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

[Subtitle] How architecting the government helps enhance digital access to government services for a shared sustainable and common future?

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Presentation

How architecting the government helps enhance digital access to government services for a shared sustainable and common future?

Sustainability is a societal goal with three dimensions: the environmental, economic and social.

- Architecting the government, eg. utilizing enterprise architecture approach in government bodies and organizations, allows for asmaller number of IT systems required, less data centers and less data interactions involved, less energy expenditures as well as better re-use of existing digital solutions.
- This results in a reduction of the negative impact on the environment / green IT (environmental sustainability), lowering public expenditures (economic sustainability), and better serving and engaging citizens of the democratic society (social sustainability).

E-government offers new opportunities for more direct and convenient citizen access to government, and for government provision of services directly to citizens. But the e-government areas - such as legal, organizational, semantic (data) and technical layers of public administration - consist of a vast number of actors, elements and interconnections. **Therefore there's a necessity to utilize the best management methods to design and smoothly run such a complex and enormous system as well as involve all stakeholders in its co-creation.**

Taking into account the goal of connecting of all people and safeguarding human rights, in the process of e-government development it's necessary to address - among others - the following human rights:

- The Right to Democracy: The right to take part in democratic governance means not only possibility to choose parliamentary representatives, but also actively participate in choosing government goals and shaping the laws, regulations and actions of public administration bodies.

- Freedom of Expression: Everybody has the right to share ideas with other people. It means one may submit proposals and opinions, as well as participate in the soft-law (recommendations) and hard-law (regulations) making process.
- The Right to Education: Everyone has the right to be informed about public administration proceedings and learn its methods of management.
- Don't Discriminate: Access to public information about e-government status and management methods is for everyone, regardless of the race, age, sex, sexual orientation, religious and philosophical beliefs or disability.
- The Right to Privacy: A person exercising the right to public information about e-government may not be required demonstrating a legal or factual interest.

E-Government today requires more interoperability (incl. cultural interoperability) and better public management to involve all stakeholders (incl. citizens, NGOs, private and public sector employees) into designing and implementing digital government solutions satisfying all identified needs.

- "Cultural interoperability refers to the approach taken by individuals and organisations to align their societal cultural differences and, if applicable, organisational cultural differences. Interoperability can be challenged by cultural differences, as individuals and organisations can respond differently to the same interoperability challenge." (Source: Final Study Report - Proposal for a European Interoperability Framework for Smart Cities and Communities (EIF4SCC), European Commission)

Solution to the above-mentioned challenges could be **application of systems thinking methods in public administration environment**.

- 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. It has been used as a way of exploring and developing effective action in complex contexts.

Efficient e-government requires a very broad view of how the entire digital state is organized. It means looking at how public administration offices are organized, what are the administrative procedures, as well as what rights and obligations are included in the legal system. It's necessary to focus on how citizens and entrepreneurs use electronic services provided by the state. It also requires the deep understanding of the role of public registers and public ICT systems in the effective functioning of the digital state, including the provision of public e-services. **Such a broad, comprehensive and methodical application of systems thinking in public administration is Government Enterprise Architecture.**

For the success of such a large endeavor as running effective, interoperable and inclusive digital government it is also crucial to engage all stakeholders (citizens, NGOs, academia, public & private organizations) to participate in Government Enterprise Architecture development. This task can be done by allowing everyone to submit proposals and evaluate the directions of digital state development.

To enable the stakeholders transition to active participation it's necessary to firstly present available information - such as digital government principles and models - then encouraging them to engage by consulting and involving them. It builds more inclusive administration and more effective digital government at the same time.

Increasing digital access to government services requires participation in further development of digital government principles and models. The following digital government principles - based on European Interoperability Framework - are decisive in development of effective, interoperable and inclusive digital government:

1. Subsidiarity and proportionality.
2. Openness.
3. Transparency.
4. Reusability.
5. Technological neutrality and data portability.
6. User-centricity.
7. Inclusion and accessibility.
8. Security and privacy.
9. Multilingualism.
10. Administrative simplification.
11. Preservation of information.
12. Assessment of effectiveness and efficiency.

In Poland we strongly advise policymakers to take into account the existing ICT landscape of their or other affected organizations. As a matter of fact we incorporated such a verification in our government procedures and regulations.

All central government ICT projects with a budget greater than 1 million euro are reviewed by the Committee of the Council of Ministers on Digitization. Committee is responsible for ensuring the consistency of key IT projects with the strategic activities of the State. Therefore the it assesses projects descriptions for compliance with State Information Architecture.

Government project descriptions are compared with our enterprise architecture repository. Repository contains - among others – interoperability principles and models of government administration electronic services. Principles are already published. Enterprise architecture models of public administration electronic services are prepared to be published in future.

Compliance with the State Information Architecture is aimed at ensuring legal, organizational, semantic and technical interoperability. It supports re-use of existing e-government solutions and design in accordance with the government enterprise architecture vision as well.

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

To support policymakers - and other stakeholders - the Chancellery of the Prime Minister of Poland since 2021 runs Polish Interoperability and Government Enterprise Architecture portal: www.ia.gov.pl

- Portal presents information about European and Polish digital strategies, regulations, and interoperability frameworks, as well as national and domain interoperability standards. Everyone interested can also access digital government models and principles.
- We also provide descriptions of government solutions ready for re-use and videos presenting key aspects of interoperability and Polish government enterprise architecture.

- In the past we consulted government enterprise architecture principles with all interested stakeholders. We aim to involve more stakeholders from every area in the revision of Polish National Interoperability Framework.

Addressing Sustainable Development Goals

The presented topic links with the following UN Sustainable Development Goals:

- 16.6. Develop effective, accountable and transparent institutions at all levels:
    - Effectiveness is achieved by reducing digital government complexity into architectural models.
    - Accountability is safeguarded by government procedures and regulations verifying government projects with Government Enterprise Architecture requirements.
    - Transparency is ensured by publishing Government Enterprise Architecture documents on the public internet portal.
- 16.7. Ensure responsive, inclusive, participatory and representative decision-making at all levels
    - Government Enterprise Architecture principles were consulted with all interested stakeholders, including citizens. All provided comments were published on the ministry's website and influenced principles contents and formulations. We aim at further multistakeholder participation and co-creation.
- 16.10. Ensure public access to information and protect fundamental freedoms, in accordance with national legislation and international agreements
    - Wide spectrum of Government Enterprise Architecture documents is published on Polish Interoperability and Government Enterprise Architecture portal. (www.ia.gov.pl)