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Polish State Information Architecture Roadshow

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MINISTRY OF DIGITAL AFFAIRS
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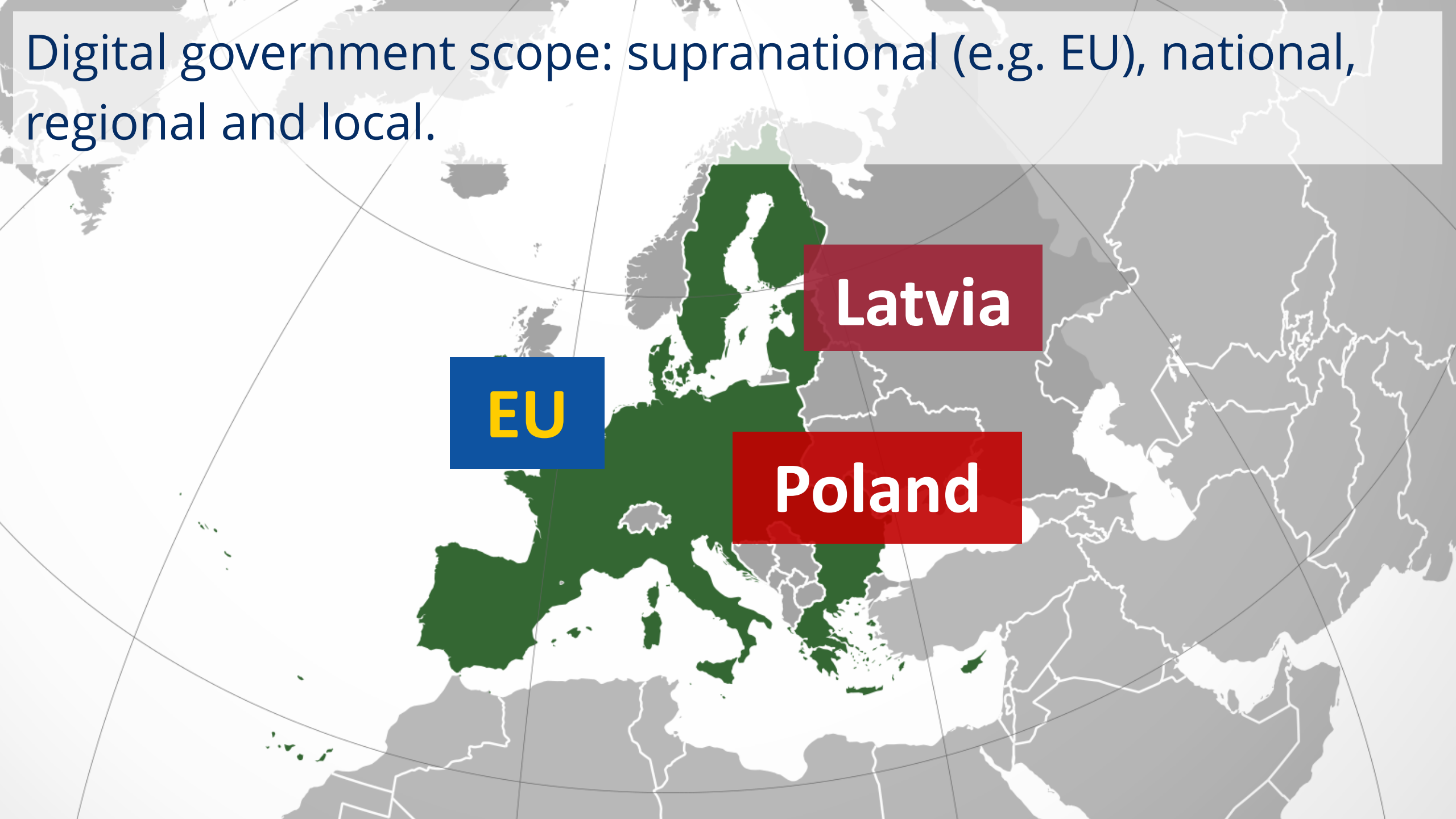
Digital government

Service delivery between government and the public - as well as within government - using information and communication technologies.

Digital government scope: supranational (e.g. EU), national, regional and local.



Digital government: challenges

- Lack of single cross-government vision of digital government: silo-based views.
- Lack of top-level ownership and effective cross-government decision-making.
- Failure to provide services with a real value to citizens.
- Lack of cooperation in creation and use of shared digital government services.
- Lack of required skills at all levels to implement the coherent digital government program.

Based on: OASIS "Avoiding the Pitfalls of eGovernment" 2010

… and more challenges

- Electronic services are provided by thousands of public organizations of varied digital maturity.
- A significant number of datasets is collected multiple times (duplicated) at central, regional and local level. It is not reused sufficiently, resulting in excessive data collection costs and information inconsistency.
- Lack of consistent identification of the state’s information resources and the inability to assign reference status to public registers’ data.

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Digital government is served by public administration

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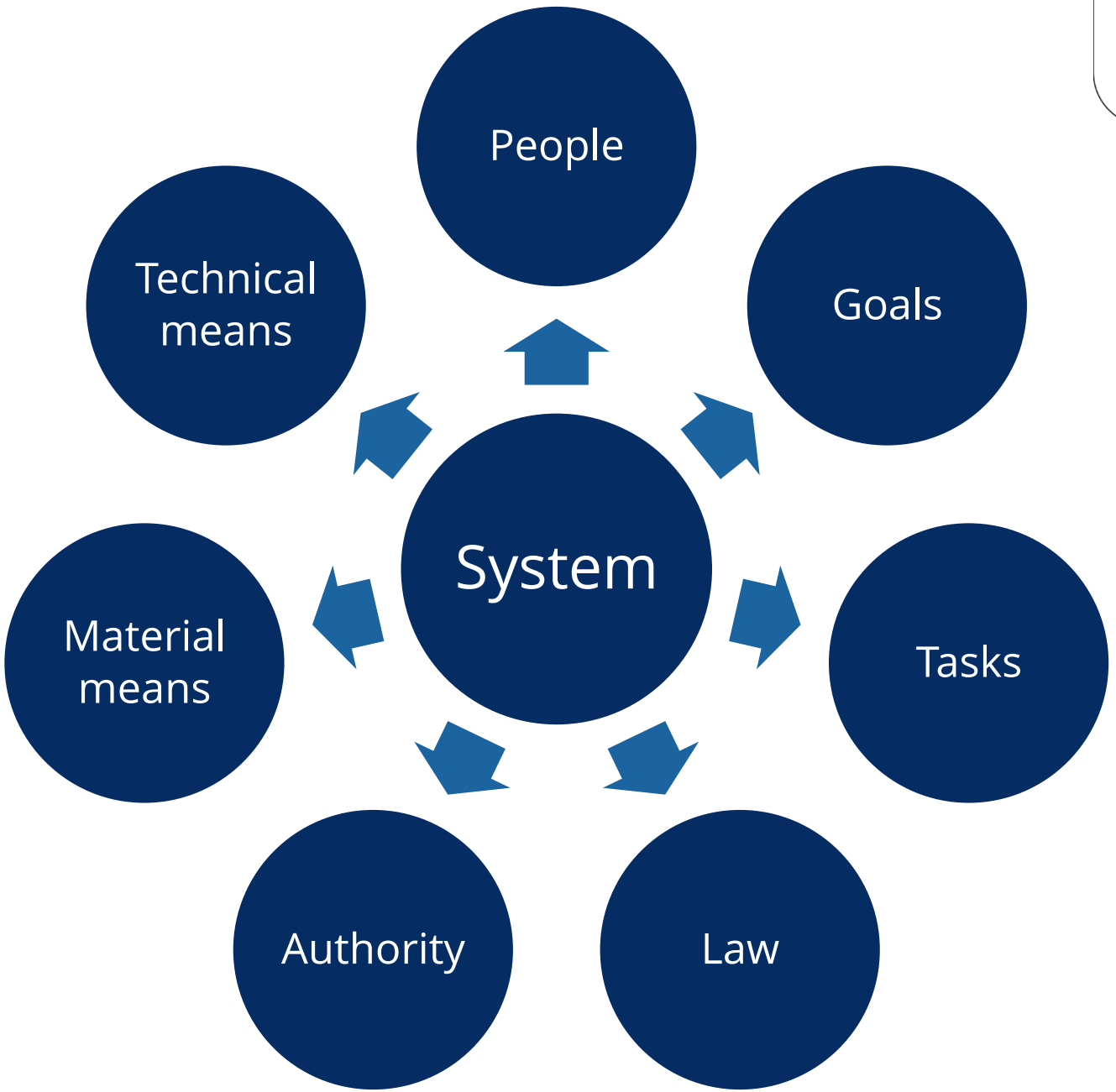
Public administration

„System
made up of people,
organized for the purpose of constant, systematic, future-oriented realization of the common good as a public mission,
consisting mainly (though not exclusively) on the ongoing implementation of laws,
equipped for this purpose with state authority
and material and technical means”.

