e-Governance Academy & Estonian eGov Frameworks

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Arvo Ott, PhD
Executive Director, Chairman of the Management Board

eGA - non-government, non-profit, non-academic

eGA was founded by Open Society Institute, UNDP and Estonian Government in 2002

Main Donors

VÄLISMINISTEERIUM

OPEN SOCIETY FOUNDATIONS

UNDP

The World Bank

European Union

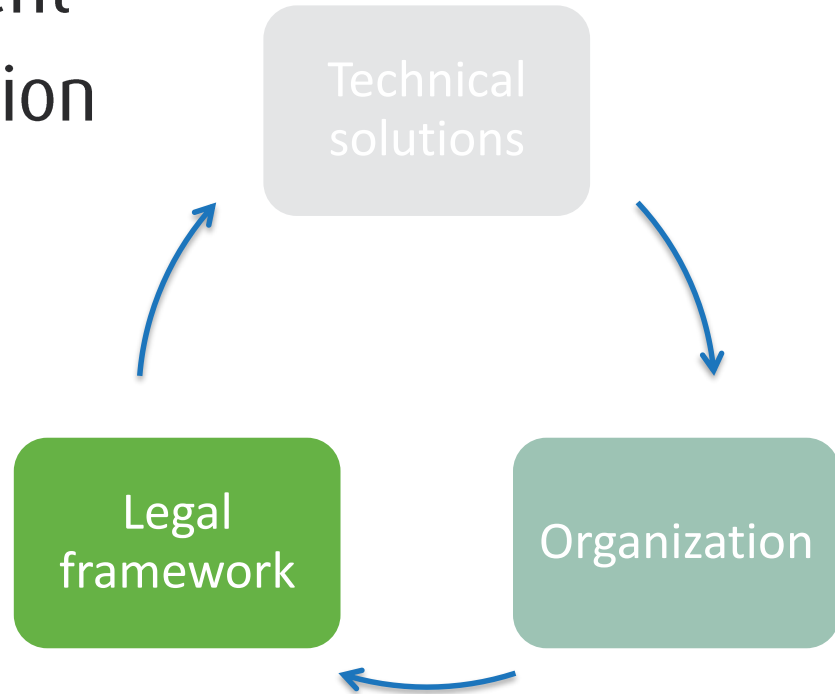SWEDEN

Foreign & Commonwealth Office

USAID FROM THE AMERICAN PEOPLE

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Compentencies

- Central & local e-government
- E-democracy & e-participation
- Interoperability, open data
- Cyber security
- E-identity
- Change management

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Technical solutions

Organization

Legal framework

Current projects

Armenia	Cayman Islands
Azerbaijan	India
Belarus	Indian Ocean Countries
Georgia	Namibia
Moldova	Sao Tome & Principe
Kyrgyzstan	Tunisia
Ukraine	National Cyber Security Index

- Governance efficiency
- Economic competitiveness
- e-Way of live

Balanced e-Governance =
Combination of electronic services and participatory acitvities

