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Portuguese Ministry of Health Shared Services (SPMS)

From large scale cross border pilots to large scale deployment

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OBJECTIVES

Describe how semantic services were crucial to achieve cross border services during epSOS project.

Enumerate accelerators and constraints found while moving from Pilots to real operation.

CROSS BORDER HEALTH SERVICES

Patient Summary

- EU citizen, **away** from his home country

- Requires an emergent healthcare treatment

- Healthcare professional has access to relevant clinical information, from patient's home country

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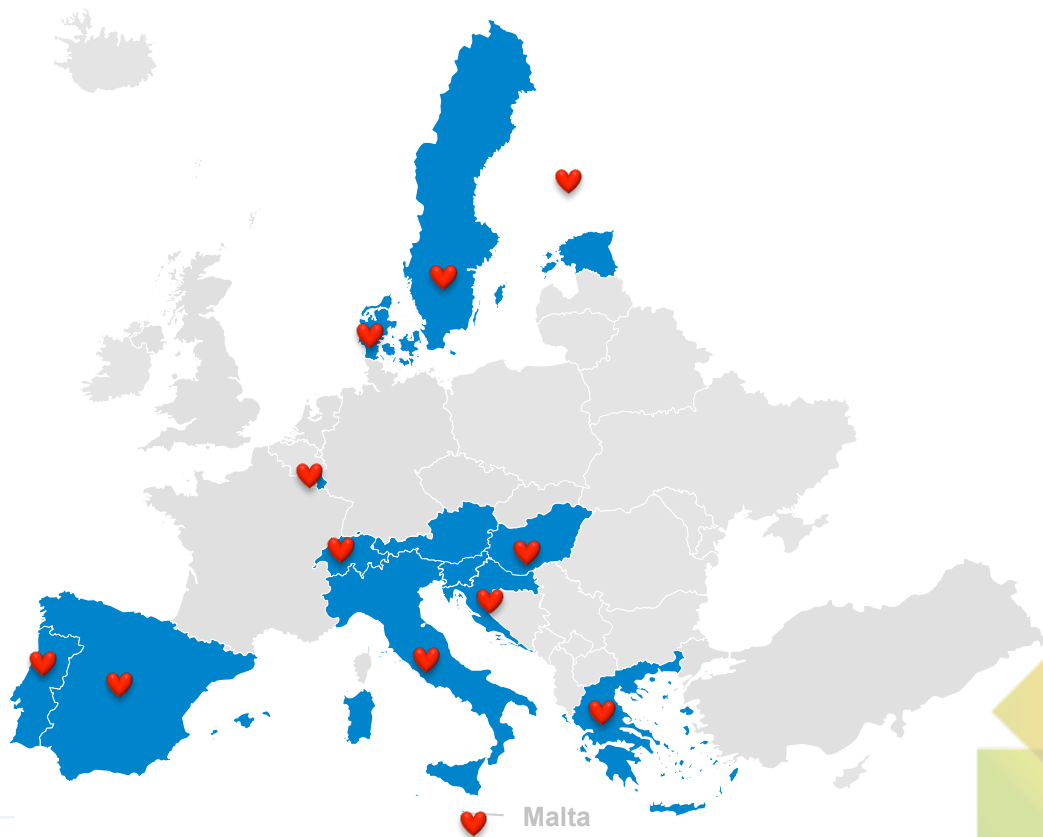
CROSS BORDER HEALTH SERVICES

