![European Commission logo]

CISE Demonstrator

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Context and purpose

Cooperation Project (WP5) — Identify

Services specifications

~~Demonstrator~~ Incubator

European Commission
Facilitator

Member States
- Select
- Implement
- Test

Verify, elaborate, test and apply concepts

Lessons learnt

POV — Elaborate and Implement

Scope

Service Consumer

1. Service Consumer requests information

2. Service Provider provides information

Service Provider

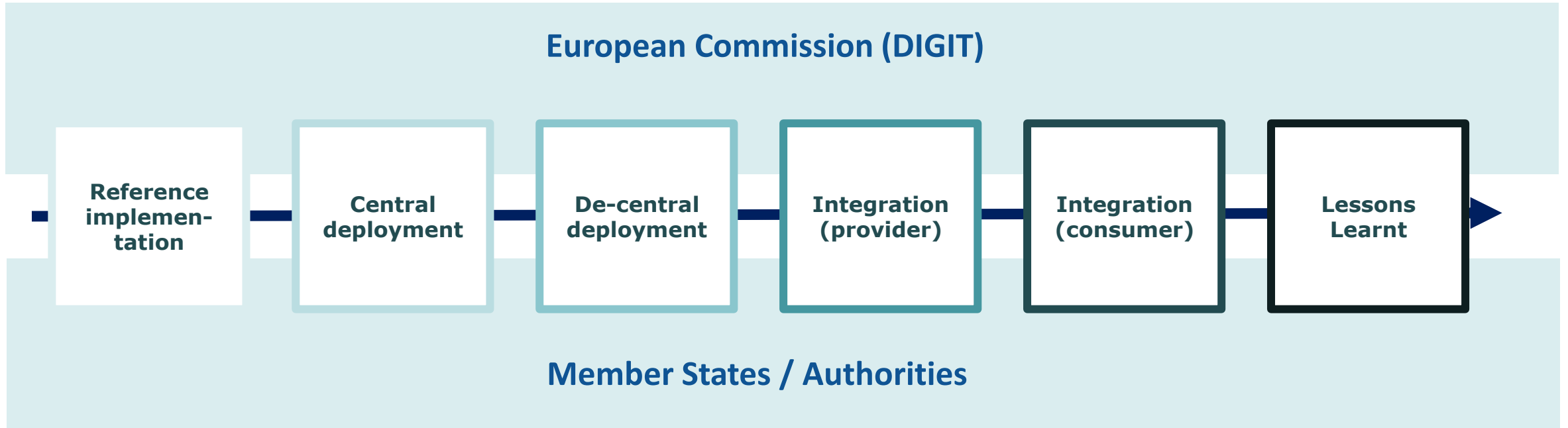| In scope |
|---|
| **Verify, elaborate, test and apply the concepts of WP5 of the Cooperation Project to exchange information between a Service Consumer and a Service Provider** |

Out of scope
Service registry

Access and identity management

Security

Infrastructure services (enterprise services) |

Incubator Approach

European Commission (DIGIT)

| Reference implemen-tation | Central deployment | De-central deployment | Integration (provider) | Integration (consumer) | Lessons Learnt |

Member States / Authorities

CISE Service Approach

- ### Bottom-up Approach

Considering the amount of services specified by WP2, it would not be feasible to specify all services necessary. Therefore it was decided to take a bottom-up approach focused on the core data entities.

(WP5 Final Report, § 4.2.2 – Service Catalogue)

