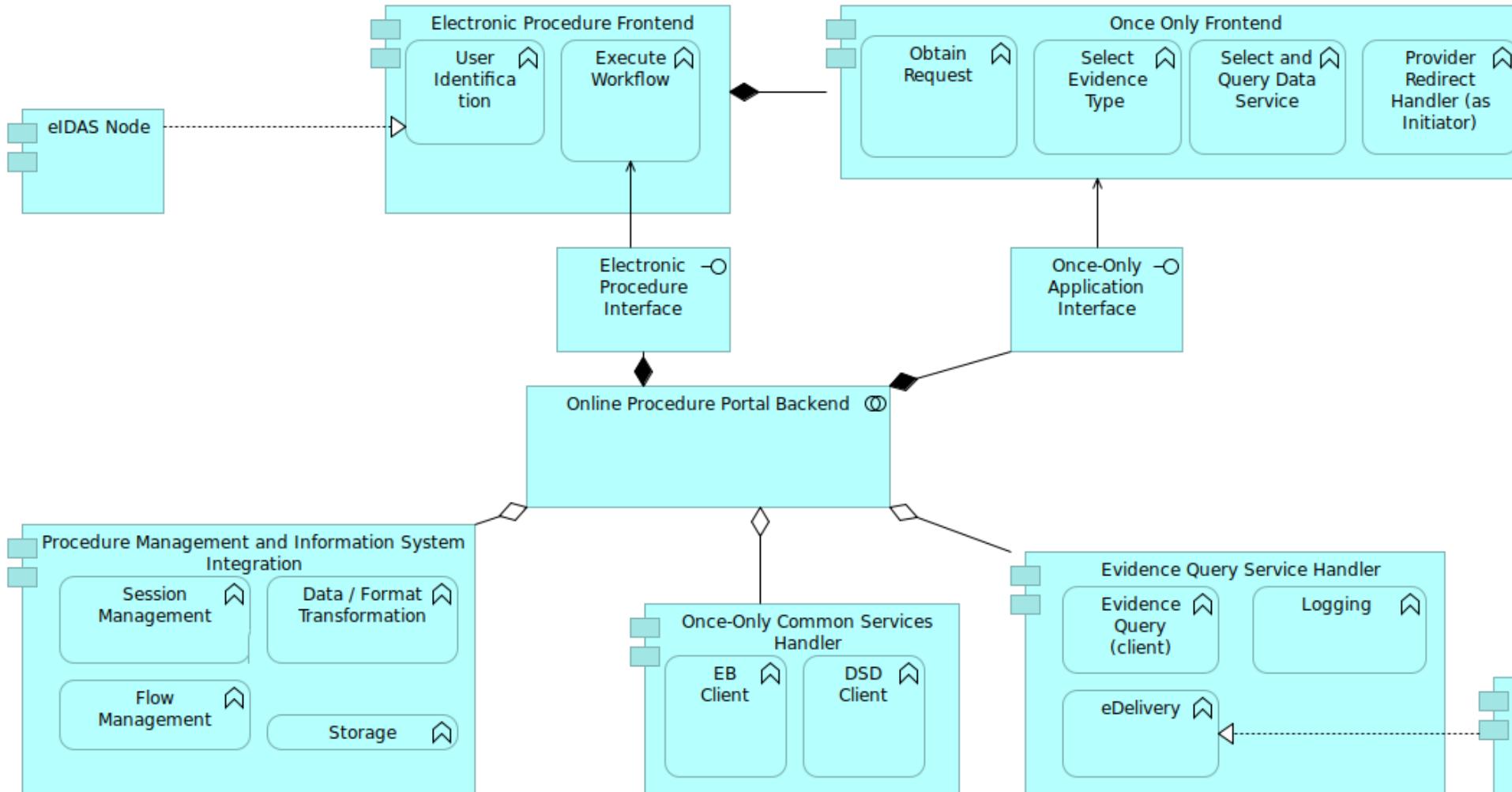


# Once-only Technical System (OOTS) – high level view: Online Procedure Portal Application View

Technical Design Document (TDD) (v 1.00, released in December 2023)

<https://ec.europa.eu/digital-building-blocks/sites/pages/viewpage.action?pageld=706382128>

