



MINISTRY OF THE INTERIOR  
OF THE CZECH REPUBLIC

# Digital Transformation in the Czech Central Government

*Application of EA for digital transformation of Czech public  
administration*

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MINISTRY OF THE INTERIOR  
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# Brief History of Czech Central Government Digital Transformation

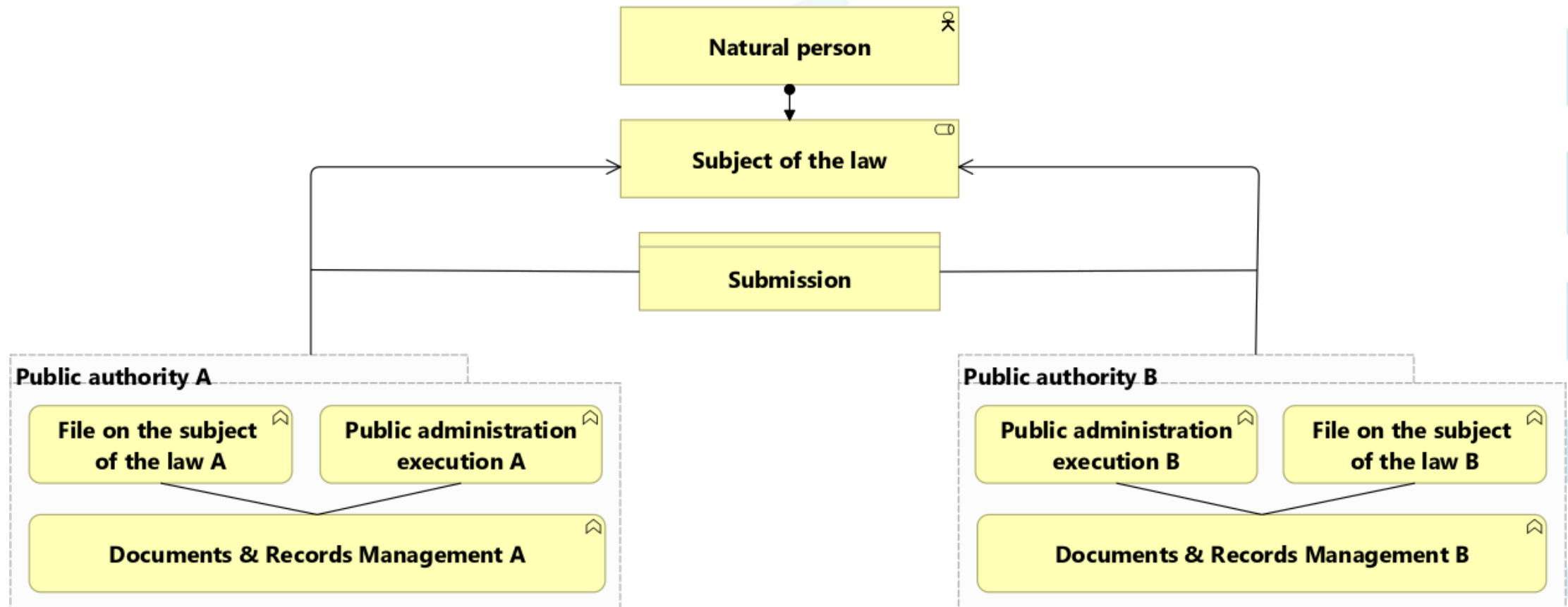


# Major milestones of digital services in Czech Public Administration

- 2000
  - legal precondition: equivalence of electronic and traditional documents and signatures
- 2009
  - front-end: guaranteed electronic filing and delivery channel - Data boxes
  - front-end: nationwide unified and integrated assisted counters with central services - Czech POINT
- 2012
  - back-end: central base registers (master data) and integration platform
- recent past
  - front-end: central transaction portal and growing number of self-service public administration services
  - key prerequisite: unified electronic identification of public administration clients – citizens
- and near future
  - integrated multichannel & multilevel customer care centre
  - electronic power of attorney and representation (for physical persons and organizations)

