GOBIERNO DE ESPAÑA

MINISTERIO DE HACIENDA Y ADMINISTRACIONES PÚBLICAS

SECRETARÍA DE ESTADO DE ADMINISTRACIONES PÚBLICAS

DIRECCIÓN DE TECNOLOGÍAS DE LA INFORMACIÓN Y LAS COMUNICACIONES

# OPEN ICT STANDARDS FOR PUBLIC PROCUREMENT
## FOSTERING INTEROPERABILITY

Brussels, 13th November 2015 | 09:00 a.m.
Avenue de Beaulieu, 25

# Spanish national catalogue of ICT standards

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Ministry of Finance and Public Administrations of Spain

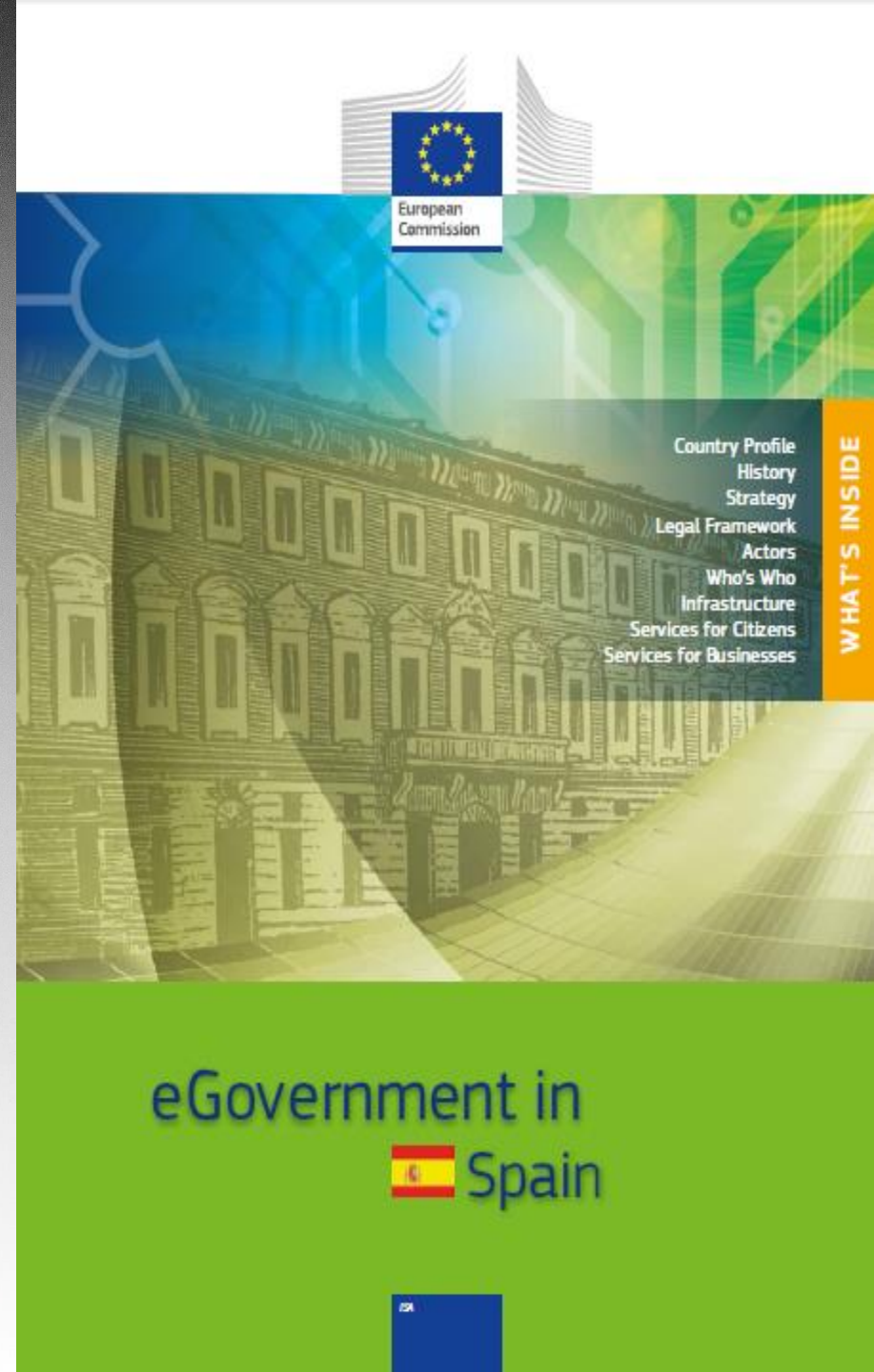# Contents

**Spanish National Catalogue of ICT Standards**

**Challenges ahead**

**And the European ICT Standards Catalogue**

**Conclusions**

Photo: Andrei Chudy

# 1 Spanish National Catalogue of ICT Standards

# National Interoperability Framework of Spain



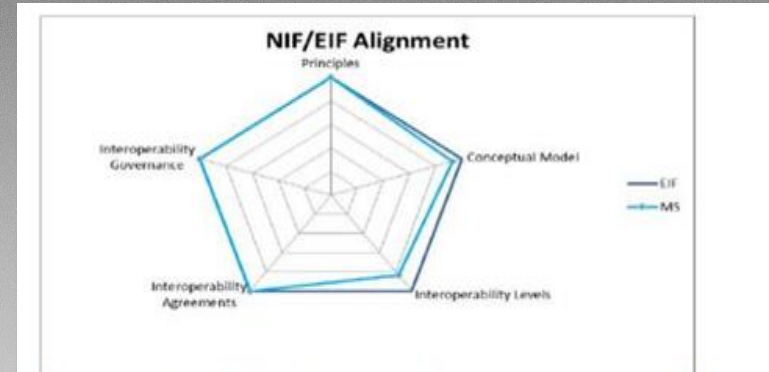Regulated by Royal Decree 4/2010:
