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# The Development of e-Governance. Building Blocks and Frameworks: Information Policy, Management and Coordination, Public Key Infrastructure, e-Services

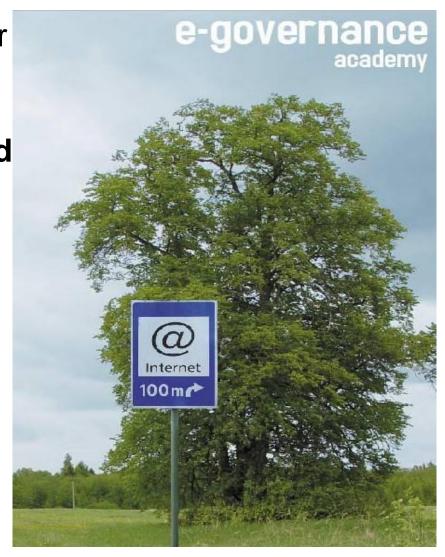
Nele Leosk November, 25, 2013

# Where e-Estonia?

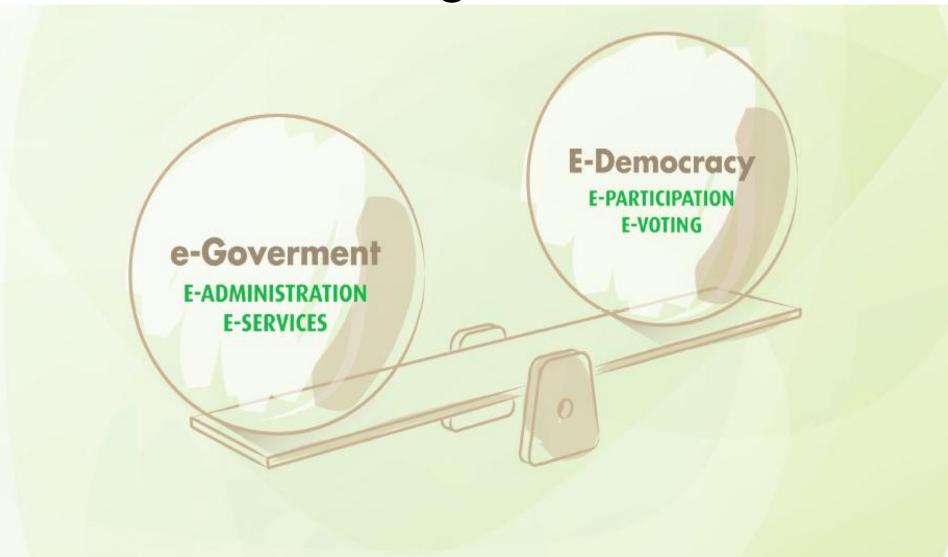


# What is e-Governance Acedemy?

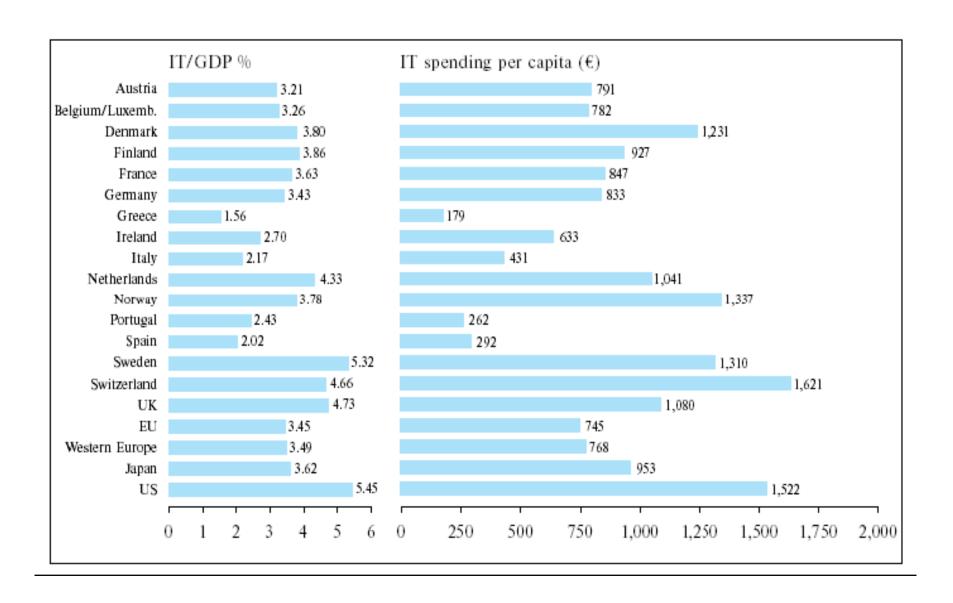
- Non profit think tank founded for the creation and transfer of knowledge concerning egovernance, e-democracy and the development of civil society
- by OSI, UNDP and Estonian Government in 2002
- Network-based organisation (national and international experts, practicioners)



