



The role of Spatial Data Infrastructures in the Digital Transformation of Public Administration

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Background, scope and objectives of the study

Objective of the study: **analyse the role that SDIs play in Digital Government Transformation** by looking at the experience of the 28 EU countries and Norway.

The study focused more specifically on:

- Analysing the **institutional setting underpinning SDI and Digital Government Transformation**,
- Examining the **technical infrastructure put in place** and its relationship with eGovernment services and the reuse of data and services,
- Assessing the **usage and benefits** of the infrastructure for citizens, businesses and the public sector and,
- Considering the **relevance of the OECD Recommendation** on Digital Government Strategies in the context of SDI policies and strategies.

Study was conducted between September 2018 and July 2019



Methodology and limitations

Our overarching data collection and analysis strategy involved **two main stages**:

- Overall explorative analysis of the 29 countries in scope;
- In-depth analysis of 4 particular countries (NL, ES, BE, PL).
- In both stages, data were collected through a combination of **desk research and phone interviews**;
- Sources and interviewees came from both the SDI/INSPIRE and eGovernment/digital government domains and we included relevant data and information from **existing assessments and evaluations** (INSPIRE, eGovernment factsheets, open data Maturity Index, etc.);
- We continued **testing, refining, and validating** the analytical framework thorough the entire assignment (in an iterative manner), in order to establish a framework for identifying and comparing the role of SDI/INSPIRE in Digital Transformation for the countries in scope of the analysis.



Institutional settings of SDI & Digital Government Transformation

Governance, strategies & legal frameworks

Governance:

- **Joint decision making** structures on SDI, Digital Government & Government Transformation
- Strong and increasing **involvement of non-government actors** in decision making



Strategies:

- **Integrated strategies** on SDI & DGT and/or SDI strategies with a strong emphasis on transformation
- Strategic approaches on **capacity building**, but focus mainly on SDI implementation



Legal frameworks:

- Coordination and alignment with **open data and open government** policies
- **'Base registries'** as important mechanisms for strengthening the role of SDIs in Digital Transformation

Institutional settings of SDI & Digital Government Transformation

Extended infrastructures, interoperability & innovation

Extended infrastructures:

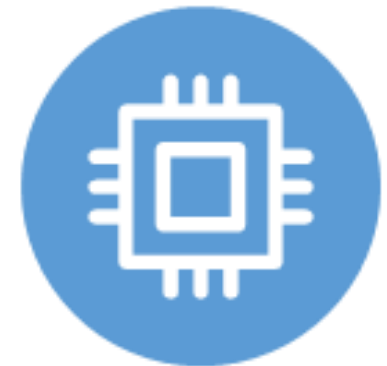
- Development and implementation of services **beyond the services required by INSPIRE**
- More **user-centric approaches** through the provision of high-quality services, the creation of platforms and the use of APIs

Interoperability:

- Linking **geo-catalogues and open data catalogues**
- Initiatives to improve the interoperability of – **geospatial and administrative** – data

Innovation:

- Different approaches for investigating and testing **new technological developments** (INSPIRE conference, testbeds, research projects, user demands, ...)
- Use of some of the **generic ICT solutions** developed under the ISA² programme



Institutional settings of SDI & Digital Government Transformation

Usage & benefits

Usage:

- **Monitoring the use of the infrastructure** – in the public sector and the private sector - through access statistics and more in-depth case studies
- **Cross-border use cases** remain rather hidden