I. Lipowicz, PhD

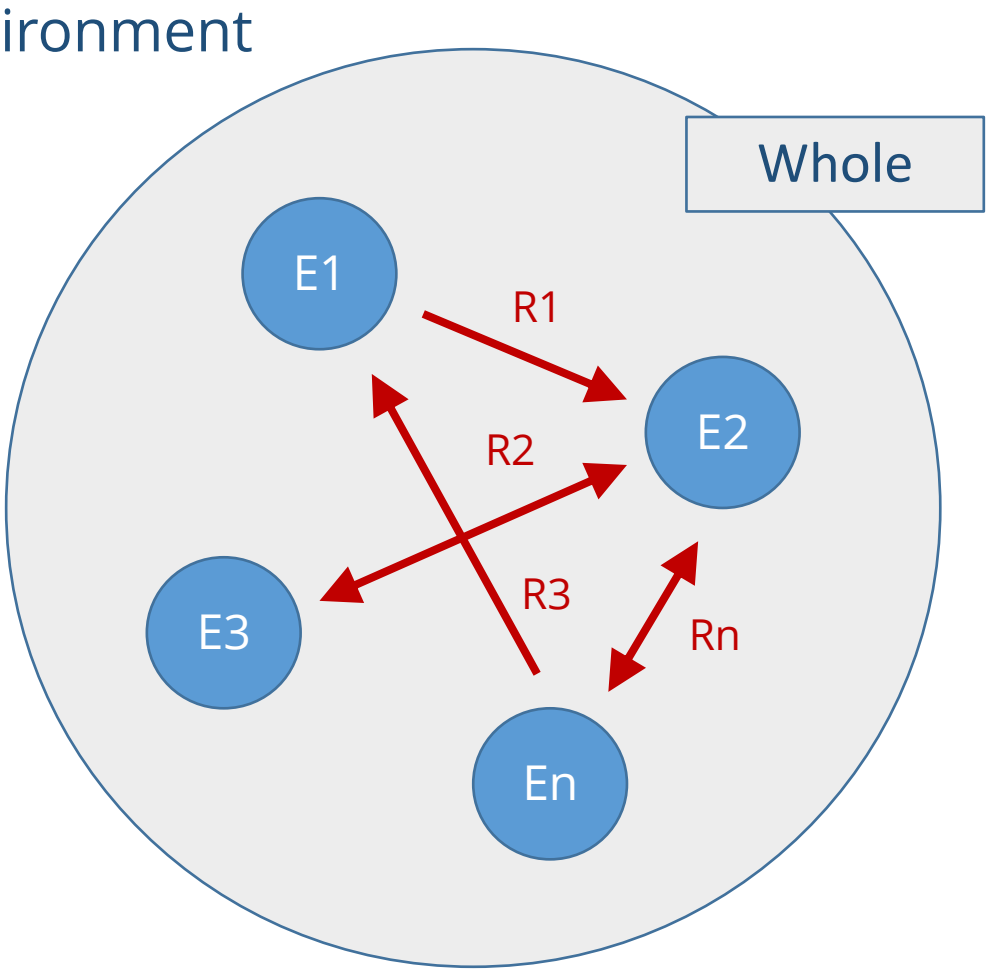
Public administration



System

„A system is a whole
separated from the environment,
composed of elements
(subsystems)
that are directly or indirectly
related to each other.”

R. Ackoff



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Systems thinking

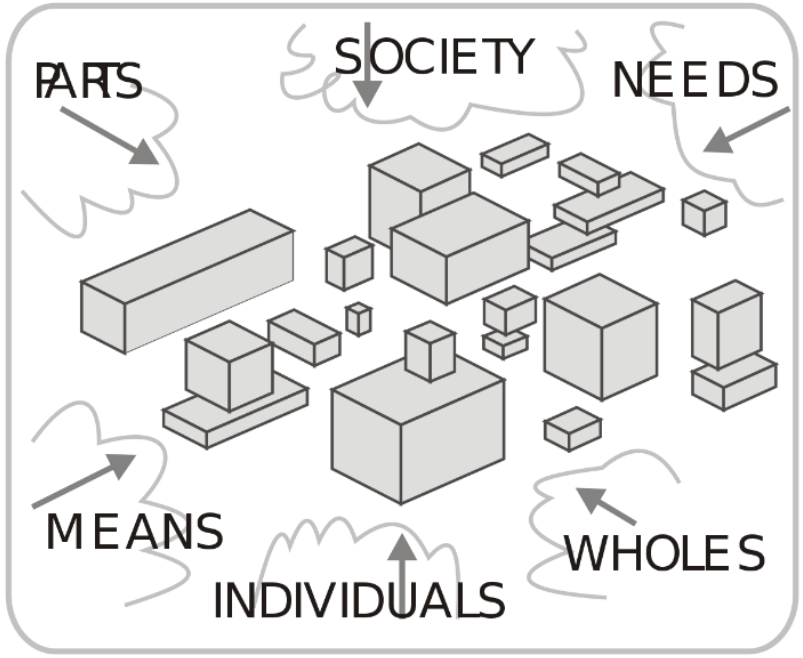
„Systems thinking is a way of

making sense of the complexity of the world

by looking at it in terms of wholes and relationships rather than by splitting it down into its parts.”

M. Ramage and K. Shipp

Systems thinking



Systems thinking approach to the development of effective, interoperable and inclusive digital government

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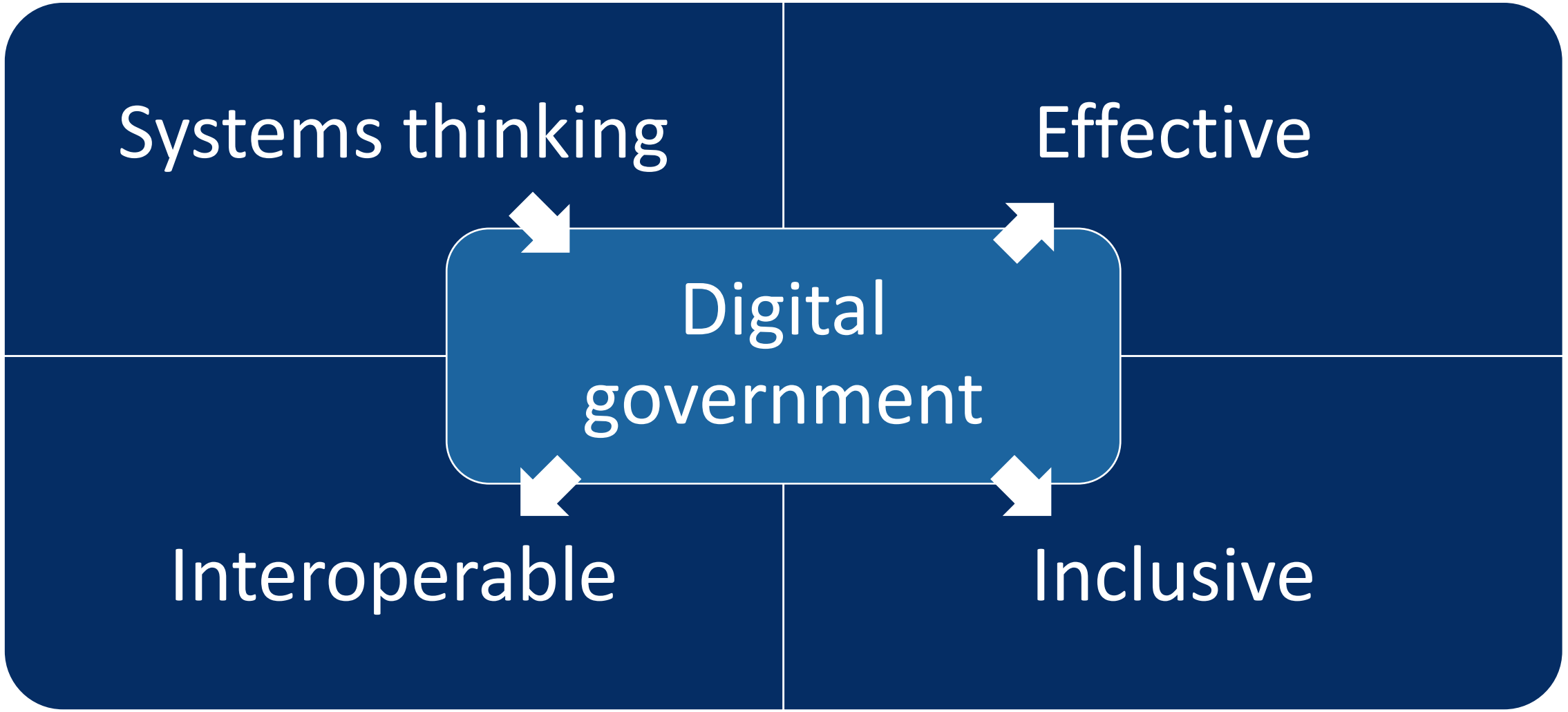

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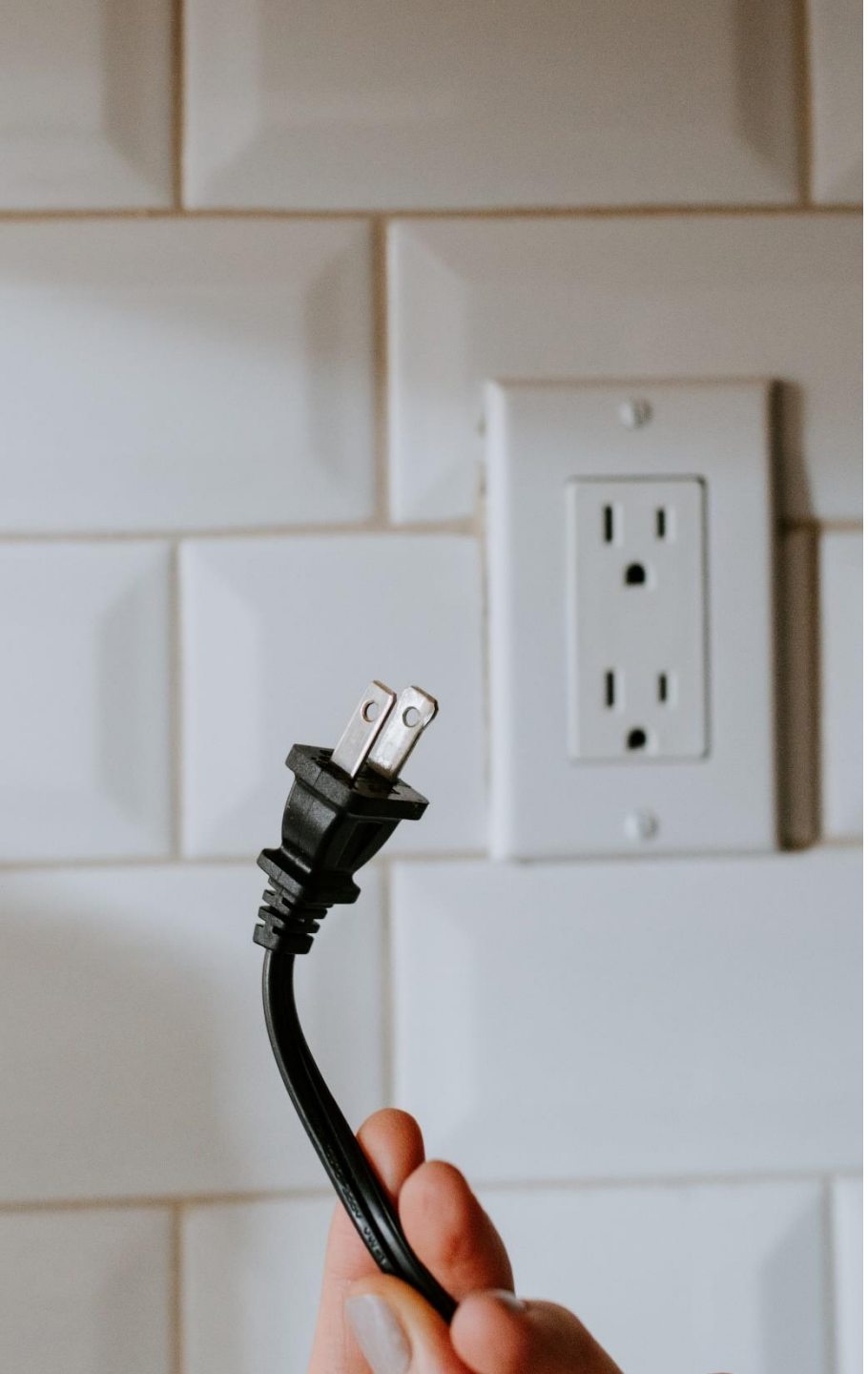
Effective

- Effective: able to reach the goals.
- + Efficient: long term benefits are greater than efforts (including costs).