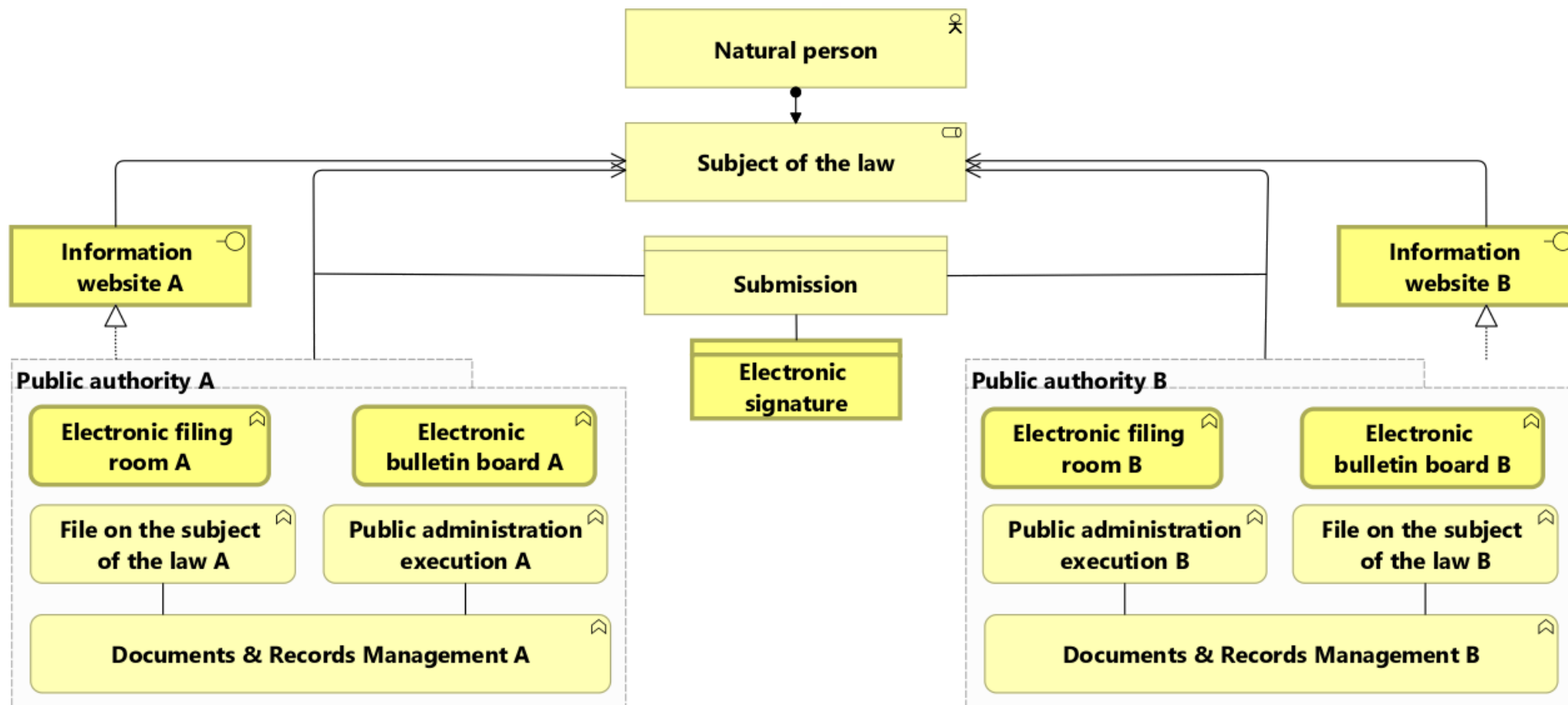


# Czech eGov History – until 2000



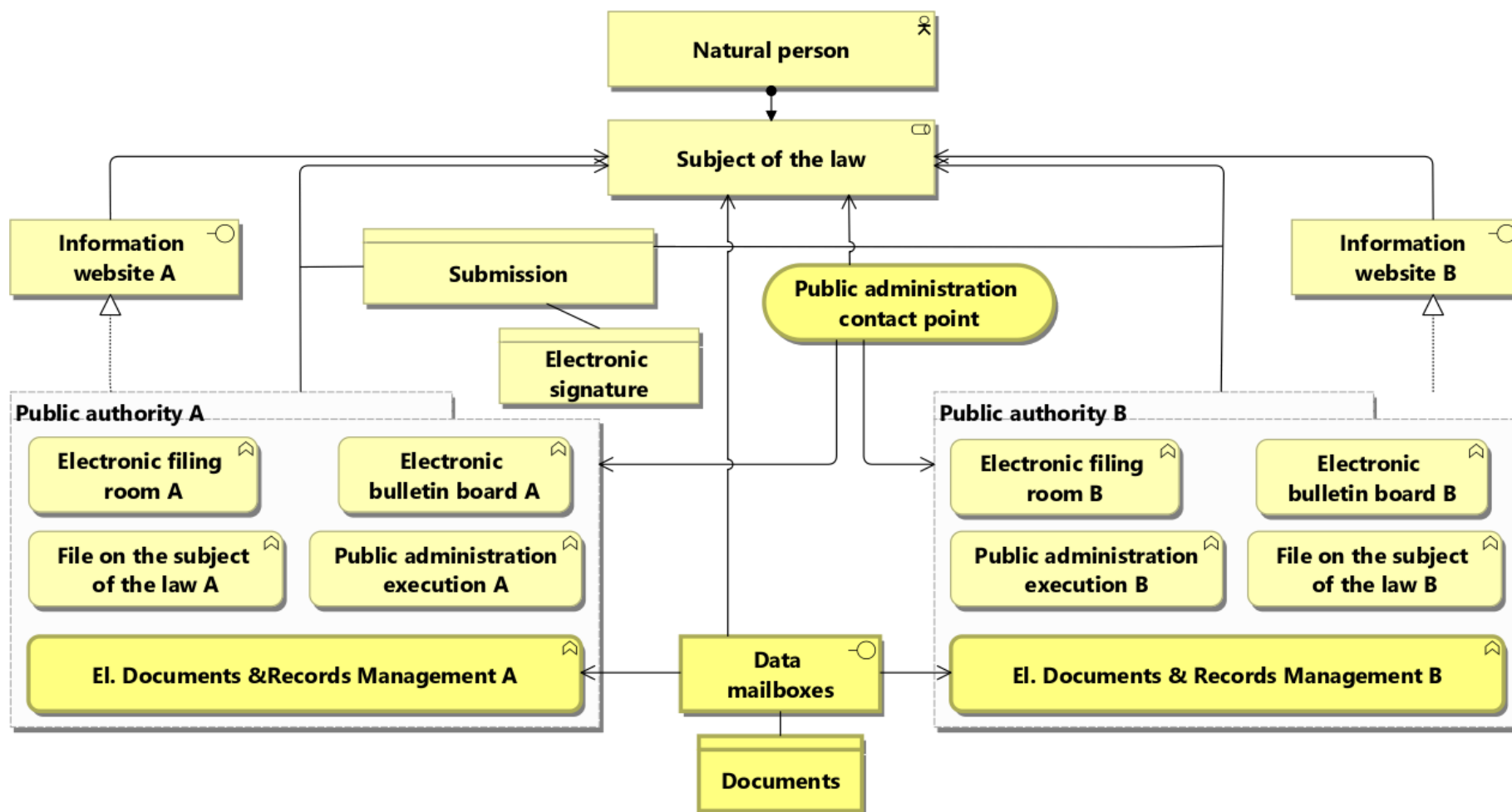


# Czech eGov History – 2000



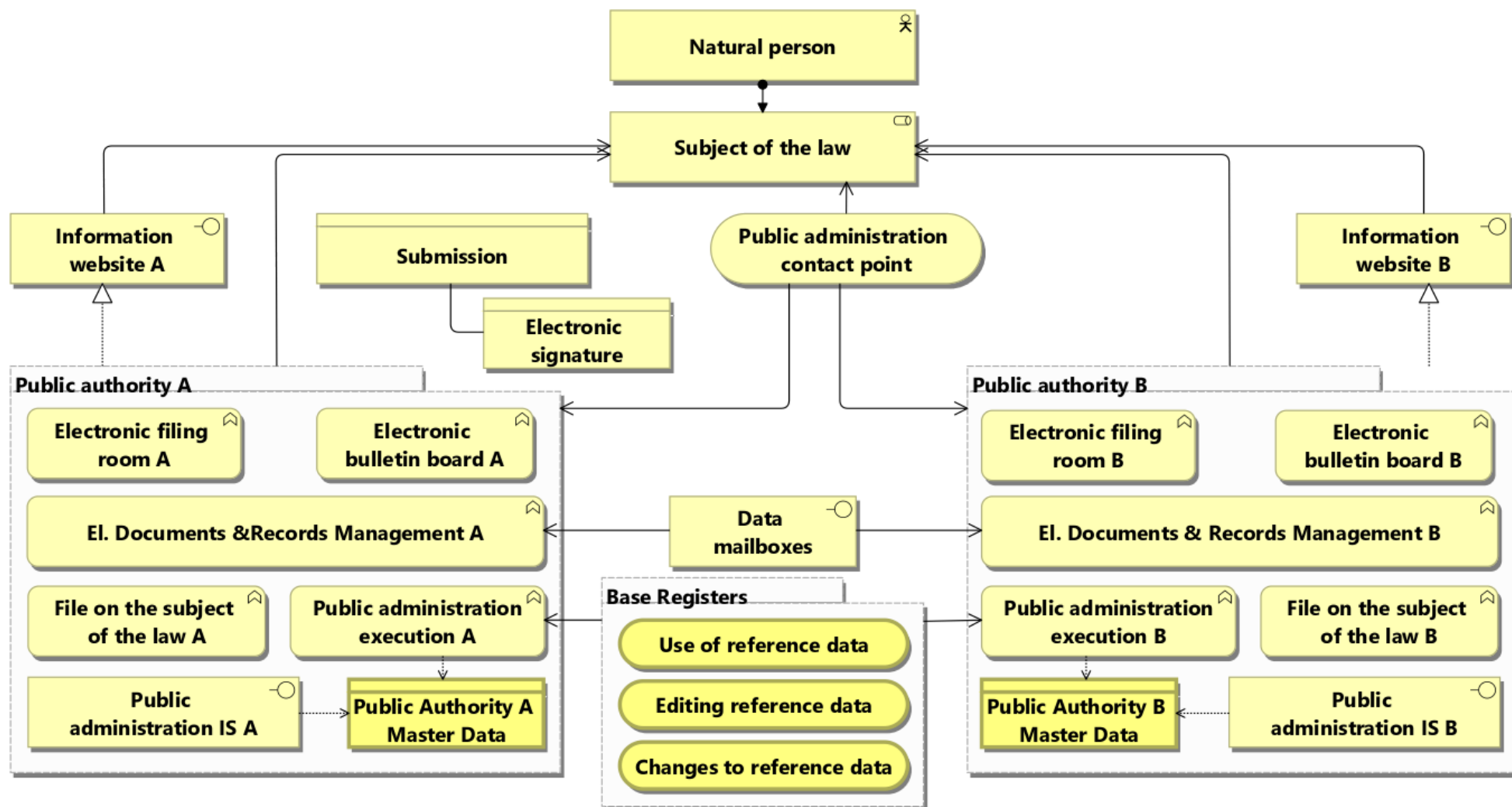


# Czech eGov History – 2009





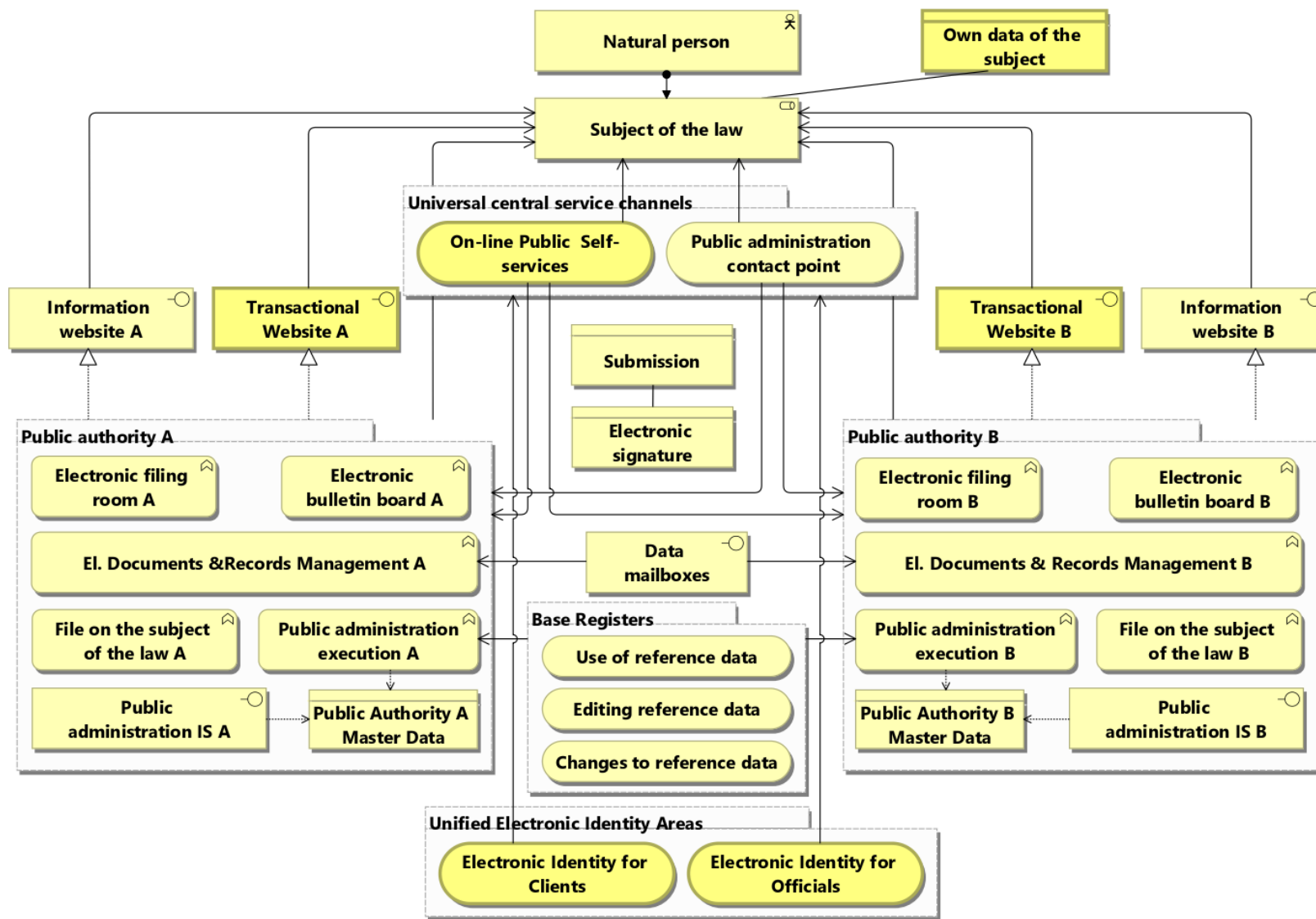
# Czech eGov History – 2012







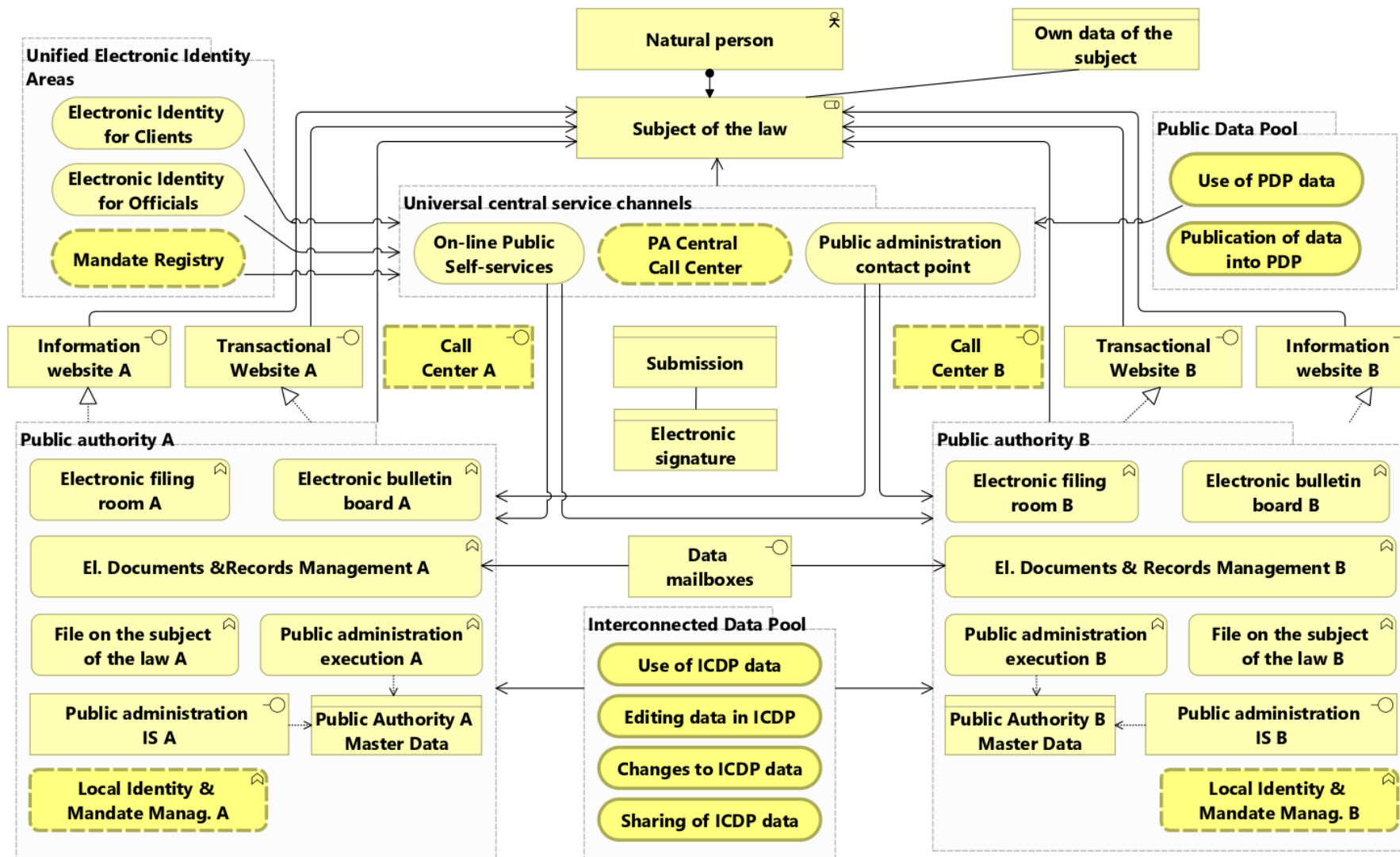
# Czech eGov History – today







# Czech eGov History – near future





# What do our services look like

# Life events

## Public administration services

### Security and protection



Police, army, firefighters, crisis,  
crash, weapons, dangerous  
substances

### Housing, ownership and construction



Energy, cadastre,  
expropriation, land  
surveying, real estate,  
construction

### Travel and Czechs abroad



Passports, visas, international  
documents, diplomacy, EU,  
humanitarian aid

### Taxes and finances



Taxes, subsidies, insolvency,  
execution, controls,  
accounting, contracts

### Digital citizen



Electronic communication  
with authorities, data boxes,  
information services

### Documents and authorizations



Identity and driver's licenses,  
passports, permits,  
authorizations, certificates,  
licenses, registrar

### Transport



Driving licenses, tolls, car  
registration, public transport,  
fuel

### Pensions, retirement and compensation



Old-age, orphan, invalidity,  
widow's and widower's  
pension, war veterans,  
compensation

### Culture and media



Film, museums and galleries,  
monuments, television, radio,  
press, literature, libraries and  
more

### Births, deaths, marriages and



### Business areas



### Business, companies and





## Citizen

24  
7

Apply to  
any time

### Choose your I



Identita obč  
Use a bank iden



Data box  
Use the login de

CITIZEN



The service provider asks your ele  
Please choose one of the followin



Mobile key of eGovernment



Identity card new



Name, password and SMS code



IIG – International ID Gateway



I.CA identita s kartou Starcos



