

SEMIC 2013

Semantic interoperability of Civil Status Registers by the International Commission on Civil Status (ICCS-CIEC)

Dr Panagiotis A. Gouvas
R&D Director of UBITECH
pgouvas@ubitech.eu

The “Ubiquitous Solutions Company”

- UBITECH is an R&D company established in 2005 by a team of Electrical & Computer Engineers
 - concentrated in the **Greek, Balkan, European** and (lately) in **Latin America** markets



- ◆ Established to provide cutting edge
 - ubiquitous intelligent solutions
 - software engineering services
 - research, development, and innovation services
 - technical consulting services

Our Professional Services

- UBITECH designs, develops, customizes and applies
 - enterprise-driven **custom software applications and solutions**
 - **e-business** (B2B) and **e-commerce** (B2C) solutions
 - **e-government** (G2G, G2B and G2C) and **e-health** solutions
 - applications, services and systems' **integration solutions (CIEC)**

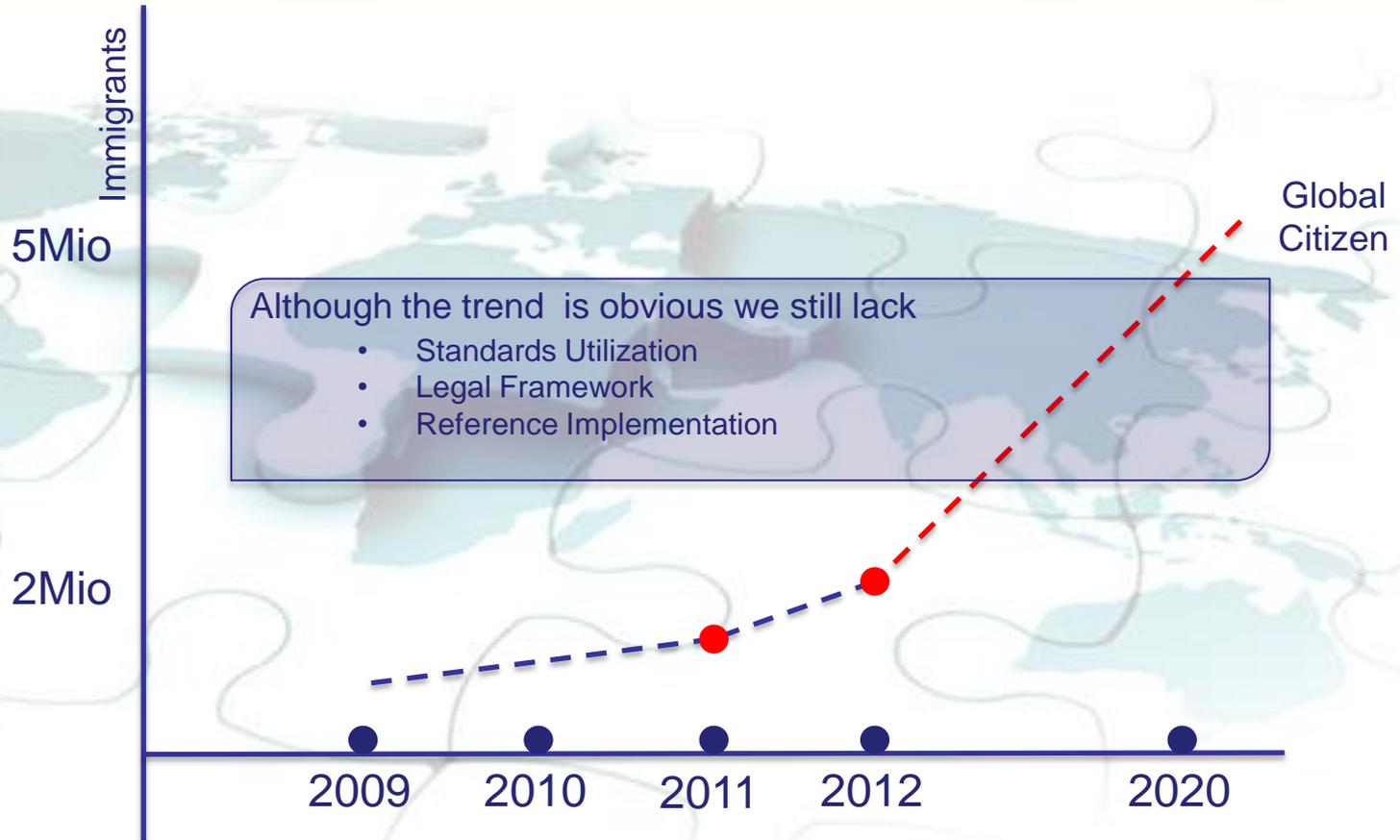
A stylized world map in shades of blue and green, with wavy lines representing continents and oceans, serving as a background for the title text.