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Interoperable

Capable of effective co-operation:

organizations, people, regulations, processes, data, applications, and infrastructure.

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Inclusive

Providing equal opportunity for individuals and groups to participate.

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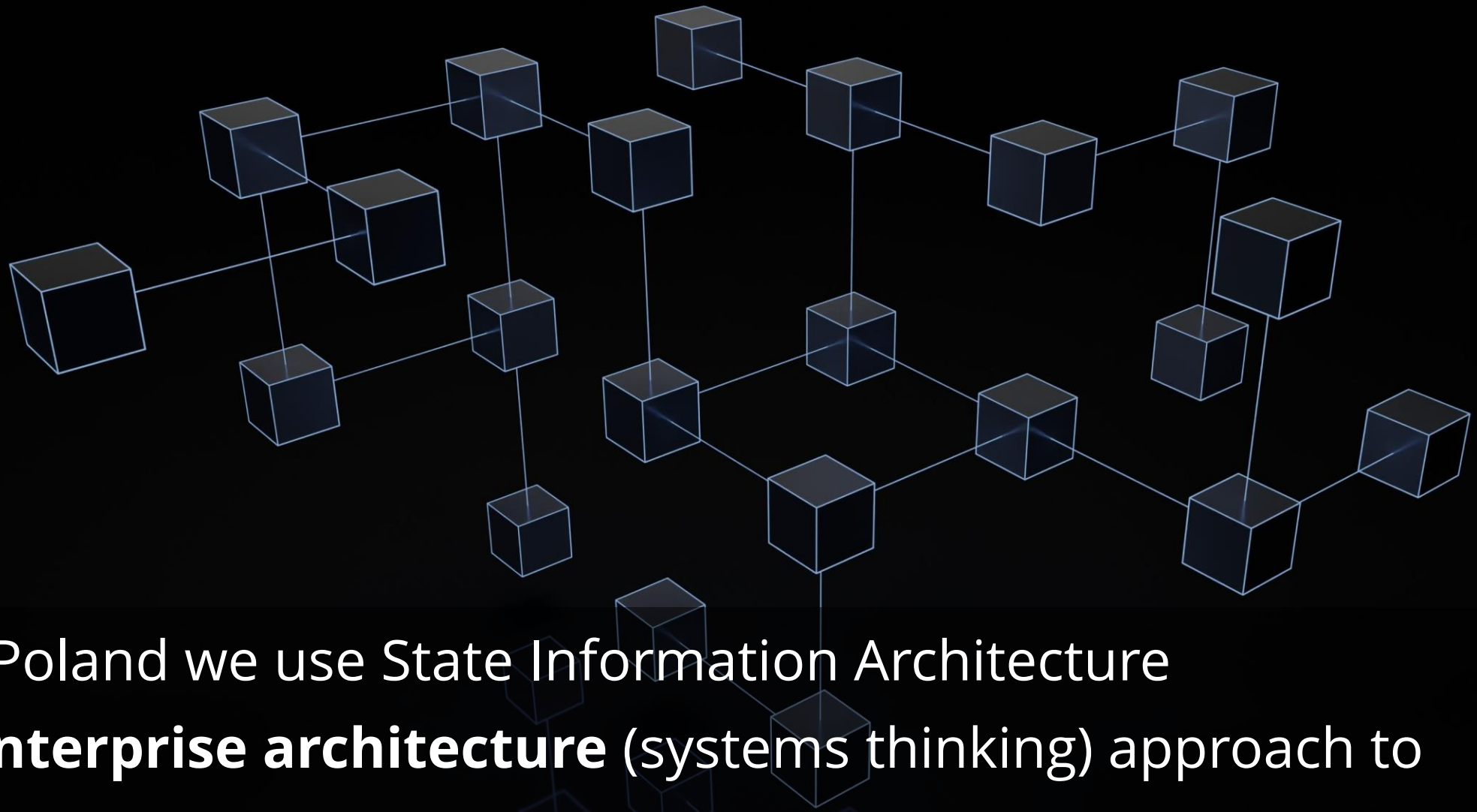
Architecting the government

- Public administration is a complex system: cultural, legal, organizational, semantic, and technical aspects.
- The best way to understand the system and address its challenges is to use systems thinking methods.

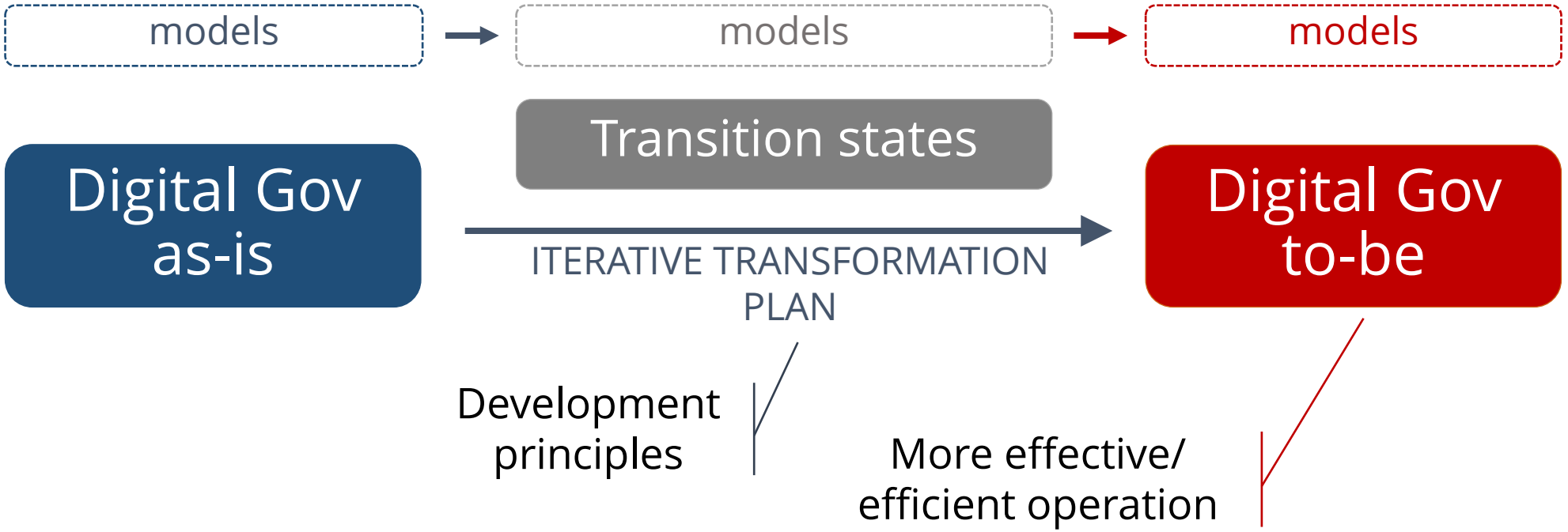
State Information Architecture



In Poland we use State Information Architecture
- **enterprise architecture** (systems thinking) approach to public administration digital transformation.

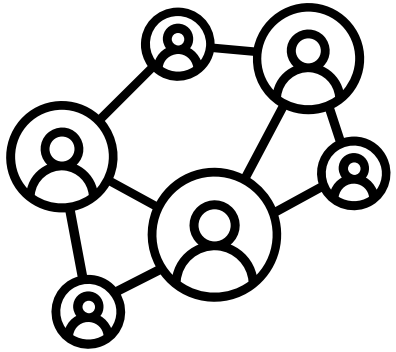
Digital government transformation

Comprehensive improvement in **quality of services** provided by public entities is possible due to organizational transformation.



Enterprise architecture

Enterprise architecture approach is required when the complexity of the organization is high, and the organization operates in a rapidly changing environment.



high complexity

rapidly changing environment

State Information Architecture

Public administration

- very high complexity: complex structure of a very large number of entities,
- moderate speed of changes: due to the digitalization the environment changes quickly, while the law changes slowly.