# What is e-governance?



# IT/GDP and IT/per capita



# Readiness 2003

| COUNTRY        | SCORE | NRI RANK |
|----------------|-------|----------|
| United States  | 5.50  | 1        |
| Singapore      | 5.40  | 2        |
| Finland        | 5.23  | 3        |
| Sweden         | 5.20  | 4        |
| Denmark        | 5.19  | 5        |
| Canada         | 5.07  | 6        |
| Switzerland    | 5.06  | 7        |
| Norway         | 5.03  | 8        |
| Australia      | 4.88  | 9        |
| Iceland        | 4.88  | 10       |
| Germany        | 4.85  | 11       |
| Japan          | 4.80  | 12       |
| Netherlands    | 4.79  | 13       |
| Luxembourg     | 4.76  | 14       |
| United Kingdom | 4.68  | 15       |
| Israel         | 4.64  | 16       |
| Taiwan         | 4.62  | 17       |
| Hong Kong SAR  | 4.61  | 18       |
| France         | 4.60  | 19       |
| Korea          | 4.60  | 20       |
| Austria        | 4.56  | 21       |
| Ireland        | 4.55  | 22       |
| New Zealand    | 4.48  | 23       |
| Belgium        | 4.43  | 24       |
| Estonia        | 4.25  | 25       |
|                |       |          |

