TÜBİTAK BİLGEM YTE

YAZILIM TEKNOLOJİLERİ ARAŞTIRMA ENSTİTÜSÜ

DİJİTAL DEVLET VE KURUMSAL MİMARİ

31 Mayıs 2016, Salı

Wyndham Ankara Oteli

MINISTRY OF FINANCE

National Reference Architecture for Digital Services

31.5.2016 Jari Kallela

Digital Government & Enterprise Architecture Event, Ankara, Turkey

Digitalization & Digital Services

Example of public service transformation:

Finnish Taxation Authority

Customer service in Taxation office in Helsinki 1989

Examples of e-services of Taxation Authority

Tax Card -online

Income Tax Return Correction -online

social media

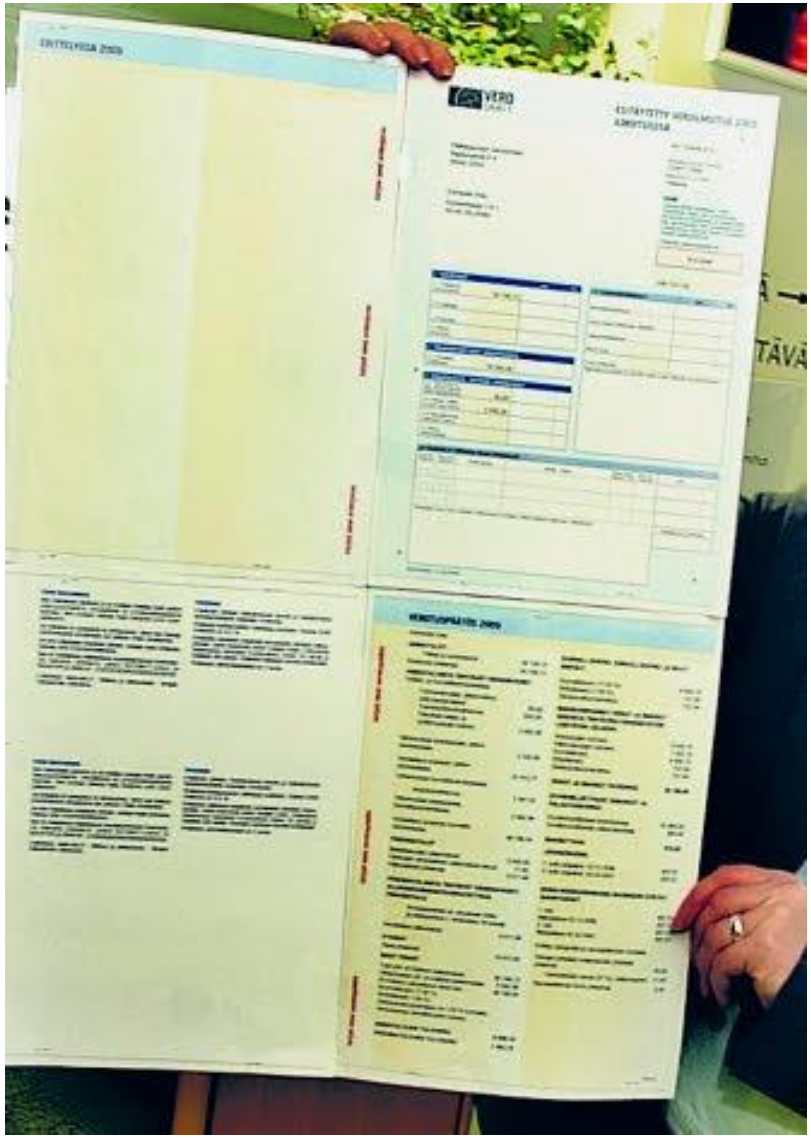