e- GOVERNMENT
e-Services

e-DEMOCRACY
e-Participation

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Balanced e-Governance

Combination of electronic services and participatory services

e- GOVERNMENT

Transaction of user-oriented services offered by government that are based on information and communication technologies.
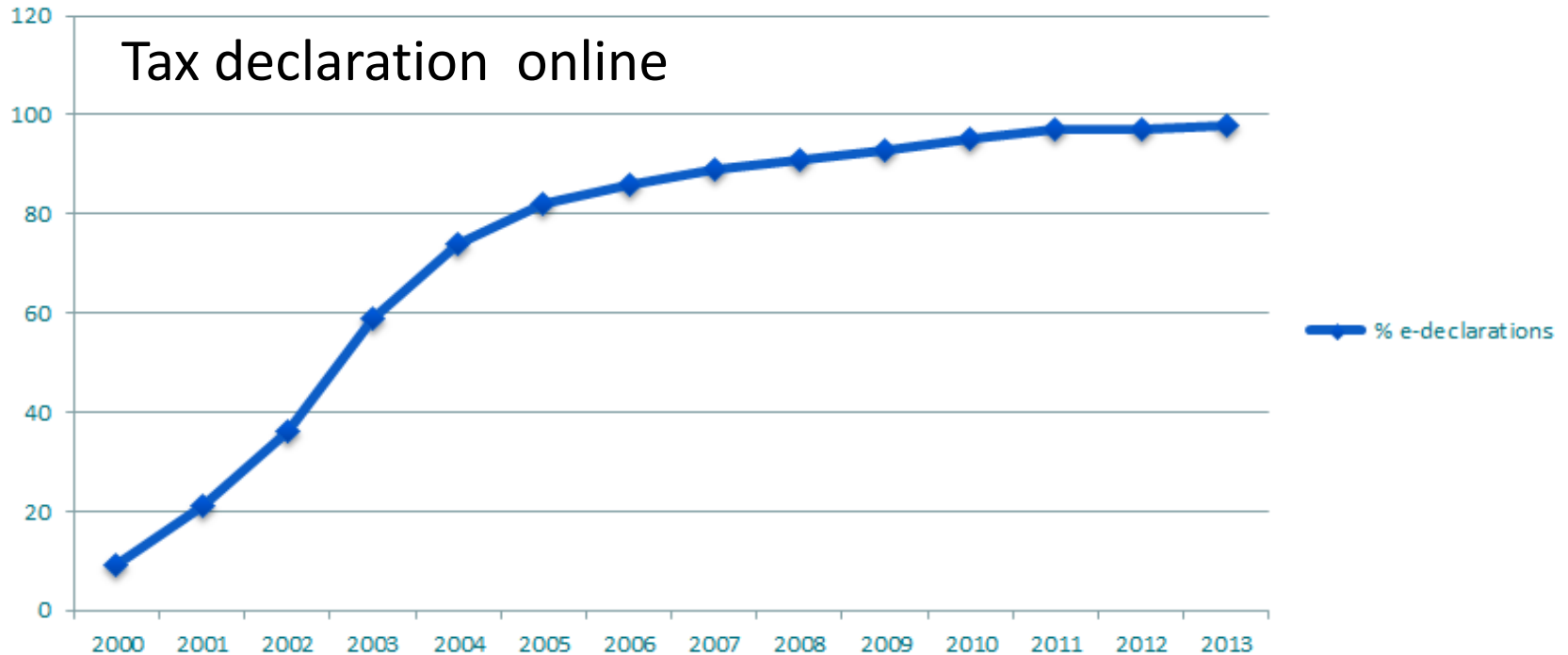
e-DEMOCRACY

Digitally conveyed information (transparency) and the political influence (participation) exerted by citizens and business on the opinion-forming processes of public – state and non-state –institutions

eGovernment example:

Parental benefit – best eGov service in 2004 (interoperability of 5 information systems from 5 goverment institutions)
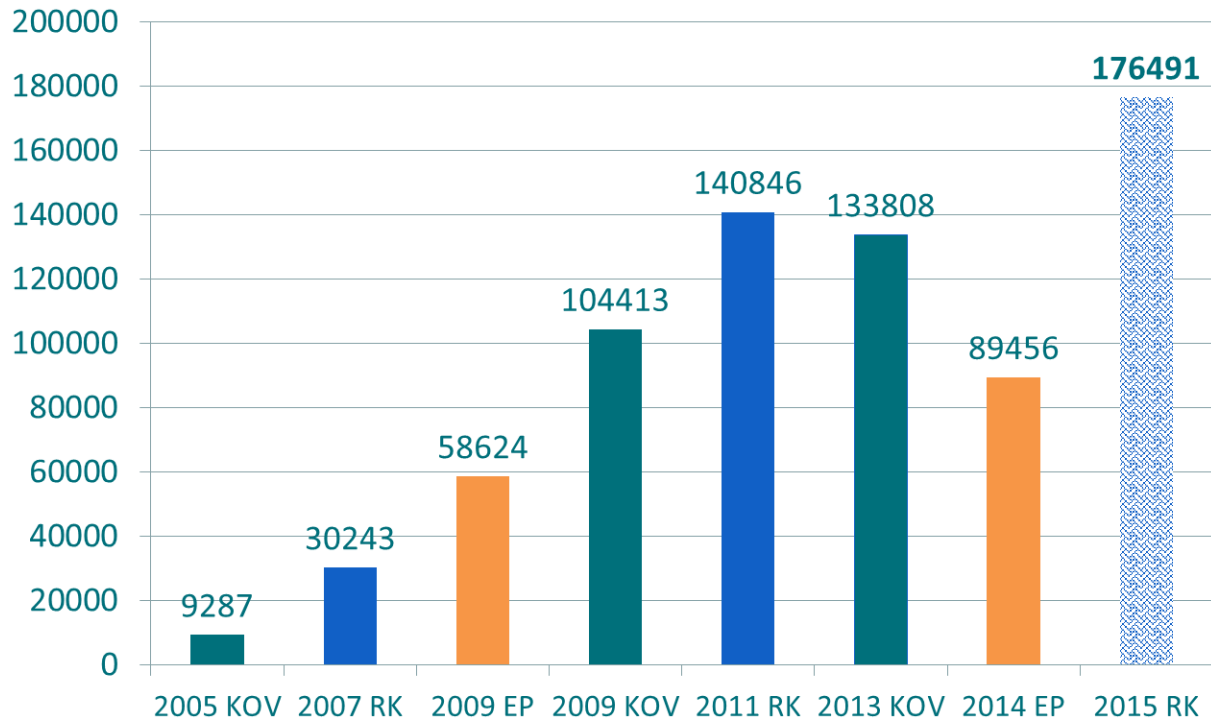
Takeup takes time