- ### Service Model

To ensure consistency, reusability and extensibility of the CISE technologies, it is useful to define a model for these services which is independent of their content and function in the context of a specific activity or use case. This allows parties to easily develop new business services which are automatically compatible and interoperable with existing ones, and which can be easily integrated into the CISE network.
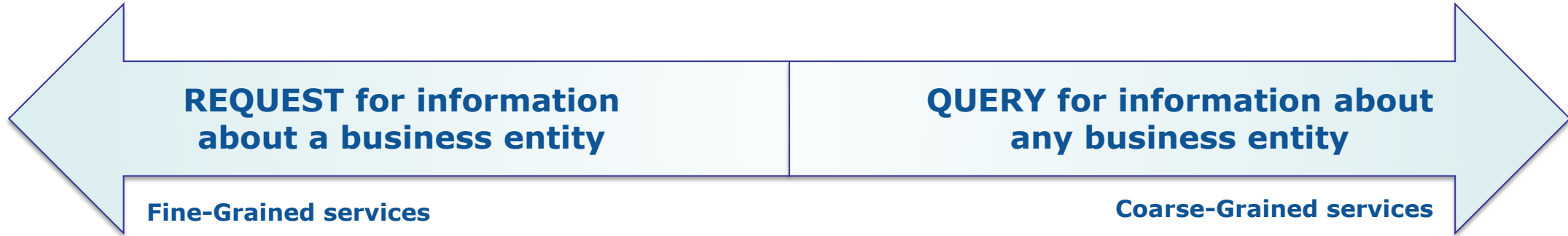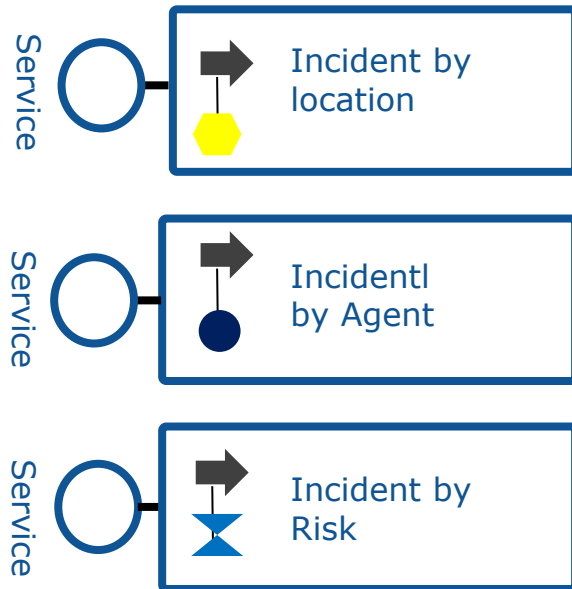
(WP5 Final Report, § 4.2.3 – Service Model)

Service Challenges

GRANULARITY
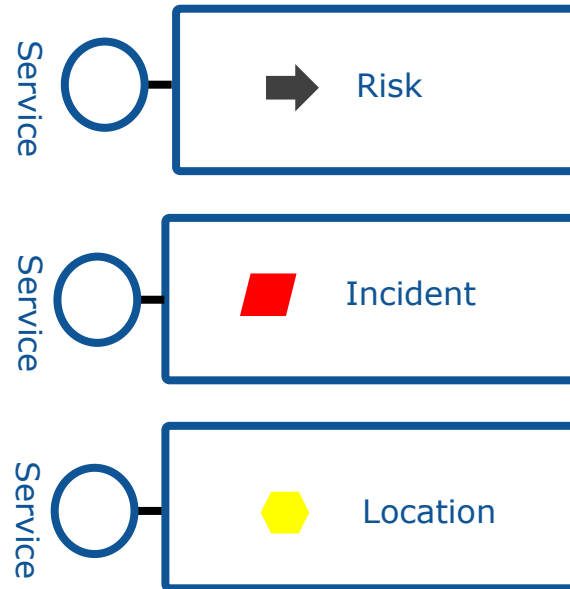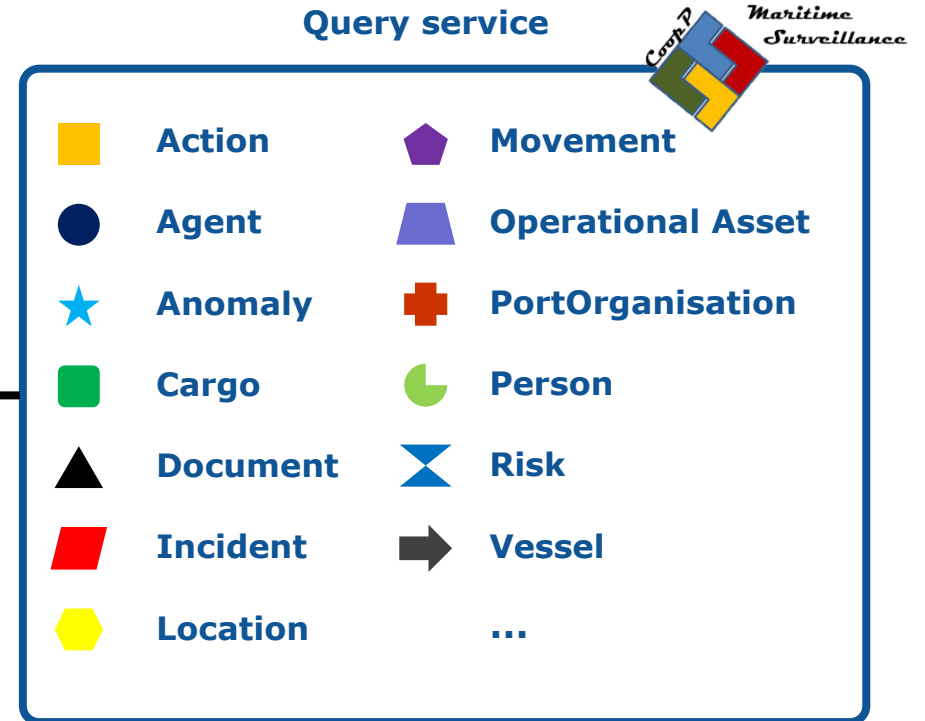
MODEL

