

eGov-Bus: Advanced eGovernment Information Service Bus

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OASIS Open Standards Forum

*Enabling Transformational Government
Through Web Services and SOA*

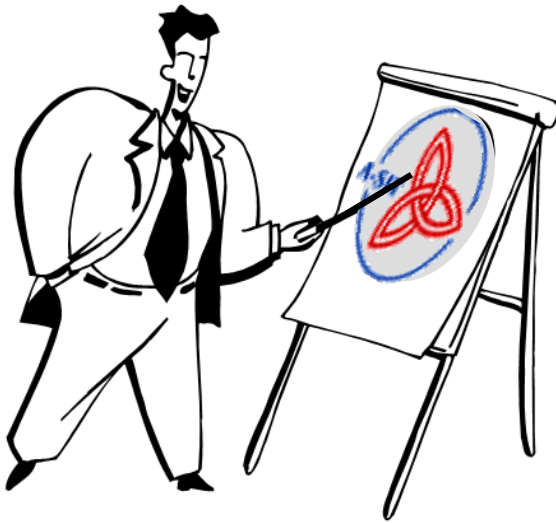
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Project Overview

- Research project funded under the EU 6th Framework Programme, Information Society Technologies
- Project Budget: € 3.368.674,40
- Community Funding: € 2.269.945,00
- Project Duration: 1.1.2006 – 31.12.2007
extension to June 2008
- 8 Project Partners
 - Companies, Universities, Research Institutions



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Project Partners

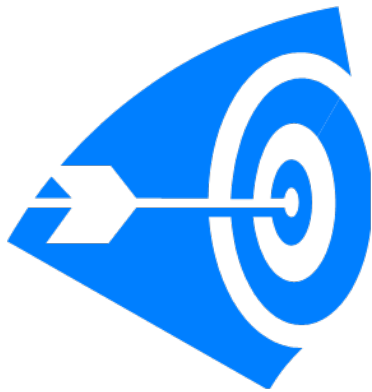
- Rodan Systems S.A. – Project Co-ordinator - Poland
- Axway – France
- University Paris Dauphine – France
- European Microsoft Innovation Centre – Germany
- Polish-Japanese Institute of Information Technology – Poland
- Ministry of Internal Affairs and Administration – Poland
- Secure Information Technology Centre – Austria
- University of Uppsala – Sweden



 Polsko-Japońska Wyższa Szkoła Technik Komputerowych



Project Objectives



- Overall Goal
- Specific Objectives
- Overall Architecture



eGov-Bus Overall Goal

- To **integrate and extend research and standards** in the area of **process and content management** for government and cross-government systems,
- with the capability of creating advanced applications of **electronic signature** enhancing acceptance of the technology and establishing trusted system validity and non-repudiation,
- relying on **web services**, process and repository management platforms based on a highly secure, highly available, scalable and distributed architecture providing **data access abstraction**.

Specific eGov-Bus Objectives

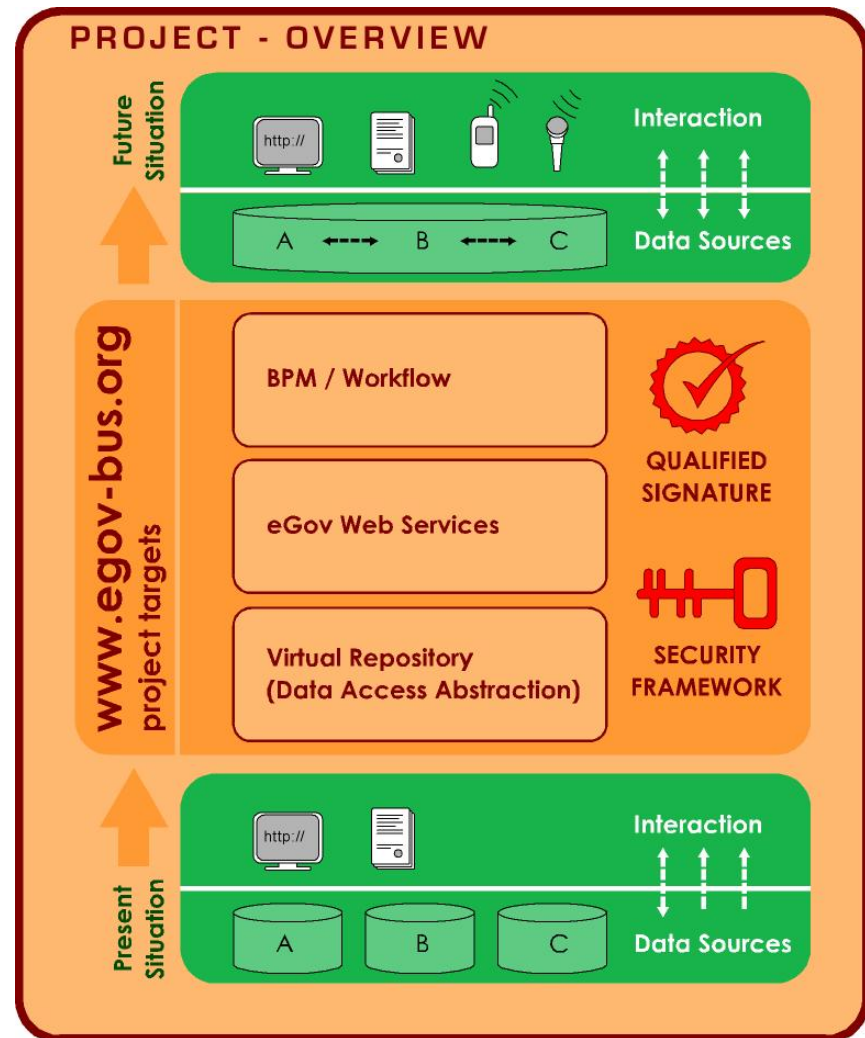
- Create **adaptable process management technologies** by enabling virtual services to be combined dynamically from the available set of e-Gov functions, personalizing preferences and supporting the rules of the specified **life event**.
- Exploit and integrate current and ongoing research results in the area of **natural language processing** to provide user-friendly personalisable interfaces to the eGov-Bus.
- **Orchestrate available web services** according to the specific life-event requirements, creating a comprehensive workflow process and providing explanation to the end-user.