Tax.fi – information online

Ask online

Corporate Income Tax Return

Tax Account service

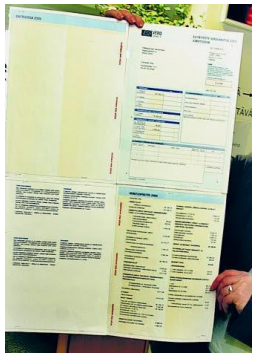
Success story: Pre-filled tax return



Pre-filled Tax Return streamlined the process

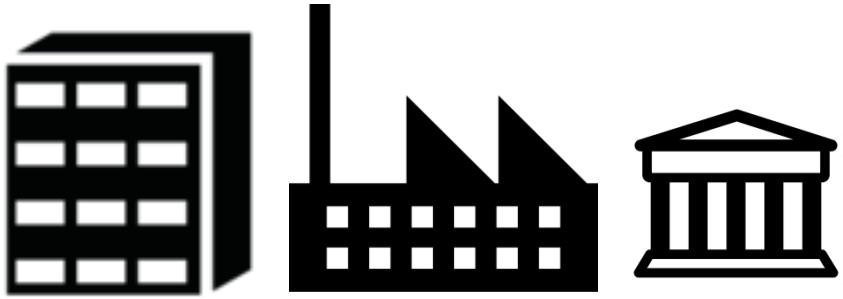
Finnish Tax Administration

40 000 000
Annual Declarations



Tax Return, prefilled
5 000 000

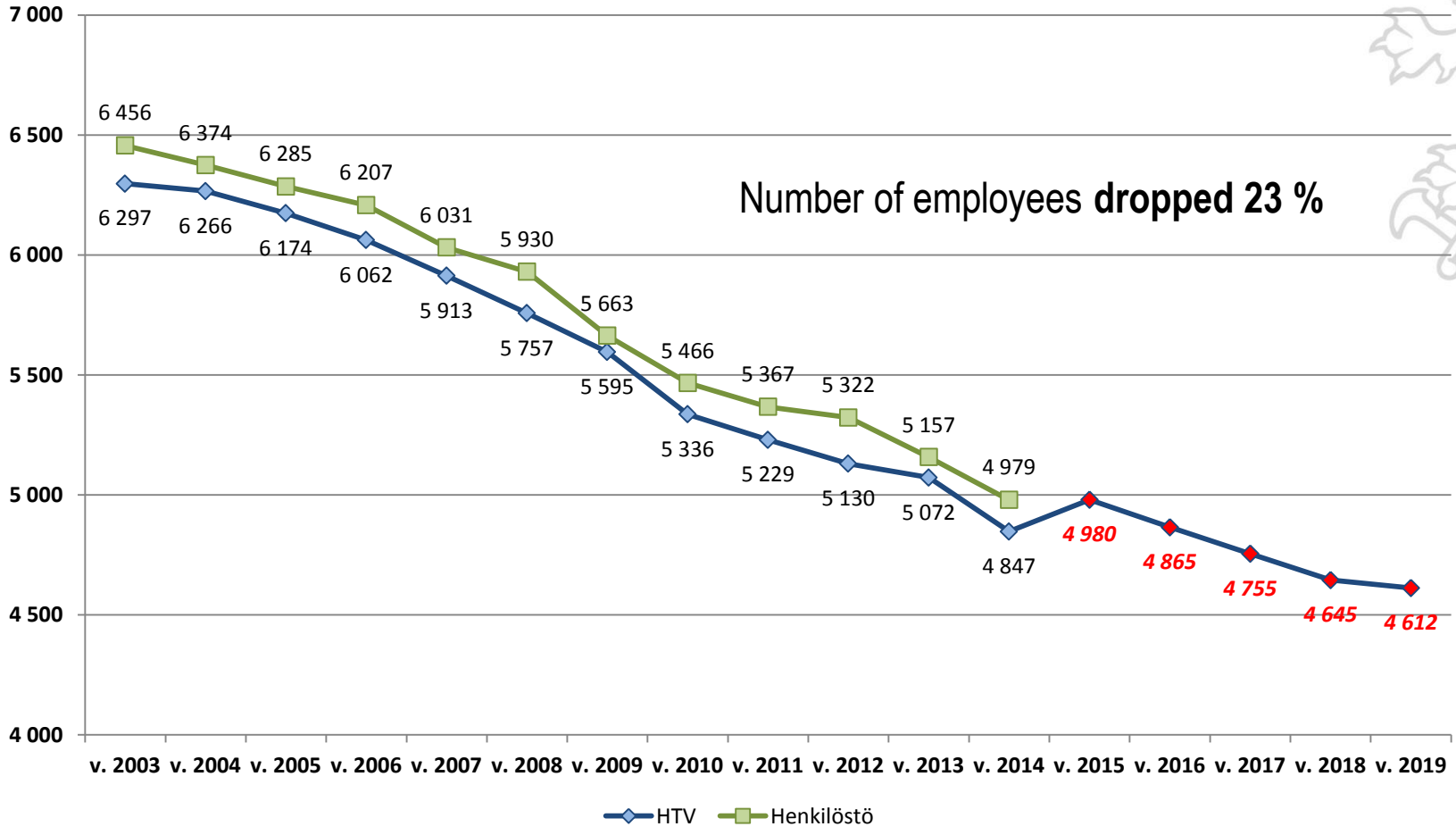
1/3



Businesses and enterprises
Employers,
Pension Funds, Banks, Brokers
Dividend payers, Wood buyers

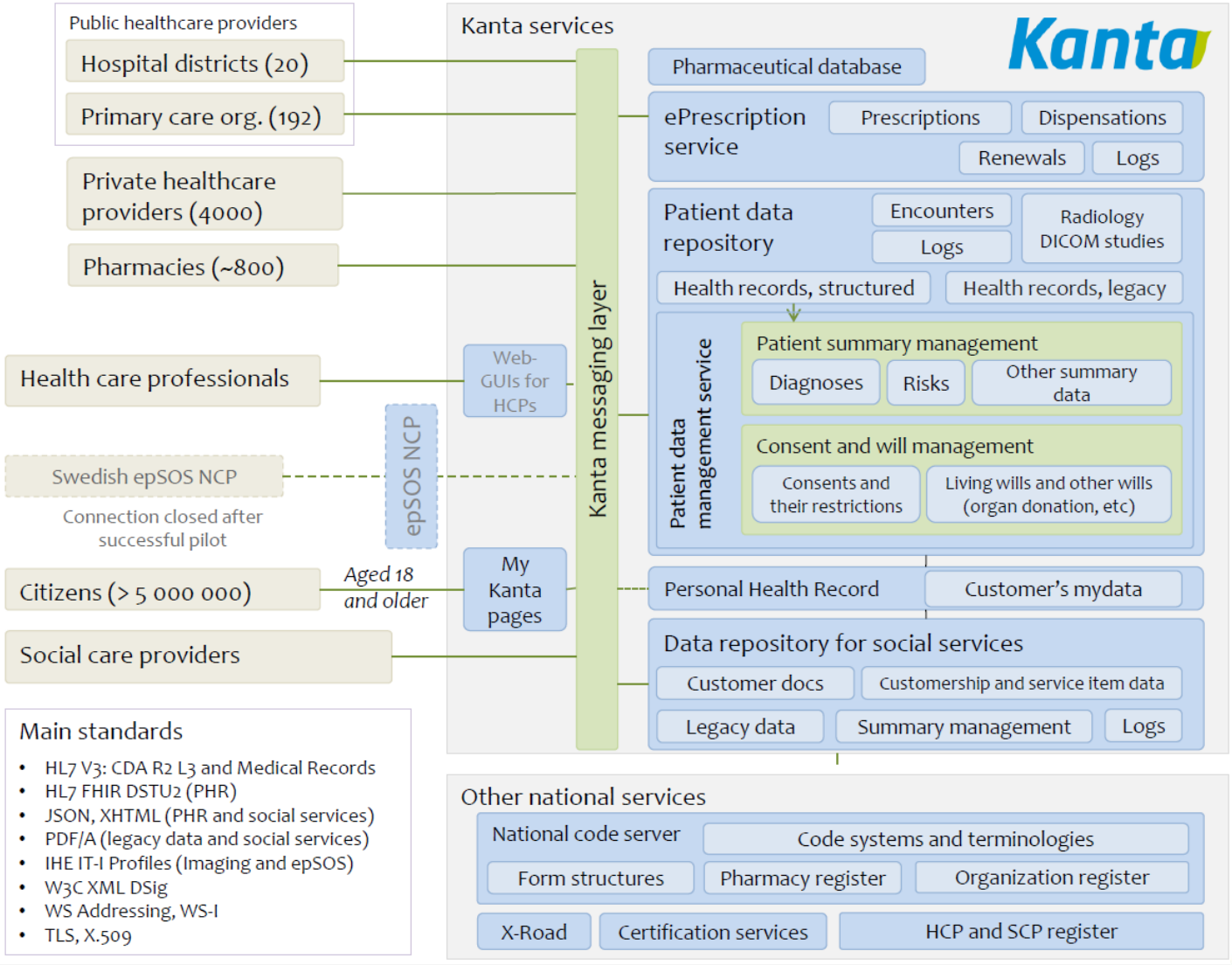
Citizens – income
Salary, Pension, Dividend, Sales of shares, sales of wood