Tax declaration online

% e-declarations

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i-voting in Estonia

i-Voting statistics in Estonia

Bar chart of i-Voting statistics in Estonia:
- 2005 KOV: 9287
- 2007 RK: 30243
- 2009 EP: 58624
- 2009 KOV: 104413
- 2011 RK: 140846
- 2013 KOV: 133808
- 2014 EP: 89456
- 2015 RK: 176491
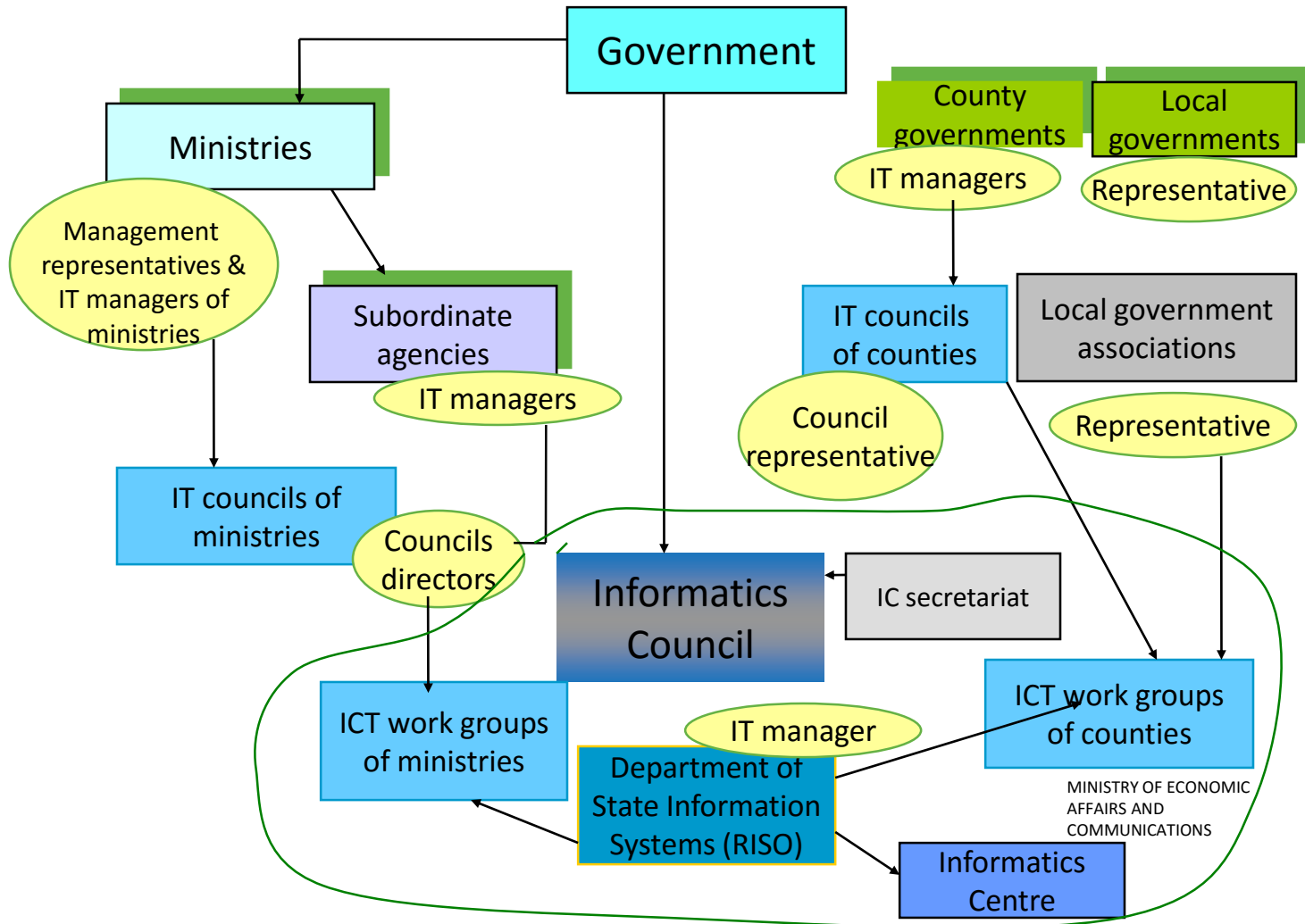
Principles

- Citizen (customer) orientation
- Leading role for the private sector
- Efficient and transparent public sector.
- e-Democracy/e-participation.
- Protection of personal data
- Measures against digital divide (ID-cards example…)
- Neutrality concerning technological platforms

Central coordination and IOF management – Different roles

eGovernment Central Coordination Unit:

eGov and Information Society strategy planning and monitoring.
- Collecting and analyzing ICT systems in government
- eGov budget planning with Ministry of Finances and donors
- Developing and giving approvals for legal acts related to eGov
- Preparing eGov strategies and action plans
- Monitoring Action Plan development
- Cooperating with CIOs. Trainings for CIOs.
- Planning and coordinating international cooperation on eGov.