Interoperability in the legal framework.

**Objective:** to contribute to build and improve interoperability; clear and direct statements.

**Scope:** all Public Administrations.

Developed with **the participation of all Public Administrations** (General State, Regional, Local, Justice, Universities, + input from Industry).



Alignment of the NIF of Spain with the European Interoperability Framework (EIF). NIFO, Factsheet Spain.
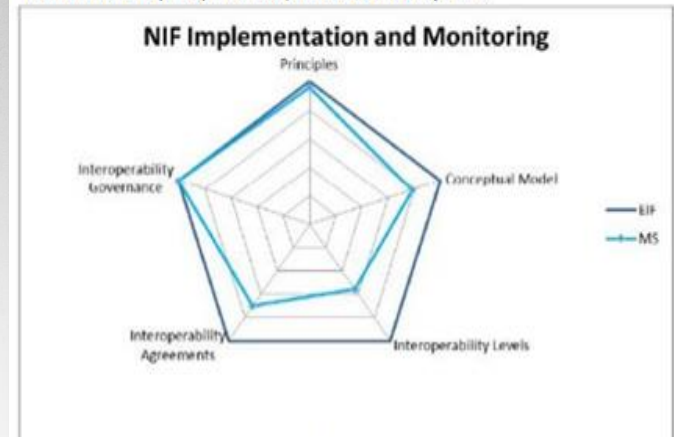


Alignment of the NIF with the EIF from the perspective of implementation and monitoring. NIFO, Factsheet Spain.

# National Interoperability Framework of Spain

Principles: Integral, multidimensional and multilateral approach.

Organisational IOP

Semantic IOP

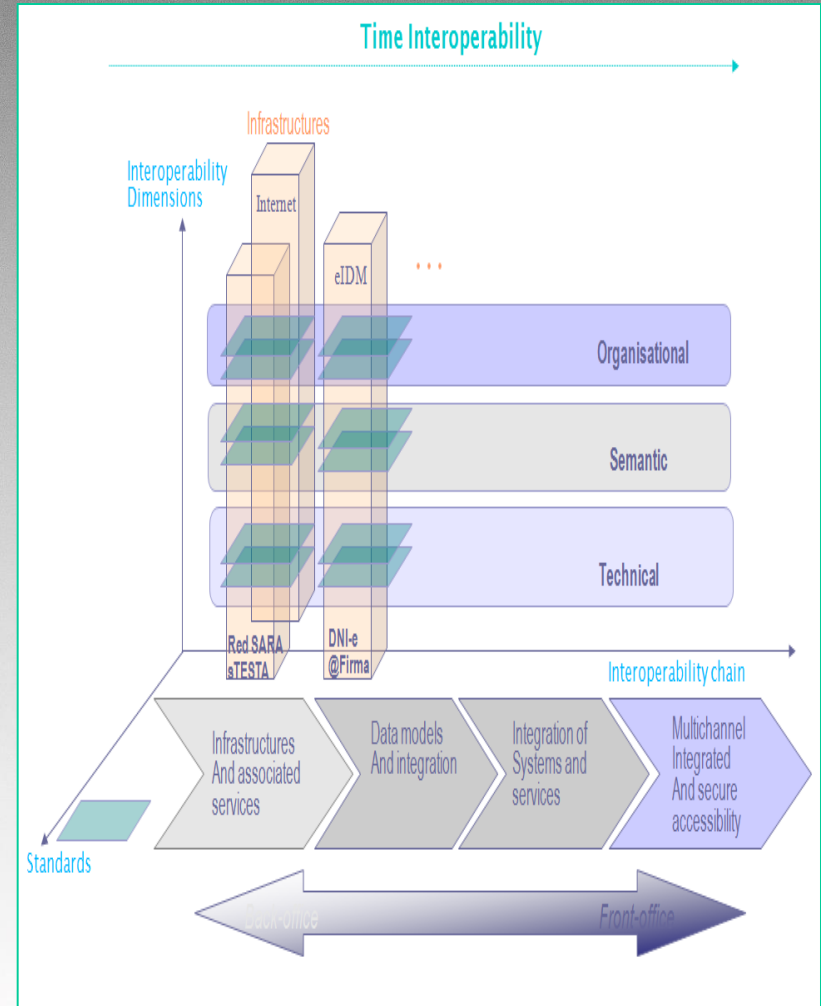Technical: **Use of standards -> Selection criteria**

Use of common infrastrutures and services.