- EU citizen, **away** from his home country

- Requires drugs prescribed in the home country

- Goes to a pharmacy and obtains the needed medication

ePrescription

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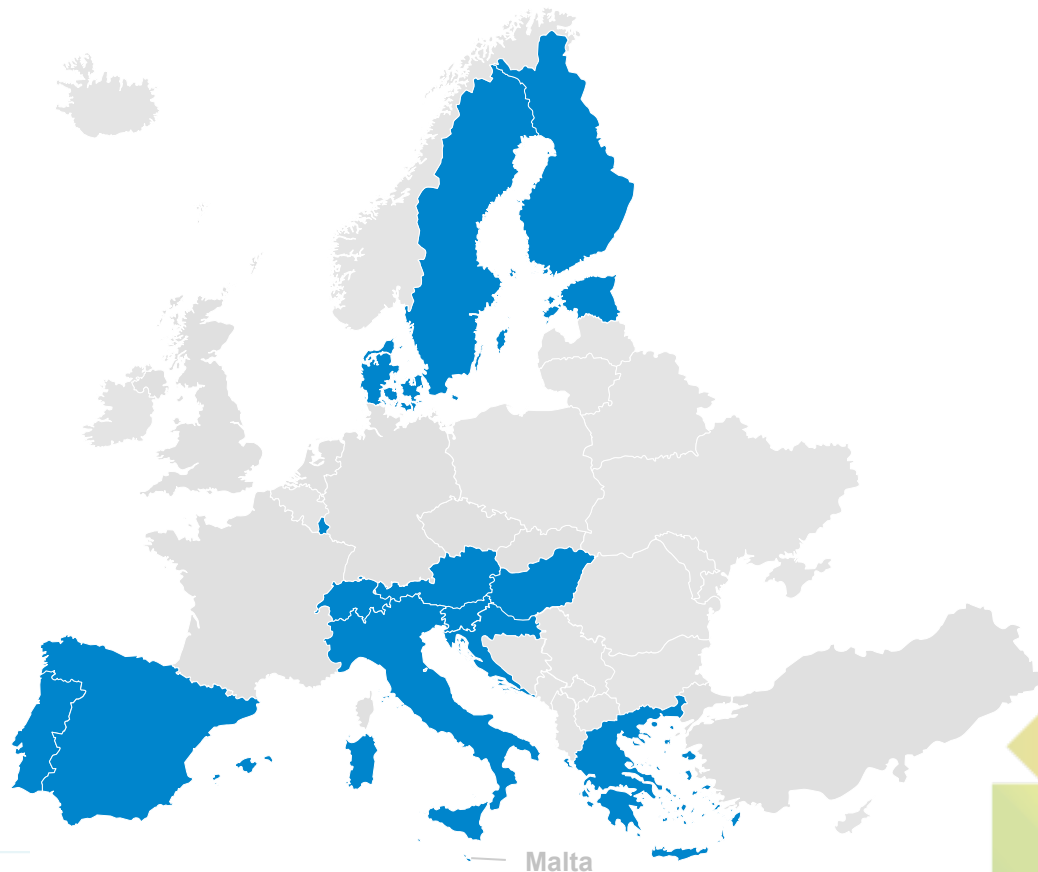Serviços Partilhados do Ministério da Saúde

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WHY <u>NO</u> LIVE SERVICES TODAY?

WHY <u>NO</u> LIVE SERVICES TODAY?

Because projects END

Long term sustainability

- Requires long term commitments

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HOW TO MOVE FORWARD?

CHALLENGE (BY EXPAND)

CHALLENGE (BY EXPAND)

("Bridge to CEF")

eHealth assets from different projects

CEF (available for "mature" domains; with specs which may be used in procurement)