Specific eGov-Bus Objectives (cntd.)

- Support a **virtual repository of data structures** required by life-event processes, representing declarative (i.e. rules governing life-events categories) and procedural knowledge.
- Provide these capabilities based on a highly available, distributed and **secure architecture** that uses existing systems.

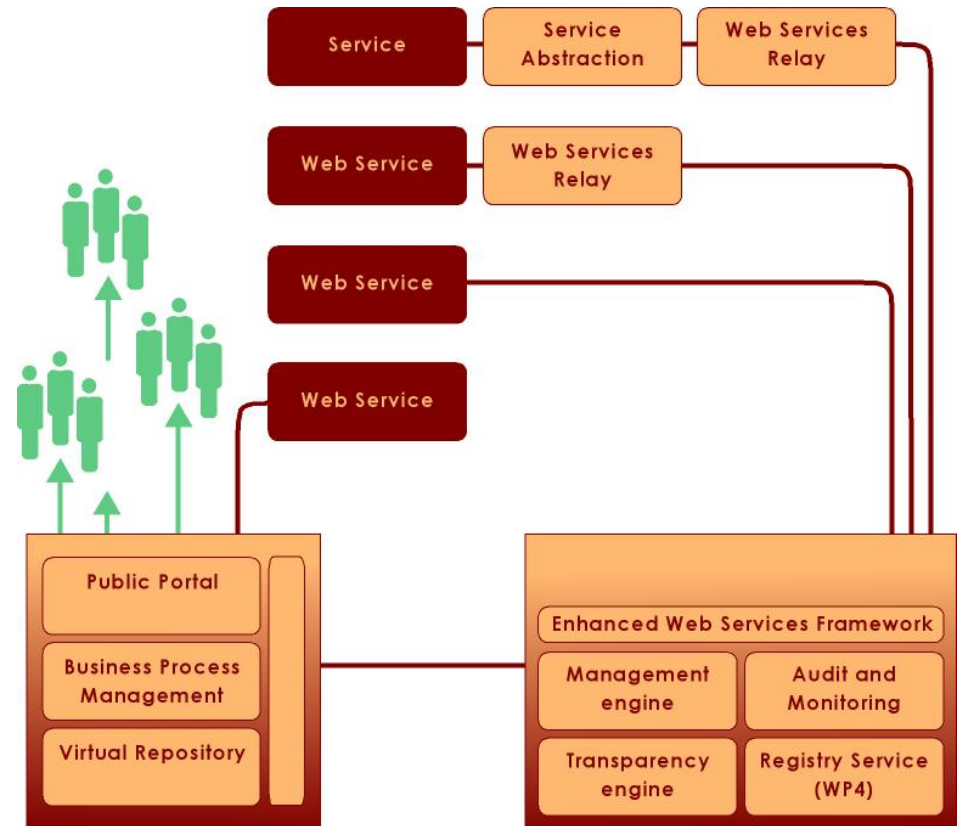
Project Architecture

- Using existing eGov Webservices
- Non-intrusive
- Innovative user interface
- Security services