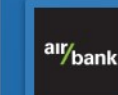
MojID



BANK IDENTITY



BANK IDENTITY



Air Bank



Česká spořitelna



ČSOB



Fio bank



Commercial Bank



MONETA Money Bank



Raiffeisenbank



Data valid to 06/11/2022 21:00



# Viewing the real estate cadastre

Portion Building Unit Construction law Management Map LV Cat. area My cadastre Pavel Hrabě [NIA]

## Viewing the real estate cadastre

The application allows to obtain selected data on plots, buildings, units (apartments or non-residential premises) and building rights, registered in the real estate cadastre, as well as information on the status of proceedings for registration of ownership and other rights of authorized entities for real estate in the Czech Republic or for confirmation geometric plans .

Inspection of the CN requires no registration and is free of charge. [To view the complete set of information](#) , you must enter a [CAPTCHA](#) or log in via the [Citizen's Identity or](#) [the Remote Access cadastre](#) customer account .

**The application is intended exclusively for interactive work of users, any acquisition or extraction of data by automated means is not allowed.**

Every user is obliged to get acquainted with [the conditions of use of the application](#) and to observe them.

Plot search

Building search

Search for a unit

Finding control

Map view

My cadastre



# Some eGovernment statistics



# A press release

## **Data box users have already sent a billion data messages**

- At 7:53 on Tuesday, May 10, 2022, the limit of 1 billion data messages sent was reached. This happened after less than 13 years of operation of the data box system. The jubilee message was sent from the data box of the municipal office in the Zlín Region.
- The system of data boxes was launched on 1 July 2009, during its operation 1.56 million data boxes were set up, of which 1.35 million are active. The number of data messages is constantly growing year-on-year, this year Czech Post records an increase compared to last year about 9%.