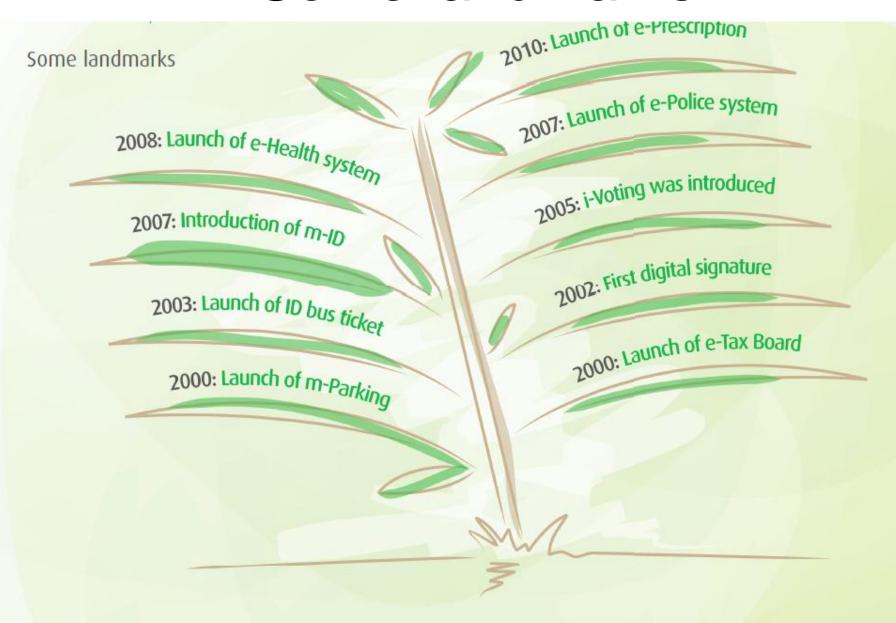
# Readiness 2009

| 2008–2009 rank | Country/Economy | Score |
|----------------|-----------------|-------|
| 1              | Denmark         | 5.85  |
| 2              | Sweden          | 5.84  |
| 3              | United States   | 5.68  |
| 4              | Singapore       | 5.67  |
| 5              | Switzerland     | 5.58  |
| 6              | Finland         | 5.53  |
| 7              | Iceland         | 5.50  |
| 8              | Norway          | 5.49  |
| 9              | Netherlands     | 5.48  |
| 10             | Canada          | 5.41  |
| 11             | Korea, Rep.     | 5.37  |
| 12             | Hong Kong SAR   | 5.30  |
| 13             | Taiwan, China   | 5.30  |
| 14             | Australia       | 5.29  |
| 15             | United Kingdom  | 5.27  |
| 16             | Austria         | 5.22  |
| 17             | Japan           | 5.19  |
| 18             | Estonia         | 5.19  |
| 19             | France          | 5.17  |
| 20             | Germany         | 5.17  |
| 21             | Luxembourg      | 5.10  |
| 22             | New Zealand     | 5.04  |
| 23             | Ireland         | 5.03  |
| 24             | Belgium         | 5.02  |
| 25             | Israel          | 4.98  |

# E-Government

| Country        | e-Government | Rank       |
|----------------|--------------|------------|
| Singapore      | 5.43         | 4          |
| Finland        | 5.40         | 2          |
| Iceland        | 5.35         | 3          |
| Sweden         | 5.10         | L          |
| Estonia        | 4.95         | 5          |
| Canada         | 4.93         | 6          |
| Hong Kong SAR  | 4.90         | 7          |
| Taiwan         | 4.90         | 7          |
| Denmark        | 4.88         | 9          |
| United States  | 4.88         | 9          |
| United Kingdom | 4.83         | 11         |
| Norway         | 4.70         | 12         |
| Netherlands    | 4.65         | 13         |
| Austria        | 4.63         | 14         |
| Australia      | 4.58         | 15         |
| Brazil         | 4.58         | 15         |
| Ireland        | 4.58         | 15         |
| Korea          | 4.38         | 18         |
| France         | 4.35         | 19         |
| New Zealand    | 4.33         | 20         |
| Spain          | 4.30         | 21         |
| Germany        | 4.28         | 22         |
| Switzerland    | 4.28         | 22         |
| Chile          | 4.18         | 2 <i>t</i> |
| Hungary        | 4.13         | 25         |