Personnel in Taxation Authority 2003 - 2019

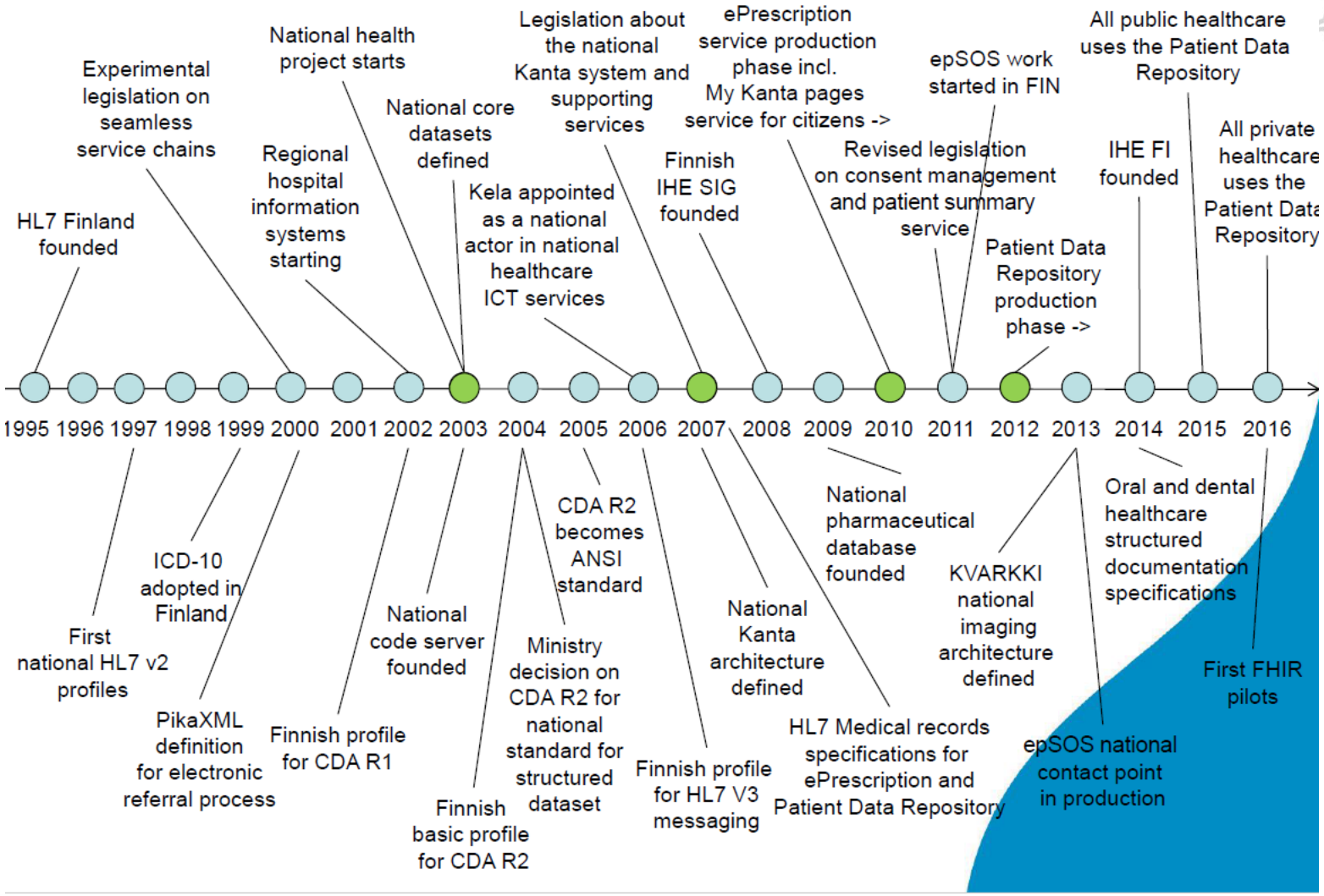


CASE: Finnish Healthcare ICT Standardization for Interoperability

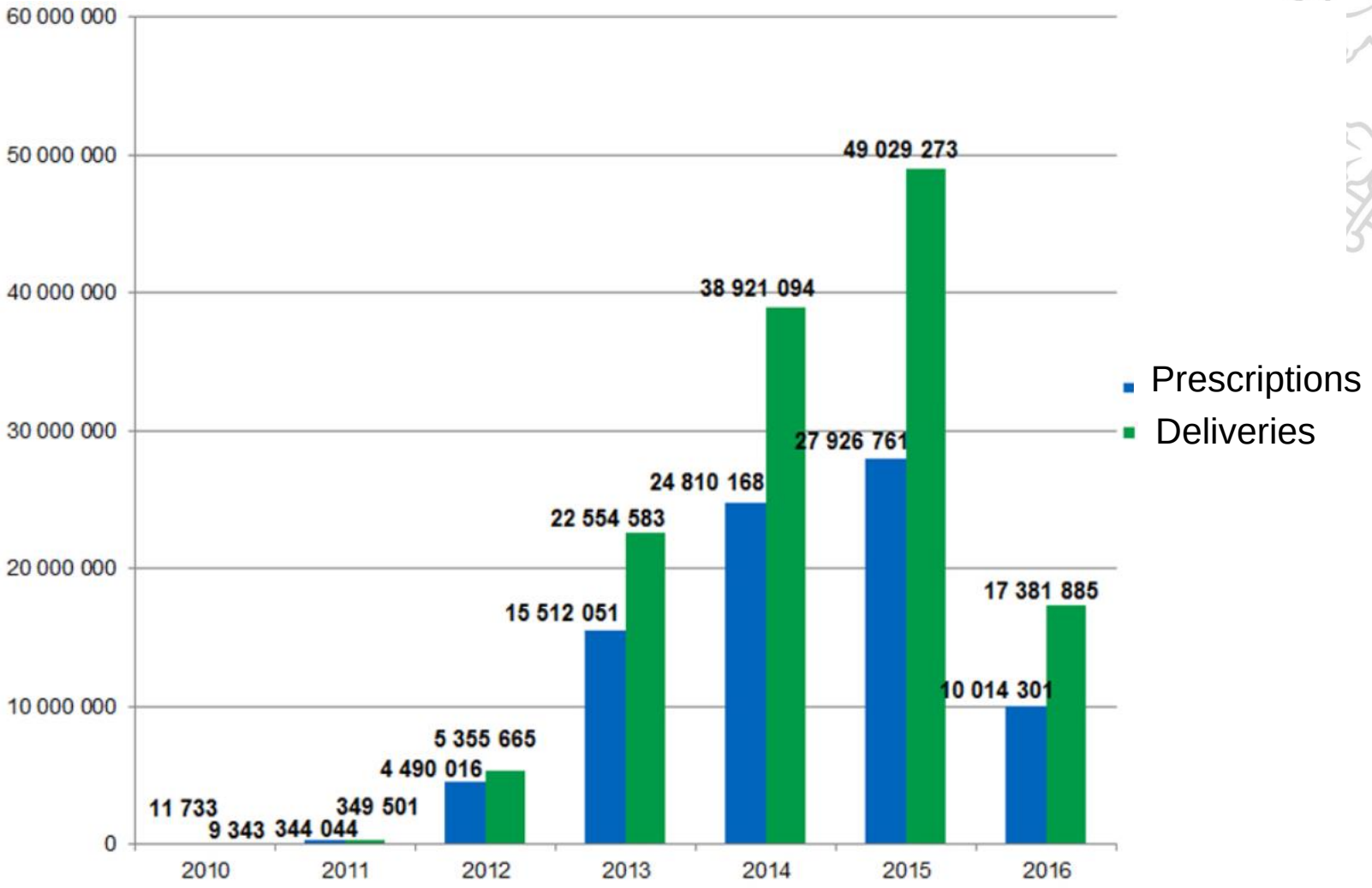
The architecture for the national healthcare data repositories