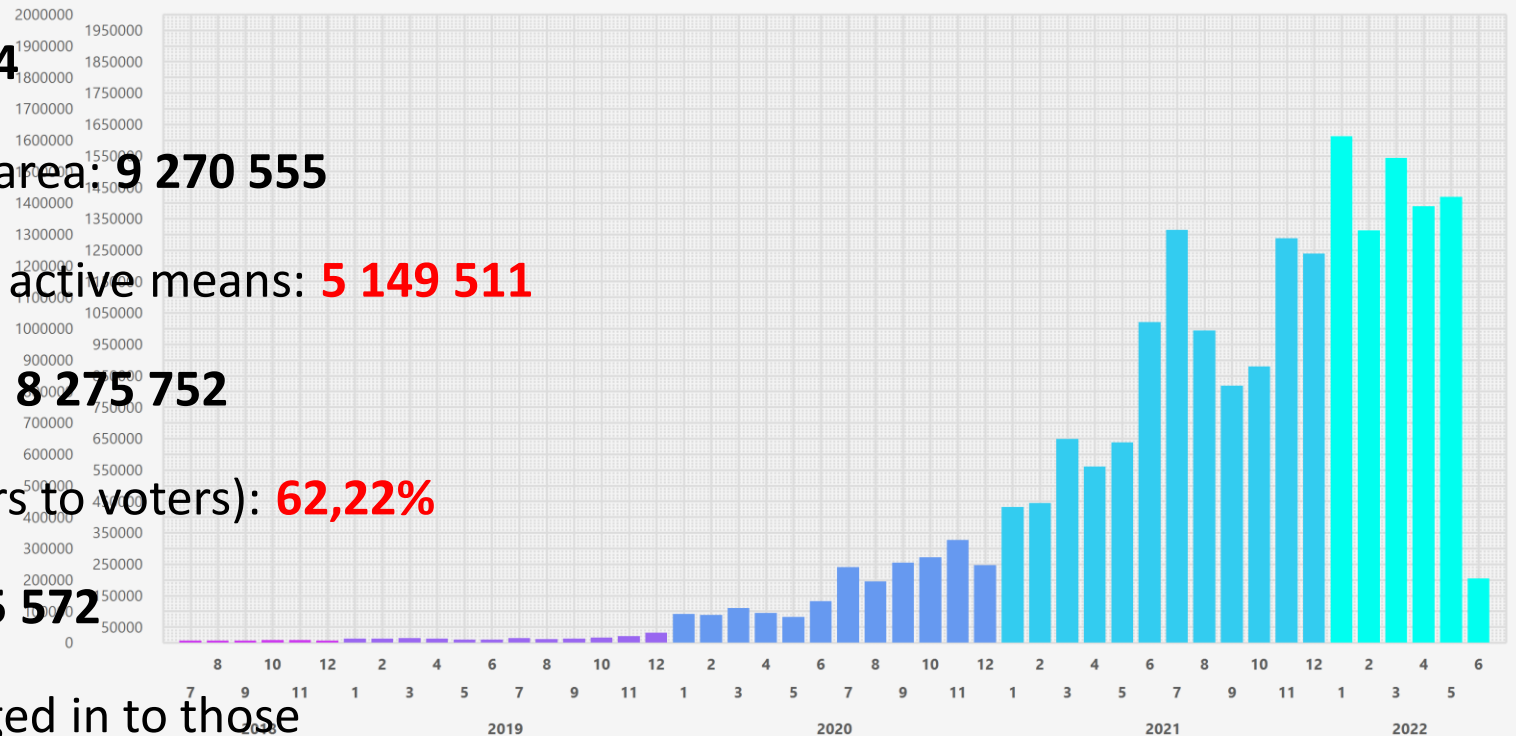




# e-Identity is popular and growing

- Total state eID means: **872 541**
- Total non-state eID means: **8 398 014**
- Total means in the national identity area: **9 270 555**
- Number of profiles with at least one active means: **5 149 511**
- Number of voters (potential clients): **8 275 752**
- Conversion (ratio of ID means holders to voters): **62,22%**
- Total number of unique logins: **1 345 572**
- Conversions (ratio of those who logged in to those who could log in): **26.13%**

Number of logins per month



Clients use the eID means of their choice



# Top 20 self-services in June 2022

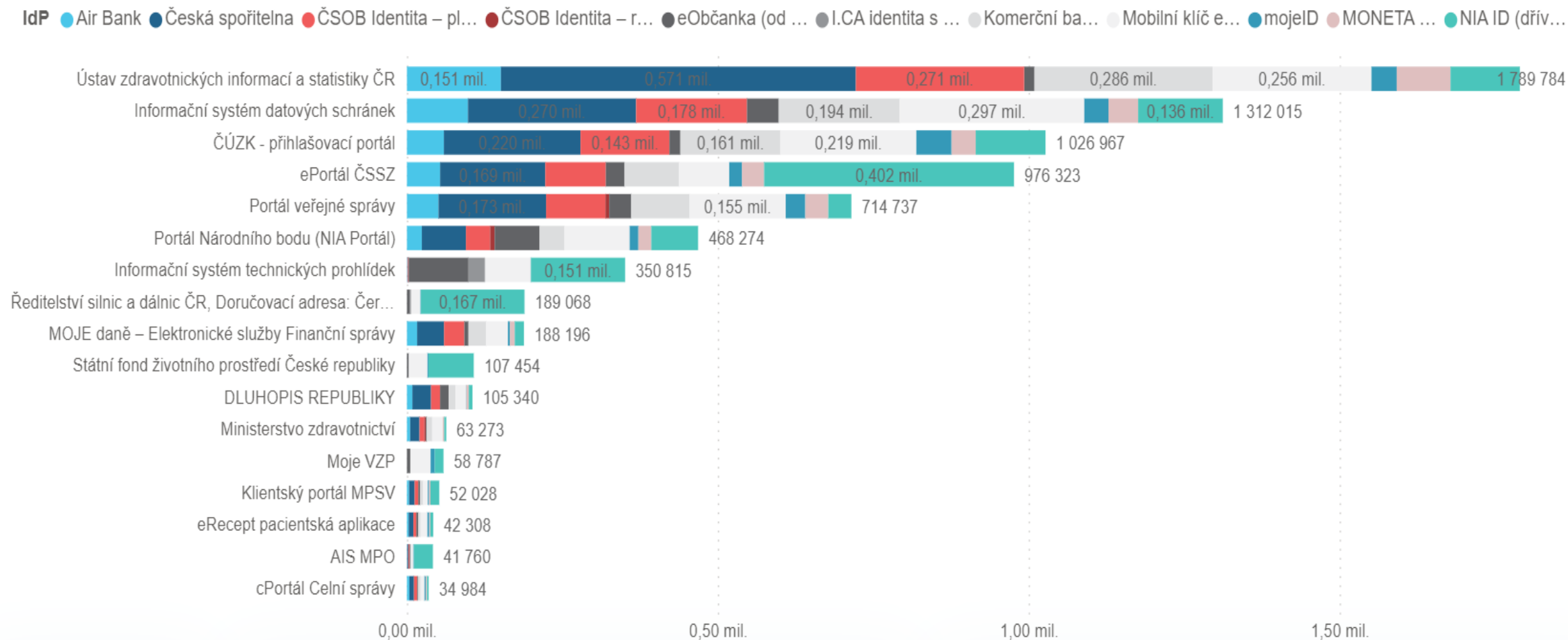
1. Data boxes	3213202	<a href="https://www.mojedatovaschranka.cz/portal/ISDS/">https://www.mojedatovaschranka.cz/portal/ISDS/</a>
2. Social insurance and pensions	3088779	<a href="https://eportal.cssz.cz/ikr-cas">https://eportal.cssz.cz/ikr-cas</a>
3. Vaccination - Covid	2878201	<a href="https://ocko.uzis.cz/">https://ocko.uzis.cz/</a>
4. Public administration portal - Citizen's portal	1990667	<a href="https://obcan.portal.gov.cz/auth">https://obcan.portal.gov.cz/auth</a>
5. Land Registry - Cadastre	1740640	<a href="https://login.cuzk.cz/nia/">https://login.cuzk.cz/nia/</a>
6. Technical inspections of vehicles	1223221	<a href="https://istp.mdcr.cz/Logon.aspx">https://istp.mdcr.cz/Logon.aspx</a>
7. Business	1039364	<a href="https://aisportal.mpo.cz/aisportal/nia/overeni">https://aisportal.mpo.cz/aisportal/nia/overeni</a>
8. Taxes	794722	<a href="https://adisspr.mfcr.cz/auth">https://adisspr.mfcr.cz/auth</a>
9. Toll	732028	<a href="https://myto.cz.eu/selfcare/">https://myto.cz.eu/selfcare/</a>
10. Benefits Ukraine	351678	<a href="https://davkyuk.mpsv.cz/login/nia">https://davkyuk.mpsv.cz/login/nia</a>
11. Environment	295106	<a href="https://zadosti.sfzp.cz/AISPortal/NIA/overeni">https://zadosti.sfzp.cz/AISPortal/NIA/overeni</a>
12. Social benefits	185383	<a href="https://www.mpsv.cz/cas">https://www.mpsv.cz/cas</a>
13. Health insurance	174906	<a href="https://auth.vzp.cz">https://auth.vzp.cz</a>
14. State bonds	170327	<a href="https://pssd.sporicidluhopisycr.cz/pssd-war/login">https://pssd.sporicidluhopisycr.cz/pssd-war/login</a>
15. Census 2021	151096	<a href="https://onlinescitani.cz/#/">https://onlinescitani.cz/#/</a>
16. e-Recipe	124501	<a href="https://pacient.erecept.sukl.cz/suklerp/Pacient">https://pacient.erecept.sukl.cz/suklerp/Pacient</a>
17. Ministry of Health	97156	<a href="https://registrace.mzcr.cz/detail">https://registrace.mzcr.cz/detail</a>
18. Judicial authentication and authorization service	63868	<a href="https://jaas.justice.cz/">https://jaas.justice.cz/</a>
19. Customs	63751	<a href="https://cportal.celnisprava.cz/cas">https://cportal.celnisprava.cz/cas</a>
20. Dron registration	58634	<a href="https://dron.caa.cz">https://dron.caa.cz</a>

22.03.2023



# Top self-services in 2021

Logins by SeP and IdP





# Role of The Chief Architect of eGovernment



# Establishment of architectural authority

- In 2014-15, the Czech eGovernment was at a crossroads.
  - On the one hand, several other central shared services needed to be designed and built for further progress.
  - On the other hand, it was necessary to get hundreds of individual agencies to rapidly develop their digital services for clients, in a unified way and using these shared services.
- It was decided to re-establish the Department of the Chief Architect of eGovernment in the Ministry of the Interior.
- Since the beginning of 2016, the department has been instructed by government resolution to inspect the architecture of all central government IT projects with a value of more than approximately EUR 250,000.
- It was also decided on an enterprise architecture based on TOGAF and ArchiMate as the main method of work.
- All projects of municipalities that want to contribute to financing, especially from EU funds, are also assessed.