EXCHANGE PATTERNS

Service Granularity

REQUEST for information about a business entity

QUERY for information about any business entity

Fine-Grained services

Coarse-Grained services

Alternative I – Task services

Service — Incident by location ⬢

Service — Incidentl by Agent ⚫

Service — Incident by Risk ⧖

Alternative II – Entity services

Service — Risk ➡

Service — Incident ▰

Service — Location ⬢

Query service

🟨 Action   ⬟ Movement

⚫ Agent   ⬟ Operational Asset

⭐ Anomaly   ✚ PortOrganisation

🟩 Cargo   ◗ Person

▲ Document   ⧖ Risk

▰ Incident   ➡ Vessel

⬢ Location   …

Coop P   *Maritime Surveillance*

Service Model

CISE Service Model
Bottom-Up Approach

Service Consumer

Service Provider

Incident
Vessel
Risk
Movement

Context-specific services
Service Consumers build context-specific services by combining context-neutral services

Context-neutral services
Service Providers build services, which are independent of the context of use

✔ **Reusability**

✔ **Extensibility**

✔ **Consistency**

European Commission

Entity Services

Search Services	**Looking up all entities that match a set of criteria** *E.g. Find all Incidents in a specific area, and …, and … or …*	Request to a single service provider
Resource Services	**Find all information available for a specific entity** *E.g. retrieve all available details of a specific Incident*	Request to a single service provider
Broadcast Services	**Find all entities that match a set of criteria** E.g. find all Incidents of a specific risk	Request to all service providers that support a given entity service

Service Issues (examples)

- **What does a search operation return ?**

  - Best or Exact match of identified data ?
  - What is the definition of a best match ?
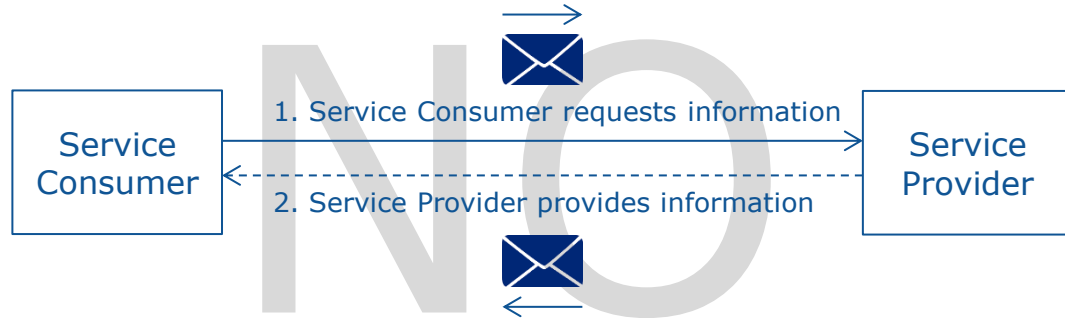 - Google like solution (following keywords not found)?

- **How to manage data volume ?**

  - Retrieve any data up to 1 MB ?
  - Retrieve first "x" elements meeting search criteria (support range concept) ?