**Reuse of applications and other information objects.**

e-Signature and certificates.

e-Document: recovery and preservation.

Interoperability Agreements -> Catalogue

# Catalogue of ICT standards

"Interoperability agreement", adopted in 2012, applicable to all P.A.s in Spain.

TECHNICAL INTEROPERABILITY STANDARD FOR THE STANDARD CATALOGUE

CONTENTS

I.    Purpose
II.   Scope of application
III.  Standard catalogue → **Criteria**
IV.   Use of standards
V.    Standard catalogue review and update → **Governance**
Annex. Standards

**Interoperability chain**
**Functional categories**: authentications, encryption, file formats, encoding, document and archive management, communication and exchange protocols, …
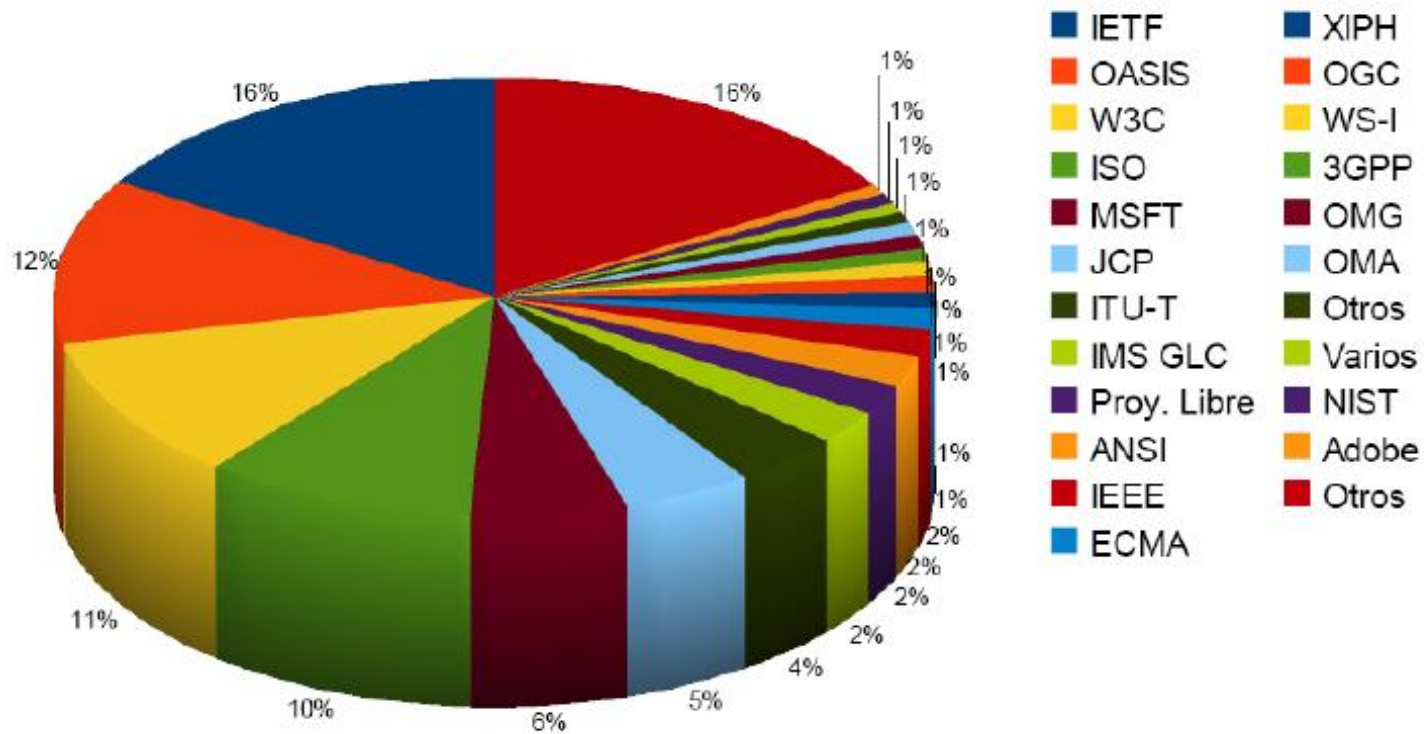**Catalogue**

# Selection criteria, necessary indeed!

Some explorative work for the NIF showed the following (around 2009):



On the basis of a compilation of 400 standards for eGovernment, we find the following:

# Criteria for the selection of standards

**NIF article 11and the IOP agreement** of the Catalogue.

**Minimum required standards for interoperability and for the application of other IOP agreements.**

**Use of standards as foreseen in the legal framework**, EU & national

Drafted before Regulation 1025/2012

**+ additional criteria (inspired in CAMSS):**

- ✓ Suitability: needs and required functionality;

- ✓ Openness: conditions related to development, use or implementation, available and complete documentation, publication, governance of the standard;

- ✓ Market conditions: related to the maturity, support and adoption by the market,:

- ✓ Potential of reuse.