# About architectural authority - I

- Control and approval of major ICT projects, in the phase of project planning and final check before the start of operation
- Consulting, support and expert services to other public administration entities,
- Managing the development of shared eGovernment services,
- Coordination of building and development of architecture of public administration services and its ICT support architecture in public authorities
- Setting procedures, principles and standards for ICT.
- 38 employees, out of which 27 are regular employees of the department and 11 external experts.





# About architectural authority – II

## Performance in 2021

- A total of **162 projects** with a total value of CZK 14.0 billion / **EUR 350 million** were assessed.
- Deficiencies were identified in 121 projects, representing 75%, and significant deficiencies were identified in 59 cases.
- The correction of deficiencies led to **savings** for the agencies in the estimated amount of CZK 1.6 billion / **EUR 64 million**.
- The most common deficiencies:
  - failure to use central electronic identification of clients or officials
  - insufficient integration into an interconnected public administration data pool
  - failure to take into account the architecture of the whole agency
  - non-prevention of unwanted dependence on the supplier (so-called vendor lock-in effect),
  - failure to take into account other legislation, national or international standards.





## Current significant progress

- Authority and its duties are **established by law**, not only by a government resolution.
- Checking a smaller number of **important projects**:
  - with integration to base registers or
  - with services for public administration clients.
- In addition to individual IT projects, there is also an assessment of **agency-wide architectural concepts**.
- Projects and concepts are assessed for compliance with the **Information policy of the Czech Republic**
  - approved by the government in 2018, updated 2020 and 2022



# Planned improvements

- Extending the impact of project coordination
  - in addition to assessment in the planning phase, the final inspection of the solution during **productive operation preparation**.
- Extension of scope and detail
  - in addition to the entire solution, the coordination and assessment of **individual digital services** is also newly planned
  - will ultimately lead to the expected uniformity and cost savings,
  - but will require a significant increase in the number of staff of the architectural authority.
- Consulting and insourcing
  - inspection is not sufficient, a strong central **competence centre** is needed
  - not full delivery, but mentoring and coaching, knowledge sharing



# What we are using and teaching

Examples of Methodology Content



# Enterprise Architecture definition

Enterprise Architecture  
is a means  
of **humble** and **holistic**  
exploring and understanding  
of the Enterprise as a whole  
in all possible consequences  
to make informed decisions.

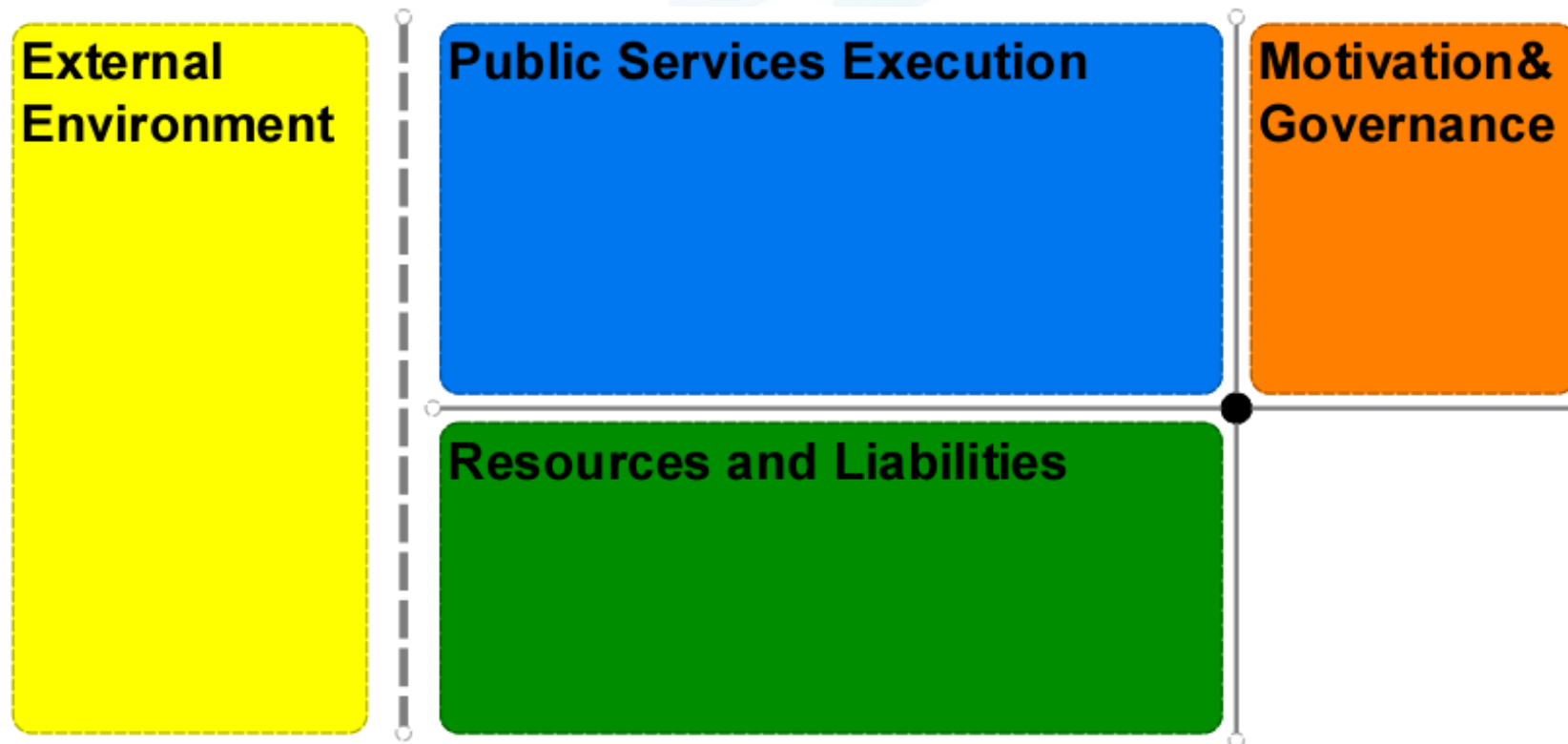
It is especially important „to call a spade a spade“, it means to speak clearly and directly about things, even embarrassing or unpleasant things.



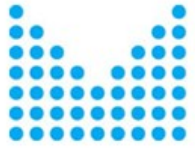


# Key building blocks of Government organization – level 1

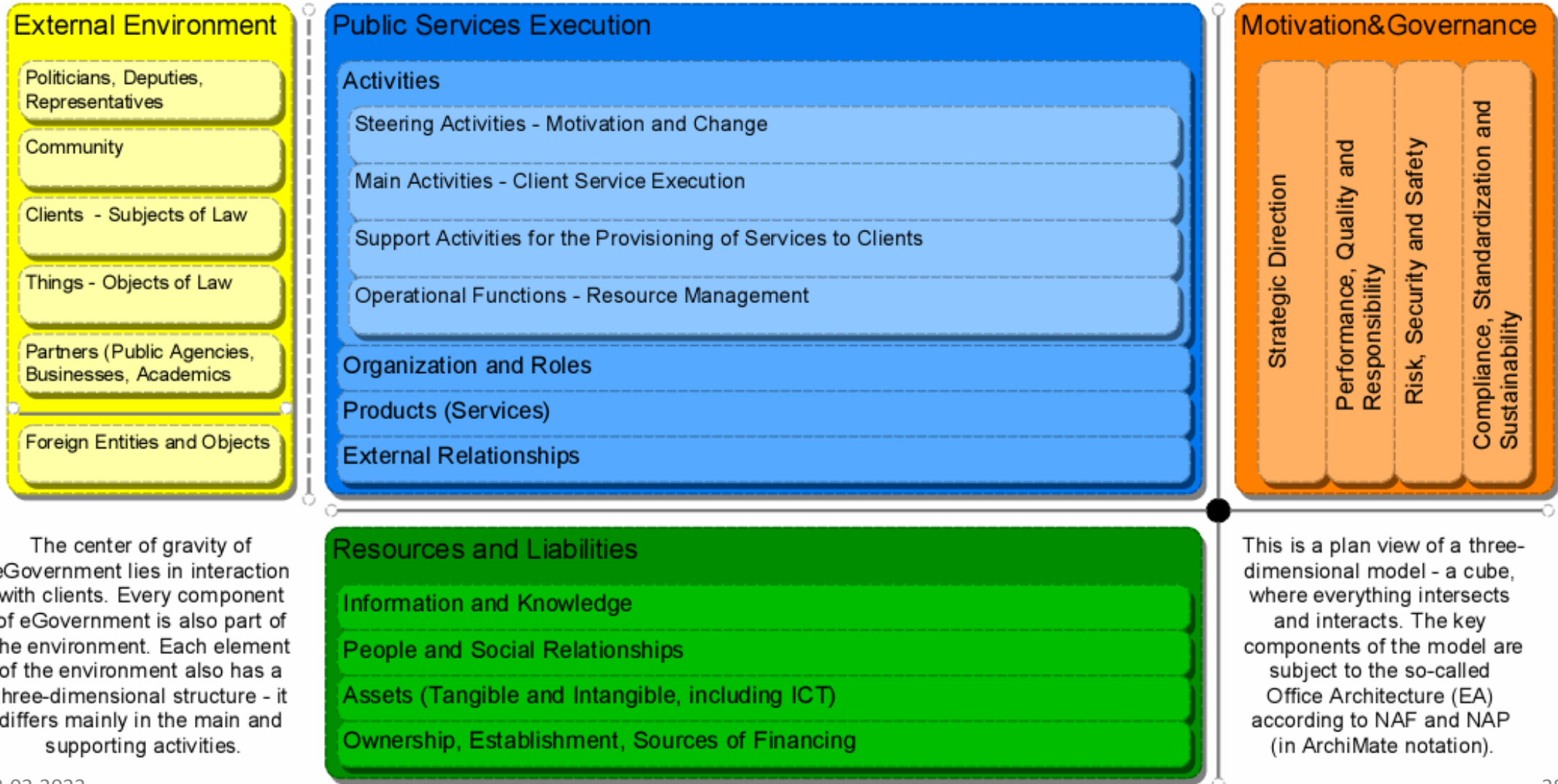
What every public administration organization must consist of?