... 2013   2014   2015   2016 ...
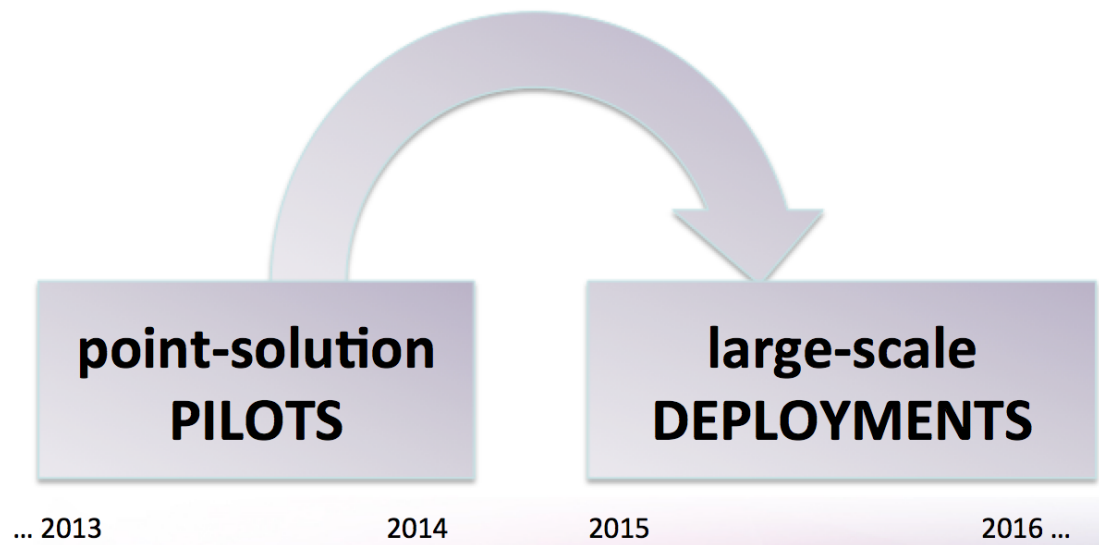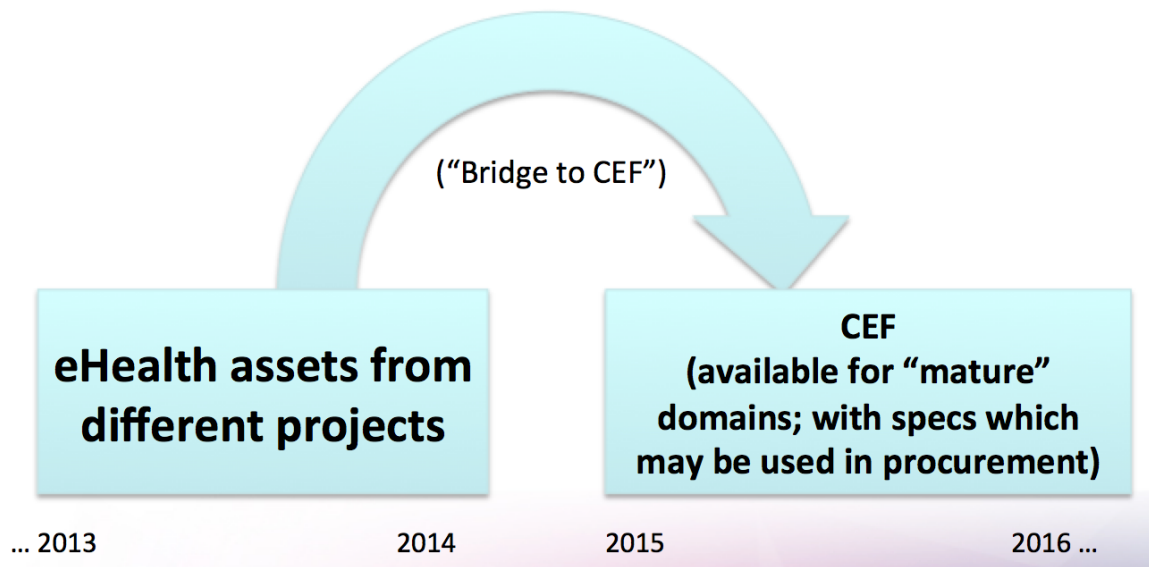
THE SEMANTIC CHALLENGE

The Semantic challenge

- Let's take the example of the
  – Patient Summary Service

  – Providing the Health Professional, at the "Country of Treatment",
  – with the health related essential information
  – needed in case of unexpected or unscheduled care