# Criteria for the selection of standards

Expert opinion approach

⬇

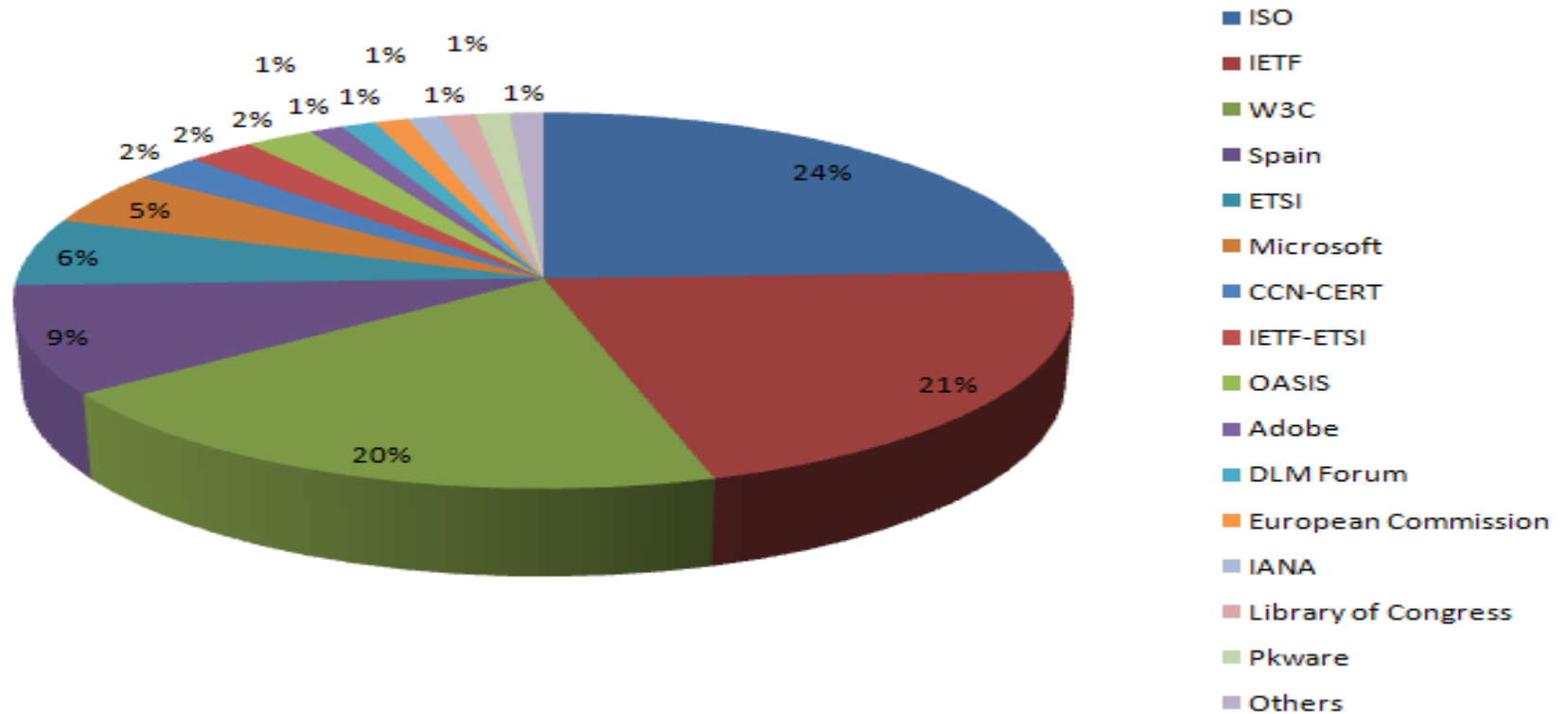Assessment by working groups

⬇

Formal adoption

**Required standards for other IOP agreements**: eDoc, eFile, eSignature, network platform, brokering platform,…

And **for interfaces** with common services.

**Discussion focused on specific entries**.

# Catalogue of ICT standards

**86 entries** in the Catalogue.

# Catalogue of ICT standards

A sample:

| Interoperability chain | Category | Name | | Type | Minimum required version | Extension | Status |
|---|---|---|---|---|---|---|---|
| | | Common | Formal | | | | |
| Integrated, secure, multichannel accessibility | Authentication – E-signature | CAdES | ETSI TS 101 733 Electronic Signatures and Infrastructures (ESI); CMS Advanced Electronic Signatures (CAdES) | Open | 1.6.3 | .p7s .csig | Accepted |
| Integrated, secure, multichannel accessibility | Authentication – E-signature | CMS | Cryptographic Message Syntax (CMS) | Open | RFC 5652 | .sig | Accepted |
| Integrated, secure, multichannel accessibility | Authentication – E-signature | ETSI TS 102 176-1 | ETSI TS 102 176-1 Electronic Signatures and Infrastructures (ESI); Algorithms and Parameters for Secure Electronic Signature; Part 1: Hash Functions and Asymmetric Algorithms | Open | 2.0.0 | - | Accepted |
| Integrated, secure, multichannel accessibility | Authentication – E-signature | PAdES | ETSI TS 102 778-3 Electronic Signatures and Infrastructures (ESI); PDF Advanced Electronic Signature Profiles; Part 3: PAdES Enhanced – PAdES-BES and PAdES-EPES Profiles | Open | PAdES-1 1.1.1 PAdES-3 1.1.2 PAdES-4 1.1.2 | .p7s .pdf | Accepted |
| Integrated, secure, multichannel accessibility | Authentication – E-signature | PDF Signature | PDF Signature | Widespread use | - | .pdf | Abandoned |
| Integrated, secure, multichannel accessibility | Authentication – E-signature | PKCS#7 | PKCS #7: Cryptographic Message Syntax Version 1.5 | Open | RFC 2315 | - | Abandoned |
| Integrated, secure, multichannel accessibility | Authentication – E-signature | XAdES | ETSI TS 101 903 XML Advanced Electronic Signatures (XAdES) | Open | 1.2.2 | .xml .dsig .xsig | Accepted |
| Integrated, secure, multichannel accessibility | Authentication – E-signature | XML-DSig | XML Signature Syntax and Processing | Open | Second edition 2008 | .xml .dsig .xsig .sig | Accepted |
| Integrated, secure, multichannel accessibility | Authentication – E-signature policy | ETSI TR 102 038 | ETSI TR 102 038 TC Security – Electronic Signatures and Infrastructures (ESI) XML Format for Signature Policies | Open | RFC 3125 1.1.1 | - | Accepted |
| Integrated, secure, multichannel accessibility | Authentication – E-signature policy | ETSI TR 102 272 | ETSI TR 102 272 Electronic Signatures and Infrastructures (ESI); ASN.1 Format for Signature Policies | Open | 1.1.1 | - | Accepted |

In case a standard not included in the catalogue is needed the provisions of the NIF apply.

# Catalogue of solutions

**"CTT" Catalogue of interoperability solutions, based on ICT Standards**, with legal **support**.

The concept of "solution" may refer to:

- ✓ **Semantic Assets:** data models, interfaces and code lists (semantic dimension)

- ✓ **Common services:** to simplify implementation of new services and foster interoperability (technical dimension – application and infrastructure)

- ✓ **ICT Developments** source code and related information is offered to other administrations (technical dimension – application)

- ✓ **Recommendations, policies, methodologies, agreements** (legal and organizational dimensions)
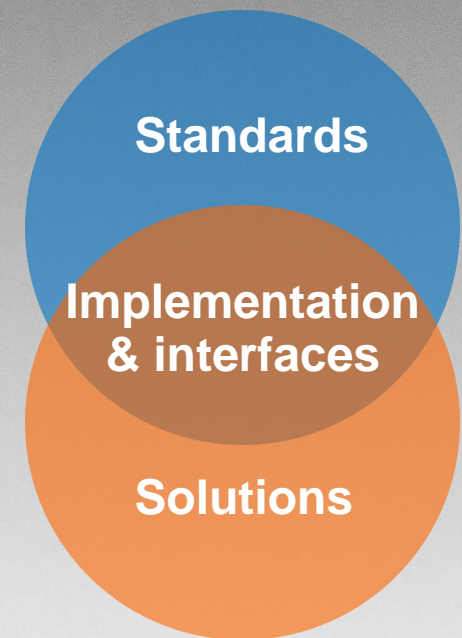
Federated with **Joinup** and other regional repositories:

**Standards**

**Implementation & interfaces**

**Solutions**

joinup

# Catalogue of solutions & reuse

## Catalogue of solutions

Castellano | Català | Euskara | Galego | Valencià | English

◀ Escuchar    Identificarse | Registrarse

GOBIERNO DE ESPAÑA

PAe portal administración electrónica

Actualidad  Estrategias  Soluciones - CTT  Observatorio - OBSAE  Documentación  Organización

Estás en: Inicio > Soluciones - CTT

**Soluciones - CTT**

¿Qué es el CTT?

Actualidad CTT

Soluciones por área técnica

Soluciones por área funcional

Soluciones por área orgánica

Soluciones por modo de uso

Buscador de soluciones

Forjas Asociadas

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**Centro de Transferencia de Tecnología - CTT**

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**Bienvenido al entorno CTT- PAe, el directorio de Soluciones del CTT**

El Centro de Transferencia de Tecnología (CTT) tiene por objeto favorecer la reutilización de soluciones por todas las Administraciones Públicas. Cuenta con 2 entornos tecnológicos en los que trabajar en función de diferentes necesidades.

Entornos tecnológicos disponibles para el CTT

CTT-PAe    Forja del CTT

PAe portal administración electrónica    CTT Forja

▸ El entorno CTT-PAe o directorio de soluciones del CTT, en el cuál te encuentras actualmente, es el lugar indicado para encontrar una solución, proyecto o/y servicio para reutilizar en tu administración. En este entorno está disponible la información divulgativa de todas las soluciones recogidas en el CTT y se ofrecen diferentes opciones de descarga y de colaboración en ellas.

administracion.gob.es
punto de acceso general

**Destacados CTT**

? Soporte CTT

▸ ⓘ Nuevas opciones de suscripción a soluciones del CTT.