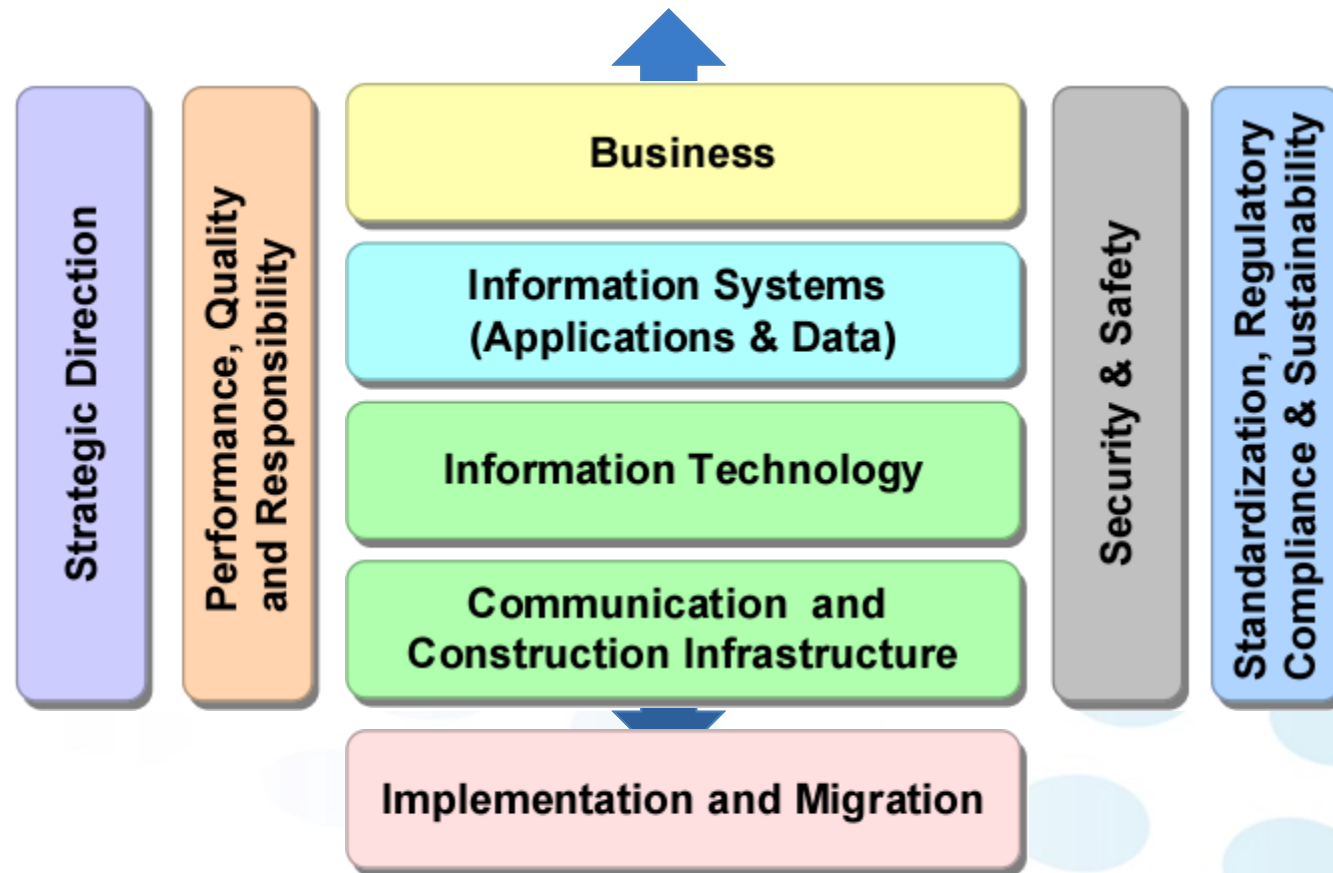


# Key building blocks of Government organization – level 2+3 (partly)





# Adapted domains of Czech GEA

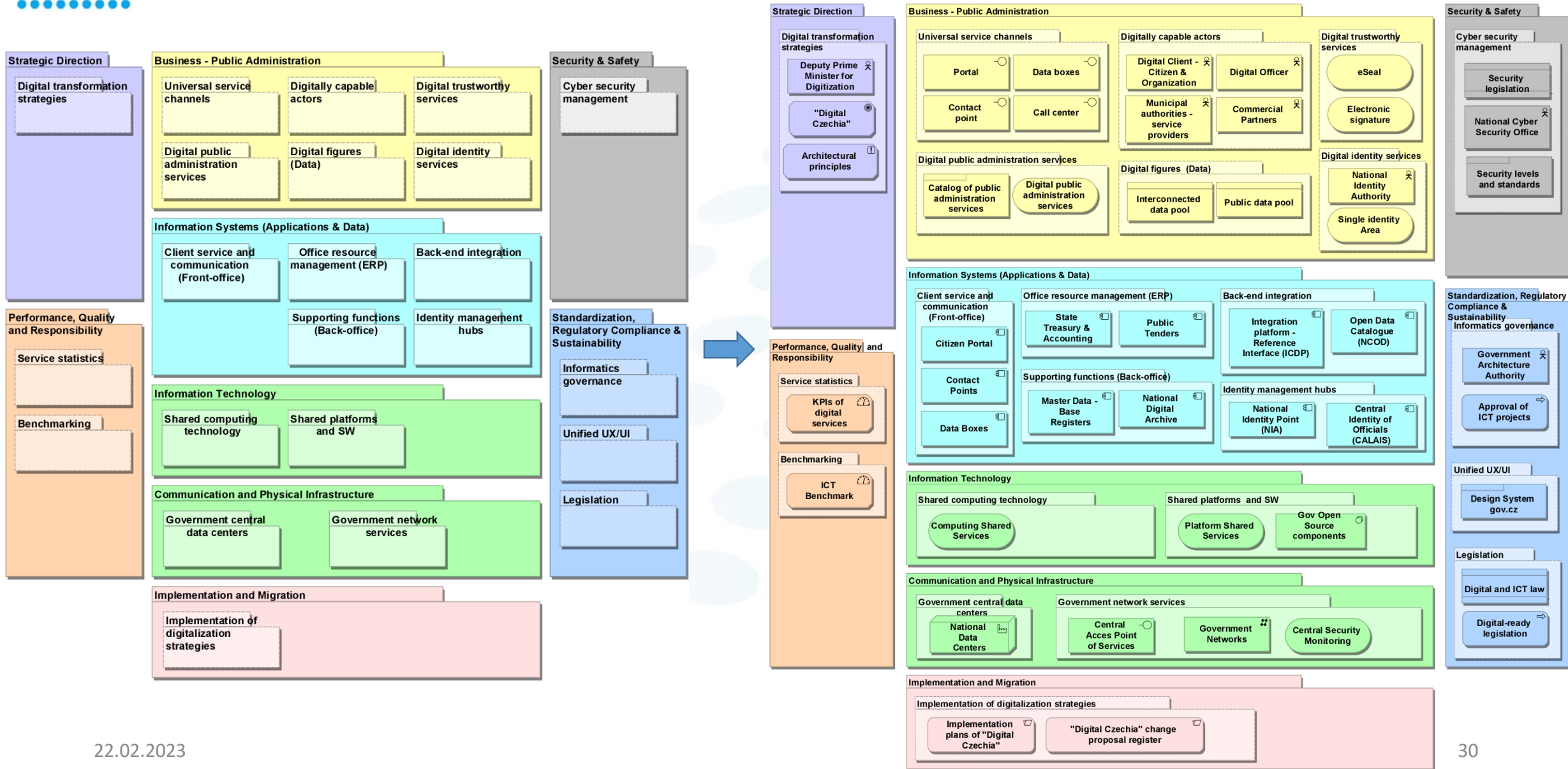


- Horizontal domains of Czech GEA correspond with TOGAF & ArchiMate, just splitting technology layer.
- Besides already promoted domains of Performance and Security, domains of Compliance & Sustainability as well as Strategy are also promoted in Czech GEA, corresponding with **FEA v2 a GEA-NZ 3.0**.