# Some landmarks



# Examples of e-services: e-declarations

e-Tax board: e-declarations submitted to the tax board



# Example of e-services: Parental benefit



18 data requests

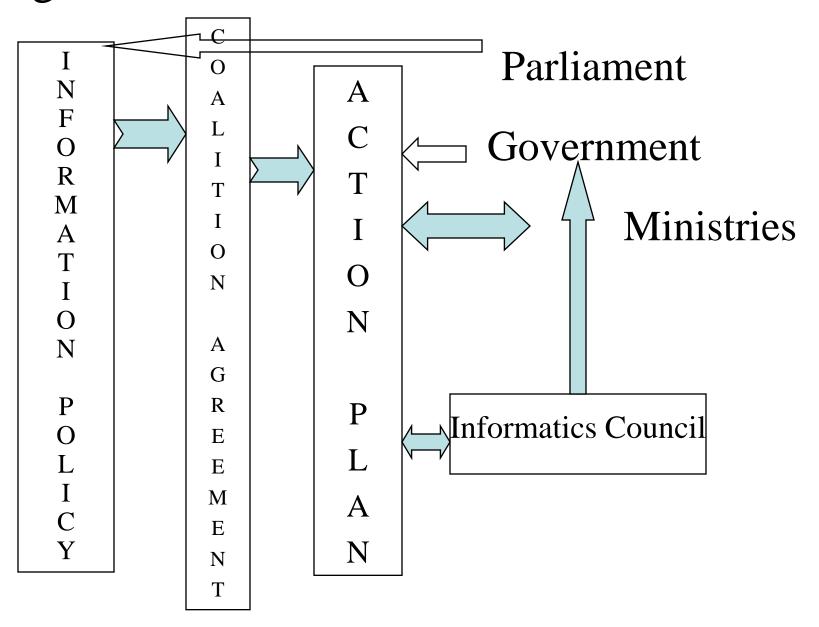
between 5 information systems

+ calculation =

7 documents in real life

3 minutes data input +1 mouse click

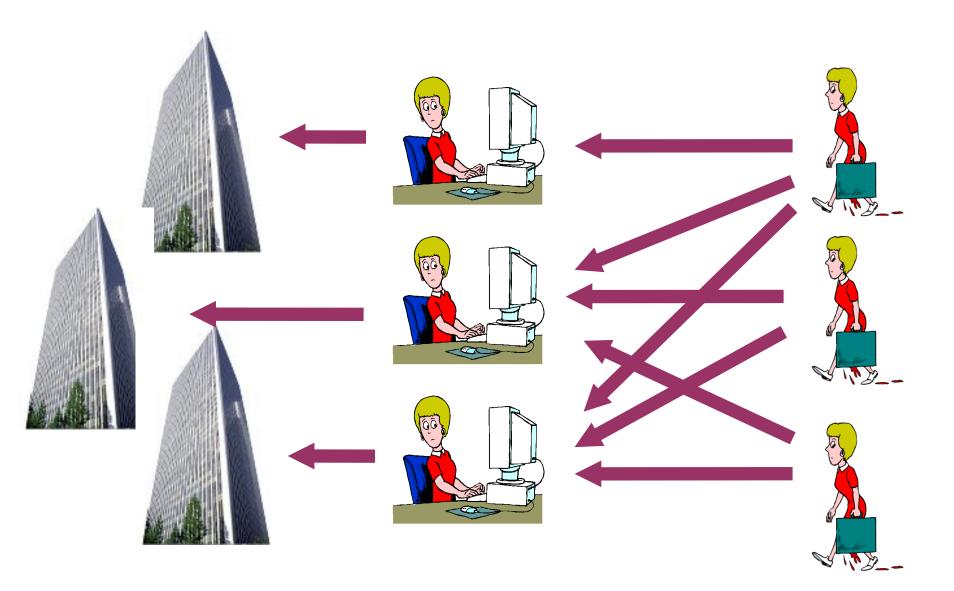
## Organisational framework



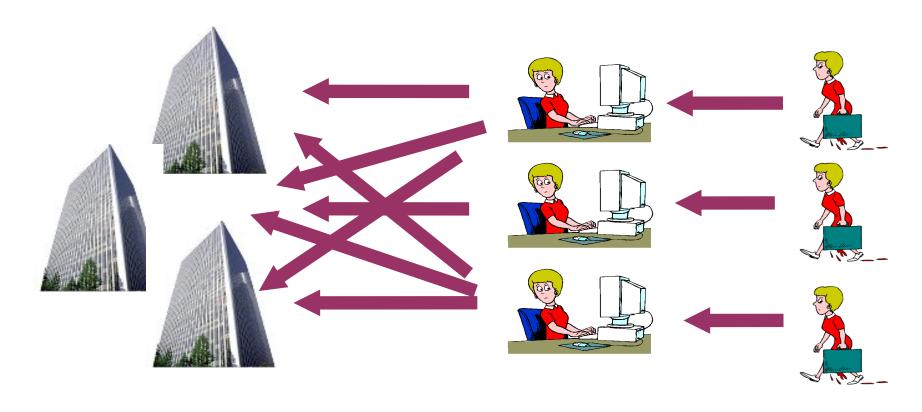
# Example: Info-political principles in Estonia

- Citizen (customer) orientation
- Leading role for the private sector
- Efficient and transparent public sector.
   eDemocracy and participation.
- Functioning model for protection of personal data
- Measures against digital divide (ID-cards example...)
- Neutrality concerning technological platforms
- etc.