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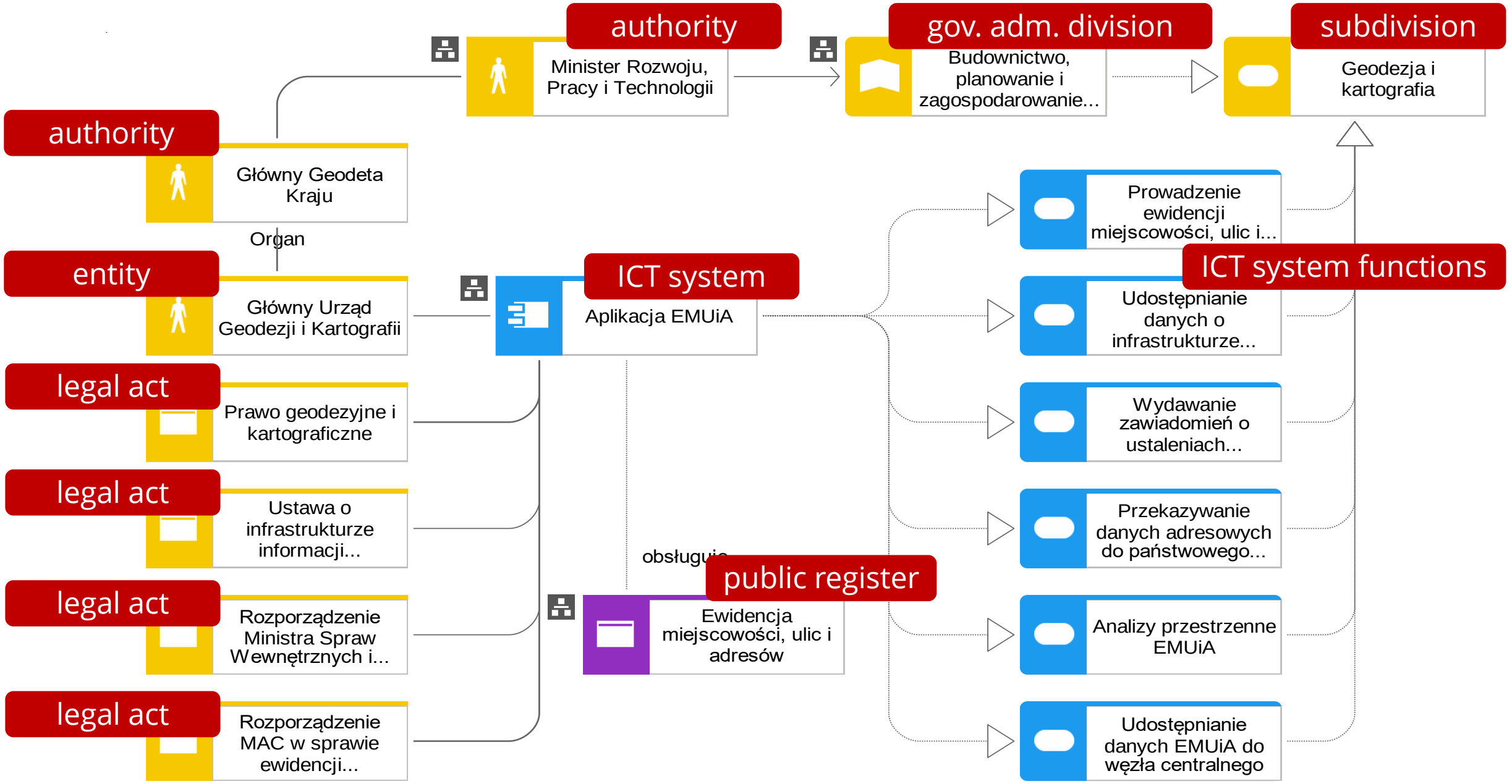
State Information Architecture

uses principles and **visual models**, which reflect Polish public administration organization and development.

Example: ICT system co-operation model



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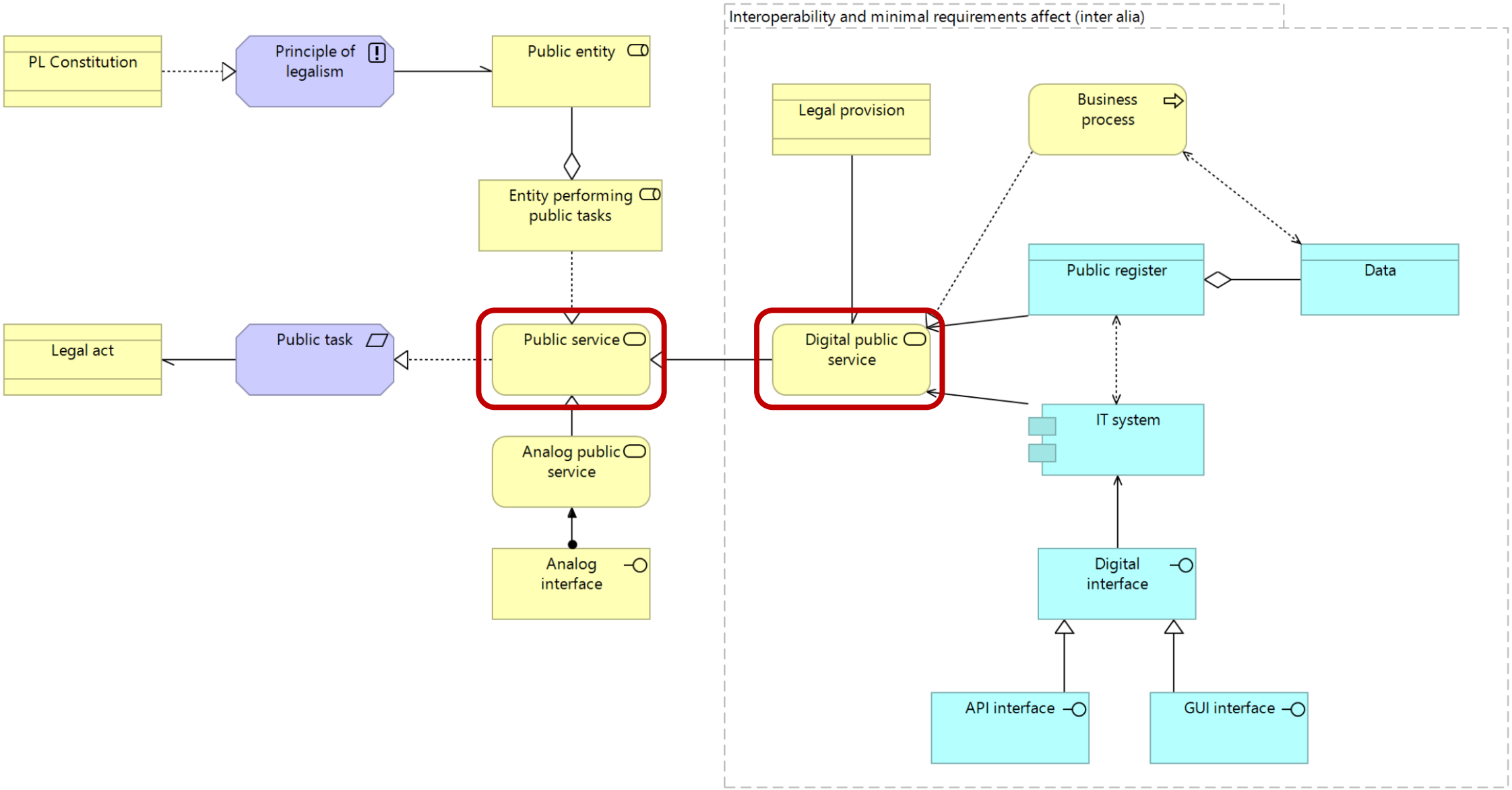
Principles and models

- Lead to better understanding of digital government, which allow further reduction of administration complexity.
- Contribute to increase in interoperability, re-use and effectiveness of whole system of public administration.

Ministry of Digital Affairs goals

- To create a coherent, logical and efficient state information system which provides high-quality digital services for citizens and entrepreneurs in a cost-effective way.
- To ensure the interoperability of existing and new ICT systems of public administration (including the elimination of duplicate functions).

PL National Interoperability Framework domain model

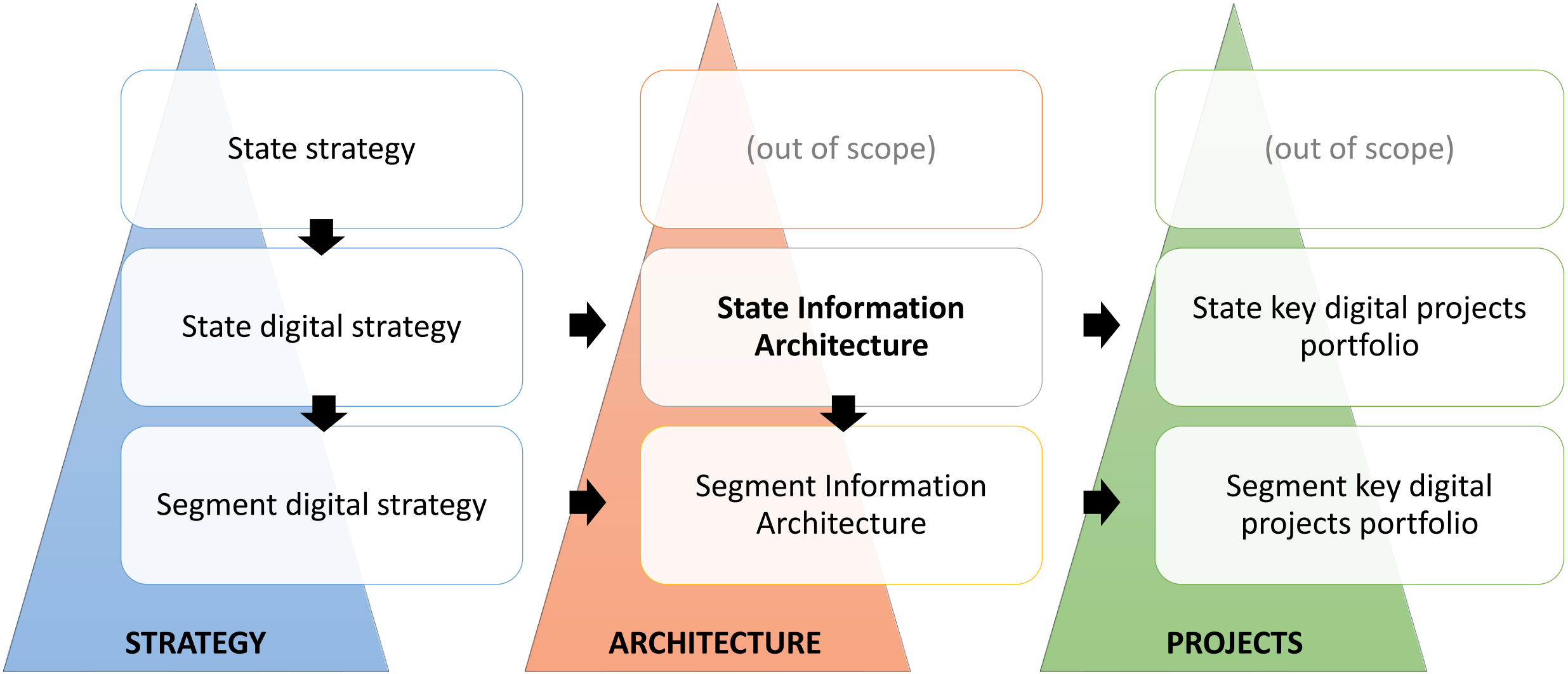


State Information Architecture

Definition

State Information Architecture –
government digital transformation methodology,
implementing the objectives of the digital strategy,
based on architecture models,
including principles, standards, guidelines and architecture recommendations.