The timeline of healthcare ICT standardization



Prescriptions and deliveries by 30.4.2016



Usage

Enterprise Architecture Approach in Public Sector and experiences/lessons learned

Finland in international rankings - overview

Org	Year	Survey	Countries	Best country	Finland's position in	
					Europe	World
UN	2014	eGovernment development index	193	South Korea	4.	10.
WEF	2014	Networked readiness index	148	Finland	1.	1.
OECD	2013	Citizens internet use with public authorities	27	Iceland	5.	N/A
OECD	2013	Enterprises internet use with public authorities	27	Iceland	2.	N/A
Flet	2013	Digital Evolution Index	50	Singapore	4.	7.
EC	2012	Quality of eGovernment	32	Finland	1.	N/A
EC	2012	eGovernment use	32	Denmark	4.	N/A
EC	2015	eGovernment performance across policy priorities	35	N/A	Top	N/A
EU	2014	Interoperability framework	25	N/A	Avg	N/A
OKFN	2014	Global open data index	114	UK	3.	3.
EC	2014	Public sector information re-use	28	UK	13.	N/A
OECD	2011	Individuals that have encountered a computer virus	26	Austria	4.	N/A
OECD	2011	Businesses that have encountered security problems	26	Finland	1.	N/A
MS	2014	Malware infection rate	106	Finland	1.	1.
ITU	2014	Global cybersecurity index	193	USA	11.	23.

Government programme of PM Sipilä 2015

Finland, a land of solutions

Strategic Programme of the Finnish Government

27 May 2015

8. Digitalisation, Experimentation and Deregulation

Ten year objective:
Finland has made a productive leap in public services and the private sector by grasping the opportunities offered by digitalisation, dismantling unnecessary regulation and cutting red tape. The flexible renewal of Finnish society is supported by a management culture based on trust, interaction and experimentation.

http://valtioneuvosto.fi/documents/10184/1427398/Ratkaisujen+Suomi_EN_YHDISTETTY_netti.pdf

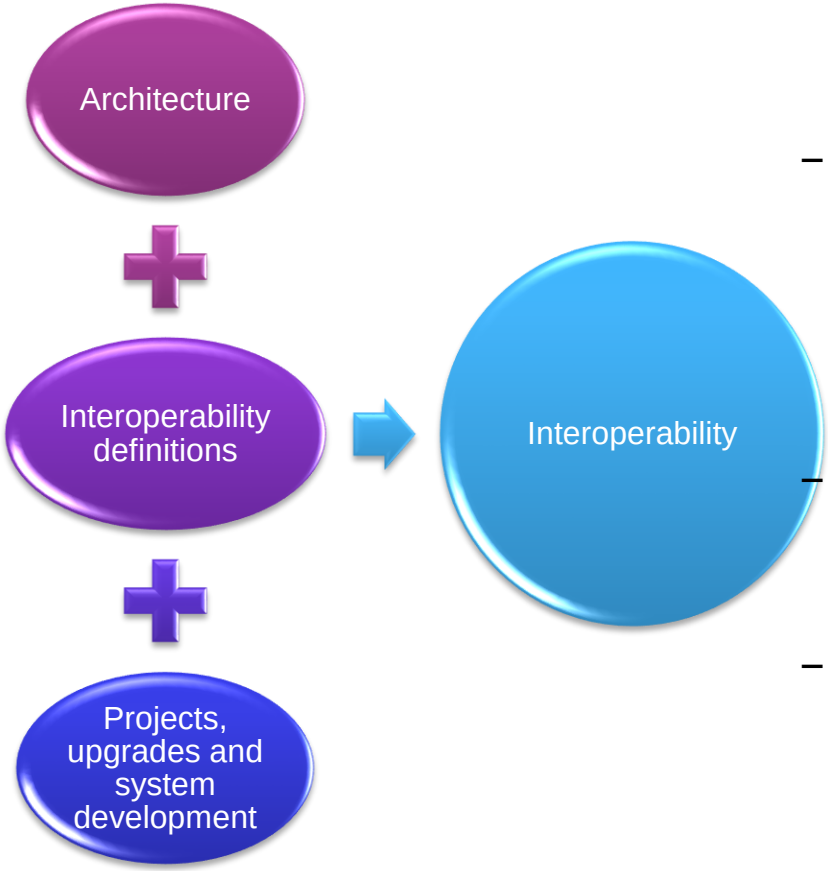
How to promote digital services?