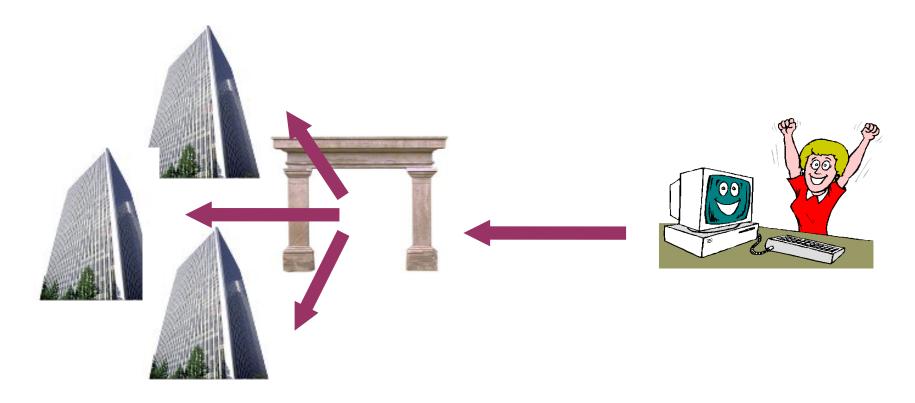
# Progress. Public Service Model 1(byrocratic state+Internet)



## Public Service Model II (One stop shop)



## Public Service Model III (24/7 self service)



#### Example of Action Plan:

#### Document management and digital archives

- All life-cycle of documents is digital in gov sector, preconditions for long-term archiving of digital documents
- Responsible: State Chancellery
- Actions:
  - Document management as part of interoperability framework
  - Infrastructure for digital archiving









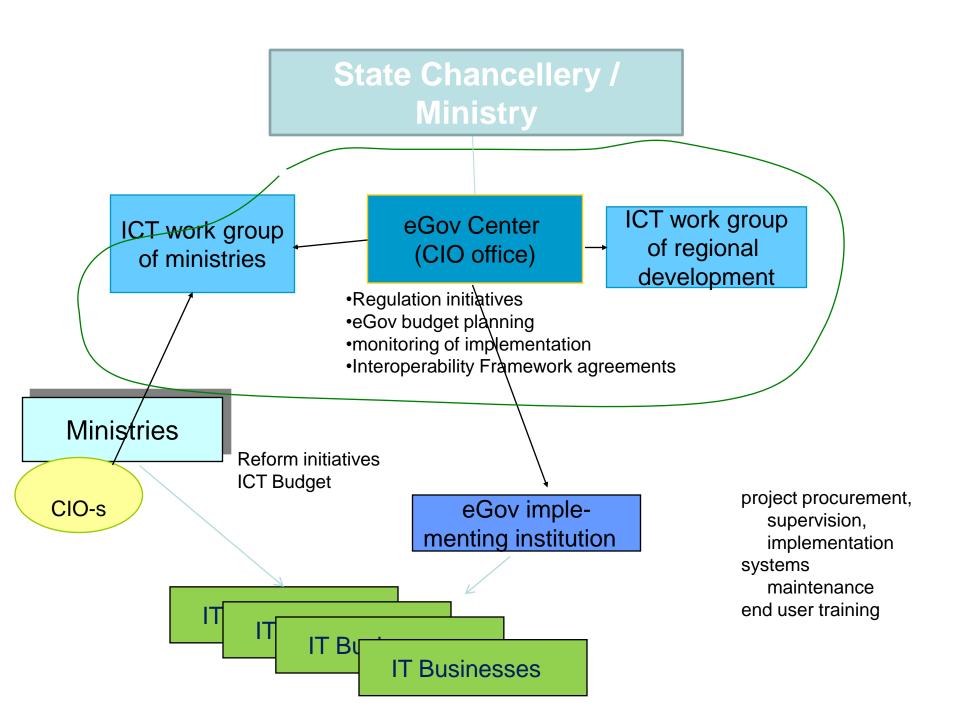
Organization

Legal framework

Fiscal framework

Technical architecture

eGovernment Policy / Strategy



| Nature of document                    | Name of Document   | Nature of regulation                           |
|---------------------------------------|--|--|
| Policy and strategy documents         | eGov Strategy,<br>Interoperability<br>Framework                          | Infopolitical agreement, strong recommendation |
| Laws and sub-acts                     | Databases acts, Personal Data Protection Act, Digital Signature Act etc. | Compulsory                                     |
| Framework descriptions                | Architecture descriptions  | Strong recommendation                          |
| Interoperability Related<br>Standards | Documents, digital signature, security, message transfer etc.            | Advise and recommendation                      |
|                                       |  |  |
|                                       |  |  |
|                                       |  |  |