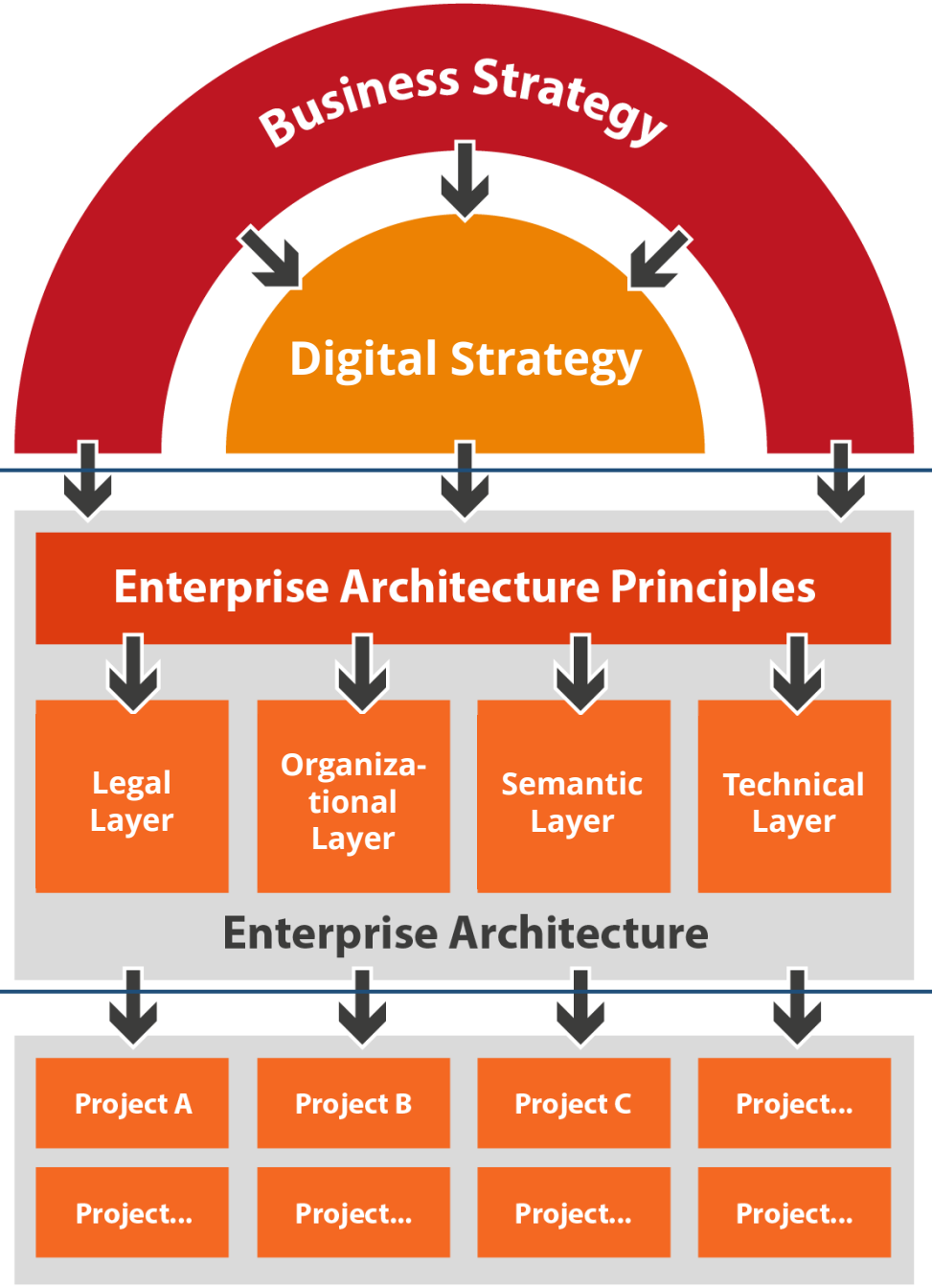
Digital state: cascade



Strategy (objectives)

Enterprise architecture (including principles)

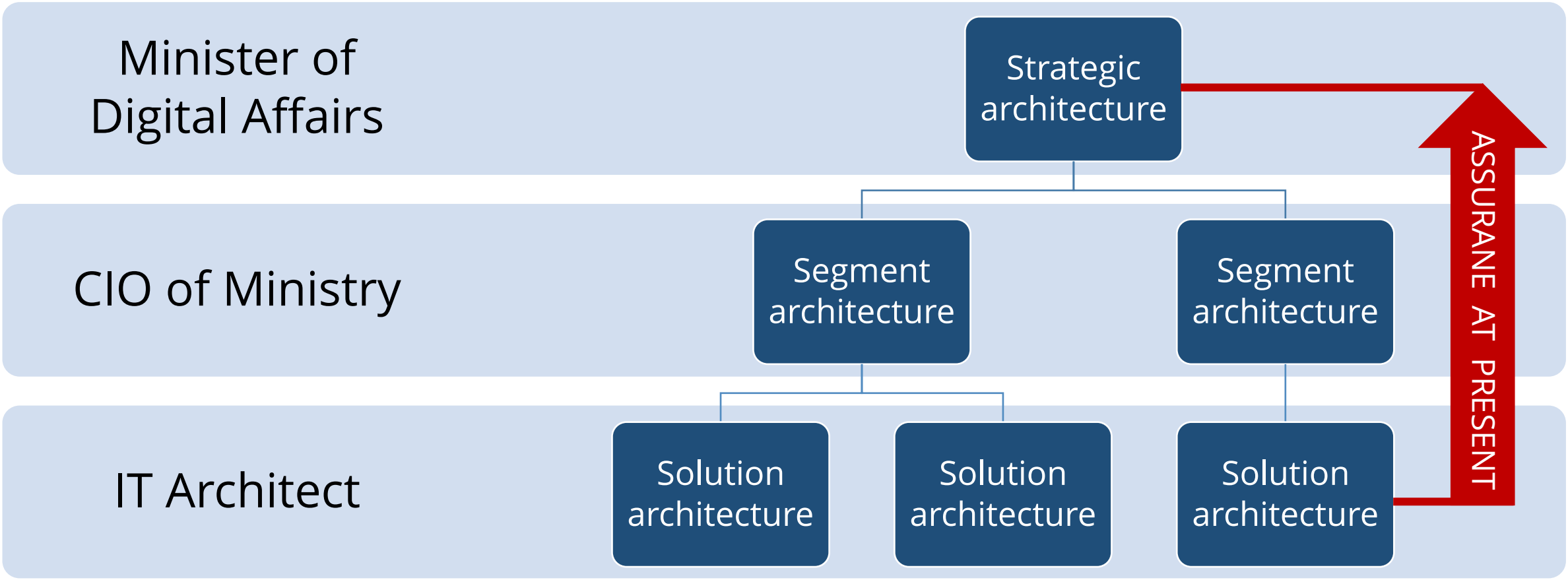
Project portfolio



Source: Sobczak, A. „Zastosowanie pryncypiów architektury korporacyjnej w organizacjach publicznych”, 2008

State Information Architecture

Target enterprise architecture cascade:



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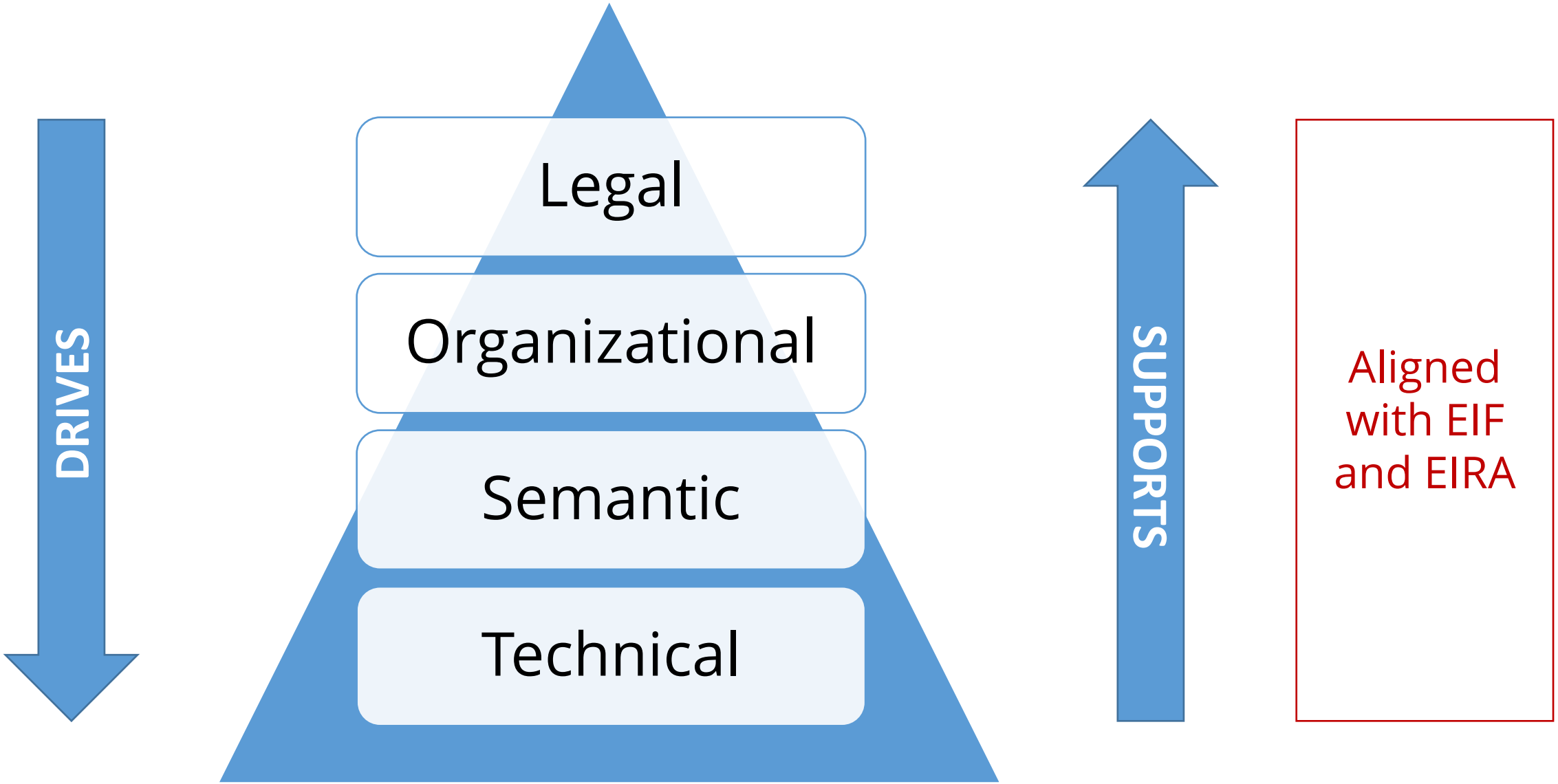
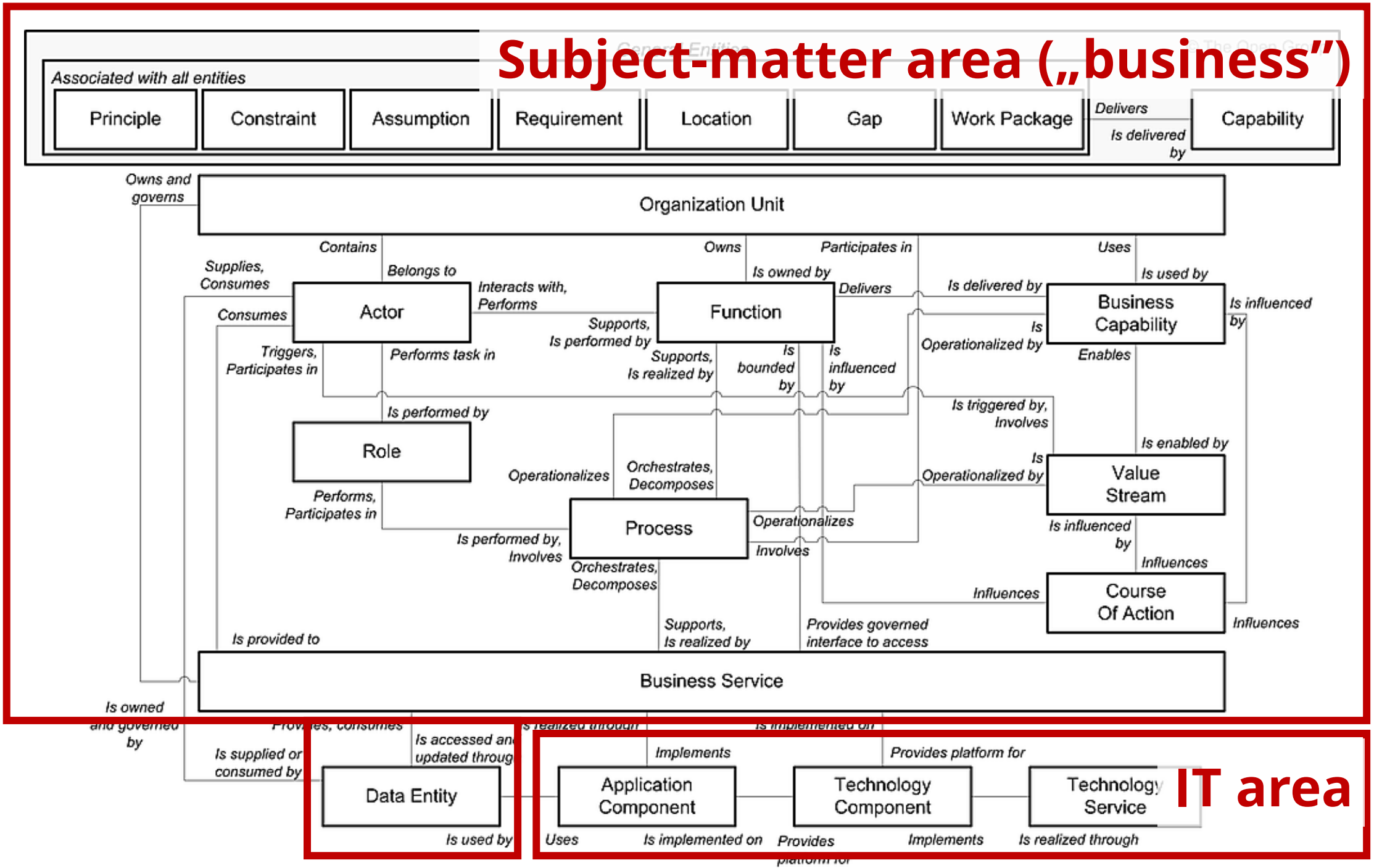
What is State Information Architecture about?

State Information Architecture layers

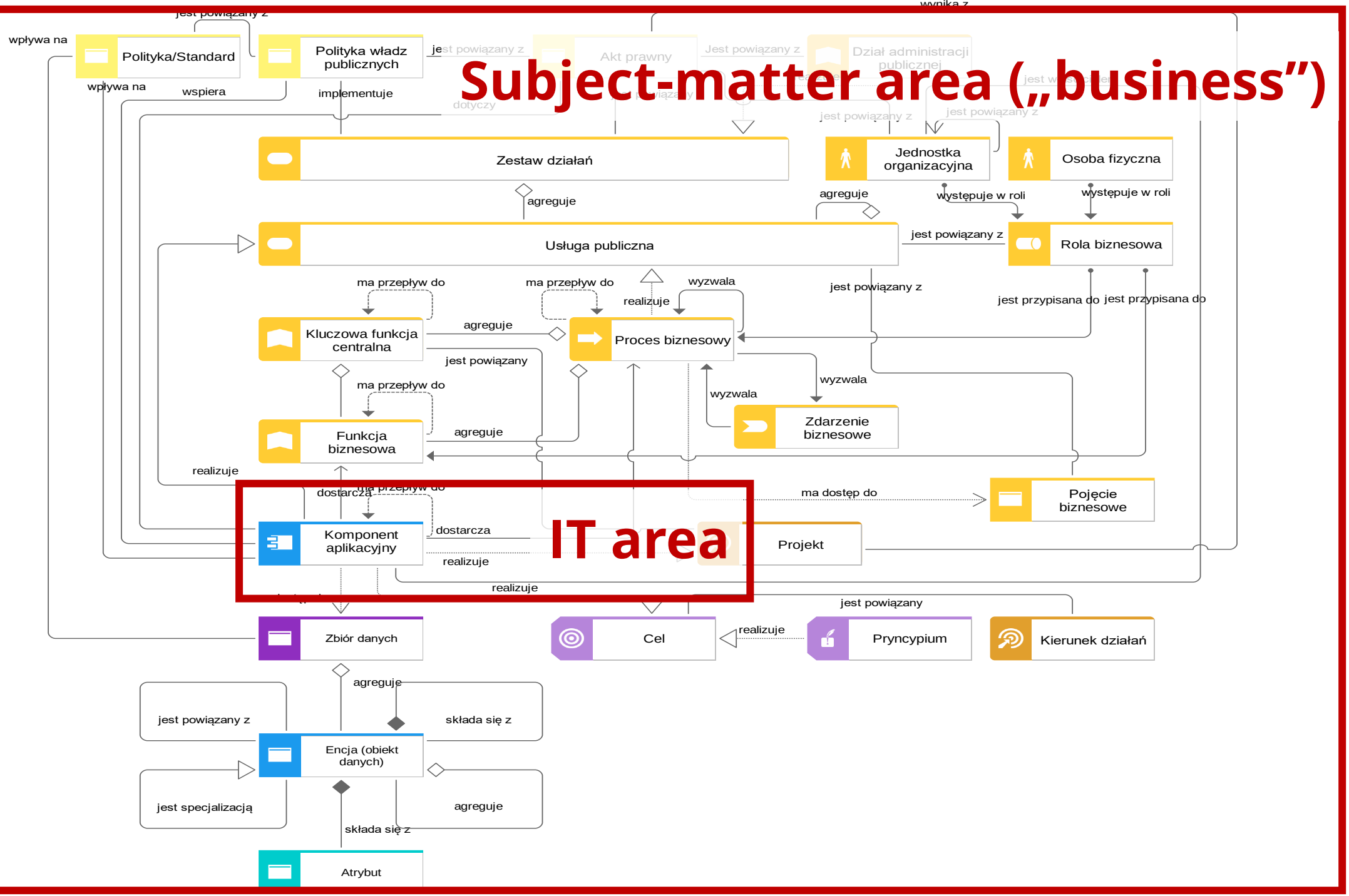


TOGAF metamodel



PL SIA metamodel

Subject-matter area („business”)



SIA functions

SIA functions

DEVELOPMENT

Development of architecture artifacts

- Development of SIA products: metamodel, model, vision, universal model for implementing e-services, method for building an interoperable IT system, cascade of architectures, etc.
- Improving artifacts by obtaining feedback from stakeholders (PDCA).

SIA functions

SUPPORT

Support for public entities in the use of SIA and building domain architectures

- Support for the Minister of Digital Affairs in the creation and operationalization of the Digital Strategy (SIA Vision -> Project portfolio).
- Support for public entities in planning, development and withdrawing public e-services - based on SIA artifacts from the SIA repository in architecture layers.

SIA functions

EDUCATION

Gaining/improving competences and sharing architectural knowledge

- Building awareness of the existence and benefits of SIA, as well as building the segment architecture in line with the strategic SIA.
- Mutual learning with the commercial environment where the architectural approach is applied.