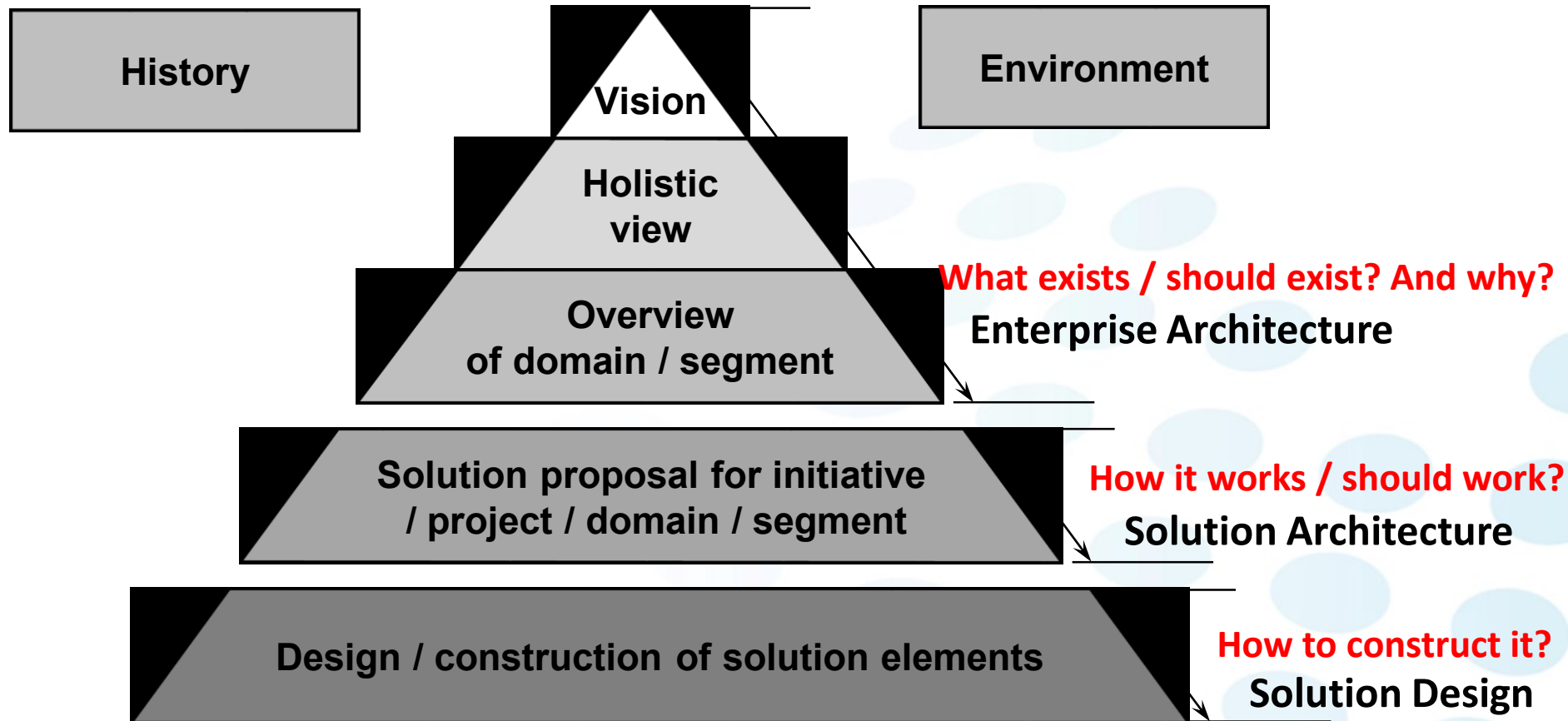


# Czech eGovernment Building Block Groups





# Architecture pyramid of the enterprise



© Pavel Hrabě 2011



# Categories of architecture content in Czech GEA

## Reference models

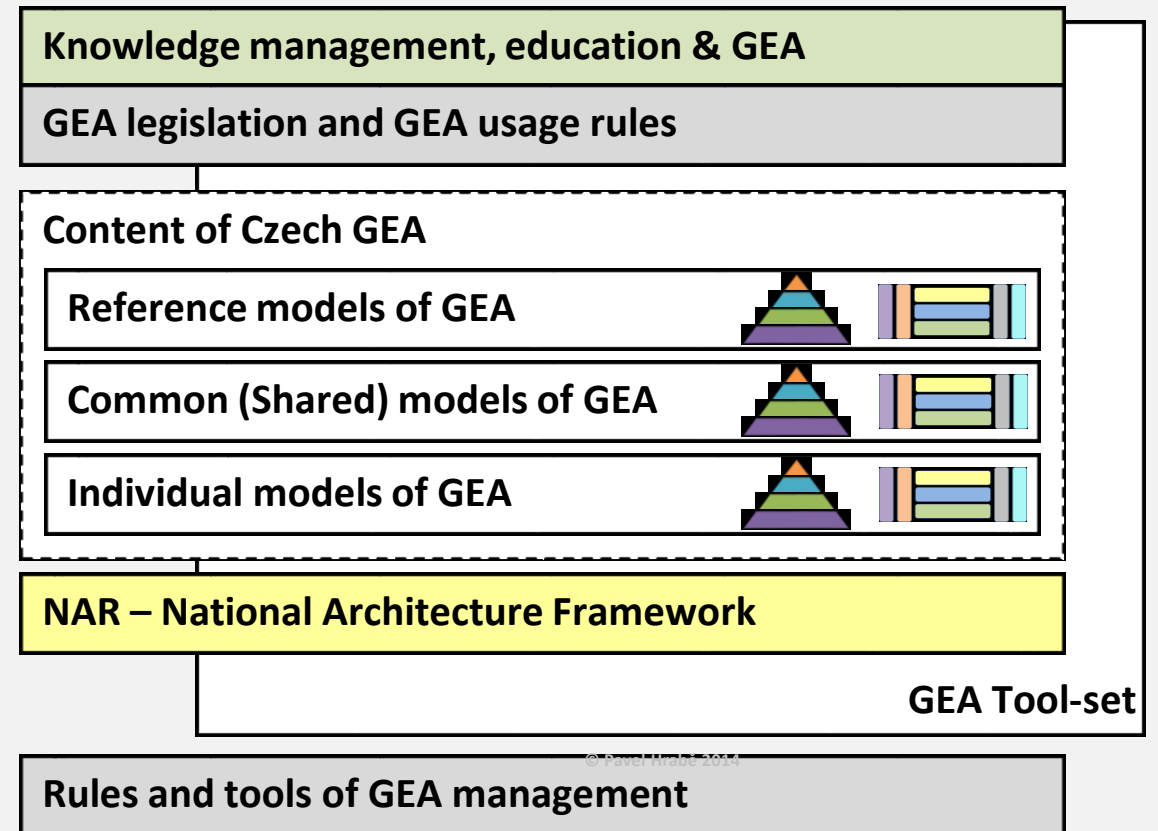
- Generalization of best practice adopted for Czech PA reality
- Common mandatory taxonomy
- Reference of form and management

## Common (shared) models

- Parts of models, playing role of mandatory or recommended patterns
- Reference of content