#### **Budgeting**

- Separate article of state budget: expenses for ITsubdivided into HW, SW and project work ordered from outside of government structures. For the last 8 years this budget has formed about 1% of the state budget.
- All ministries, county governments and boards have independent IT budgets which are planned in cooperation of all CIOs.
- For joint actions of several ministries the IT budget is often included in the budget of the ministry that is coordinating the work.

## E-Government infrastructure



#### Electronic Identity:

 Authentication of a user by digital certificate imbedded in the ID card or SIM card



# Digitalized information:

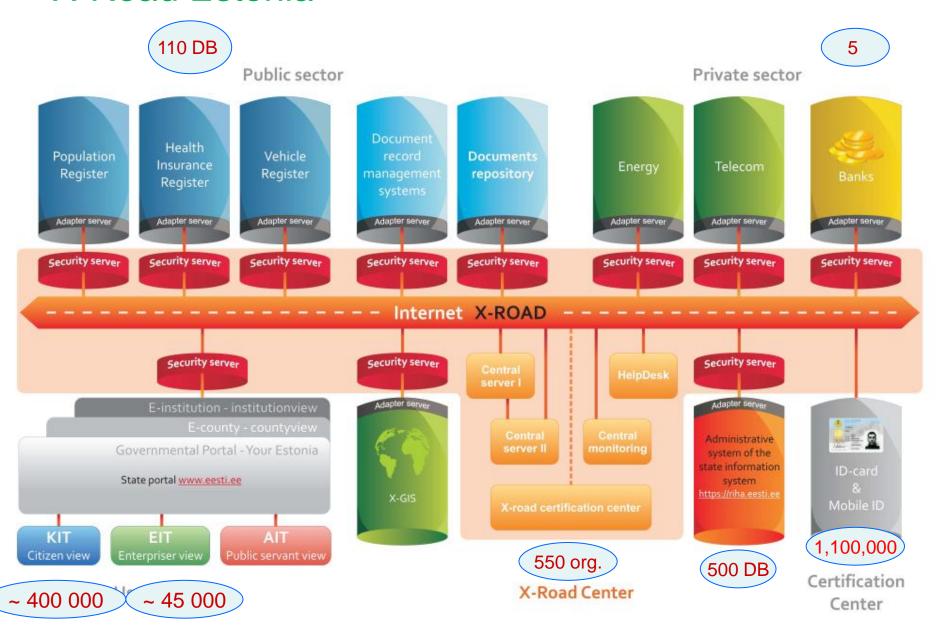
 Information systems and databases in all levels of government