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Central coordination and IOF management – different roles

eGovernment Central Implementing Body:

Implementation of eGov interoperability platform.
- Data exchange layer and monitoring
- Portal
- IOP management system - metadata
- Infrastructure
  - Network
  - eID
  - CA
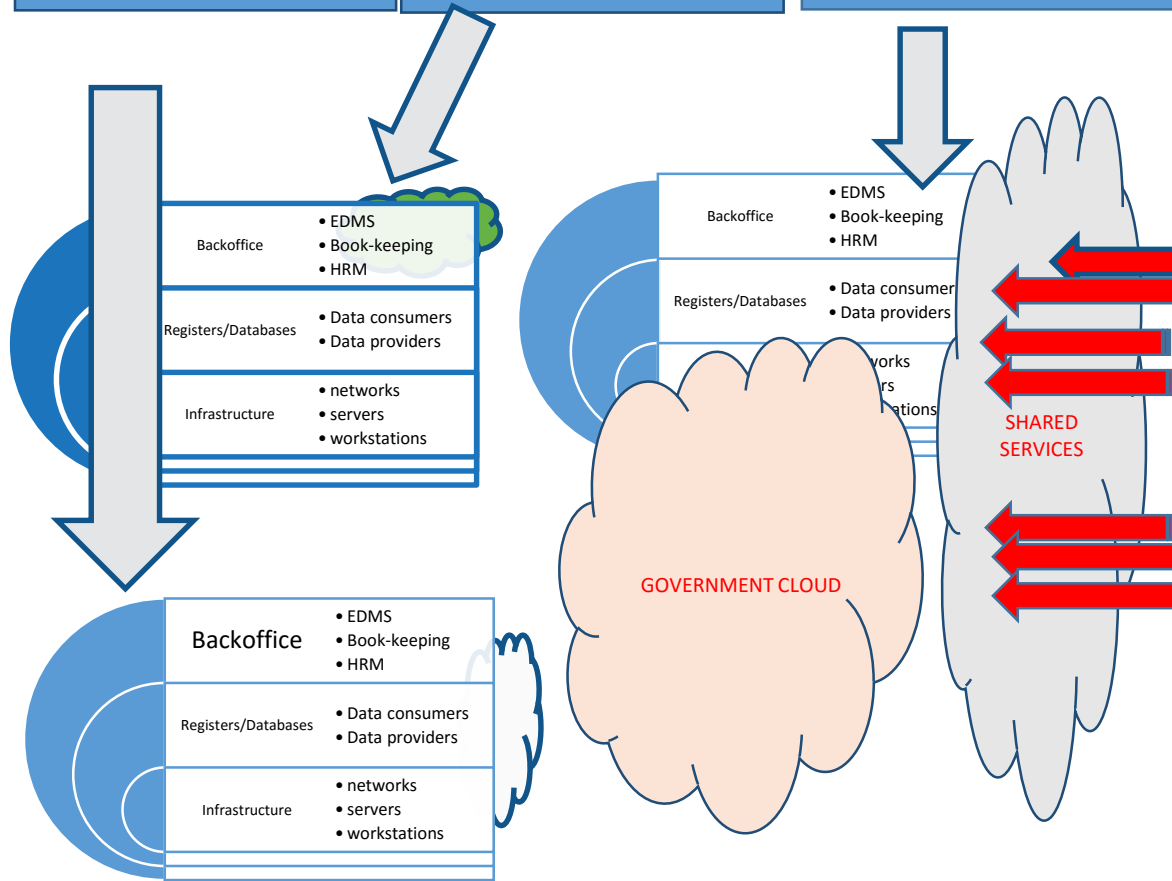 - Mobile and payment gateway
  - Cloud

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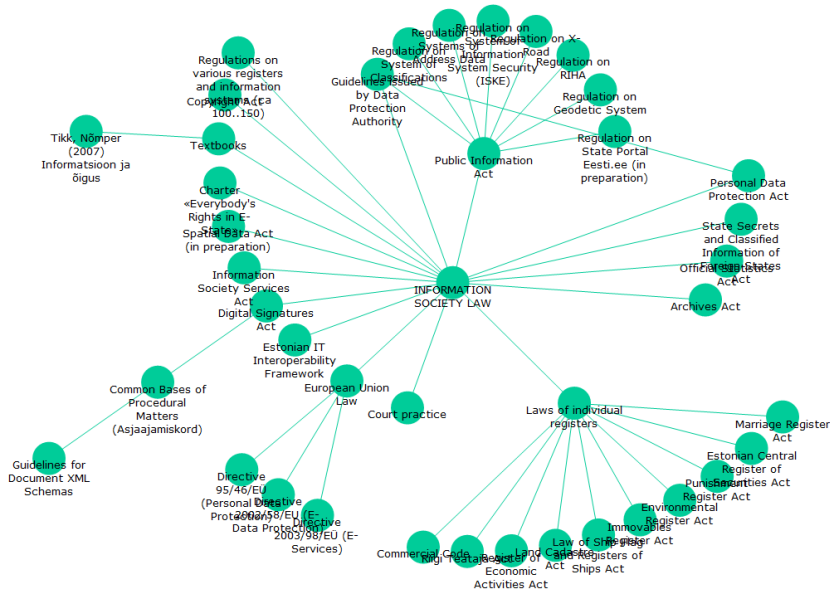
Legal framework