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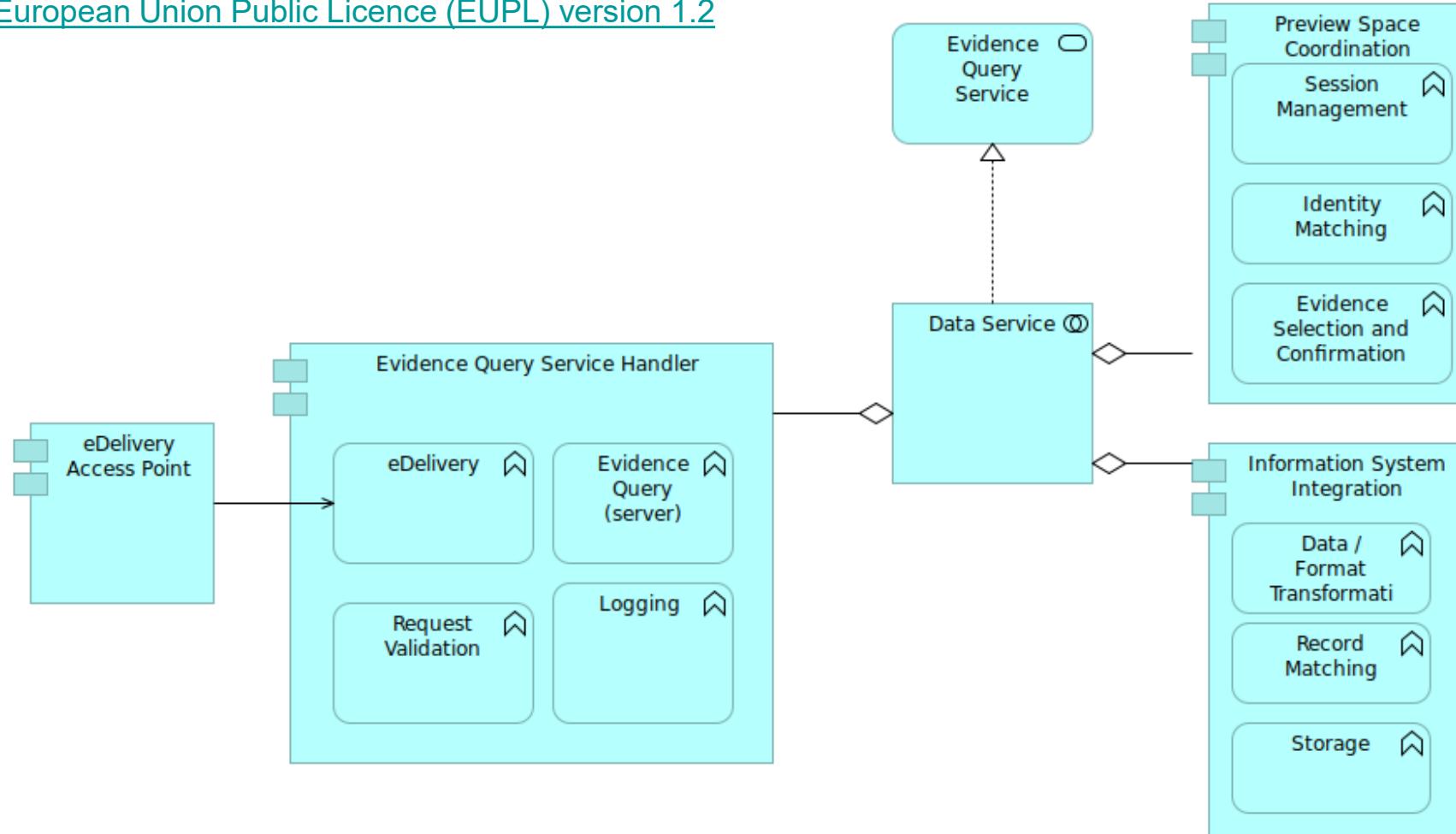


# Once-only Technical System (OOTS) – high level view: Data Service Application View

Technical Design Document (TDD) (v 1.00, released in December 2023)

<https://ec.europa.eu/digital-building-blocks/sites/pages/viewpage.action?pagId=706382128>

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# Once-Only Hub (launched in July 2024)

- ❖ **Knowledge base:** It provides guidance, documentation, technical specifications, and best practices for EU Member States and stakeholders implementing the Once-Only Principle.
- ❖ **Collaboration space:** It serves as a workspace for national administrations, EU institutions, and developers to collaborate on the cross-border exchange of data.
- ❖ **Monitoring & updates:** Offers status updates, project timelines, and compliance tools related to OOTS rollout and SDGR implementation.
- ❖ **Technical support:** Hosts technical architecture details, APIs, test environments, and integration guidelines for national IT systems.
- ❖ **Communication channel:** Shares news, milestones, and relevant legislative or strategic updates tied to digital government reforms.

