BELSPO BRAIN-BE FLEXPUB – EXECUTIVE SUMMARY

Context and Objectives

Public administrations are required to become more and more efficient and to create e-services which are capable of adapting in a flexible way to the changing needs of citizens, business and other actors, such as public administrations and non-governmental organisations. This turmoil happens in a context where public administrations face complex challenges and are expected to foresee more and more tailor-made public services. Also, public organisations are limited by their resources and their knowledge. In this context, the BELSPO BRAIN-be FLEXPUB research project researched, during four years, how public (e-)services can be developed and how the federal government can stimulate and support public administrations in the development of those services. The research was limited to e-services presenting a geospatial orientation. A multi-disciplinary research approach was applied and put into practice via survey, interviews, case studies, document analysis and focus groups. A multi-disciplinary research approach, combining technological, legal and governance perspectives, led to the two-fold objective; (1) to create a federal Strategy for flexible geospatial public e-services and (2) to develop a federal Blueprint for enabling flexibility and innovation in the public sector, which goes also beyond the field of geographical e-services. The research project led to important societal and academic output, via continuous contacts with the public administrations and a strong embeddedness in the academic community.

Methodology

Within FLEXPUB, both theoretical and empirical/practical knowledge were obtained on the basis of the combination of qualitative and quantitative research methods; interviews, surveys, observations, case studies, and statistics, and test/use cases. This combination contributes to the quality of the results. The starting-point of research was the baseline measurement of the geospatial e-services delivery of the federal government in 2016. This baseline measurement consists of a web survey and in-depth interviews with key stakeholders. The baseline measurement results form part of the research necessary for the determination of the requirements for e-service delivery. Those requirements were identified via the key stakeholders. In order to enhance the quality of the determination of the changing requirements, it was also necessary to identify how the e-service delivery will look like in the (near) future. This was achieved by interviewing (inter)nationally recognised experts and reviewing key documents on future e-service delivery.

On the basis of the determined requirements for e-service delivery, key enablers were identified as factors enabling the achievement of these requirements. In this context, the enablers of COBIT framework were applied in a comprehensive and systematic way. The COBIT-enables are: 1) Principles, policies and regulations; 2) Processes; 3) Organisational structures; 4) Culture, ethics and behaviour; 5) Information; 6) Infrastructure (with associated architectures and standards); and, 7) People, skills and competencies. These enablers were then validated on the basis of a thorough and detailed analysis of three case studies, namely “BeSt Address”, “Cadastral Information Exchange in Belgium” and “Emergency Services in Belgium”. The selection of the relevant case studies was based on the results of the baseline measurement, stakeholders studies, and the “enablers” research.

The research results of the previous activities provided the necessary input for the Federal Strategy for Flexible Geospatial e-Services. The Strategy clearly describes the vision, objectives, key stakeholders, benefits, strategic areas, strategic actions, strategic priorities, governance structure, risks, key performance indicators, and roadmap. In addition, the research results of the previous activities also fed the Blueprint for an Adaptive and Innovative Government. The scope of this document is much wider than the Strategy for Flexible Geospatial e-Services, as it covers the issue of adaptation and innovation of the Government in its full extent. Finally, the FLEXPUB toolkit contains useful tools derived from all of the above previous research activities.

Results

Via the Baseline Measurement, a number of challenges were defined, namely: Stakeholders' participation in e-service development; Divergences of opinions on private sector participation; Inter-organisational relations between different administrative levels and at the same level; Leadership for the digital agenda; Lack of shared hardware and software; Interoperability; User-friendliness of e-services; Innovation Status in Administrations; Digital divide among citizens; Public sector attractiveness; Lack of financial resources; Fear of change for impact of technologies; Existing silo structure/culture; Lack of sufficient political support; Divergences of opinion on Open Data policies; Compliance with data protection and security rules; E-services; and Location-based data.

The research team then dug deeper in these challenges in order to identify a number of requirements and enablers for flexible and innovative geospatial e-services:

- Processes: Investing in internal competences; Need for increased user participation; Better internal stakeholder alignment; Need for incentives to go agile; Integration of the impact of regulations; Flattening the Hierarchical structure; Lack of Resource Management; Tackling the Domain Complexity.
- Organisational structures: Balancing a common approach and organisational independence; Organisational aspects of (geo) data sharing; Need for administrative reorganisation; Need for administrative simplification; Need for internal organisation coordination; Need for long-term political support for coordination; Improve relation between federal administration and regional administrations.
- Infrastructure: Increase the capability to innovate; Take into account privacy concerns; Develop systems with a focus on user-centricity.
- People, skills and competencies: Tackle the digital divide among citizens; Understand and increase the public sector attractiveness; Need for sufficient (financial) resources of public administrations.
- Culture, ethics and behaviour: Understand the impact of technologies on working environment; Creation of a sustainable organisational & project network; Creation of network for political support.
- Principles, policies and frameworks: Understand the divergences of opinion on Open Data policies; Stimulate compliance with data protection and security rules.
- Semantics: Understanding of concepts of location-based data and e-services; Exploration and communication on value of location based-data.
- Location-based data: Need for coordination for location-based data exchange, within and between organisations and government levels; Integrated advice by stakeholders from the different sectors of location-based data, ICT, (e-)service delivery and data to the

government; Rethinking of licenses and standards; Integration by default of (authoritative) location-based data in e-service delivery.

These enablers were then validated on the basis of a thorough and detailed analysis of three case studies. Some cross-case issues have been identified via an analysis of the case study results. Both the specific case study results as well as the recommendations (case specific and general scope) have been compared. Even if these cases all aim at tackling different problems, they face similar cross-cutting issues. In essence, nine cross-case issues have been identified, namely: Improving data quality; Aiming for interoperability and standardisation; Offering trainings to the civil servants; Agreeing on Open Data licences; Defining authoritative sources of data; Improving communication; Streamlining cooperation; Solving financial shortcomings; Increasing user participation and inclusion.

The outcomes of all of the above research were then consolidated into the Strategy for Flexible Public Geospatial e-Services of the federal government. To guide the federal administration along the way, a ten years (2020-2030) strategy was developed. This Strategy does not only aim to support the offering by the federal administration of e-services in general, but specifically targets location-based e-services, as data and information, and especially geo data and information, are key to offer real-time and valuable services to citizens, businesses and other administrative organisations. This Strategy is envisaged as a framework that aims to establish an environment in which federal organisations and civil servants can reflect on e-government and e-service developments. This Strategy framework lays the foundations enabling a federal administration to build flexible and innovative e-services, by relying on three pillars (Openness, Participation, Collaboration) and a fundament (Geo-orientation). Specific actions points were formulated for each of the three pillars and the fundament.

The Blueprint, which purposely remains more general in scope, originates in the Strategy. Whereas the Strategy is focused on geospatial e-services, this Blueprint takes a broader and wider perspective with a focus on an adaptive and innovative government. In the final version of this Blueprint Vision, three strategic areas, nine key principles and thirty strategic actions are suggested to reinforce the administration aiming for an even more adaptive and innovative government.

Finally, a Toolkit Handbook was developed by the research team. This Handbook can be used by any public administration with an interest in finding relevant tools (1) on creating more openness in the data it possesses, (2) on stimulating the participation of both internal and external public administration actors (e.g. citizens), and (3) on discovering potential avenues for stimulating the collaboration within the public administration. Each tool in this handbook can be directly used, as there is always a clear explanation of how the tool has been developed, what the methodological approach is behind the tool and how it can be used in practice.

Keywords

e-government, e-services, public administration, governance, flexibility, innovation