EUROPEAN UNION
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OPERATIONAL PROGRAMME
GOOD GOVERNANCE

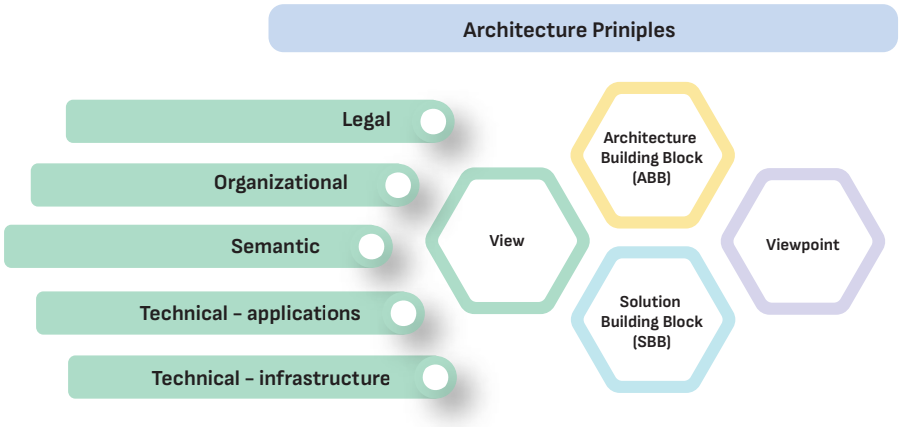
BULGARIAN INTEROPERABILITY REFERENCE ARCHITECTURE

The European Interoperability Reference Architecture (EIRA) is a metamodel that contain architecture building blocks (ABB), solution building blocks (SBB) and their relationships. The reference architecture is based on the framework for managing enterprise architectures, TOGAF, maintained by the Open Group, as well as is based on the architecture modeling specification ArchiMate. Based on EIRA, the Bulgarian Interoperability Reference Architecture is developed. The development of information systems subject to interoperability should be in compliance with the Bulgarian reference architecture.

The Bulgarian interoperability reference architecture:

- Is developed in accordance with the European Interoperability Reference Architecture EIRA version 5.0 and the Bulgarian Interoperability Framework
- Provides common vocabulary as a set of architecture building blocks (ABB), in order to achieve common understanding what is required to achieve interoperability.
- Is an approach to classify solution building blocks (SBBs) when developing e-government information systems.

Interoperability can be presented with four views: **legal, organizational, semantic and technology; another view Motivation** can be added to explain the solution regarding stakeholders, objectives and constraints.



Legal view

The legal view contains bulding blocks relevant to the interoperability of the solution. Specific ABBs and SBBs can be added, e.g. legal acts, strategic documents, regulations, EU resolutions, etc.
E.g. when developing blockchain solutions, the solution building block Resolution of the EU parliament dated 03.10.2018 regarding distributed ledger technologies and blockchains, or General Regulation EU 2016/679 for personal data protection.

Organizational view

The organizational view contains requirements regarding the actors in the process of administrative services delivery. These actors can be citizens, organizations or administrations. When providing administrative services, there can be interoperability agreements, that should be modeled as ABB or SBB.

Semantic view

The semantic view contains building blocks that support the semantic interoperability when exchanging data among administrations, citizens and businesses. For example, "Data set catalogue" is an ABB, while the "Register of registers maintained by the E-government Ministry", is a SBB.

Technical view — applications

The technical view-applications contains building blocks that are software components, software applications that support interoperability. For example, "E-delivery component" is an ABB, while the relevant SBB is "Secure electronic delivery system".

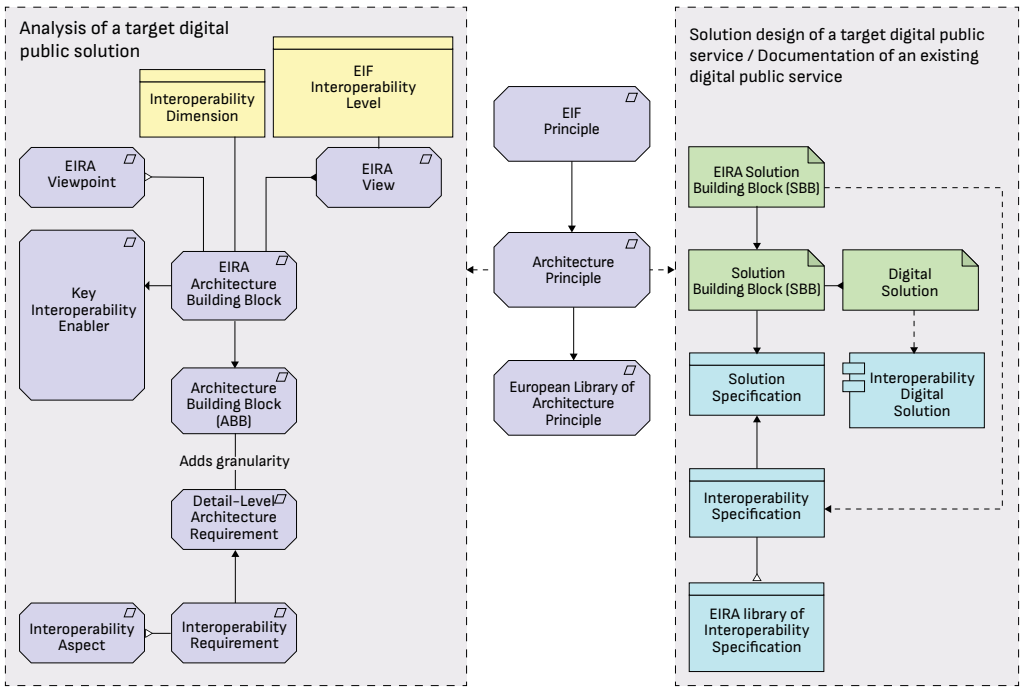
Technical view — infrastructure

The technical view — infrastructure contains building blocks of the technical infrastructure such as servers, storages, virtualization, hubs, firewalls, that support interoperability. In this view the technology building blocks ABB can be relevant and applicable for any administration, such as the e-government data center.