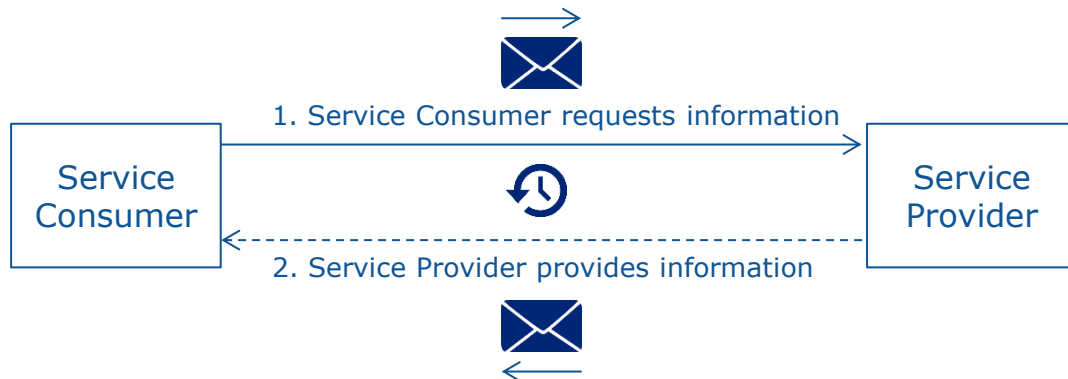- **What service pattern should be applied**

  - Return all/partial details of every entity meeting the criteria ?
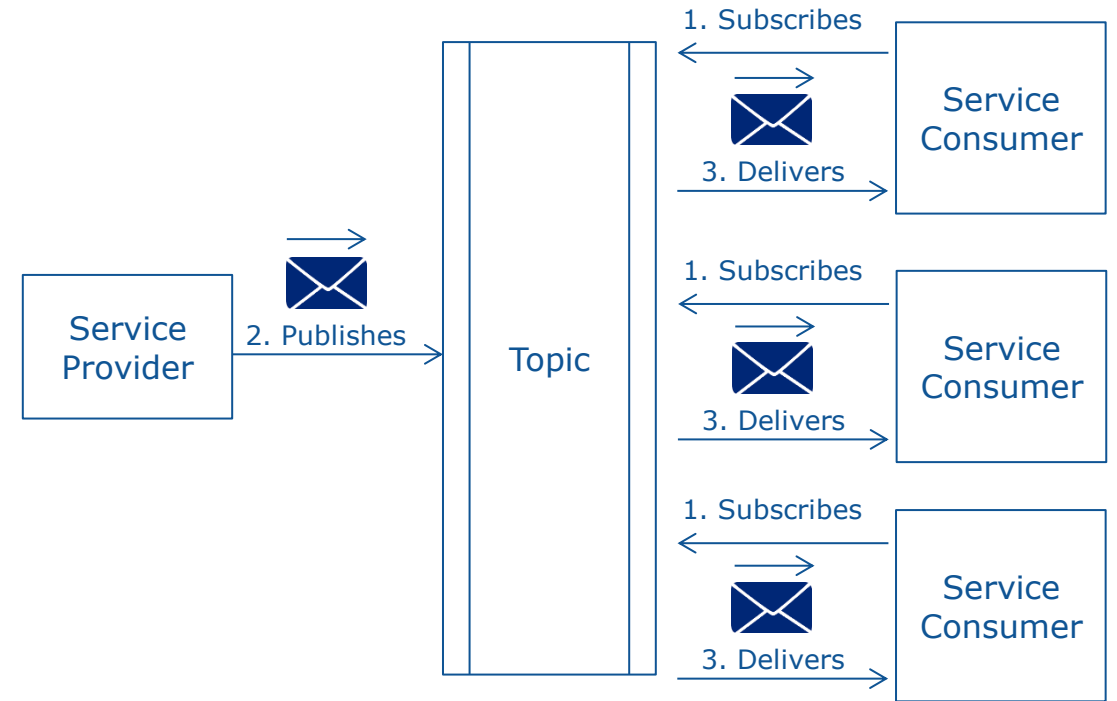
Message Exchange Patterns