The Semantic challenge – Patient Summary

- Different **languages**

- Different eHealth processes

- Different grade of development

- Different Legislation

- Different concepts

- No European nomenclature for drugs

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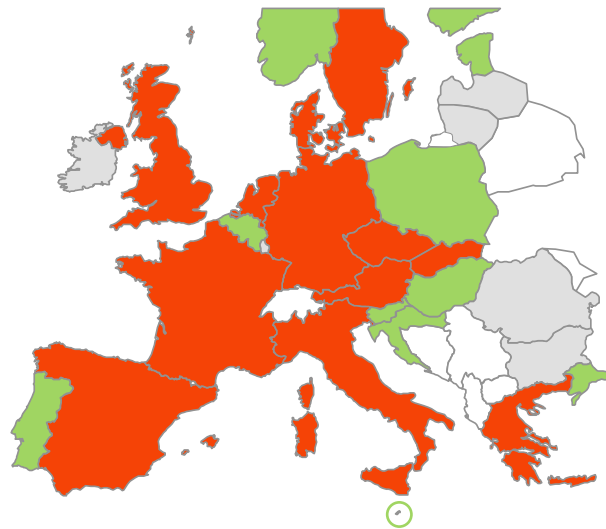
THE SEMANTIC CHALLENGE – PATIENT SUMMARY

Information/dataset	Contains
Patient Identification	Unique identification for the patient in that country.
Patient Personal information	Full name. Date of birth Gender
Allergies	Allergy description and agent
Preferred HCP/Legal organization to contact	Name of the HCP/name of the legal organization
Medical Alerts	Other alerts not included in allergies (e.g. intolerance to captopril because of cough)
List of current problems	Problems/diagnosis that fit under these conditions: conditions that may have a chronic or relapsing course, conditions for which the patient receives repeat medications and conditions that are persistent and serious contraindications for classes of medication
Medical Devices and implants	Includes devices as cardiac pacemakers, prosthesis etc that are important to know by the HCP
Major Surgical Procedures in the past 6 months	Major Surgical Procedures
Medication Summary	Current medications
Country	Name of Country A
Date of creation of PS	Data on which PS was generated

KEY SEMANTIC ASSET – MASTER VALUE SET CATALOG (MVC)

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Code sys	SNOMED-CT	ICD-10	EDQM	ATC	LOINC	HL7	IHE	ISO	ISCO	UCUM
Value set	AdverseEventType, ReactionAllergy, AllergenNoDrugs, ResolutionOutcome, BloodGroup, Severity, CodeNoMedication, SocialHistory, CodeProb, statusCode, MedicalDevices, UnknownInformation, Procedures, Vaccinations	IllnessesandDisorders	DoseForm, RoutesofAdministration, Package	ActiveIngredient	BloodPressure, PregnancyInformation, DocumentTitle, Sections	ActCode, PersonalRelation.RoleType, Confidentiality, RoleClass, EntityNamePartQualifier, Telecommunic.AddressUse, AdministrativeGender, TimingEvent, NullFavor, URL Scheme	ActCode, RoleCode	Country, Language	HealthcareProfessionalRole	Units
Term: **Status:**	500 terms	1700	600	5600	20	130	10	20	10	40

KEY SEMANTIC ASSET

One of the **most prominent asset** bundle from epSOS

Semantic Services were instrumental to reach semantic **interoperability:**

Master Value Sets Catalogue (MVC)

Master Translation/ Transcoding Catalogue (MTC)

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TRANSLATION/TRANSCODING

Local document A is coded with ICD-10 4-digit codes and sent to NCP A

Transformation ICD-10 4-digit to 3-digits codes
Accession to epSOS Terminology Server A
Translation of displayName A to displayName E
Creation of pivot Document E*

Accession to epSOS Terminology Server B
Translation of displayName E to displayName B
Creation of local Document B*