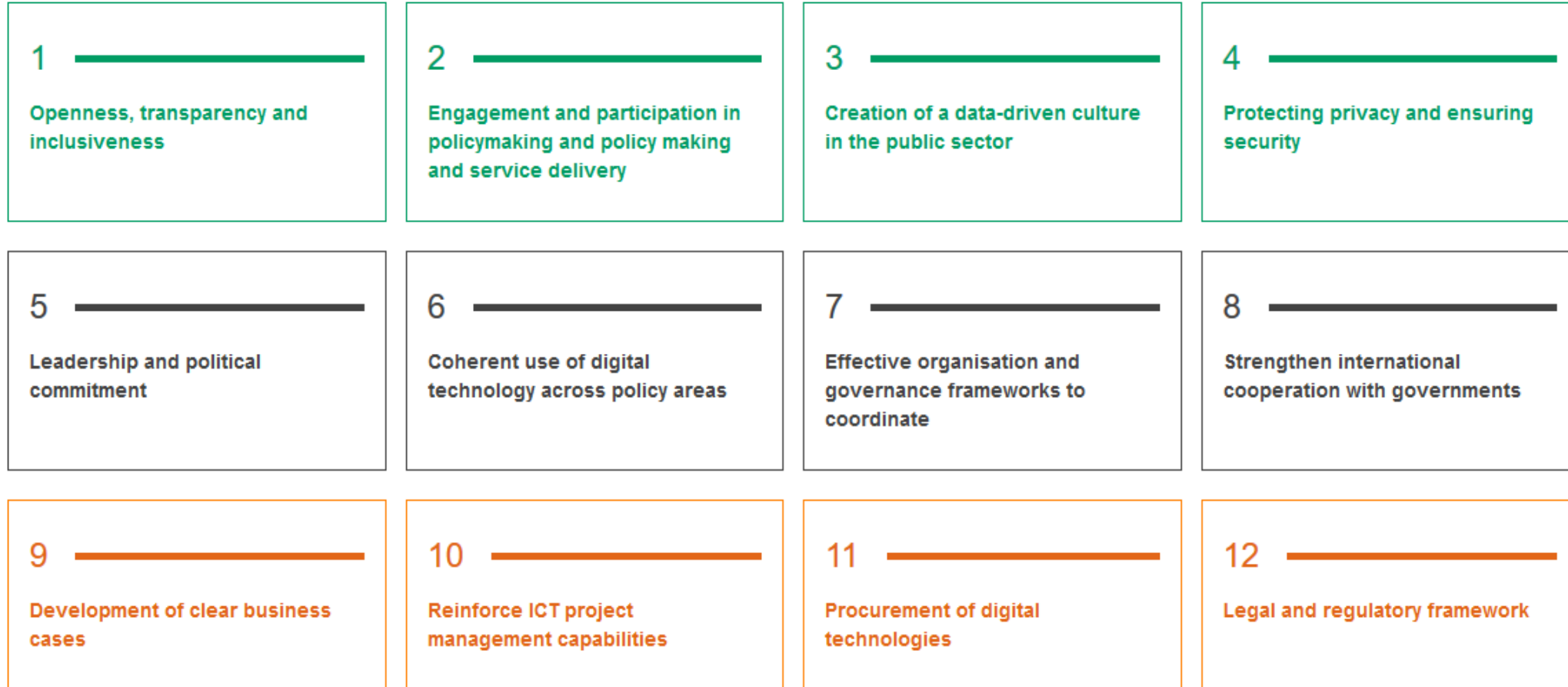
Benefits:

- **Five categories of benefits:**
 1. Efficiency gains,
 2. Improved processes,
 3. More cooperation,
 4. Better policy outcomes
 5. More innovative processes and services
- **Difficulties** in measuring the benefits of SDIs



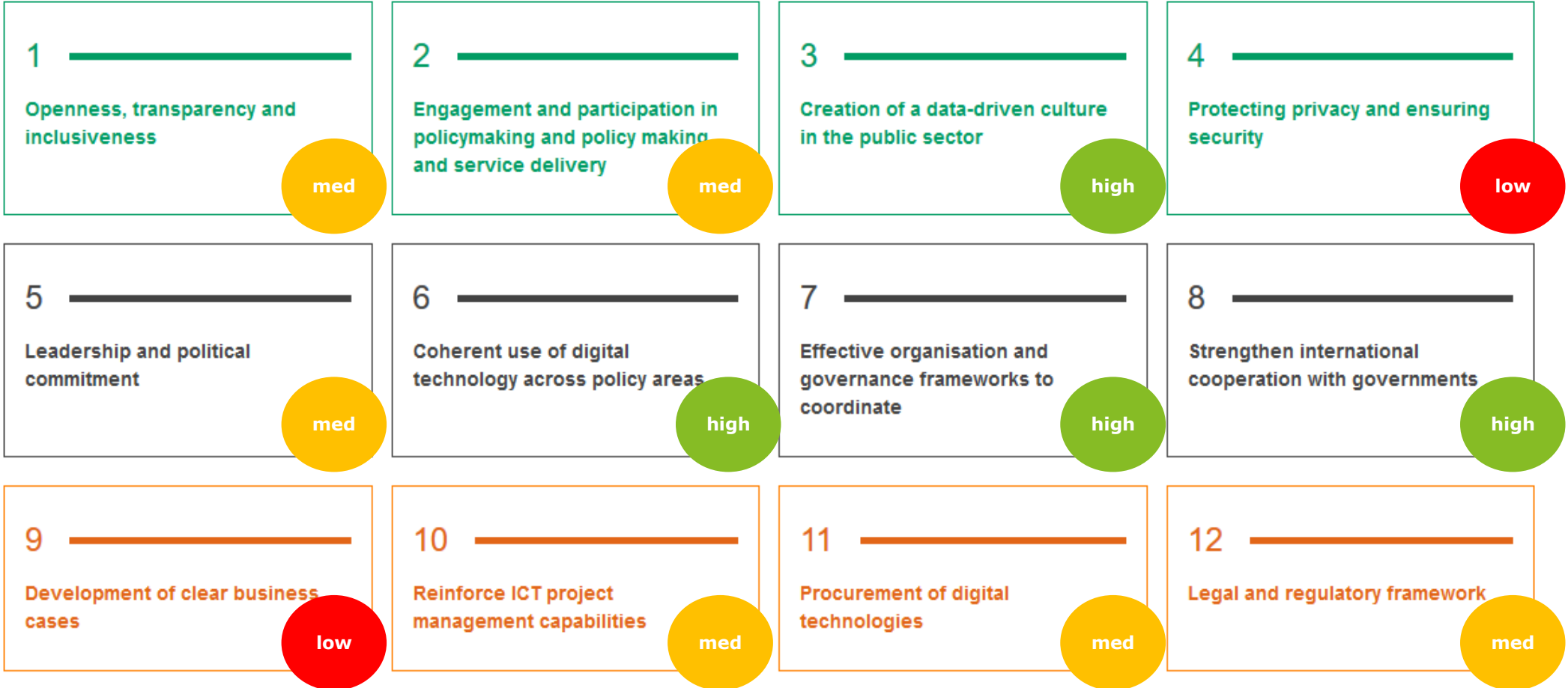
OECD Recommendation on Digital Government Strategies