ICCS-CIEC Project
Commission Internationale de l'Etat Civil
International Commission on Civil Status

ICCS Organization – The Activities

- ICCS carries out **studies** and draws up **recommendations** or conventions
 - **harmonizing the law of the member States** relating to the **status and capacity of persons**,
- ICCS has drawn up **32 Conventions** relating to civil-status matters
- Convention on international communication **by electronic means, signed at Athens on 17 September 2001**
 - sets up a legal basis for the exchange via IT tools of civil-status data as foreseen in other Conventions

Need for secure and legalized document exchange



Forecasting of immigration flows until 2025 for selected European countries using expert information, IDEA Working Group, 2009

The Project Vision

The **scope** of the CIEC-ICCS project was:

- to design and implement the **open, generic ICCS-CIEC Data Exchange Platform** for the ***cross-border electronic exchange*** of civil-status documents;
- to define the **Civil-Status Applications Schemas (Models)** comprising the standardised electronic and machine-interpretable format;
- to implement and deploy the **Certificate Authority and Security Infrastructure** constituting a certificate and maintenance authority and PKI-based software infrastructure

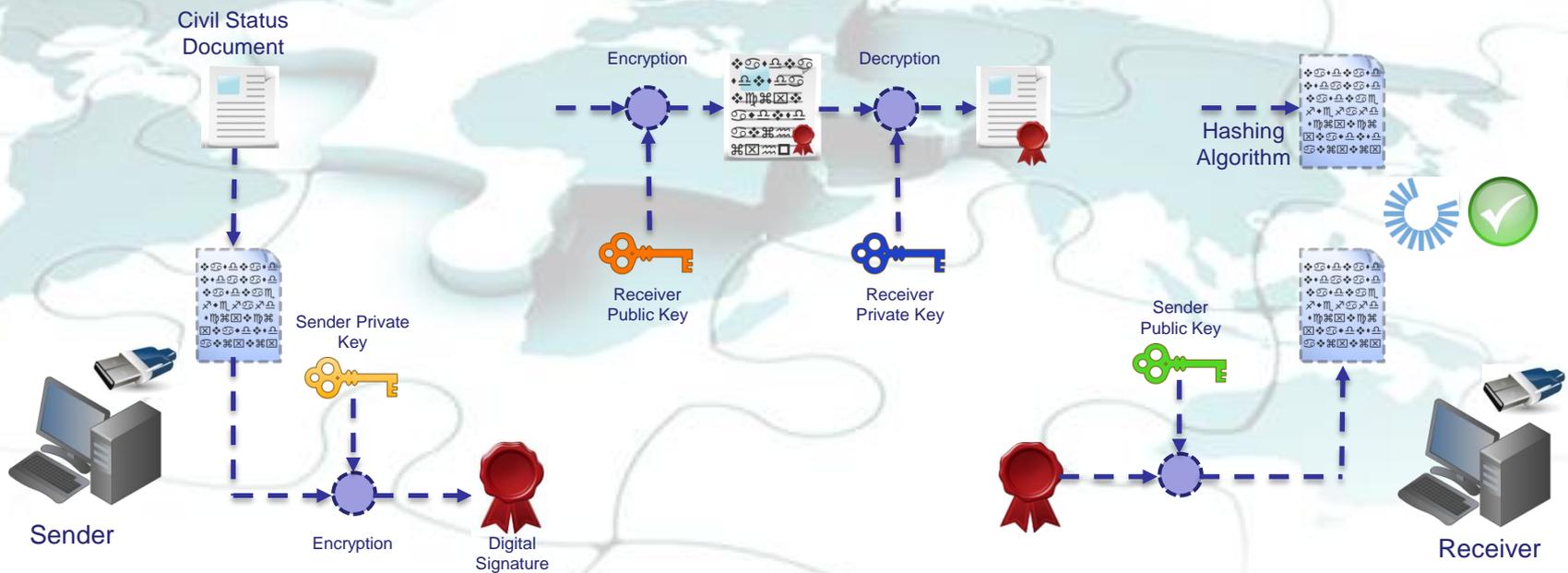
Document's exchange – The electronic era