- Technology can not be regulated but relations between people, organizations...rights and responsibilities

- Regulate as minimal as possible. Use existing legal framework and make needed amendments

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Legislation

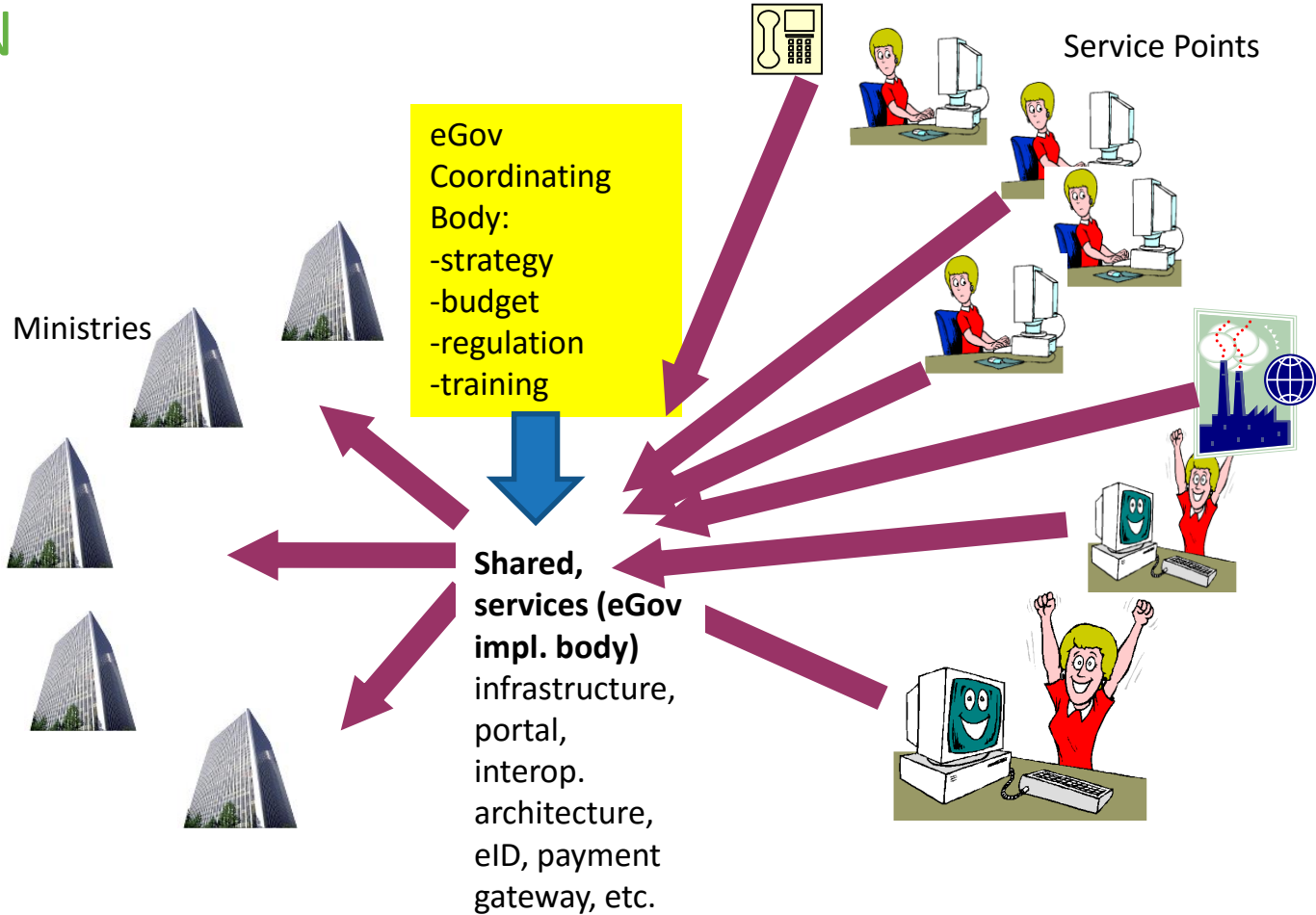- **Databases Act** (1997/ 2006)
- **Public Information Act** (2001)
- **Digital Signatures Act** (2000)
- **Act on Intellectual Property** (applicable also for state databases)
- **Principles of Estonian Information Policy** (1998, 2004)
- **Action Plan of Estonian Information Policy – (eEstonia)** (1998, 1999, 2000, 2001,2002, 2003, 2004, 2005, 2006…)
- **Personal Data Protection Act** (1996)

Ministry of ICT

Ministry of Finance

Etc....