Country A → Document A → NCP A → Document E → NCP B → Document B → Country B

Document A
CDA
Language A
ICD-10 4-digits codes

epSOS Terminology server A

Document E
CDA
English
ICD-10 3-digits codes

epSOS Terminology server B

Document B
CDA
Language B
ICD-10 3-digits codes
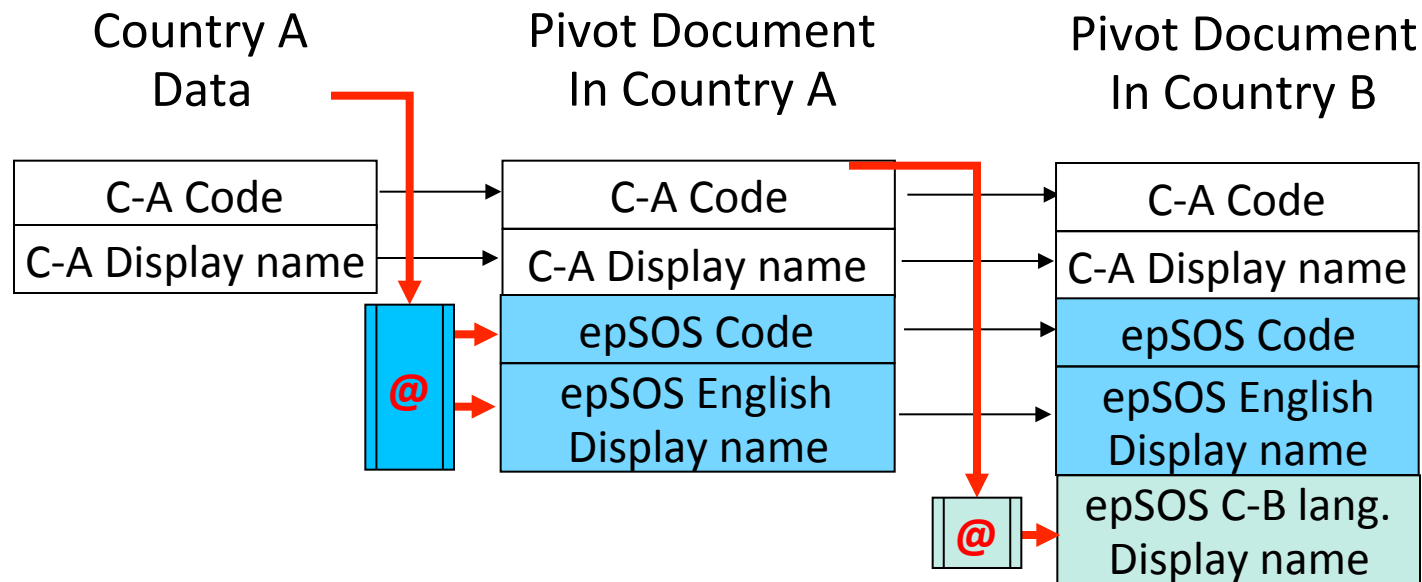
* Initial 4-digits code with displayName A are kept into CDA documents E and B and are still available

TRANSLATION/TRANSCODING

Country A Data

Pivot Document In Country A

Pivot Document In Country B

| C-A Code |
| C-A Display name |
| epSOS Code |
| epSOS English Display name |
| epSOS C-B lang. Display name |

Transcoded and Translated codes ARE ALWAYS ADDED

HOW TO

HANDOVER FOR LONG TERM SUSTAINABILITY?

HAND OVER FOR LONG TERM SUSTAINABILITY

In order to → EXPAND must succeed

- **re-START LIVE SERVICES**

- **on HANDING over to long term**

HAND OVER FOR LONG TERM SUSTAINABILITY

- **Central** responsibilities

  – Govern MVC/MTC

  – Manage MVC specification

  – Operate and Manage the Terminology Services

  – Provide conformance tools

- **Country** responsibilities

  – MTC Management (e.g. translate MVC)

  – Map national specific terminologies to the ones agreed on MVC

  – Converge, by national adoption of standard code systems and value sets included in the MVC

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HAND OVER FOR LONG TERM SUSTAINABILITY

Without proper semantic governance,
the MVC and MTC will be dangerously compromised