- ICCS' conventions
 - Birth
 - Marriage (check status, dissolution)
 - Death
- Convention 30 formulated in the frames of the project
 - Describes Countries' readiness (IT & legal)

Problems Addressed

- Lack of Common format between documents
 - Even the simplest semantic assets are not common among the various countries
- Multilingualism
- Security Policies
 - Digital Signing and Encryption/Decryption processes cannot be harmonized

Document Interchange



Interchangeable Unit Structure

- As-is: Manuscript format of Conventions
 - This format is considered commonly accepted by countries
 - It is not machine processable
- Solution: **Official Schema representation that represent**
 - Forms' structure
 - Form's data

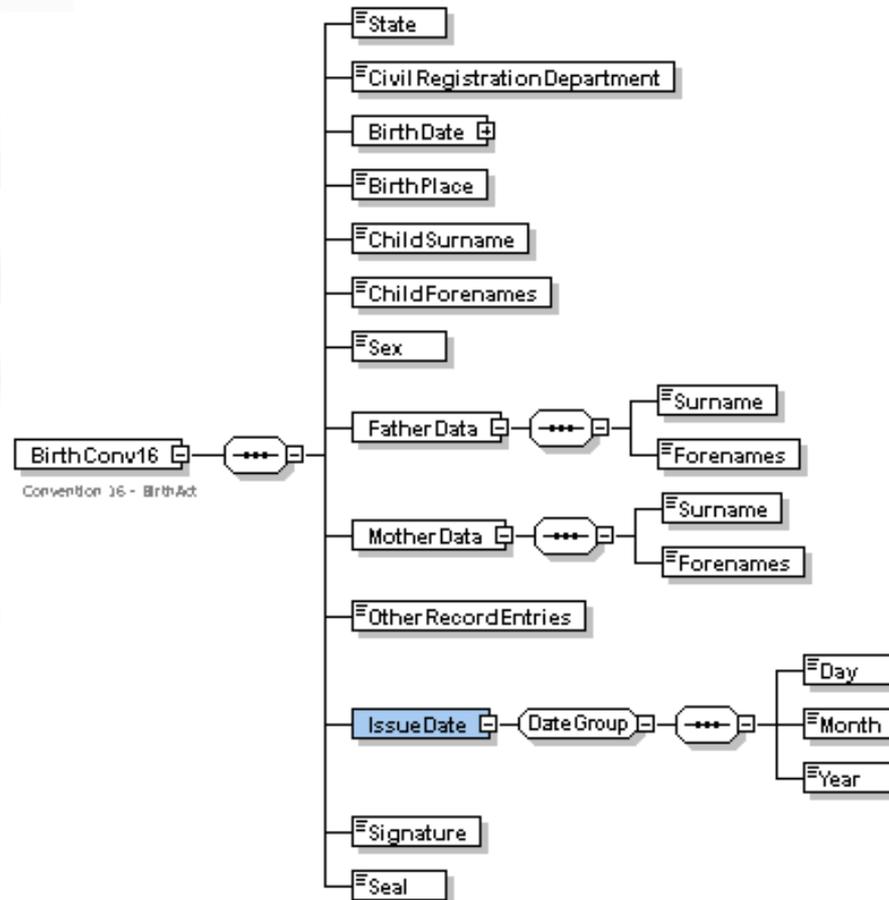
Form Structure

- These artifacts have been validated by IT experts
- Direct input to ADMS
- Cornerstone of future interoperability