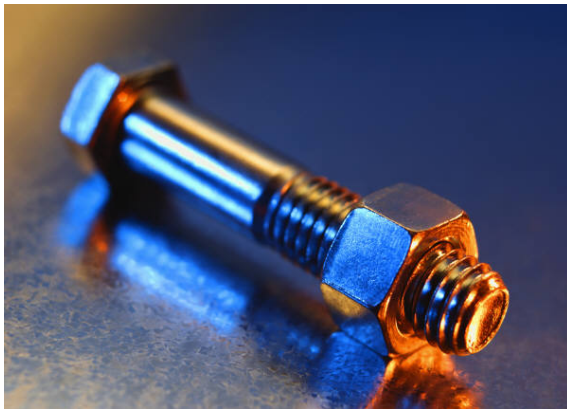


Envisaged User Experience

- Describing a situation via the portal
- Interview to identify life-event and collect the needed information
- Life-event fired
- Existing services either
 - Compliant
 - Accessed via Relay
 - Wrapped and accessed via Relay



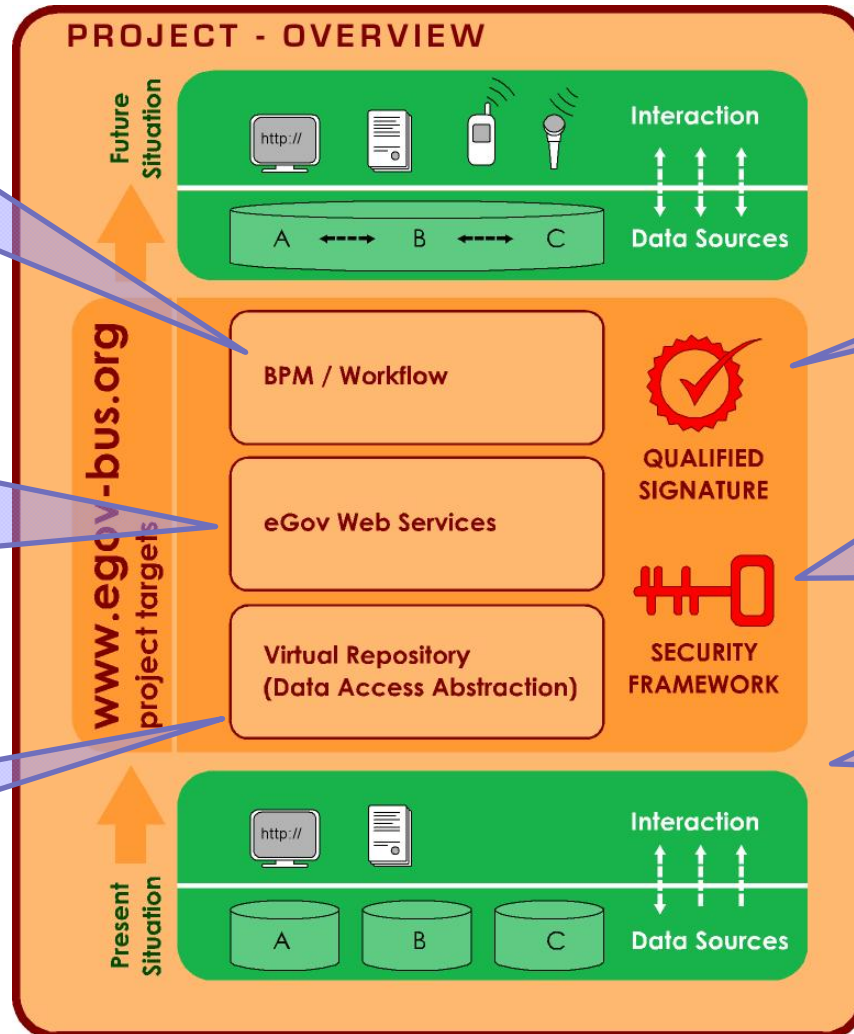
Standards - Modules



- Based on Overall Architecture
- Main Modules / Work Packages



Some standards as of the overall architecture



BPQL, TopicMaps,
ebXML Registry
Information Model /
Registry Services

CMS, XMLDDsig,
XAdES

WS-Security,
WS-Addressing,
WS-Policy, (WS-
Reliable Messaging)