Backoffice
- EDMS
- Book-keeping
- HRM

Registers/Databases
- Data consumers
- Data providers

Infrastructure
- networks
- servers
- workstations

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networks
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ations

SHARED SERVICES

GOVERNMENT CLOUD

Horizontal enablers
- ADDRESS SYSTEM
- DATA PROTECTION MEASURES
- ELECTRONIC ID
- METADATA and MANAGEMENT SYSTEM
- ONTOLOGIES and SEMANTICS
- GEOGRAPHIC COORDINATES
- CLASSIFIERS
- DOCUMENT REPOSITORY
- SERVICE PORTAL for EGOV
- DATA EXCHANGE INFRASTRUCTURE
- MOBILE GATEWAY
- PAYMENT GATEWAY

VISION

Service Points

Ministries

eGov Coordinating Body:
-strategy
-budget
-regulation
-training

Shared, services (eGov impl. body) infrastructure, portal, interop. architecture, eID, payment gateway, etc.

System Architecture
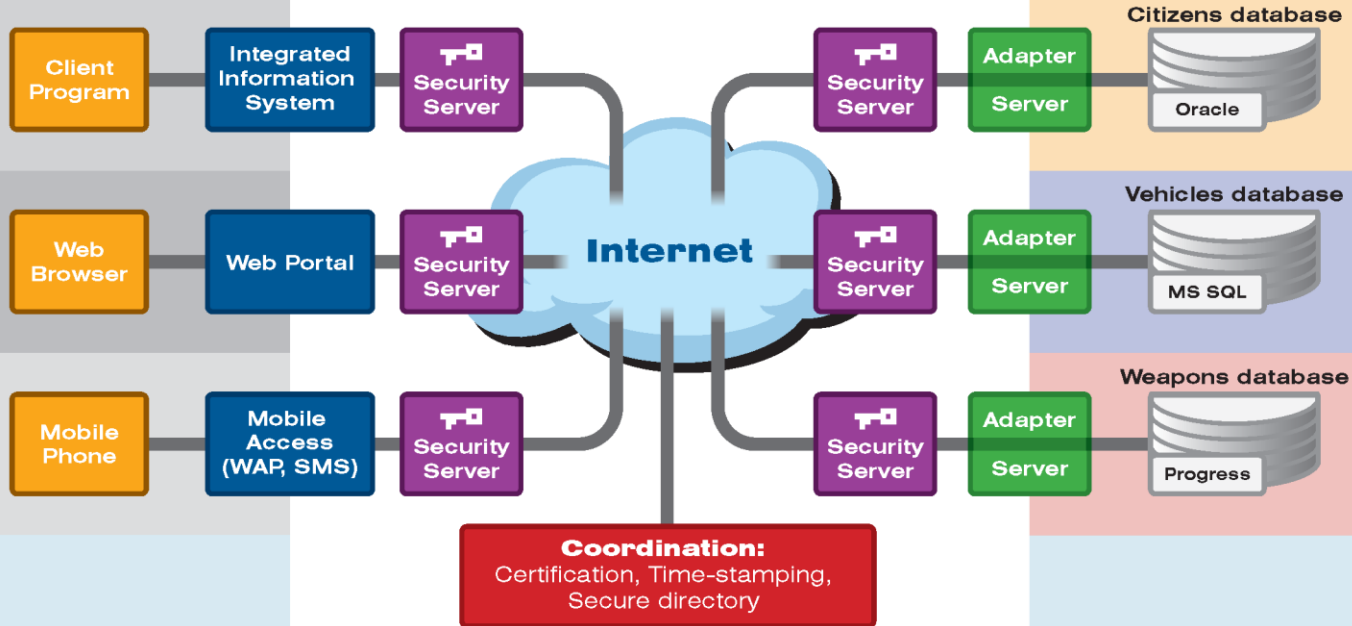

Heterogeneous environment:
different operating systems, authentication and access methods