▸ Admitidas todas las EELL en lista de espera para el servicio del Portal de la Transparencia en la nube

▸ Disponible a través de la plataforma de intermediación la consulta de inexistencia de antecedentes penales

▸ Publicación del estándar de Expediente Digital del Alumno en el CTT

▸ Se abre la lista de espera

**— 5.Reuse and technology transfer**

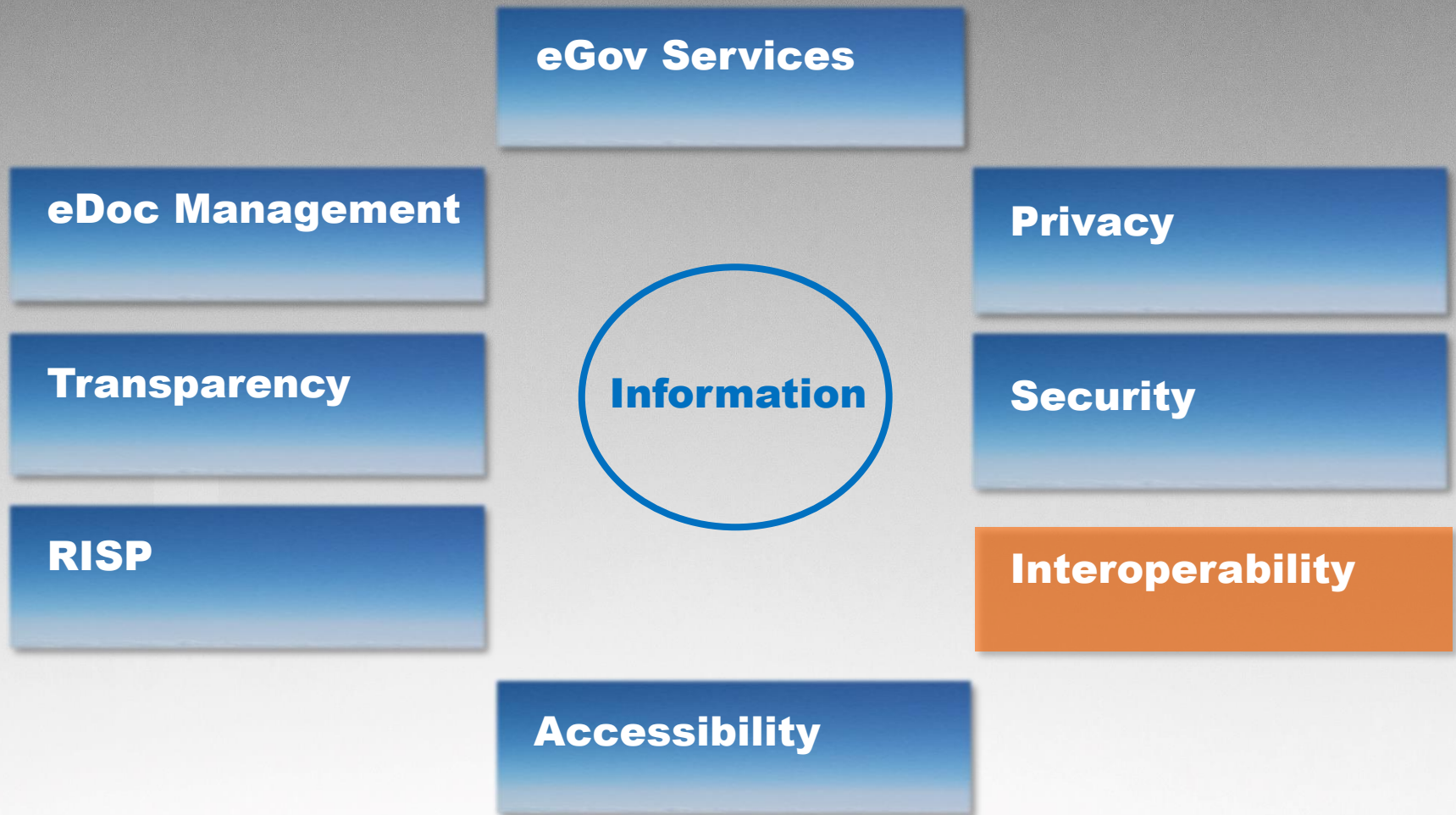| | |
|---|---|
| No. of reusable solutions avalilable at CTT | 303 |
| No. of downloads from CTT | 408.550 |
| Datasets available for reuse at datos.gob.es | 6.800 |
| Public bodies feeding datasets into datos.gob.es | 78 |