<https://ec.europa.eu/digital-building-blocks/sites/display/OOTS/OOTSHUB+Home>

## ARCHITECTURE

# The Once-Only Technical System architecture

The decentralised architecture connects public authorities, so they can exchange evidence at the citizen's or business' request by using an interoperability layer based on the concept of common reusable "[building blocks](#)", designed to minimise the impact on existing systems in Member States and to maximise opportunities for reuse.



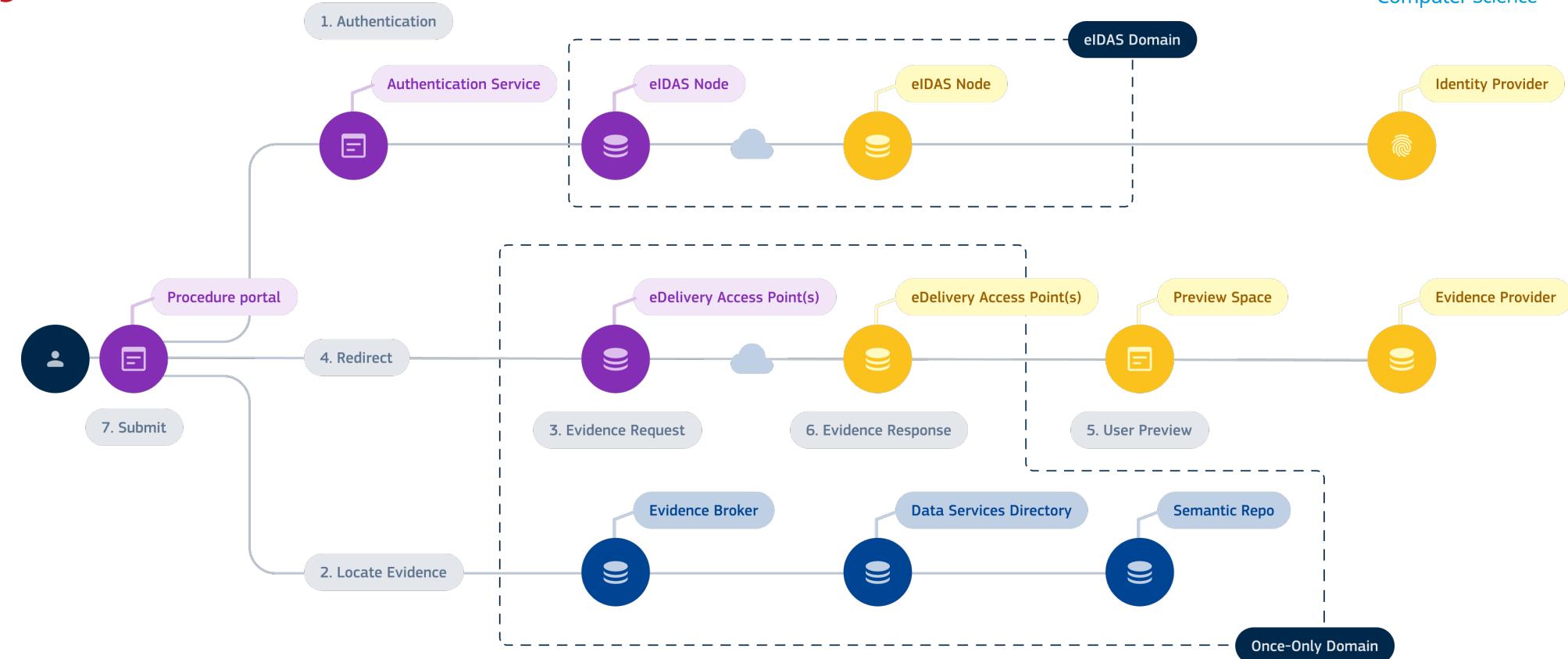
## Architectural design of the Once-Only Technical System

The OOTS architecture includes interoperability-enabling elements provided by existing Building Blocks developed under the former Connecting Europe Facility (CEF) such as eID and eDelivery and adds additional Once-Only common services to provide comprehensive support for Once-Only. The interfaces may be implemented in multiple independent software implementations or services, including software products or services from third party solution providers.