Unified security environment:
- Confidentiality, integrity, availability and non-repudiation in a unified way
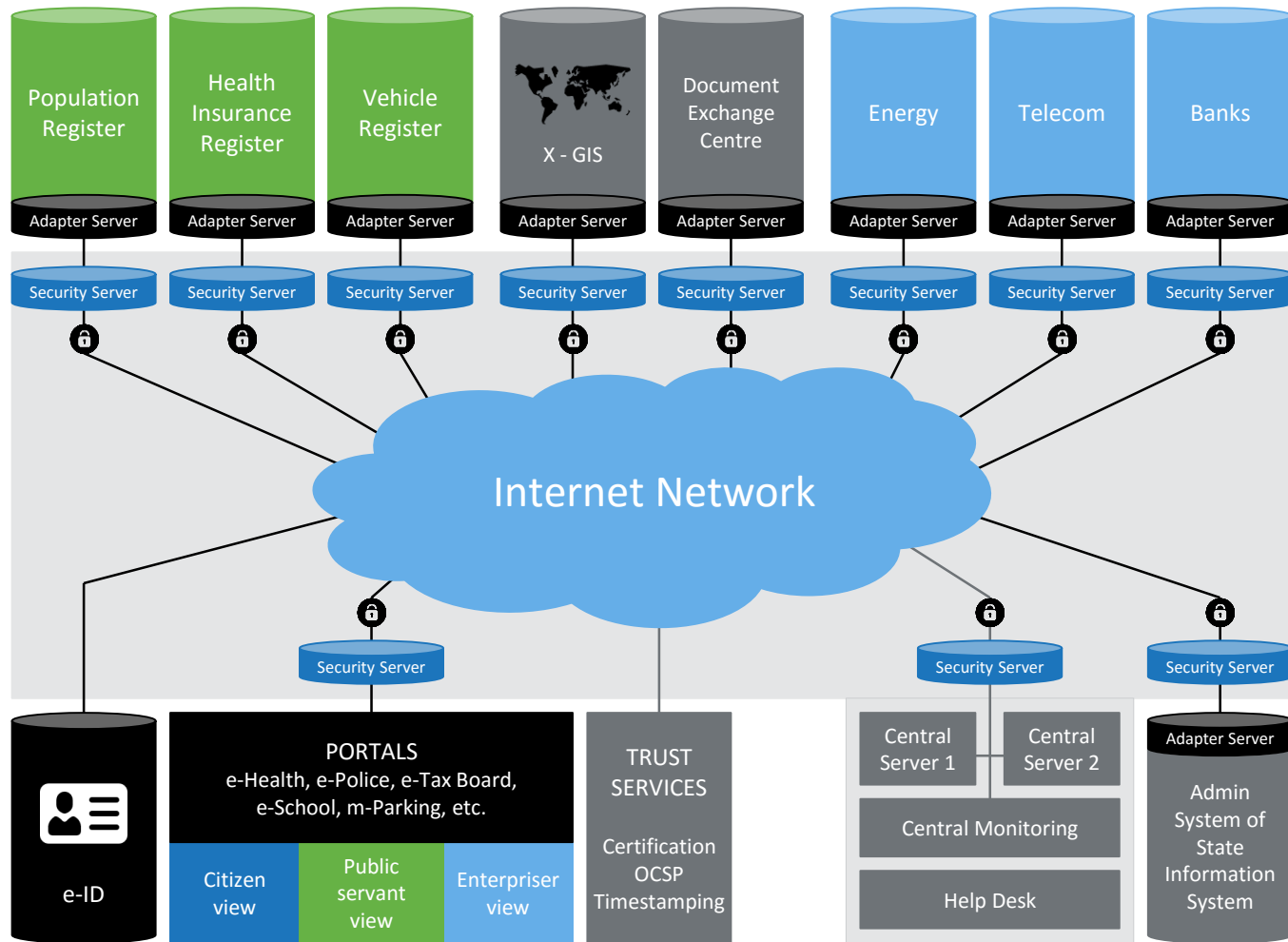- Single protocol and single interface (XML-RPC)

Heterogeneous environment:
different database systems, technologies, protocols and interfaces

Client Program — Integrated Information System — Security Server

Web Browser — Web Portal — Security Server

Mobile Phone — Mobile Access (WAP, SMS) — Security Server

Internet

Security Server — Adapter Server — Citizens database — Oracle

Security Server — Adapter Server — Vehicles database — MS SQL

Security Server — Adapter Server — Weapons database — Progress

Coordination:
Certification, Time-stamping, Secure directory

The central components in the architecture:

- Government network GovNet
- Data Exchange Infrastructure (x-road);
- The layer of personalized portals (citizen portal(s), entrepreneur portal(s), civil servant(s) portals);
- The register of registers, catalogue of services and the management system for the state information system;
- The layer of geoinformation systems;
- The layer of document management systems and document exchange centre;
- The system of classifications;
- The system of address details;
- The security system

REMOTE ADMINISTRATION & SUPPORT

Certification Authority (offline)

Central monitoring station

Service Provider Administrators

Support & administration services
Initial Installation and localization
Training
Operating of CA