## Guide to Asset Publication and Licensing

# 2 Challenges ahead

# I. Interoperability in digital transformation of government

eGov Services

eDoc Management

Transparency

RISP

Information

Privacy

Security

Interoperability

Accessibility

# II. Gaps

**ICT Procurement**

**Interoperability Framework & Catalogue of standards**

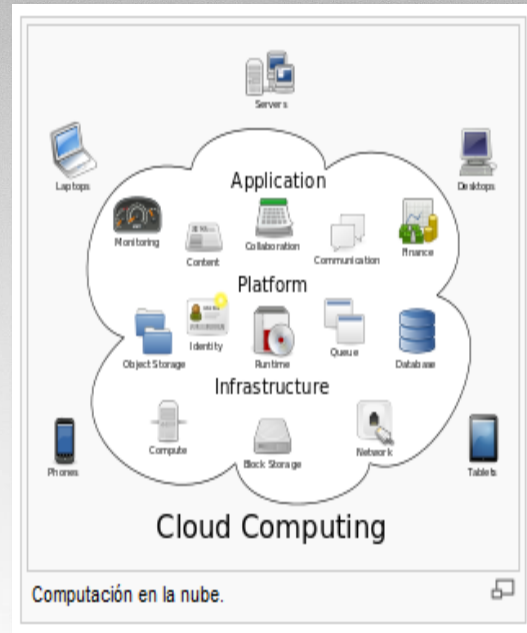**Standards in solutions used by PAs and citizens**
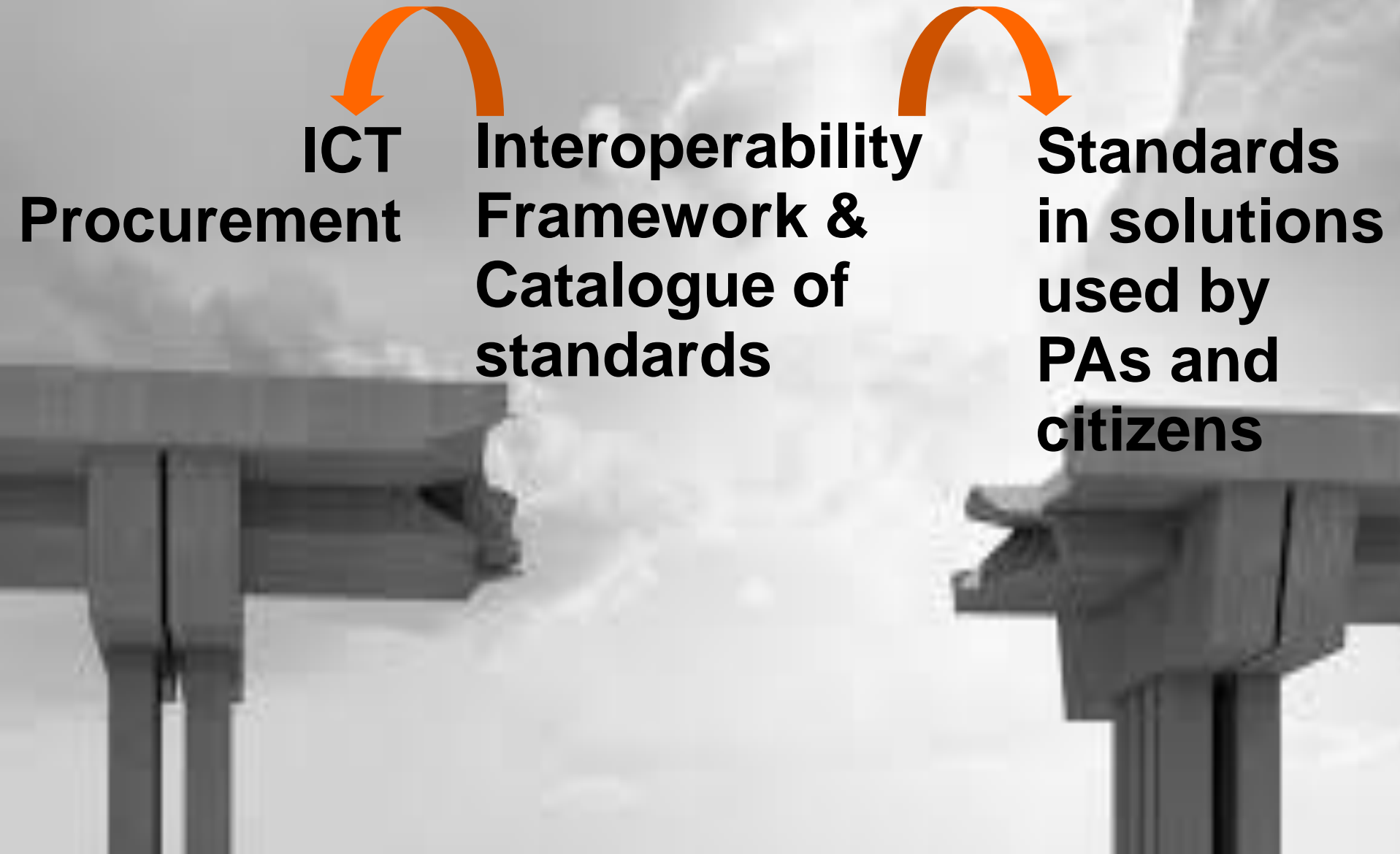
# III. Adaptation to waves



Impact of social networks, mobility, cloud computing, big data ...

✓ **Multiple channels.**

✓ **Services through mobile devices**, ...

✓ **Communication with citizens through social networks**.

✓ **Big data,** and evidence base for making up decisions, forecasts, assessments, ...