WS-Security, SAML,
WS-Trust, WS-
SecureConversation
WS-SecurityPolicy

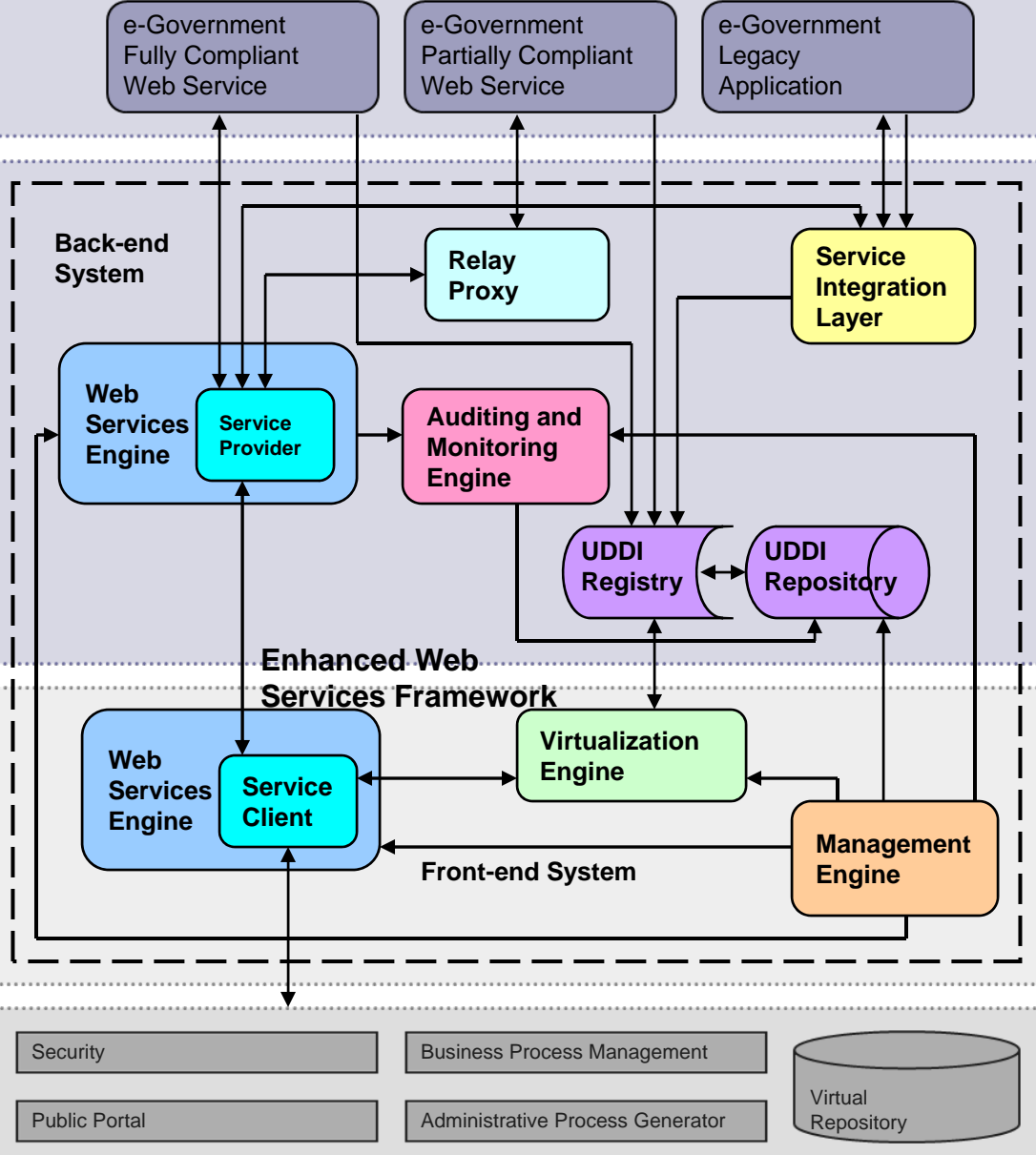
RDF views, SQL

SOAP, WSDL, UDDI



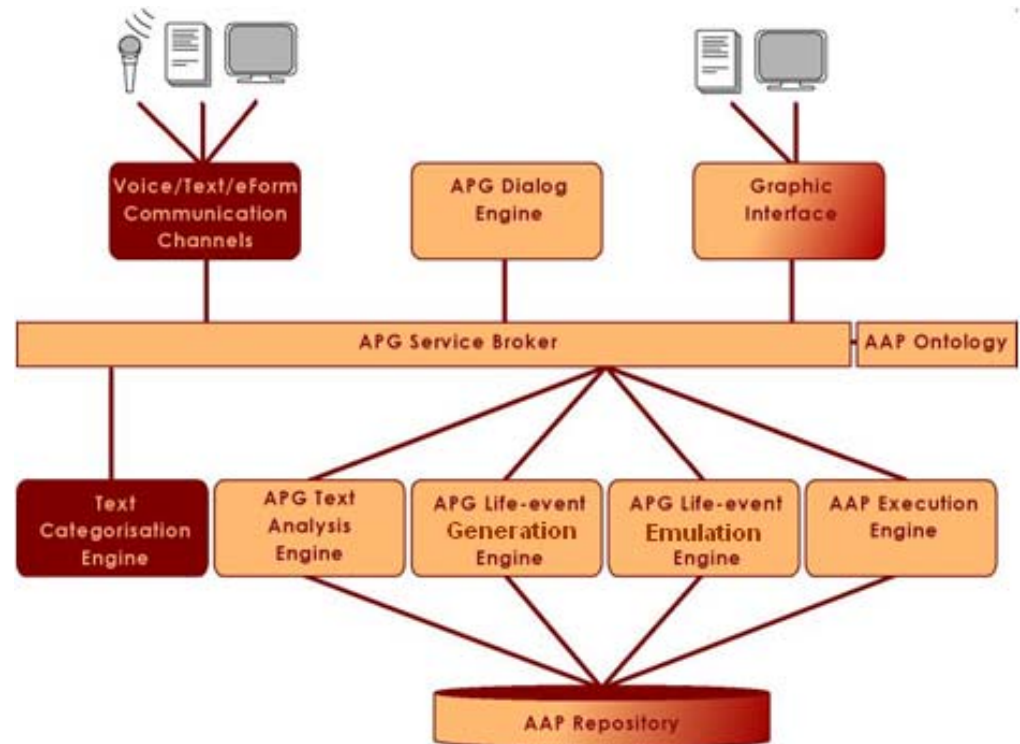
Architecture

- Requests issued via front – end system / portal
- Legacy services invoced via Service Integration / Relay
- eGovernment services published in UDDI registry