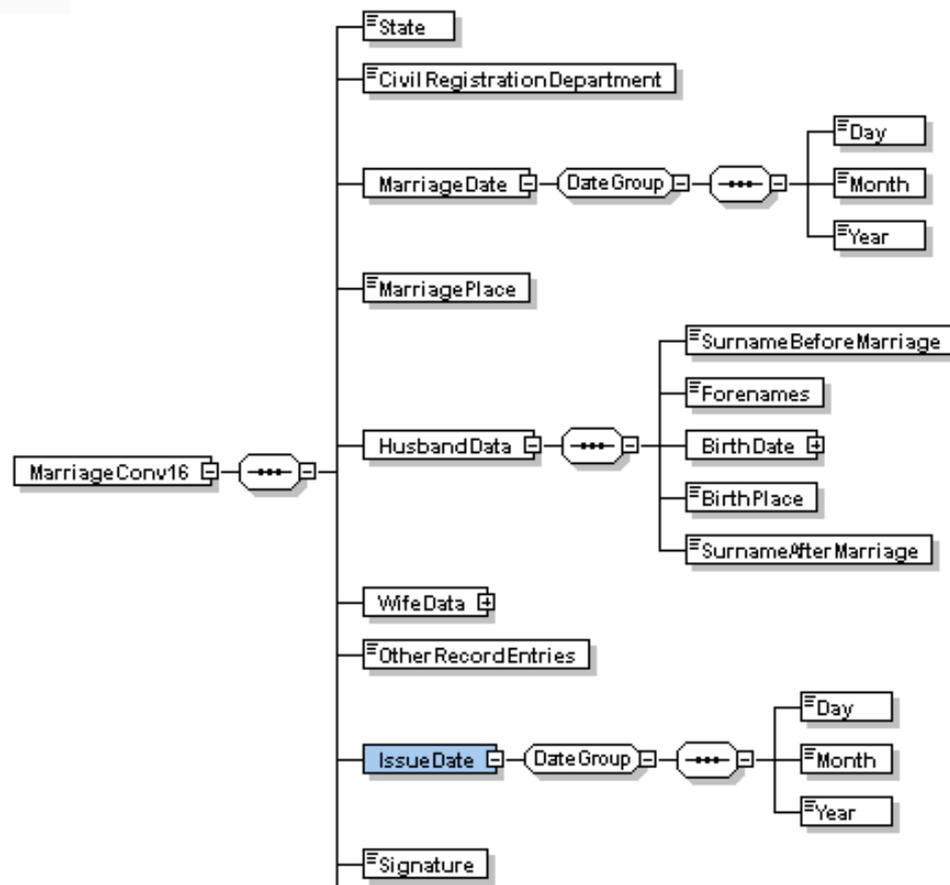
Input to ADMS

xmlns:adms	http://www.w3.org/ns/adms						
xmlns:xsi	http://www.w3.org/2001/XMLSchema-instance						
xmlns:cac	urn:oasis:names:specification:ubl:schema:xsd:CommonAggregateComponents-2						
xmlns:ac	http://www.w3.org/ns/adms/AggregateComponents						
xmlns:cvb	http://www.w3.org/ns/adms/BasicComponents						
xmlns:cbc	urn:oasis:names:specification:ubl:schema:xsd:CommonBasicComponents-2						
xsi:schemaLoca...	http://www.w3.org/ns/adms file:xsd/corevoc/CoreVocs-ADMS-v1.01.xsd						
ac:Repository							
ac:SemanticAsset (3)							
	cbc:URI	cvb:IdentifierID	cbc:Name	cvb:Alternative...	cvb:CreationDate	cvb>LastModific...	
1	http://www.ciec.org/conventions/model/conv16birth	conv16birth	Convention 16 - Extract from birth registration	Convention 16 - Extract from birth registration	2012-05-29	2012-05-29	E>ptccVi8,