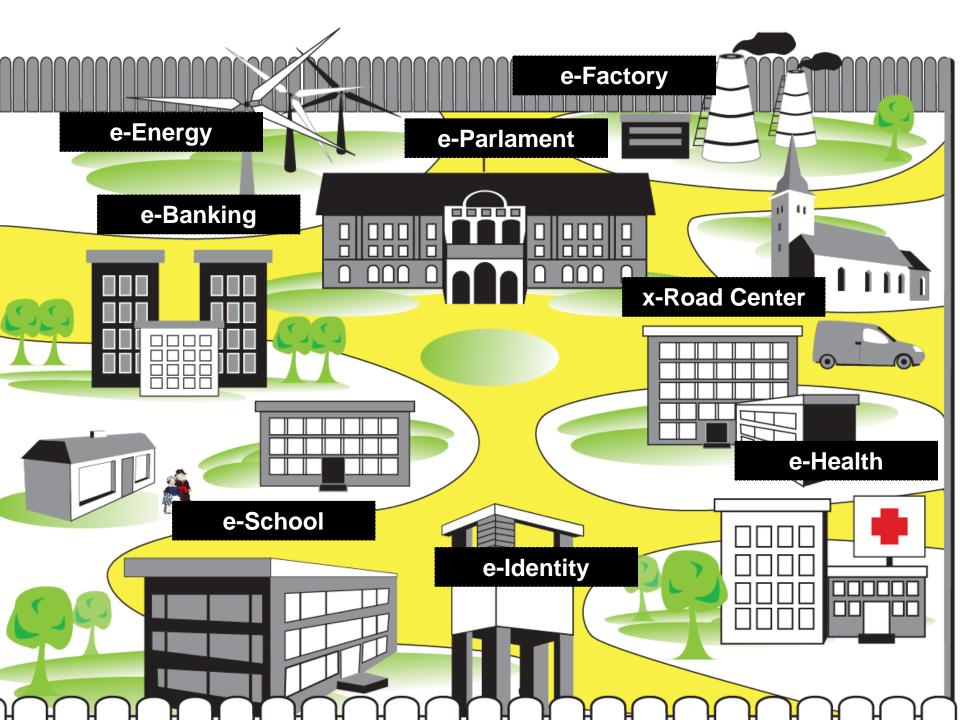


# Formalized exchange:

 X- road - the connection of government databases by a data exchange service layer

#### X-Road Estonia





# The central components in the architecture:

- Government network GovNet
- The Data Exchange Layer;
- 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

#### National chip-based Identity Card

Issuing authority:

Estonian Citizenship and

Migration Board

Service contractor:

TRÜB Switzerland

Start of issue:January 1, 2002

**Conformance with:** 

ICAO Doc. 9303 part 3



Inside 16 Kb RSA crypto chip are: 2 private keys; authentication certificate; digital signature certificate; personal data file

# National e-services portal



дни снасовидищих <sub>1</sub> номощь

LUGII NUUI

Luguan

I YOUR

Введите ключевое слово

Поиск

Карта сайта

Расширенный поиск



Мои материалы

Услуги

Темы

Контакты



#### Выбирайте трудовой договор

Заключение трудового договора защищает работника и создает доверительные трудовые отношения с работодателем. Письменный трудовой договор обеспечивает вас правом на отдых и социальные гарантии, так как работодатель платит за вас социальный налог.

Проверьте на государственном портале, платит ли ваш работодатель налоги с вашей зарплаты.



Также можно посмотреть, поставил ли работодатель вас на учет в Больничной кассе, и есть ли у вас действительная медицинская страховка. Знайте свои права и требуйте заключения трудового договора!

Ð

Подробнее о трудовом договоре

- Передача данных в Больничную кассу
   Теперь на государственном портале работодатель может передавать
   данные о медстраховке в Больничную кассу.
- Справка А1 (Е101) от Департамента соцстрахования О выдаче справки А1 (бывш. Е101) можно ходатайствовать самостоятельно или в качестве работодателя для своего работника или в качестве чиновника для сотрудника своего учреждения.
- Оформите пособие для первоклассника
   На государственном портале можно ходатайствовать о школьном пособии для жителей Таллинна и различных волостей.
- Ваши нотариальные документы При помощи этой э-услуги частные лица и предприниматели могут просматривать свои нотариальные документы и скачивать их копии.
- Подтвердите выбор спортклуба для ребенка
   Родители из Таллинна и Виймси могут подтвердить выбор спортклуба или спортшколы для перечисления муниципального пособия.
- Ссылки на другие инфосистемы

#### Some conclusions

- Cooperation and coordination is the key, technology is the simplest part;
- Important role of Centre in coordination of the actions;
- Training of CIO-s (IT managers) and partners from private sector;
- Medium push from legal framework;
- Figuring out what might be the motivation;
- Step-by-step approach, no need to enter to "business" of the "back-office"

### Some conclusions

- Process from operational technical system to wide implementation takes 2-3 years – "honeymoon period" of the project
- Money, spent once for development of basic components of the architecture will give high profit in the phase of development of single eservices... but it will be clear only after several years... and this might not be the motivation for public institutions
- Driving force is often not from the top management of public institution but somewhere else – find this person ...



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Thank you!

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