- Common service providers
  - Valtori
- Legal basis
  - Act on Information Management Governance in Public Administration (634/2011)
- Enterprise Architecture
- Development projects
  - National architecture for digital services

Act on Information Management Governance in Public Administration (634/2011)

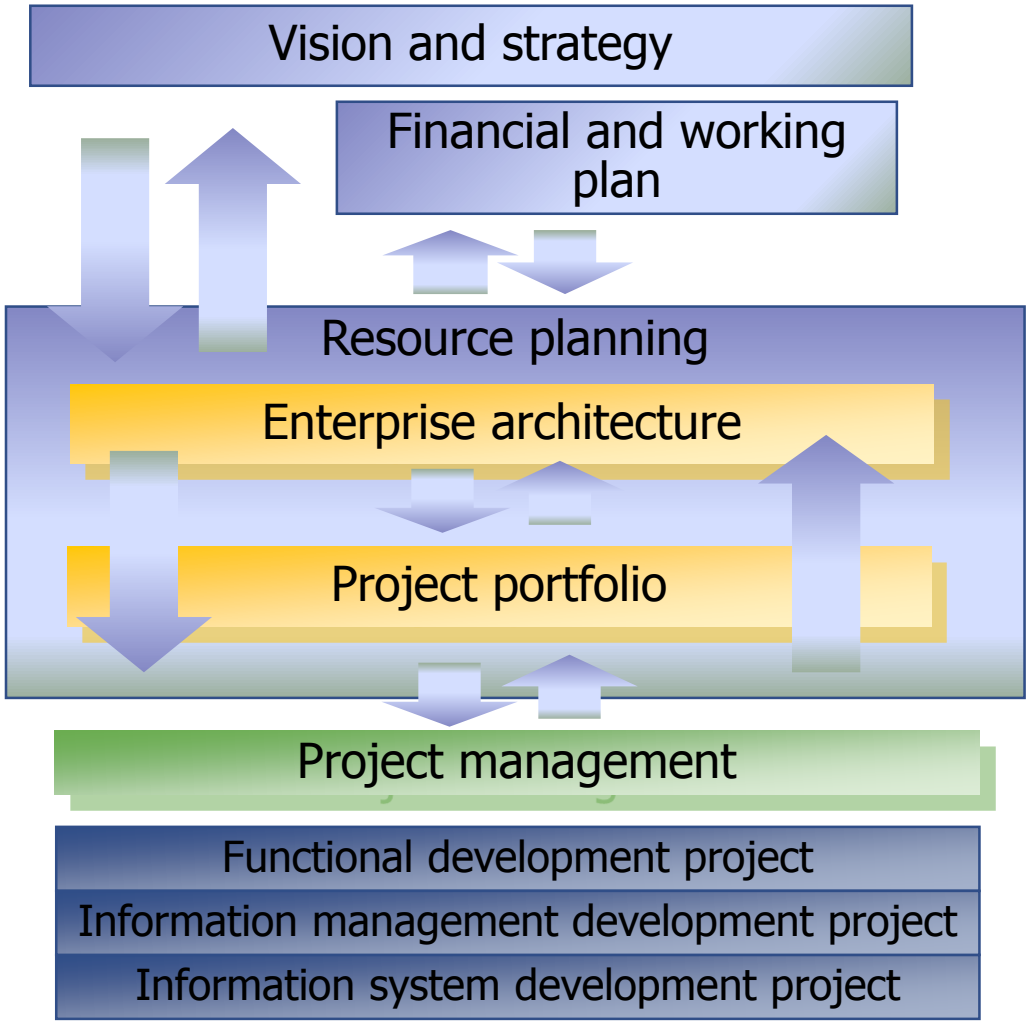
- Objective
  - Improve the efficiency in public administration
  - Improve public services and their availability
- Means
  - Promote and ensure the interoperability of information systems using enterprise architecture
  - Ministry of Finance reviews ICT projects and purchases over 5 MEUR
  - Ministries have statutory power on information management governance over the whole public administration

Achieving interoperability



- Public authorities have to define as-is and to-be architectures as part of the strategy work
- Ministries define requirements and common architectures for interoperability
  - Which can be made legally binding
- Development projects must comply and realize these requirements
- Gradually, systems are transformed and integrated

Enterprise architecture supports the management

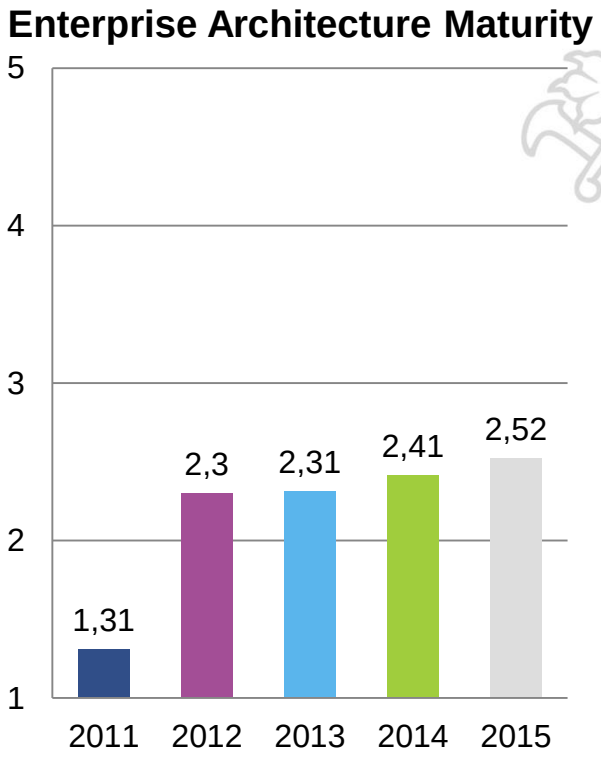


- Architecture development is governed by organisation's vision, strategy and other functional objectives.
- **Enterprise architecture helps in creating and managing the big picture and developing the organisation as a whole.**
- **Architecture is one tool amongst others** in managing the organisation and developing and planning organisation's functions and resources.
- Architecture management must be connected to organisation's management and decision making structures.