2	http://www.ciec.org/conventions/model/conv16marriage	conv16marriage	Convention 16 - Extract from marriage registration	Convention 16 - Extract from marriage registration	2012-05-29	2012-05-29	E>ptccVi8,
3	http://www.ciec.org/conventions/model/conv16death	conv16birth	Convention 16 - Extract from death registration	Convention 16 - Extract from death registration	2012-05-29	2012-05-29	E>ptccVi8,

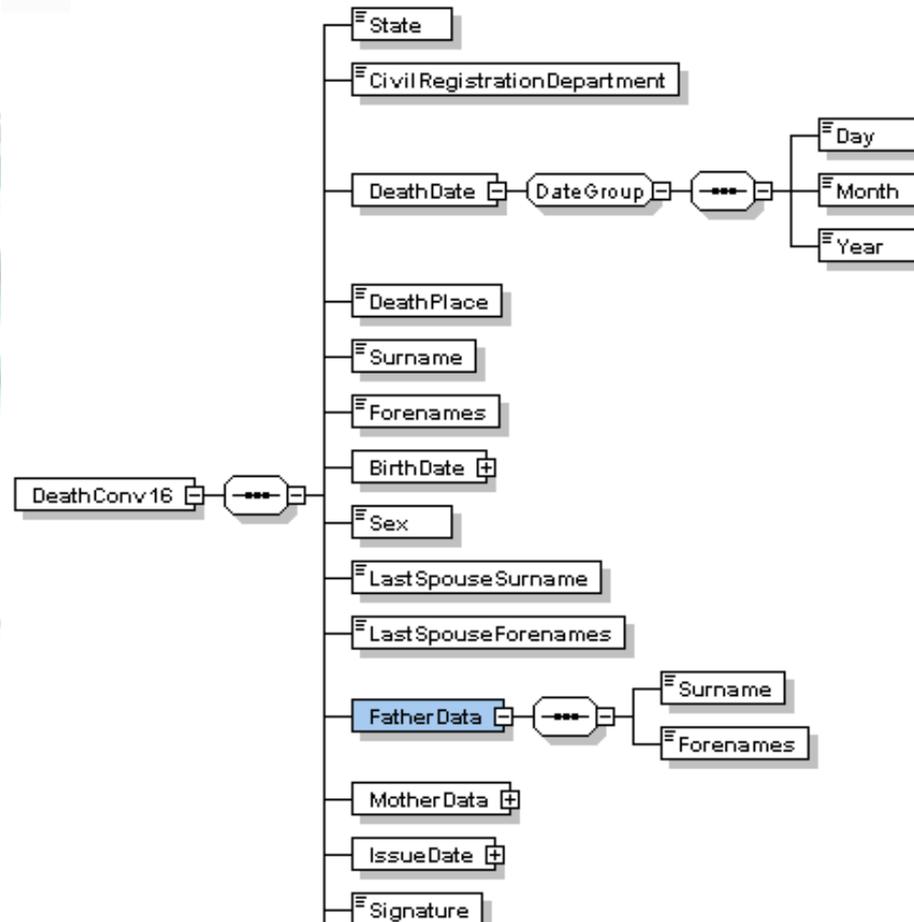
Conv.16 – Birth Certificate



Conv.16 – Marriage Certificate



Conv.16 – Death Certificate



Multilingual Environment

- Problem: All User Interfaces and Messages must be adapted automatically
- Solution: **A Translation Tool has been created**
 - categorizes elements per application
 - tracks the status of translations
 - provides user-friendly way for editing