12 principles to support the development and implementation of digital government strategies



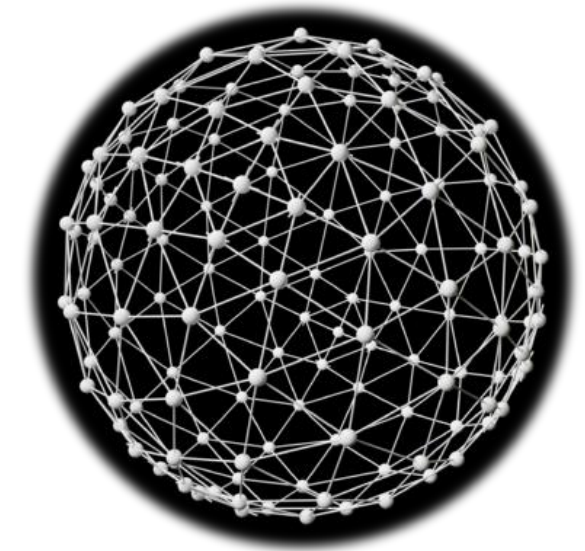
OECD Recommendation on Digital Government Strategies

Our study points at SDIs as good practice in implementing many of the principles set out by the OECD



Key takeaways from the study

- The investigation of the role of SDIs in Digital Transformation of Government requires a **particular analytical framework**, which is different from previous approaches for studying and assessing SDIs. This study provides a first attempt of providing such analytical framework but this could and should be improved.
- **SDIs in Europe already play a key role in the Digital Transformation of Governments:** they contribute to Digital Transformation in many different ways: by changing strategic and governance approaches, redefining relationships between stakeholders and providing the basis for building better processes, policies and services?
- There is a **diversity of approaches amongst countries** for integrating SDIs in the wider reflection and efforts towards their Digital Transformation. **Best practices are available** and countries can learn from each others but they also need to take into account their national contexts and history.
- **Empirical data** on the impact and benefits of SDIs in the context of Digital Government Transformation **is scarce**. However, this topic deserves more attention and should be explored more in the future, also because the **awareness on the role of SDIs** as building block of digital transformation **should be further increased**.



Discussion

Key questions

Discussion questions

1. On a scale of 1 (*no impact*) to 10 (*very strong impact*), how would you **rate the impact of SDI/INSPIRE** on the Digital Transformation of Government?
2. What are in your opinion **good examples** of processes, services or products demonstrating the role of SDIs in the Digital Transformation of Government?



Final report:

Barbero, M., Lopez Potes M., Vancauwenberghe G., Vandenbroucke D., Nunes de Lima V. (Ed.), The role of Spatial Data Infrastructures in the Digital Government Transformation of Public Administrations, Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09679-5, doi:10.2760/324167, JRC117724