SIA functions

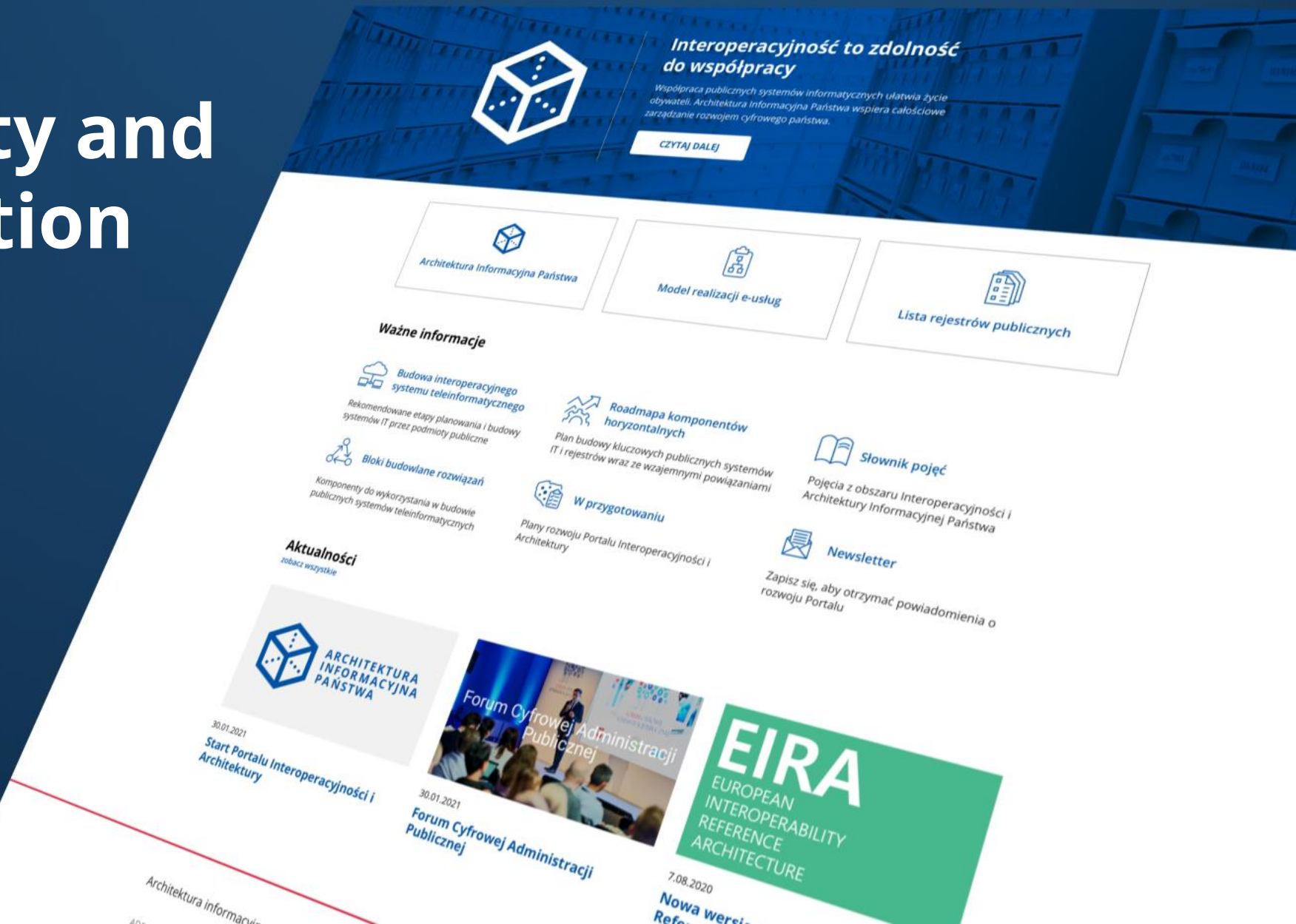
ASSURANCE

Assuring the compliance of key public digital services with SIA artifacts

- Conducted for the entire life cycle of the public digital service.
- Self-control of SIA stakeholders based on the shared SIA artifacts (planned).

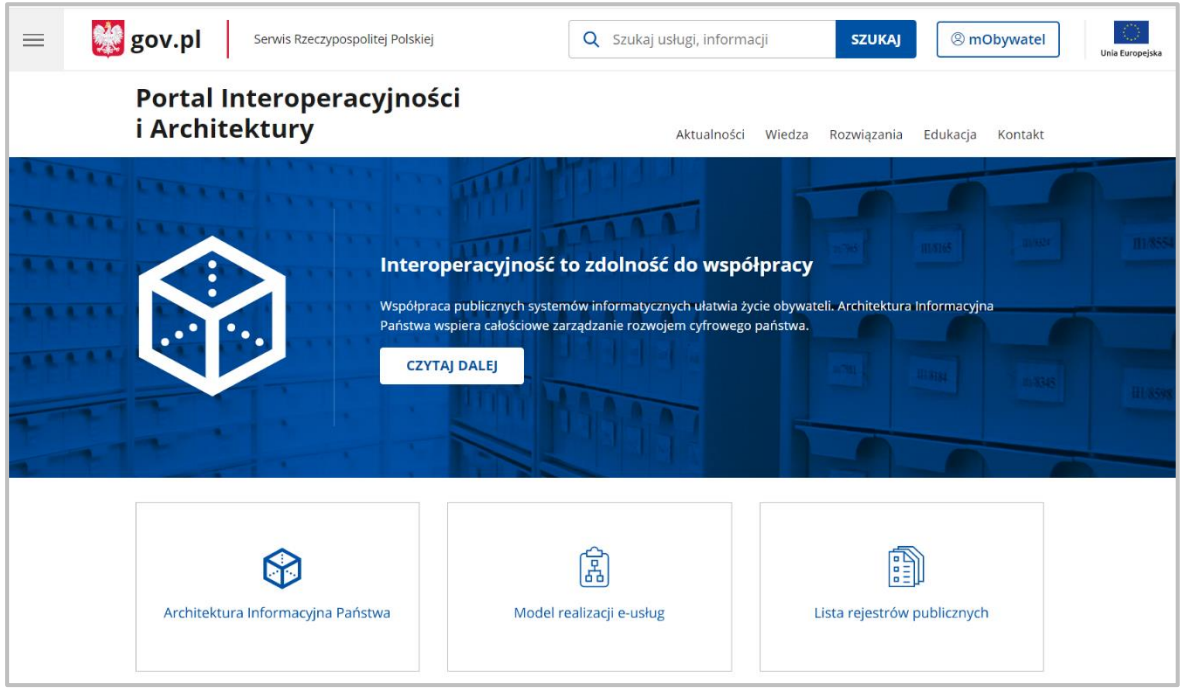
ARCHITEKTURA INFORMACYJNA PAŃSTWA

Interoperability and State Information Architecture Portal



Interoperability and architecture portal

- Launched in February 2021.
- **Purpose**
  - to increase the degree of regional, national and transeuropean interoperability,
  - ensure a widespread use of the State Information Architecture.



www.ia.gov.pl

Interoperability and architecture portal

Information on:

- Strategies and programs, legislation, interoperability and architecture frameworks, standards and recommendations, and document structures, as well as on public IT systems and public registers.
- State Information Architecture, including its principles, vision, models and management processes.
- New videos and presentations on the State Information Architecture and interoperability are regularly published.

State Information Architecture Academy

State Information Architecture Academy

Academy focuses on the architectural approach and interoperability aspects of government information systems.

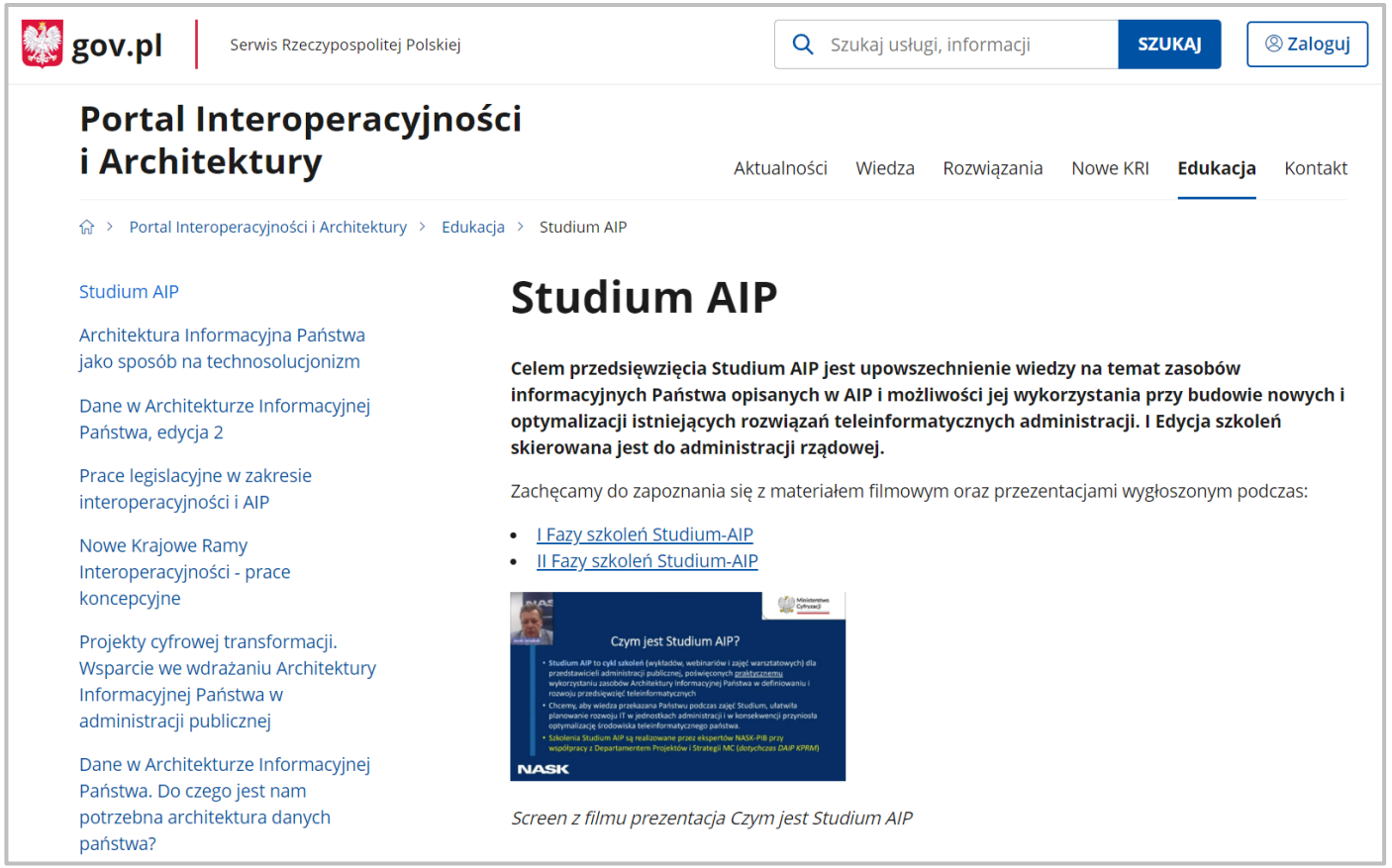
- **Mission**: To enhance the practical knowledge of government administration regarding the public information resources, for their utilization in the digital transformation processes.
- **Vision**: To achieve a high level of digital maturity in the Polish administration, consequently consolidating, standardizing, and improving the efficiency of digital services, as well as the quality of planning and implementation of public projects.

State Information Architecture Academy

More than 600 public servants has been trained online and onsite.

State Information Architecture Academy

All presentations and recordings are available online:
www.gov.pl/web/ia/studium-aip



Screen z filmu prezentacja Czym jest Studium AIP

Interoperability: an introductory course

First European Commission and Polish joint educational venture. Course published on the official civil service e-learning platform.