NO

1. Service Consumer requests information

2. Service Provider provides information

Service Consumer

Service Provider

- ❖ **Pull** (one service provider)
- ❖ **Broadcast Pull** (multiple service providers)

1. Service Consumer requests information

2. Service Provider provides information

Service Consumer

Service Provider

- ❖ **Pull Delayed**

Service Provider

2. Publishes

Topic

1. Subscribes

3. Delivers

Service Consumer

1. Subscribes

3. Delivers

Service Consumer

1. Subscribes

3. Delivers

Service Consumer

- ❖ **Push** (one service provider)
- ❖ **Broadcast Push** (multiple service providers)

Reference Implementation

Planning / Resources

	Iteration 1	Iteration 2	Iteration 3
Reference Implementation			
Central Deployment			
Local Deployment			
Integration (Provider)			
Integration (Consumer)			
Reporting			
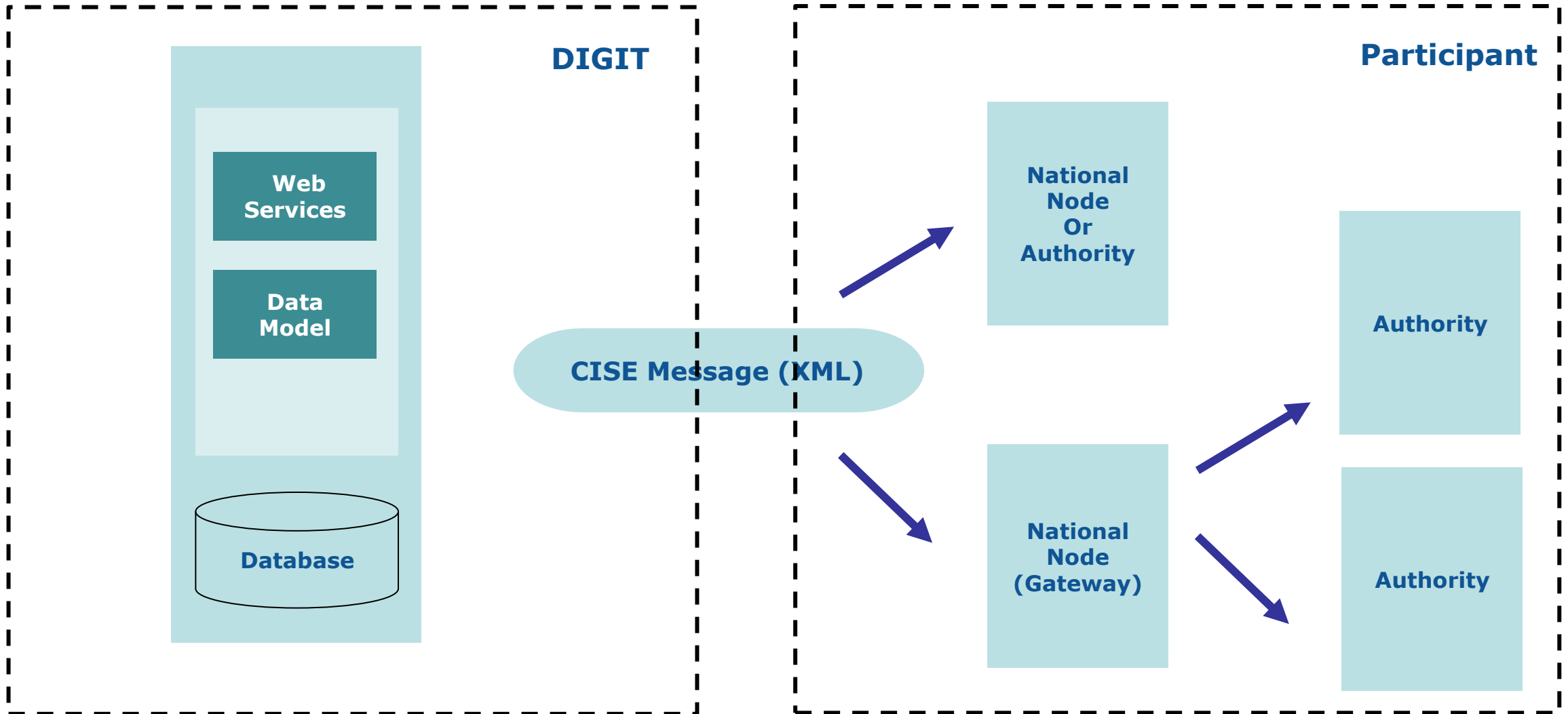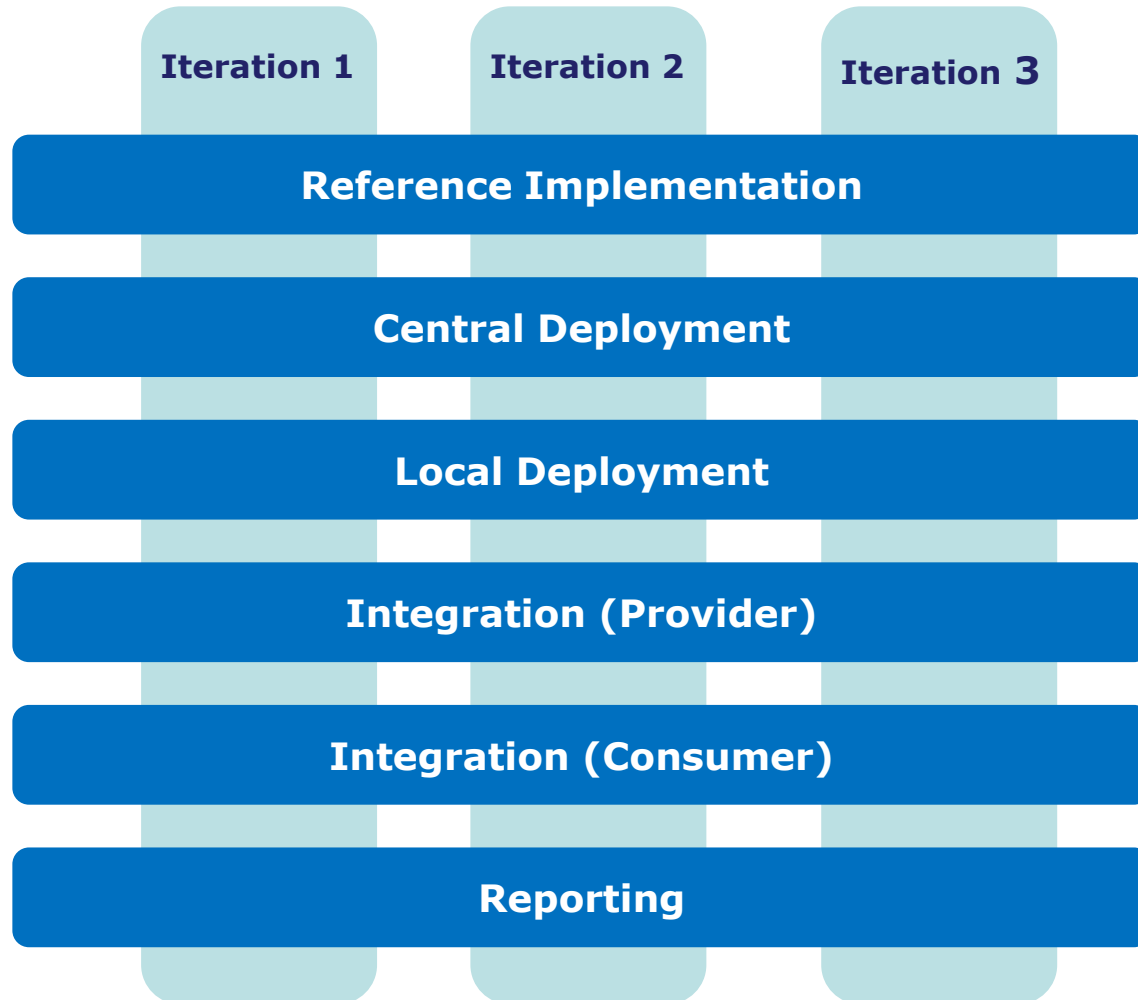
Iterations

- **31 /03/2014 – 25/04/2014**
- **05 /05/2014 – 30/05/2014**
- **09 /06/2014 – 04/07/2014**

Questions

https://joinup.ec.europa.eu/software/digit_cise/home