Multilingual Environment



Commission Internationale de l'État Civil

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Langues [?](#) Aide [Se déconnecter](#)

Filter

Sélectionner une application

Toutes

Sélectionner un type d'élément

Toutes

Sélectionner une langue

Français

Actualiser

Statistiques

Regroupées par application en Français

Application	En suspens
CIECDivisionDemarcation	OK
TranslationManager	OK
CIECAuthoringEnvironment	OK
TaskNotifications	OK
UserManagementAdmin	OK
Countries	OK

Regroupées par type d'élément en Français

Regroupées par langue

Translations SAVE

Texte de base	Traduction
AFGHANISTAN	AFGHANISTAN
ALBANIA	ALBANIE
ALGERIA	ALGÉRIE
ANDORRA	ANDORRE
ANGOLA	ANGOLA
ANTIGUA AND BARBUDA	ANTIGUA-ET-BARBUDA
ARGENTINA	ARGENTINE
ARMENIA	ARMÉNIE
AUSTRALIA	AUSTRALIE
AUSTRIA	AUTRICHE
AZERBAIJAN	AZERBAÏDJAN
Aborting	Opération en cours d'interruption
About	Infos et contact
Accept task	Accepter la tâche
Acknowledgment	Reconnaissance
Acquisition of nationality	Acquisition de la nationalité
Actions	Actes
Actual residence	Résidence
Add	Ajouter
Add database	Créer un groupe d'utilisateurs
Add new language	Ajouter une nouvelle langue

Registry Office Granularity

- Problem: Semantic Mismatch between regions & ROs
- Solution: **A Demarcation Tool has been developed**
 - Tracks correlations between regions & ROs
 - Versioning support
 - Snapshot management

Registry Office Granularity



Commission Internationale de l'État Civil

International Commission on Civil Status



Instantané Région Service de l'état civil Division administrative Aide Se déconnecter

Liste des municipalités

Nom	Service de l'état civil	Division	CodeCommune	NUTS
<input type="checkbox"/> FRANCE <ul style="list-style-type: none"> <input type="checkbox"/> Ain <ul style="list-style-type: none"> Départements 01 FR711 <input type="checkbox"/> Aisne <ul style="list-style-type: none"> Départements 02 FR221 <input type="checkbox"/> Allier <ul style="list-style-type: none"> Départements 03 FR721 <input type="checkbox"/> Alpes-Maritimes <ul style="list-style-type: none"> Départements 06 FR823 <ul style="list-style-type: none"> <input type="checkbox"/> Aiglhun Communes 06001 06001 <input type="checkbox"/> Amurat Communes 06002 06002 <input type="checkbox"/> Andon Communes 06003 06003 <input type="checkbox"/> Antibes Communes 06004 06004 <input type="checkbox"/> Ascros Communes 06005 06005 <input type="checkbox"/> Aspremont Communes 06006 06006 <input type="checkbox"/> Auribeau-sur-Siagne Communes 06007 06007 				