The following elements are core architectural elements as they are used for all "once-only" exchanges:

<https://ec.europa.eu/digital-building-blocks/sites/display/OOTS/Architecture>

# Architectural design of the Once-Only Technical System



● Evidence Requester

● OOTS Common Services

● Evidence Provider

<https://ec.europa.eu/digital-building-blocks/sites/display/OTS/Catalogue+of+reusable+services>

# The 7 steps of the Once-Only Technical System

- 1. Authenticate:** The user authenticates with an eIDAS notified eID scheme
- 2. Locate evidence:** The procedure portal identifies what to ask for, evidence type), and who to ask it from (evidence provider)
- 3. Evidence request:** The request for evidence is sent to the evidence provider
- 4. Redirect:** The user is redirected to the provider side
- 5. Preview:** The user previews their evidence
- 6. Evidence response:** The evidence provider responds to the evidence request
- 7. Submit:** The user completes and submits his/her procedural form

<https://ec.europa.eu/digital-building-blocks/sites/display/OOTS/Architecture>

# Commission work programme 2025

[https://commission.europa.eu/strategy-and-policy/strategy-documents/commission-work-programme/commission-work-programme-2025\\_en](https://commission.europa.eu/strategy-and-policy/strategy-documents/commission-work-programme/commission-work-programme-2025_en)

Key highlights: SDGR and Once-Only in the 2025 work programme

- 1. Simplification and Competitiveness Focus:** Goal: Cut admin burdens by 25% overall and 35% for SMEs by 2029.
- 2. Once-Only Principle implementation (and OOTS):** Citizens and businesses share data once; administrations reuse it across borders
- 3. Transition to a Data-Centric Economy:** Shift from document-based to data-based public services across the EU.
- 4. Mandate under the Single Digital Gateway Regulation:** Mandates cross-border digital services via OOTS.
- 5. Significant Cost and Time Savings:** Using OOTS, SMEs can save €5,000+ and 5 weeks when expanding cross-border.
- 6. Political Commitment:** A top priority in Commission President von der Leyen's agenda.
- 7. Support for Green and Digital Transitions:** Cuts energy use and boosts digital administration.

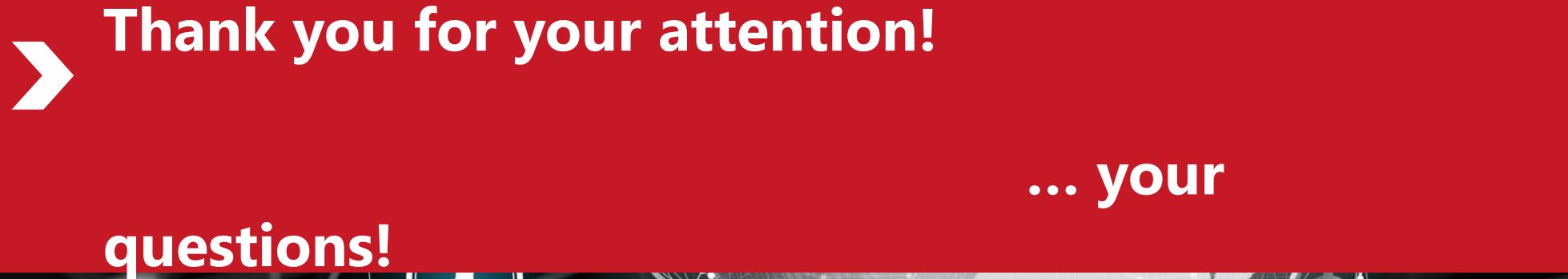
# The Once-Only Principle (TOOP) project and the Single Digital Gateway Regulation (SDGR)

## Agenda

- ❖ The Once-only Principle (TOOP) project
- ❖ TOOP federated architecture
- ❖ Exemplification of the TOOP architecture with a pilot example
- ❖ Single digital gateway regulation (SDGR), Commission Implementing Act and Technical Design Documents
- ❖ TOOP federated architecture as reference solution for SDGR implementation

# TOOP serves as reference architecture for OOP implementations

- ❖ Concept and reference implementations of core building blocks (ABBs and SBBs) for registering of actors and evidences in the network
- ❖ Publishing capabilities of providing evidences
- ❖ Identification of suitable actors (DPs)
- ❖ Retrieving the relevant information for routing
- ❖ Transport infrastructure fulfilling the main requirements
  - Interoperability
  - Confidentiality
  - Reliability
  - Security
  - Integrity
  - Non-Repudiation
  - Scalability
- ❖ Domain independent exchange format for messages
- ❖ Use of PKI to encrypt and sign messages in the network



➤ Thank you for your attention!  
... your  
questions!