Damaging the quality of information
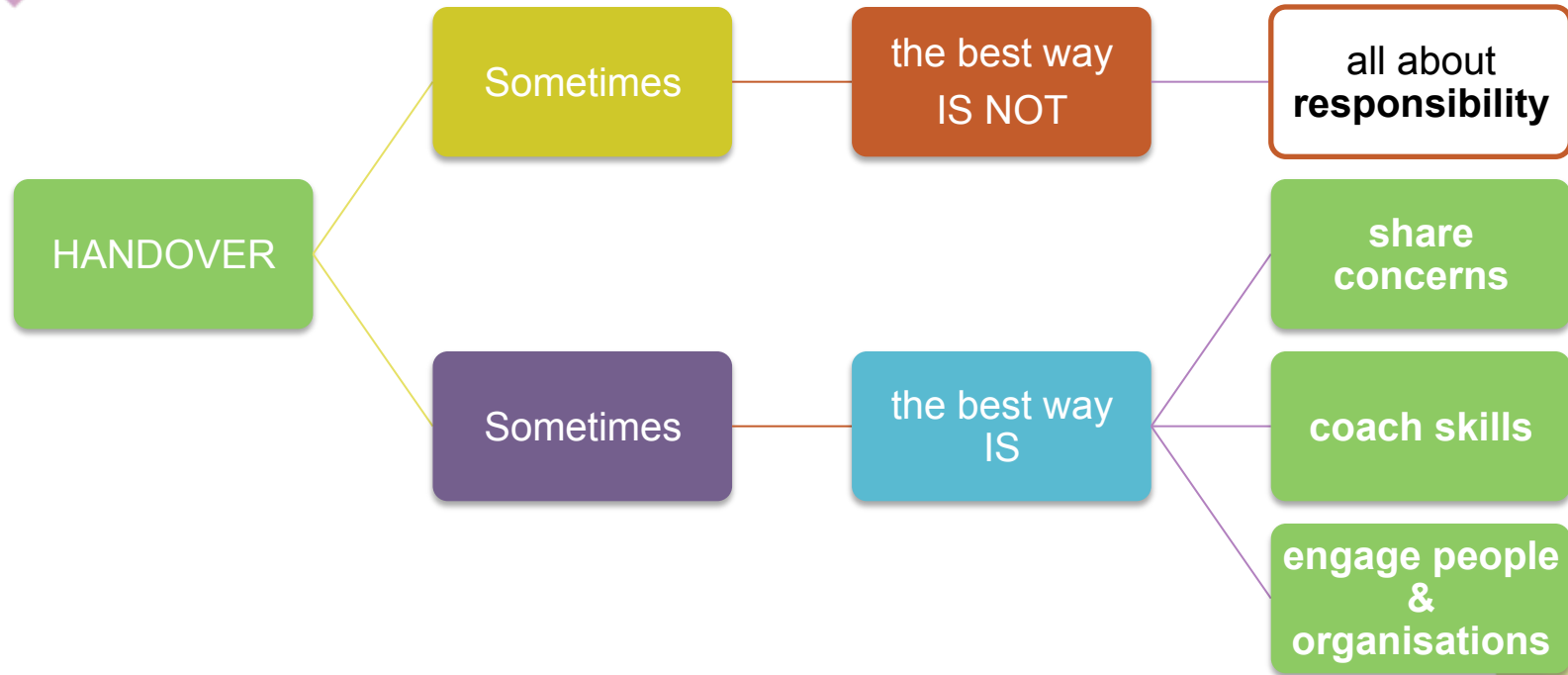
Raising concerns regarding patient safety.

HAND OVER FOR LONG TERM SUSTAINABILITY

HANDOVER

Sometimes → the best way IS NOT → all about **responsibility**

Sometimes → the best way IS → share concerns / coach skills / engage people & organisations

REFERENCES

- EXPAND Web Site: http://www.expandproject.eu

- epSOS Web Site: http://www.epsos.eu

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