Services de l'état civil

Service central d'état civil

Strasbourg

Presse-papiers

Nom	Service de l'état civil	Division	CodeCommune	NUTS
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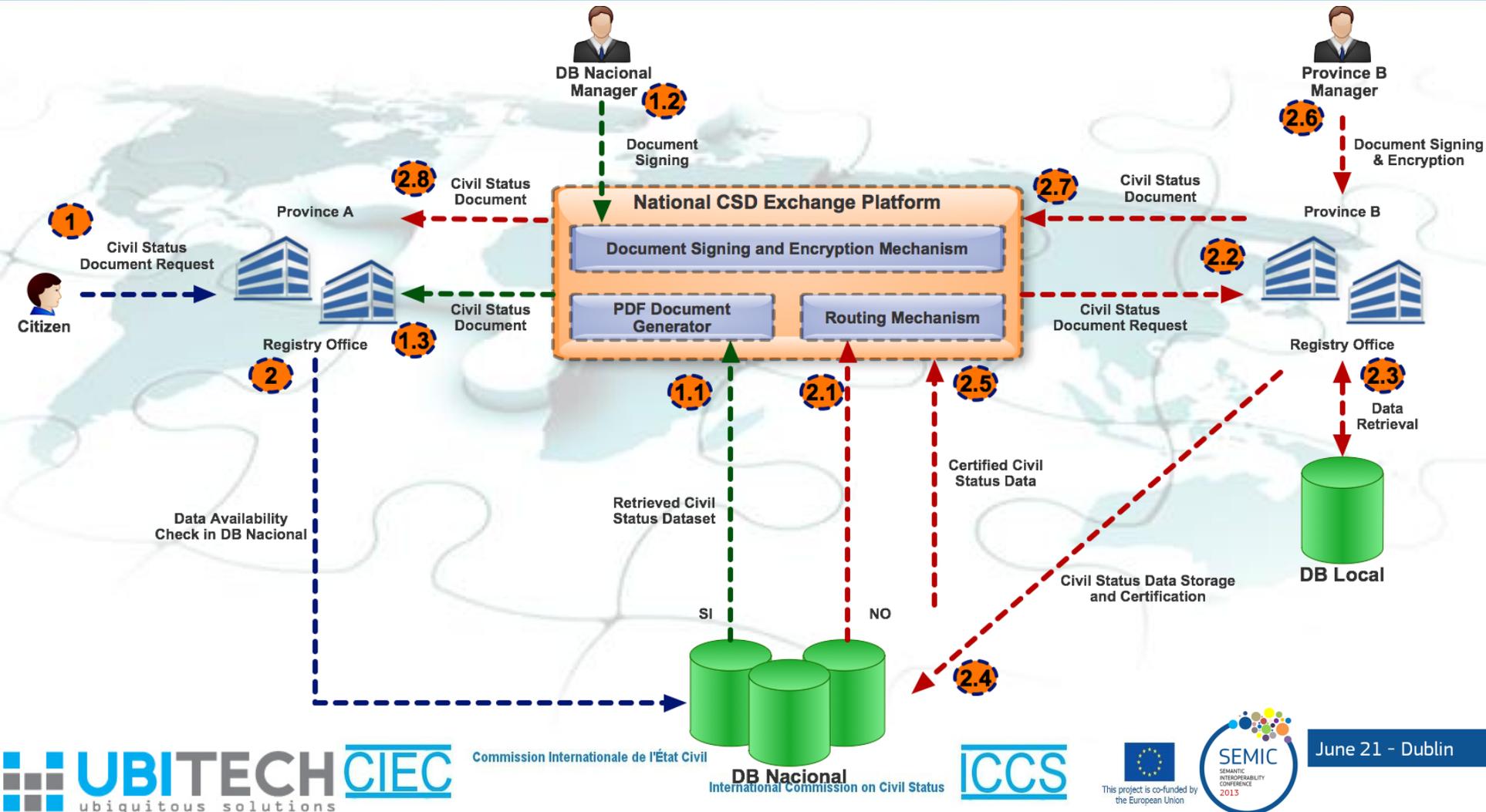
Division administrative



Beyond ICCS...

- RENAPER @Argentina
 - Registro **N**acional de las **P**ersonas
 - Part of Ministry of Interior
 - Organizes Civil registries
- Integration among 24 provinences

The Project of RENAPER



Follow-ups to CIEC Project

- End-to-End Interoperability;
- Electronic Services to Citizens (G2C);
- Electronic Services to Third Party Organizations (G2G);
 - Electronic Services (Secure Data/Documents Exchange) to Notaries and Justice Organizations

Q & A session

Thank you for your attention!
Questions or more Info?
pgouvas@ubitech.eu