Motivation view

In addition to the four views, it is recommended to add view Motivation, that contains the following objects:

- Architecture principle
- Requirement
- Goal
- Constraint
- Driver



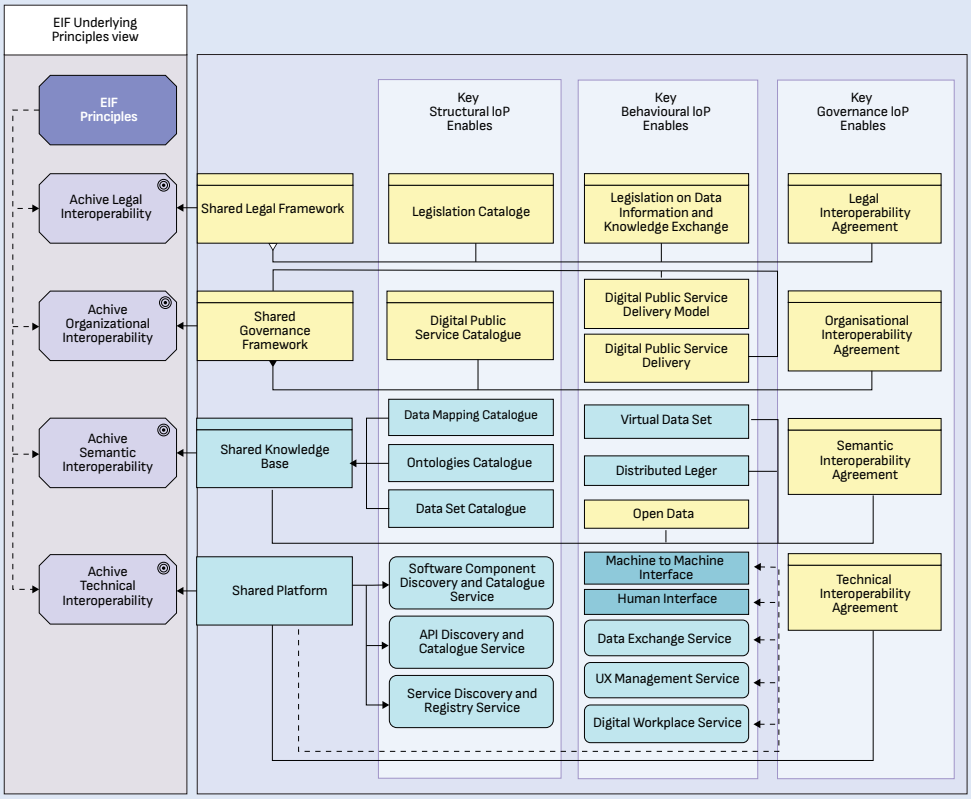
The Bulgarian reference architecture has the following components:

View — legal, organizational, semantic, technical-applications, technical-infrastructure

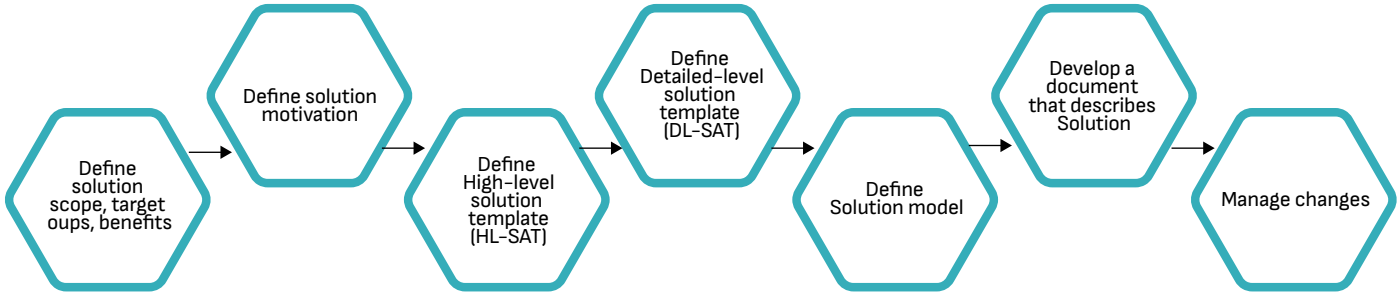
Viewpoint - provide a perspective with specific stakeholders concern in mind. E.g. information security, privacy, etc.

Architecture Building Block (ABB): an abstract component that captures architecture requirements and that directs and guides the development of Solution Building Blocks. Describes generic characteristics and functionalities.

Solution Building Block (SBB) - a concrete element that defines the implementation and fulfils the required business requirements of one or more Architecture Building Blocks. On the technical view, a Solution Building Block is a specific product or software component and may be either procured or developed.



Procedural model for interoperability



Contractor: TechnoLogica

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National Interoperability Portal: **https://ros.egov.bg**