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Polish State Information Architecture: past and present

SIA: past and present

before 2014: humble beginnings

eGov Portal Development Vision: Government Enterprise Architecture as a prerequisite for an effective and efficient digital state development

2014-2016: preliminary phase

- Stakeholder identification and analysis
- Communication based on stakeholder analysis
- Government EA visual identification
- Government enterprise architecture **principles**: developed during co-creation process
- Government enterprise **architecture vision**: prototype

2017-2024: reaching maturity

- EA repository
- Architecture vision
- Architecture metamodel
- Architecture governance processes
- LOST-layers **models** for public IT systems and public registers, incl. co-operation and data flow models
- Reference data models
- SIA assurance process
- Interoperability and State Information Architecture Portal
- SIA Study

2025+: looking for the future

- SIA one of the pillars of state digital transformation
- Hard law SIA conformance requirements
- SIA in support for cross-border and national interoperability assessments

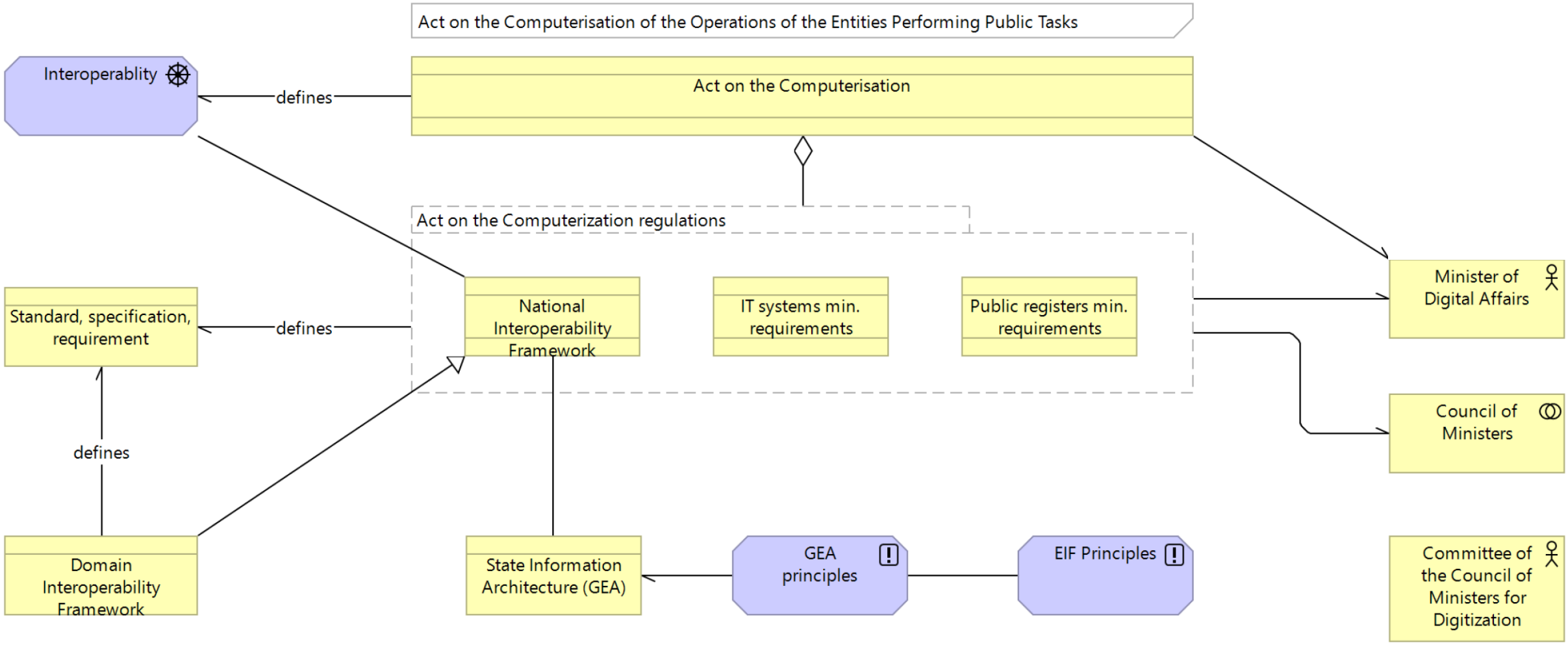
Polish regulations on State Information Architecture and interoperability

PL regulations: present

Digital Strategy

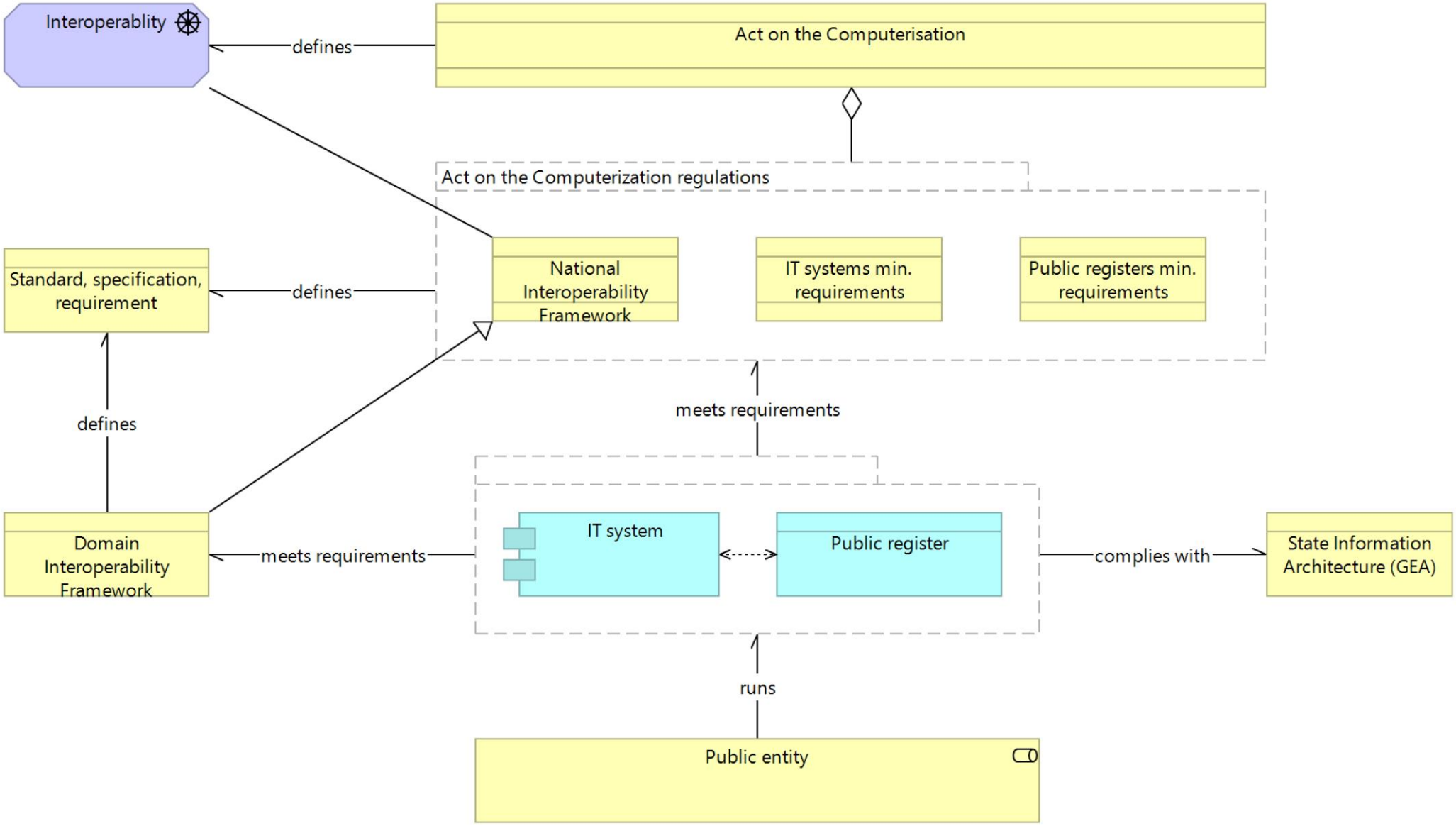
- First State Information Architecture definition.
- Basis for architecture principles, as-is and to-be architecture models to be used in government digital transformation.
- Architecture assurance proces by Committee of the Council of Ministers on Digitization.
- Basis for central government Public IT Systems and Public Registers Inventory.

PL regulations: present



The Regulation on the National Interoperability Framework, minimum requirements for public registers and information exchange in electronic form, and minimum requirements for ICT systems, adopted on 12 April 2012 by the Council of Ministers, was further amended in 2014, 2016 and 2017.

PL NIF: systems, registers and entities



PL NIF: conformance

Each entity performing public tasks

must adapt its IT systems and registers

so that they meet the minimum requirements specified in Polish National Interoperability Framework.

PL NIF: key aspects

- Interoperability: organizational, semantic & technical.
- Guiding principle: technology neutrality.
- IT systems architecture: incl. SOA, web-services, encryption protocols for data interchange.
- IT systems minimal requirements, incl. information security, file formats, digital signature formats.
- Public registers minimal requirements, including structures of reference data objects.

PL regulations: present

Internal Ministry of Digital Affairs regulations

- Project management methodology: project charter is verified against State Information Architecture.

IT Projects assessments

Enterprise Architecture Board assesses IT projects descriptions:

- for compliance with **State Information Architecture,**
- against **Polish National Interoperability Framework requirements**.

Compliance with the State Information Architecture

… supports **re-use of existing e-government solutions** and design in accordance with the government enterprise architecture vision.

Strategies & legislation drafts

Policymakers also receive **opinions on the drafts of their digital strategies or legal acts drafts**, which are verified for compliance with State Information Architecture.

PL regulations: drafts

New Digital Strategy

- State Information Architecture as a one of the pillars of state digital transformation.

PL regulations: drafts

New act on the Computerisation of the Operations of the Entities Performing Public Tasks:

- Basis for State Information Architecture preparation and development.
- New SIA definition.
- Public IT systems and public registers must conform to SIA principles, standards, and recommendations.
- Public IT systems share data via API.

PL regulations: drafts

New regulation on the National Interoperability Framework, minimum requirements for public registers, and minimum requirements for ICT systems and data exchange in electronic form – additions:

- National interoperability assessments.
- API requirement for central government public registers.
- Public register's single point of contact.
- API standard: default REST, SOAP supplementary.

PL regulations: drafts

The Regulation on the Interoperability Repository

- Register of public registers.
- Public registers metadata.
- Information about public IT systems APIs.
- National interoperability assessment reports.
- Cross-border interoperability assessment reports.
- Reports on interoperability standards and specification peruse.

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Thank you!

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