Fuente: Wikipedia



Cloud Computing

Computación en la nube.

# IV. Sustainability

**Maintain** the catalogue **updated**.

Implement a **surveillance** process about the standards included in the catalogue.

Deploy working groups of experts,

**review** entries (existing/new ones),

reach **agreements**,

publish **new release**, periodically.

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publish **new release**, periodically.

**Quite a significative effort !
(Then multiply by 28)**

# 3 And the European ICT Standards Catalogue

# Digital Single Market

Bringing down barriers to unlock online opportunities

"Moreover, **availability of standards is often not sufficient** to ensure interoperability, ... **Public procurement plays an important role in promoting standards** and Member States have created **national catalogues** of ICT-standards and interoperability specifications to guide public procurers ... **Integrating these catalogues into European catalogues would avoid market fragmentation at EU level**."

"Today, there is a common understanding among Member States on the basic requirements to achieve interoperability, based on the "**European Interoperability Framework**" put forward by the Commission in 2010. **This framework should now be updated and extended**."

# Link with the European Catalogue

**Simplify our effort in**:
assessment - updating - governance

Allow **focus on local/specific needs**

**Reduce the gap with ICT procurement**

**Help to keep the pace with trends.**

#DigitalSingleMarket

An **opportunity to overcome fragmented approaches** and provide a **full interoperability picture.**
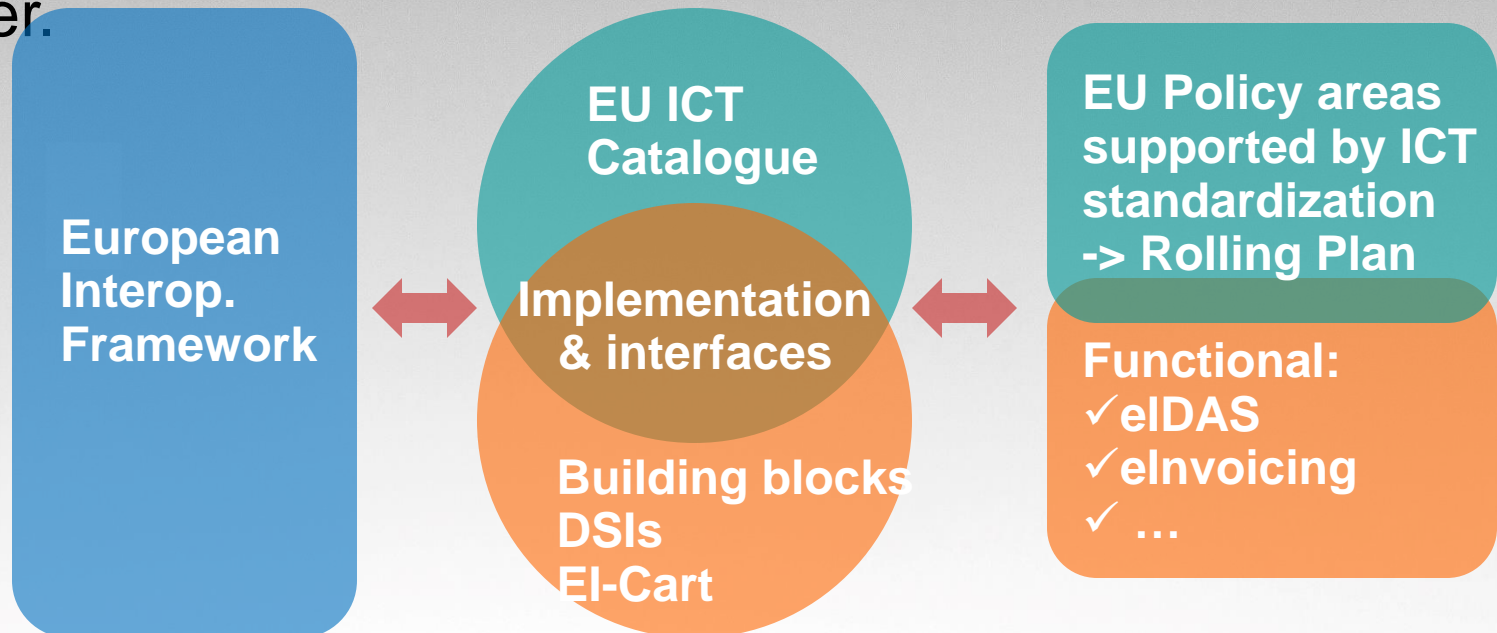
# A full interoperability picture

The new **EIF** should offer an **overall picture** of all the elements,

how each one of them **contribute to the general effort** to achieve interoperability

and the **role** that each one play and **how they interact** together.

# 4 **Conclusions**

# Conclusions

**Considering our experience with the catalogue of ICT standards and the challenges ahead:**

**1. The European ICT Catalogue of Standards would be helpful to simplify our effort:** governance, link to procurement, keep the pace with technology trends.

**2. The DSM Strategy provides an opportunity to design a full interoperability picture.**

**3. The European Interoperability Framework should provide an overall picture of all the elements which contribute to interoperability.**

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# Many thanks for your attention

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