INTEGRATION LAYER

LOCAL PARTNER

Primary management server

Secondary mgmt. server 1

Central monitoring station

Security gateway — Officials' portal

Security gateway — Entrepreneurs' portal

Security gateway — Citizens' portal

Local Administrator

Operates local organization:
- Local policies
- Training
- Validation
- User support
- User administration of Portals

OPERATION: SUPPORT, MONITORING, TRAINING, ADMINISTRATION

Registry

Adapter server

Security gateway

Local monitoring station

Local Administrator

REGISTRY 1

Registry

Adapter server

Security gateway

Local Administrator

REGISTRY 2

Monitoring information
End-user queries
Database-dependent protocol

Digital ID and Signature

Since 2002

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Active cards: 1 265 423 >92% of the population
Authentications: 431 537 431
Signatures given: 280 716 198

Source: http://id.ee/en?id=30468, 13/04/2016
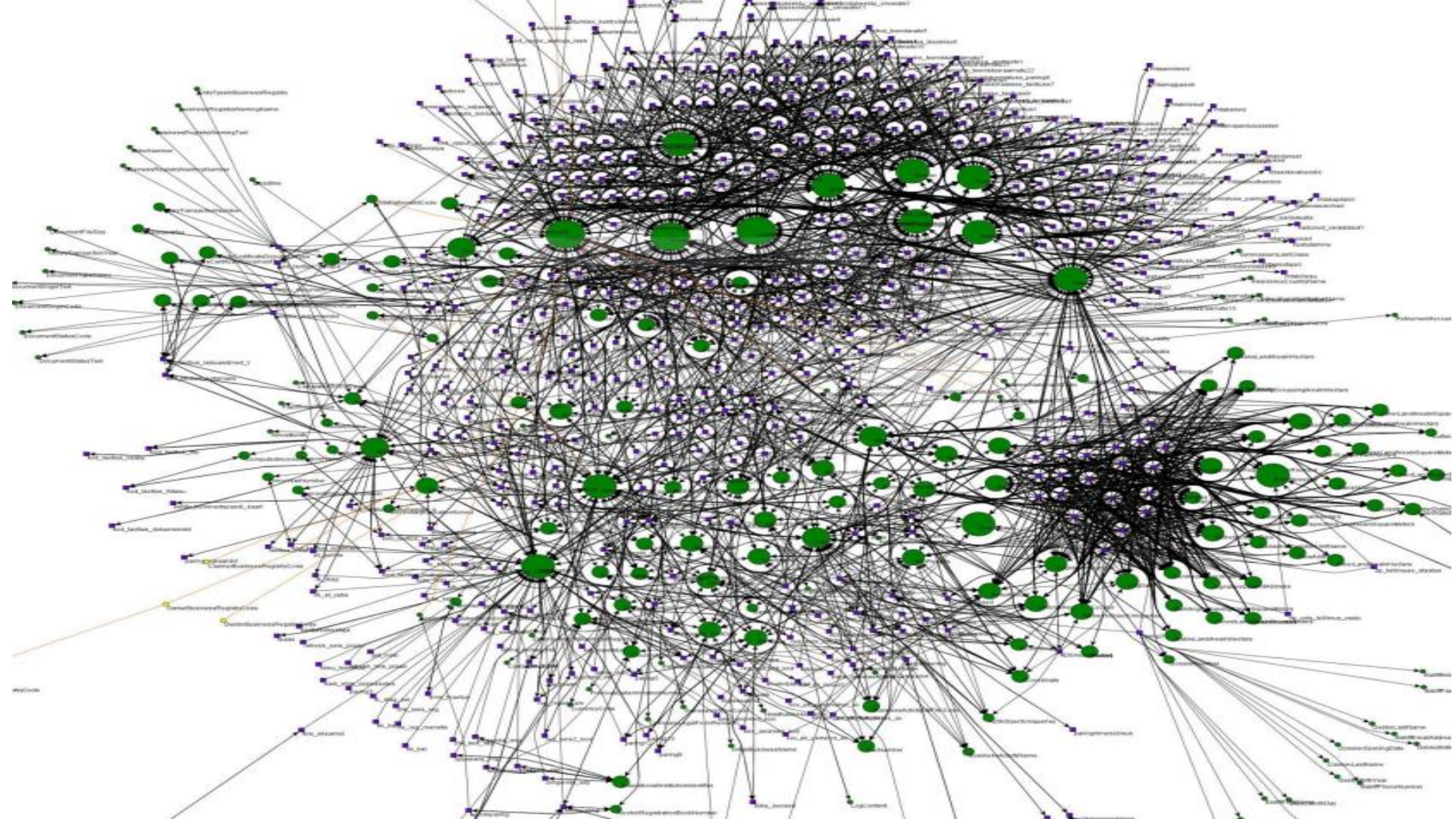
mID
(in SIM card)

Doesn't need software installed on PC

Doesn't need web browser support

Works on any handset

Can be supported by any operator

Thank You

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