Results: Enterprise Architecture in the public sector

- Over 1000 civil servants trained in EA method
- Common framework and method
- EA Governance structure
- Set of reference architectures
- Common tool for EA modeling
- ***Gradual adoption of EA: EA is not a straight forward procedure, it is more like a slow learning process***

CMM Scale:
5 – Optimized
4 - Measured
3 – Managed
2 – Partial
1 – Initial

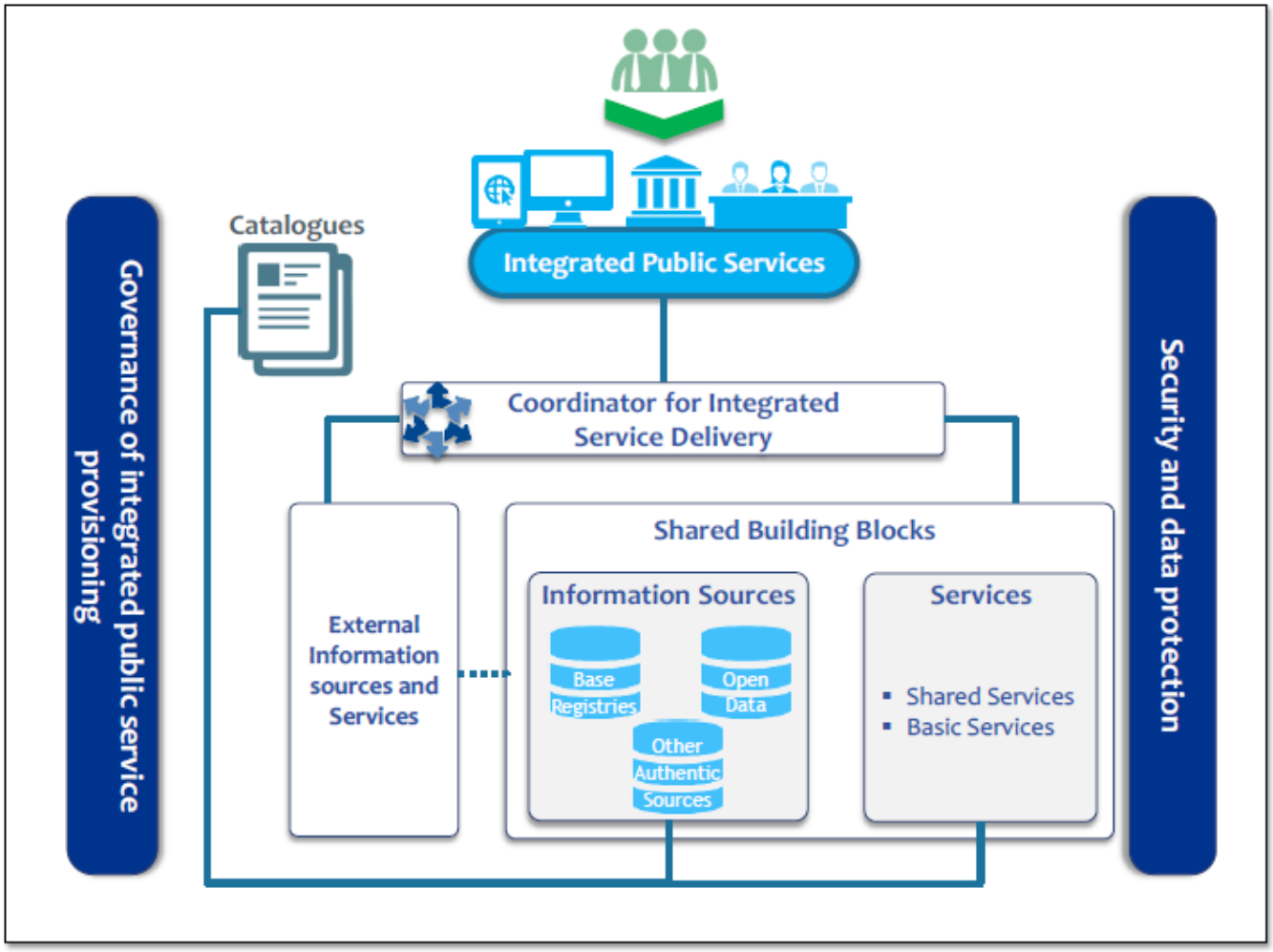


Results and achievements

- Enterprise architecture is widely used
  - All large and medium size public sector organizations are working on the enterprise architecture.
- Focus on interoperability
  - Definitions and instructions to interoperability has been published as reference architectures [1] and JHS Recommendations [2]
- Common ICT services delivered
  - Government ICT Centre Valtori started in March 2014 and it provides sector-independent ICT services (like workstations, networks, data centers) for the central government administration
  - Common secure and high availability network for the security officials under construction.
- No binding regulation on ICT solutions yet.

[1] https://www.avoindata.fi/data/en/dataset?collection_type%3DInteroperability%2BTools=&collection_type=Interoperability+Tools
[2] http://www.jhs-suositukset.fi/web/guest/jhs/recommendations/abstracts

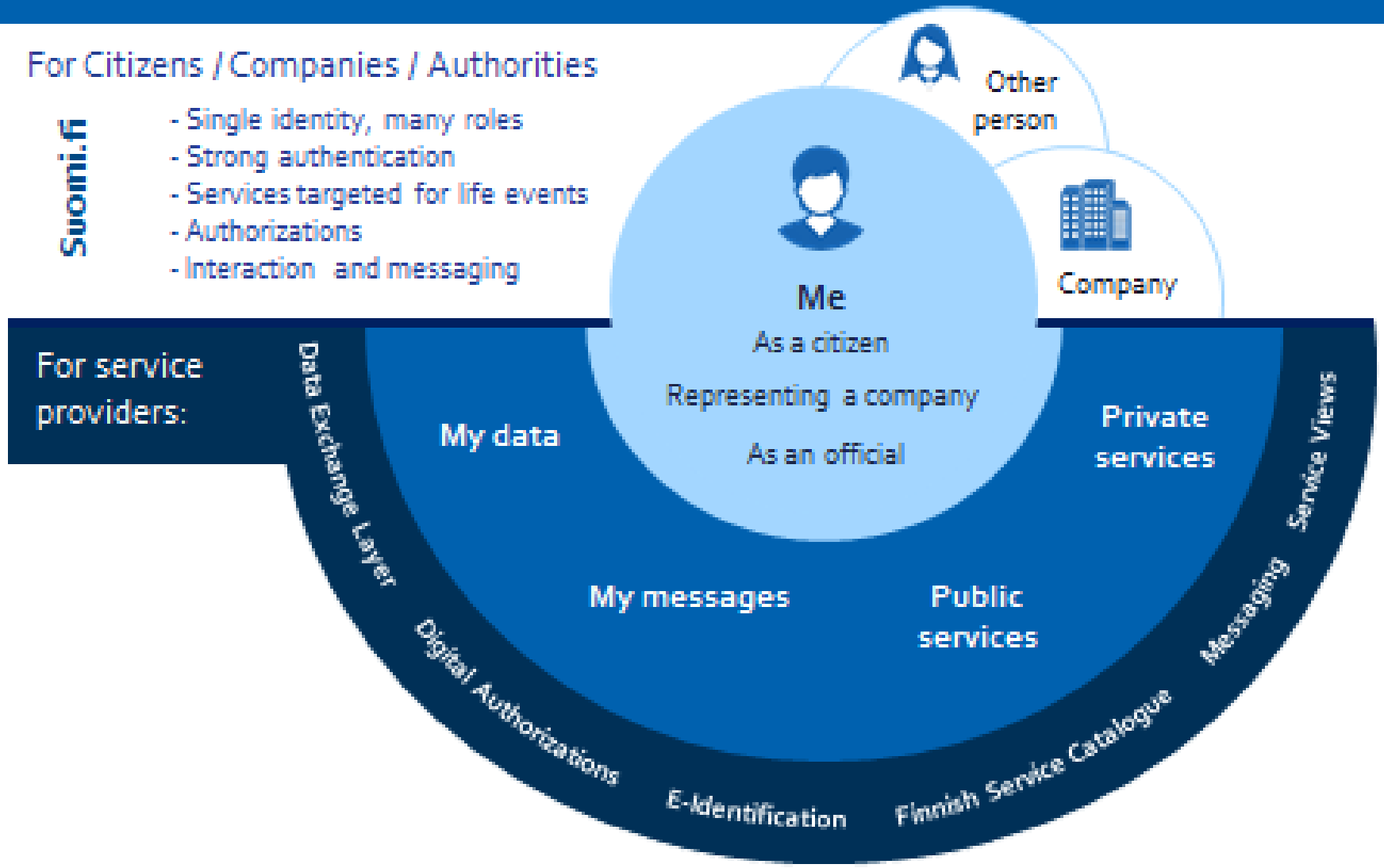
European Interoperability Framework: Concept