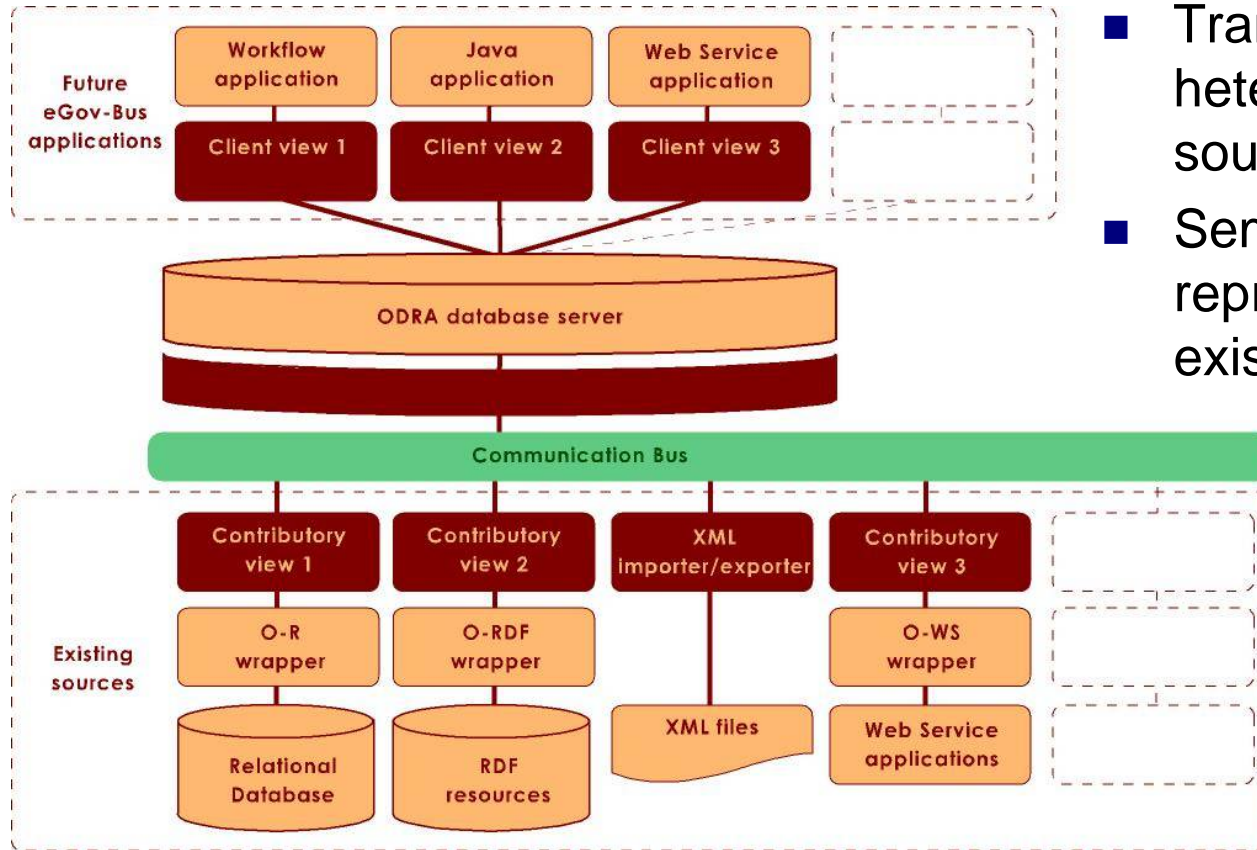


APG Architecture

- APG: Administrative Process Generator
- J2EE / JSR 168 portlets at client interface layer
- APG service broker as interaction logic layer
- APG life-event generation engine and emulation engine
- Adaptive Administrative Process (AAP) execution engine



Virtual Repository



- Transparent access to heterogeneous data sources
- Semantic Web (RDF) representation of existing sources