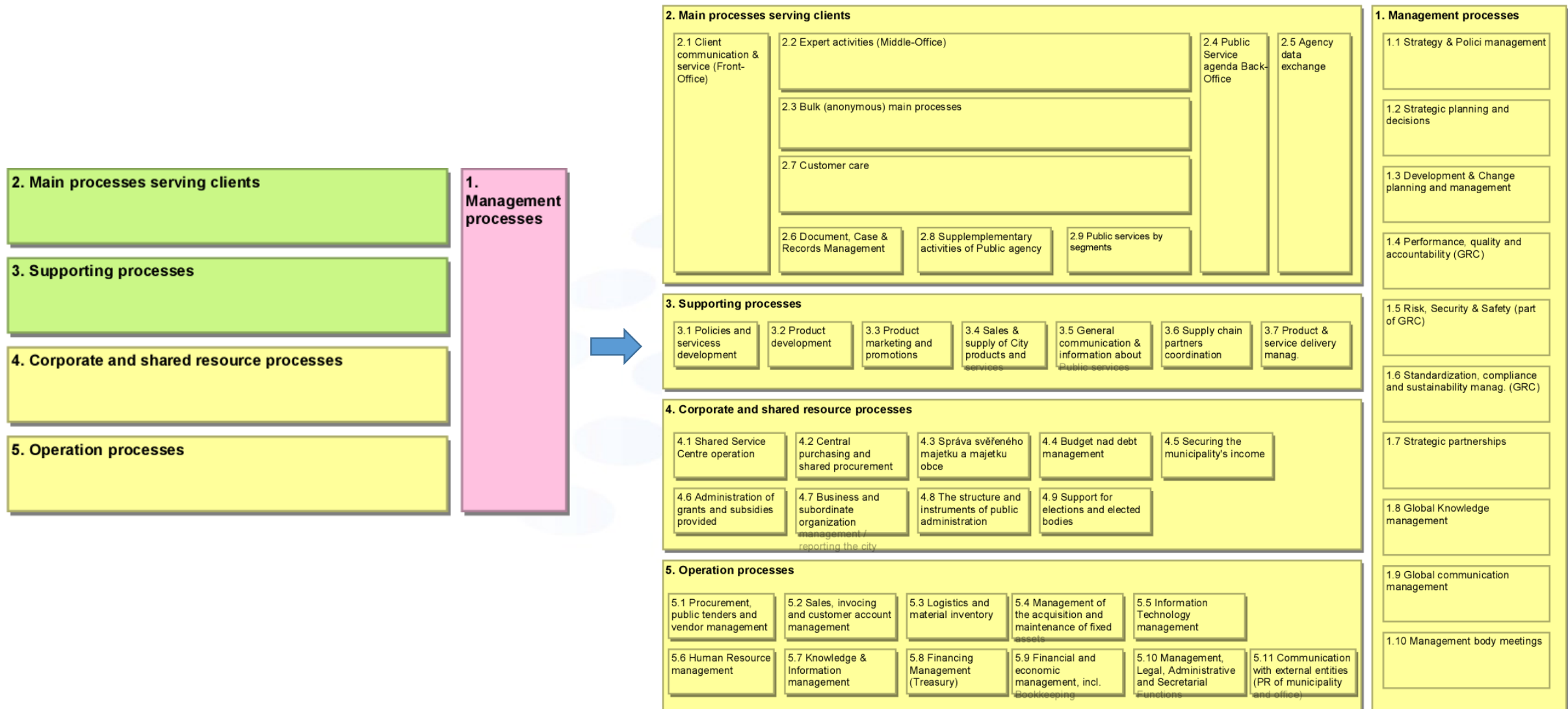
## Individual models

- Individual models created as compliant with Czech GEA framework and standards



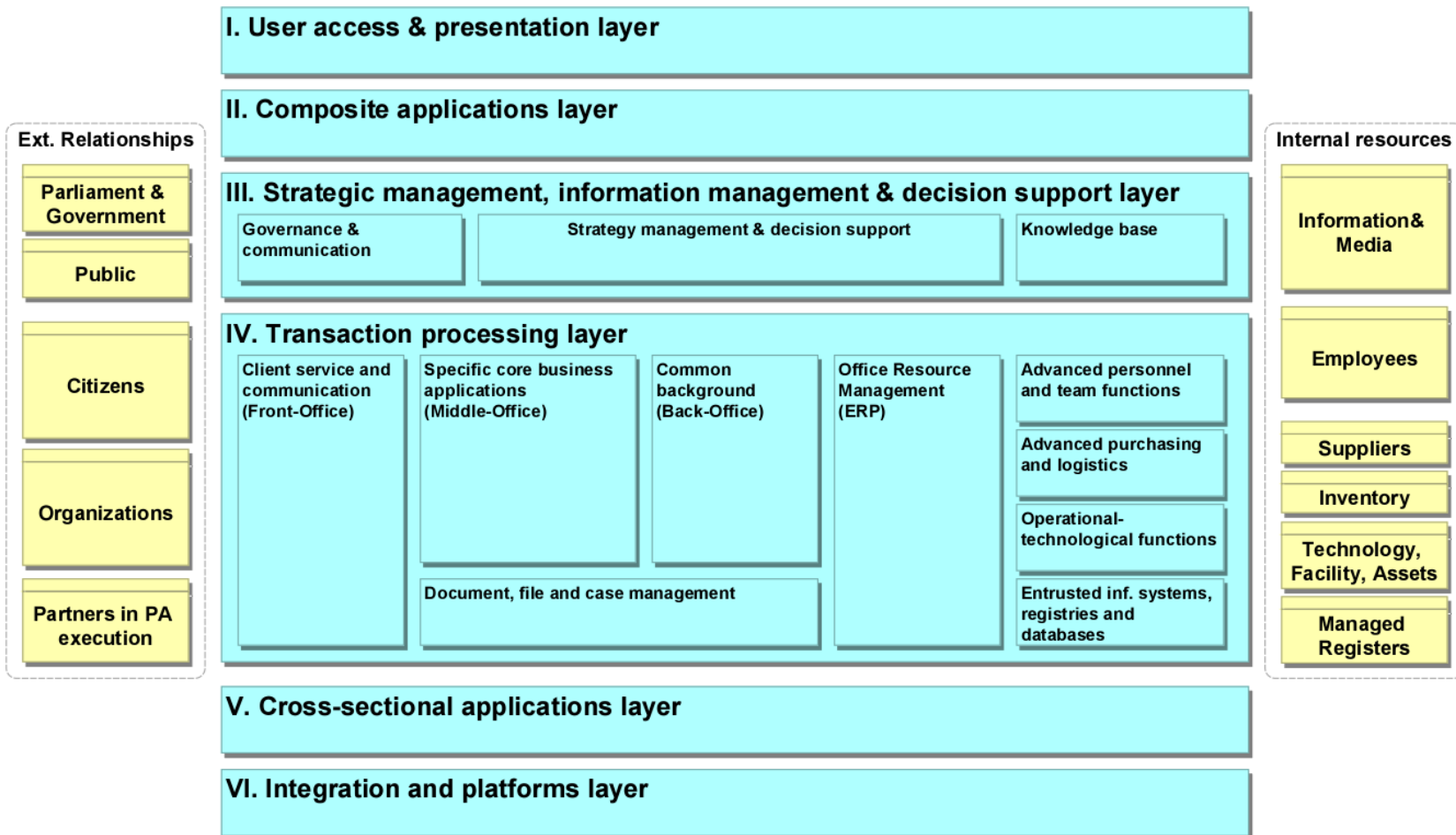


# Business Reference Taxonomy





# Application Reference Taxonomy



- Grouping applications by business purpose
- Aligned with business taxonomy
- Two dimensions:
  - vertical: from users to infrastructure
  - horizontal: from business to resource management



# Conclusions





# Key elements of transformation

Transforming an organization, including the entire public administration, means transforming all its capabilities:

- Steering / management
- Services for clients - eGovernment
- Support of external services
- Shared services and special government capabilities
- Daily operation of the office







# Current state of our transformation

- Controversial heritage from the Austro-Hungarian monarchy
  - even the new Czechoslovak state has been good in the performance of traditional public administration since 1918,
  - but we have also inherited incredible resilience to change and innovation in public administration,
  - however, officials are usually not aware that they are serving clients.
- Clear focus of digital transformation
  - from the beginning we have been focused on the prerequisites and performance of external services for clients, we are proud of what we have achieved,
  - but not much has changed within the authorities, they did not transform at all.



# Paving the way ahead

- Further increase the pressure on the delivery of services to clients, but for sustainability of change and continuous improvements - focus to transform authorities inside-out.
- This means in particular:
  - ensuring human resources and knowledge
  - adding transformation roles and processes – ability to change
  - adding new roles and processes - especially service management and client relationship management
  - adding optimized shared services for agencies
  - transforming ordinary things, such as the daily operation of agencies.



# Risks and mitigation strategies

- **Lack of will and motivation**, in other words, insufficient politics and legislation.
- **Lack of knowledge** - most people do something like this for the first time.
- **Lack of staff** – who is able to do it at all.
- **Insufficient budgets** – cost of transformation are not budgeted, especially investments into people, into change.
- **Insufficient enforceability of regulatory measures.**
- **Insufficient IT infrastructure** – solutions operated as a pilot are not scalable for success.
- **Insufficient promotion of already available services.**



# Lessons learned - 1

- For real introduction of Enterprise Architecture as a management method into the practice of eGovernment and digital transformation, it is important to:
  1. have expert knowledge of what such an implementation means,
  2. have the legal and financial tools to enforce your vision,
  3. have a clear idea of basic principles and key building blocks for shared eGovernment services from the very beginning, and finally
  4. invest sufficiently in people, in the central authority as well as in individual agencies.
- Our experience shows that it is essential for success that all four of the above conditions are met at the same time, otherwise results do not come as quickly and in the expected scale.
- While the Czech Republic succeeded in the first three points during years 2014 - 2021, the fourth condition was not sufficiently met.



## Lessons learned - 2

In Czech public administration we have still achieved considerable success:

- Established central architecture authority and ICT projects approval process, based on law.
- Created Architecture methodology and content, especially National plan of architecture.
- Implemented New eGovernment Building Blocks, like federation of electronic identities or central transactional portal.
- Adopted and continuously updated digital strategy as an enabler of further development - most recently these days.



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# Thank You!

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