Suomi.fi Services

Digitalizing Finland

Suomi.fi Services



Digital Service Platform

… creates norms and enables transactions between service providers and users

Service providers

Service market on a certain field, e.g. social servic

Digital Single Market

Users (user groups)

E.g. parents

E.g. the unemployed

Connectors / APIs / data

User experience / User interface

Integration Catalogue

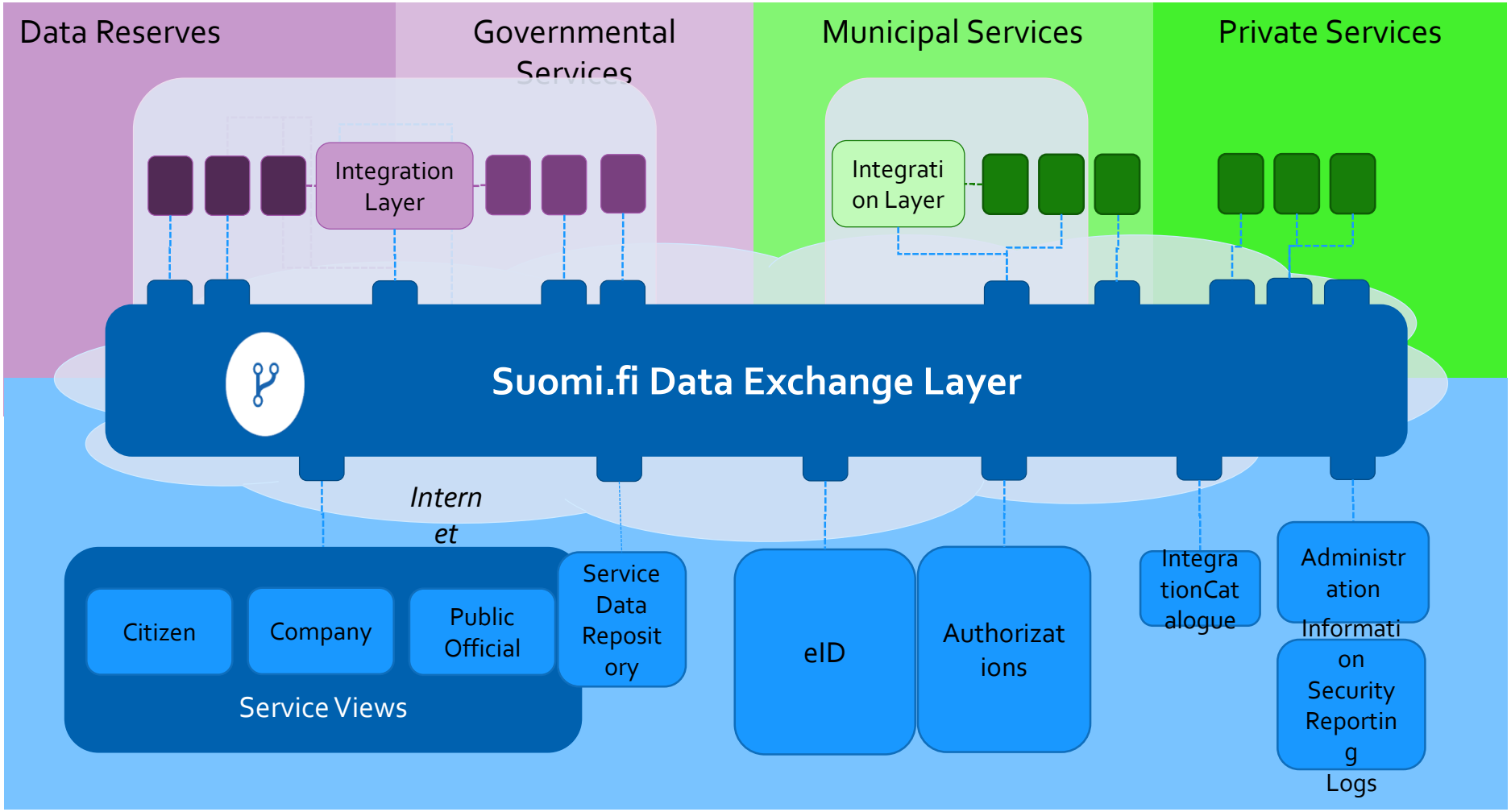
Digital service – Suomi.fi / Yrityssuomi.fi

Data Exchange Layer	e-Identifi-cation	Digital Authori-zations	Electronic signature	Electronic letter of attorney	Finnish Service Catalogue	Messaging	Time booking service	Opendata.fi