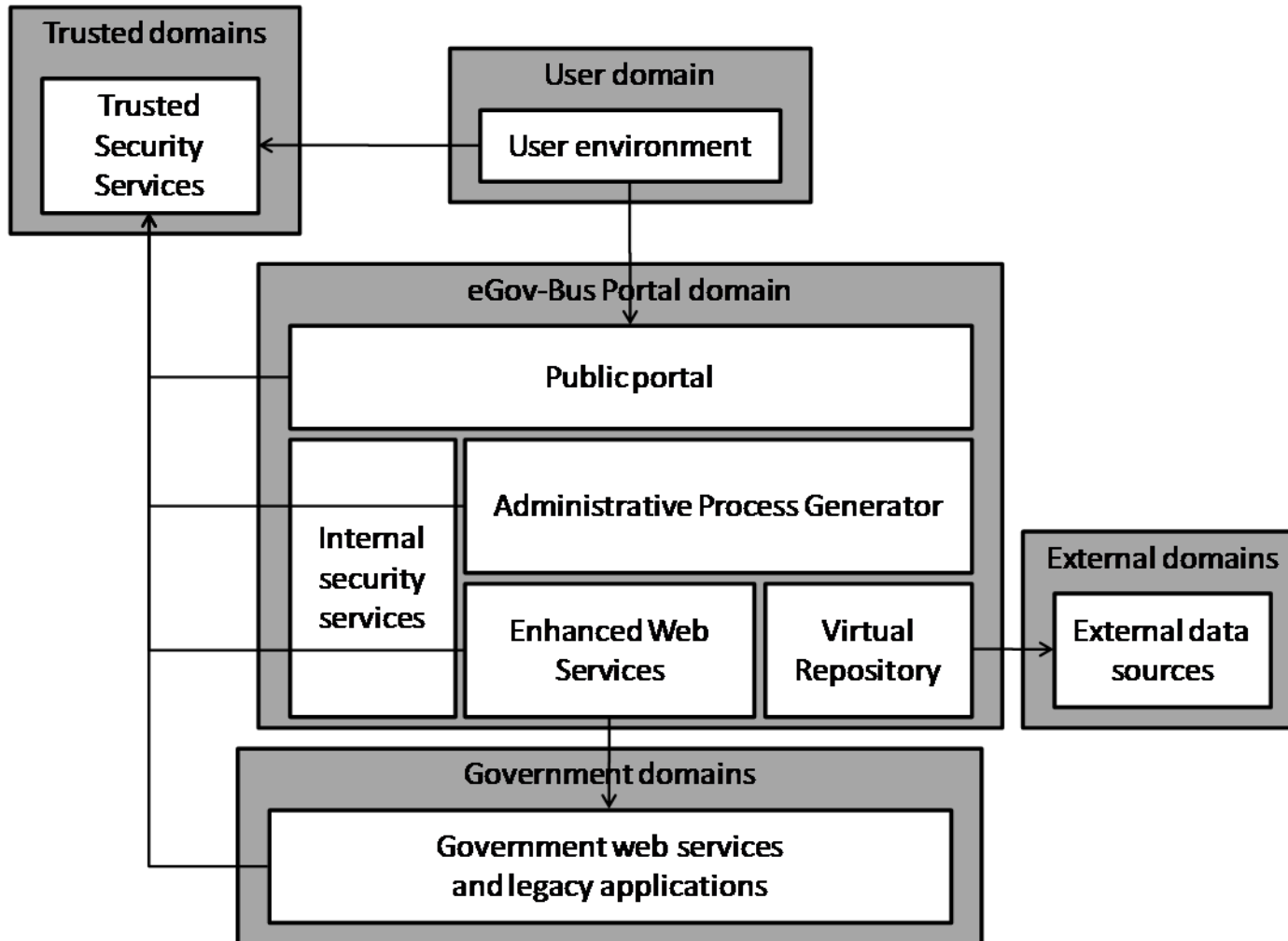
Security / eID



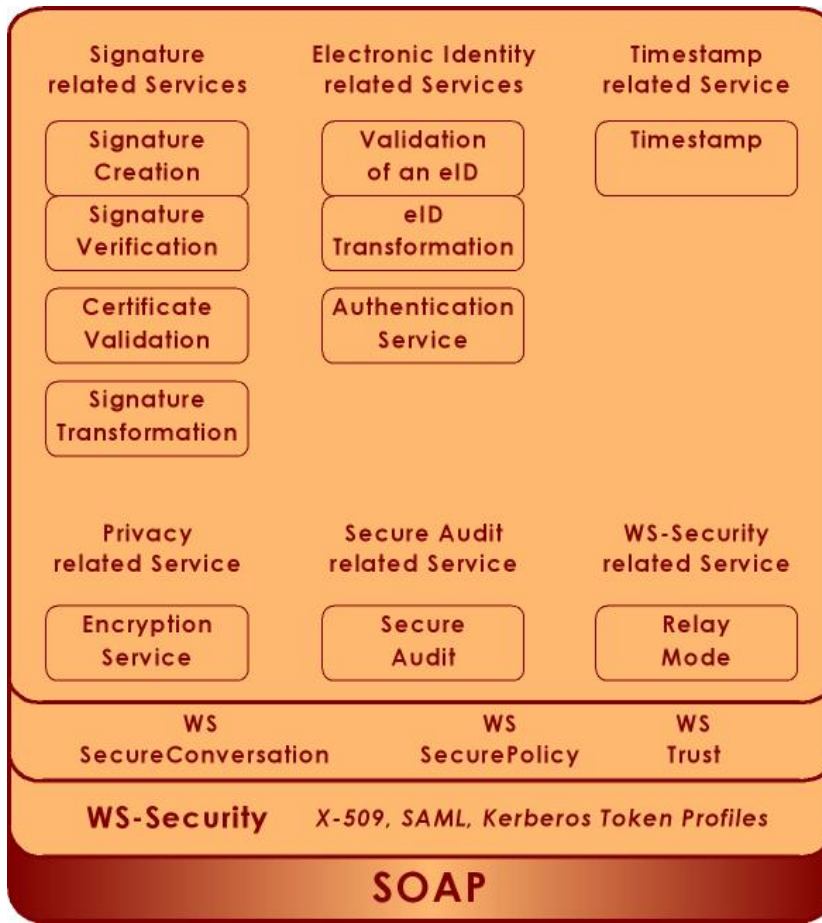
- Trust Domains
- Security Modules / Architecture
- eID Transformation
- Signature-Transformation