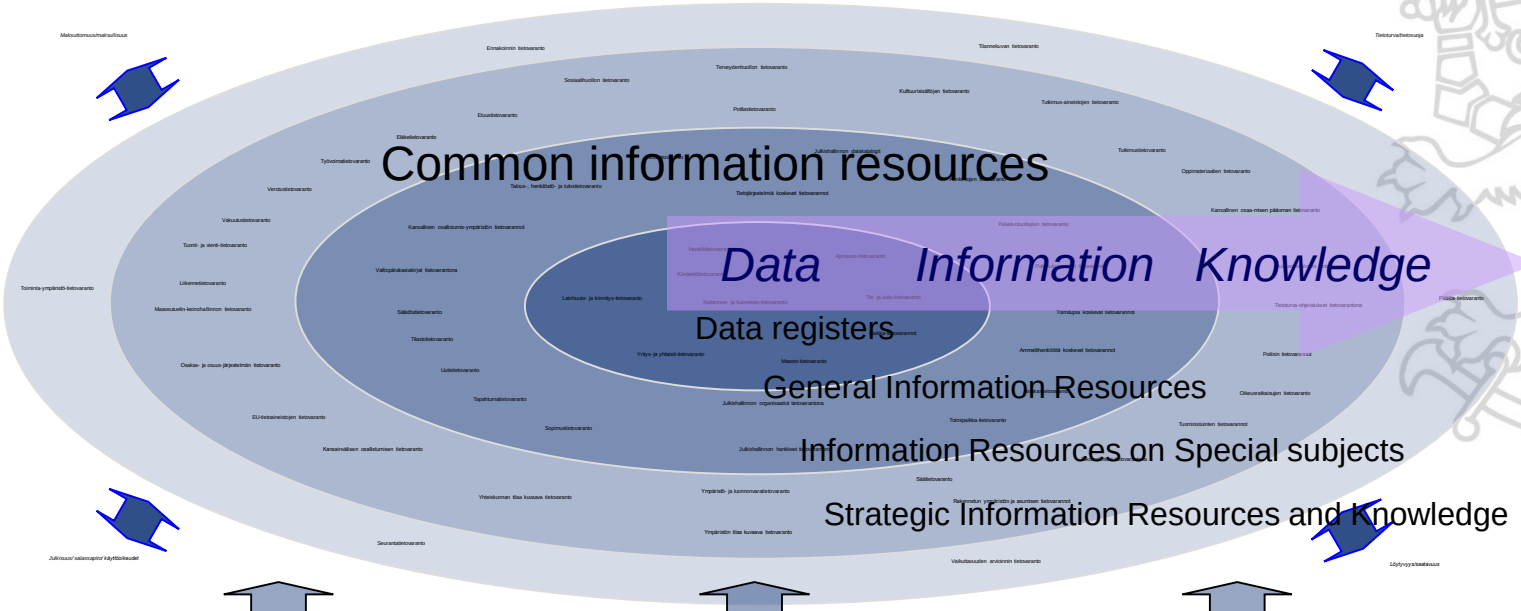
Data registers

Event logs and analytics engin

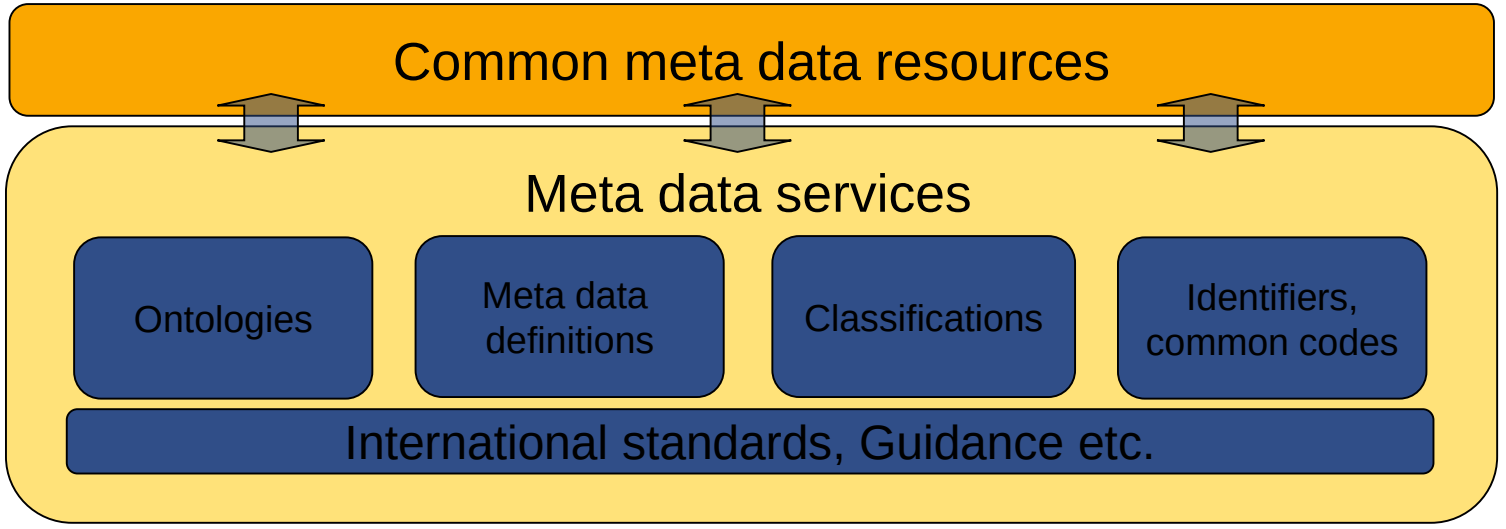
National Architecture for Digital Services



Public administration's information architecture



The common meta data architecture will serve as a means to get all the semantic interoperability pieces (different ontologies, meta data registers, XML-schemes, classifications and so on) into place to form a coherent whole.



Conclusions

The services are transforming around us – what about public sector?

- Digitalisation
- Governing the big picture
- Citizen engagement
- Partnerships with the private and the 3rd sector
- Customer oriented approach

Administration in a user oriented welfare society
- Sustainable growth
- Customer Insight
- Engagement
- Co-design

Administration in a networked society
- Horizontal efficiency
- Communality
- Phenomenon based

Asiakkuusstrategia

Decentralised service oriented sector administration
- Target oriented
- Vertical productivity and efficiency
- Service orientation

Information society

Centralised sector based administration
- Target and task oriented
- Input based

Post industrial society

1970 1990 2000 2012 2015 2020

Where to go? Key decisions

- ICT development
  - Made (own development) < -> Buy (off the shelf)
- ICT governance structure
  - Centralized <-> Distributed
- Service delivery
  - Public <-> Private
- ICT regulation
  - Laws and rules <- -> instructions and guidelines
- Open data
  - Open by default <- -> Disclosed by default

Underlying problem. How to have economy of scale and central control while at the same time keep agility and business orientation?