Trust Domains



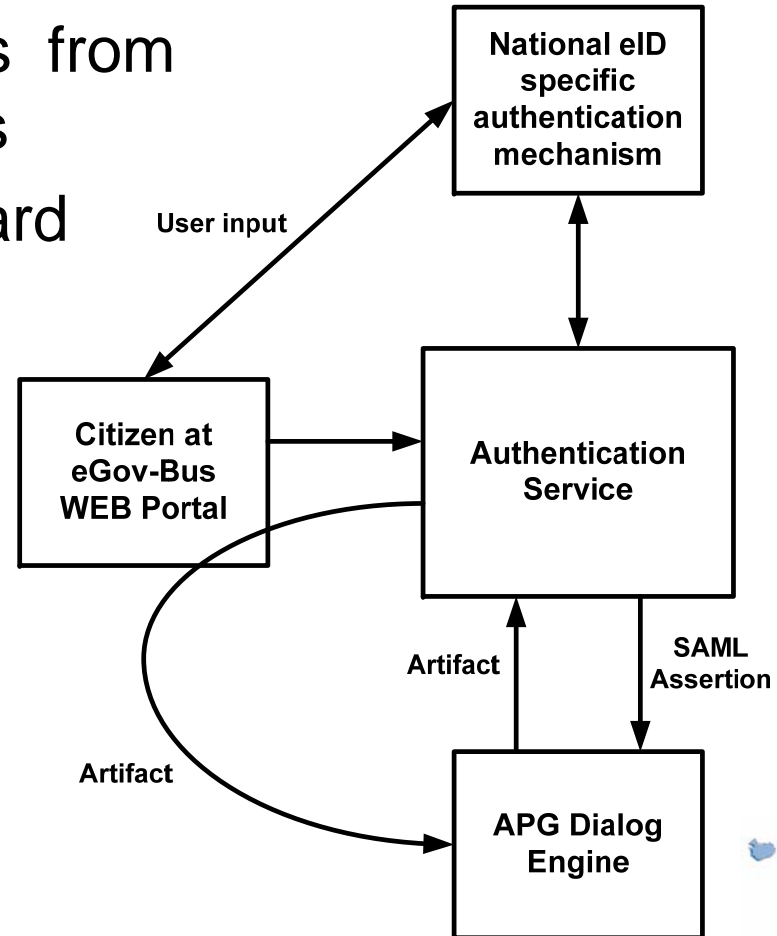
Security Modules



- Signature-related
 - Server signature-creation
 - Signature validation
 - Signature transformation
- eID-related services
 - eID validation
 - eID transformation
- Auxiliary services
 - Certificate validation
 - Timestamp
 - Encryption

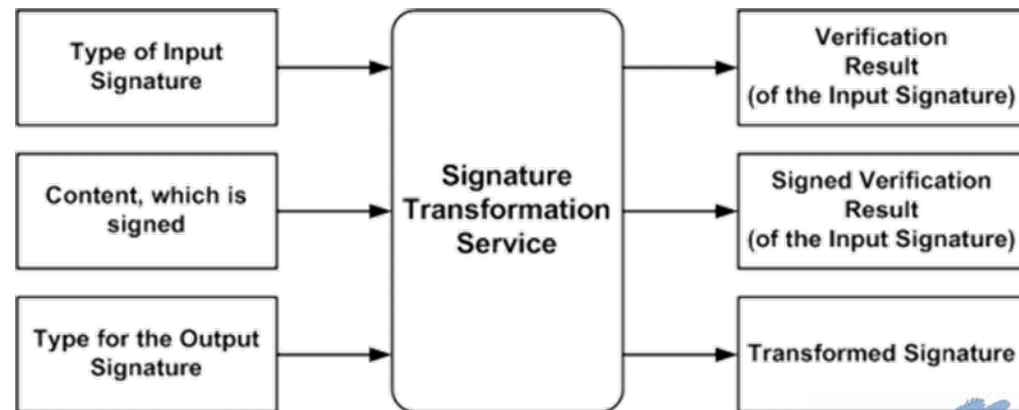
Authentication Module (eID transformation)

- Goal: De-couple eGov-Bus from integration of national eIDs
- Transformation to a standard eGov-Bus - internal representation
 - SAML has been chosen
- eIDs so far integrated
 - Austrian citizen card
 - Belgian BELPIC
 - SSL/TLS certificates
 - Username-Passwords

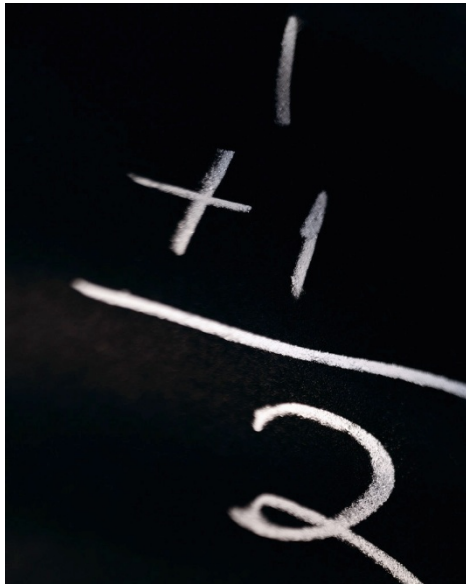


Signature Transformation

- No commonly accepted eDocument framework
- Just a few electronic eGovernment results
 - e.g. signed electronic certificate of enrolment or or certificate of register of convictions in Austria
 - May need to cope with different signature formats
- Idea: to act as a trusted signature validation and “re-signing” service
 - e.g. Input XAdES, result CMS or different XAdES profile



Lessons Learned



- eGovernment (SOAP)
Webservices are scare
 - a few exist (e.g. Austria)
 - Could not yet define a sufficiently complex cross-border life-event solely based on Webservices
 - Need to wrap Web-forms and simulate
- No common eID standards yet
 - CIP ICT PSP Large Scale Pilots
- Project objectives are still valid



Thank You for Your Attention!

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Project-Web **<http://www.egov-bus.org>**

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