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Digital transformation and the future of SDIs

How is INSPIRE contributing to digital transformation of government?
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Interactive Workshop

INSPIRE Conference, Antwerp
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Abstract

How is INSPIRE contributing to digital transformation of government?

- key strengths and potential limitations of INSPIRE in the context of digital government transformation (highlighting some examples of best practices in Member States).

- Some thoughts on how INSPIRE may need to evolve as an effective and efficient building block of digital government transformation.

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Preamble

We are not there yet… but

SDIs are a mix of technology, data, policy and people… and have been since they were first developed for certain territories or domains

They are a very interesting context for how the public sector could respond to the challenges for how we work and live in relation to digital transformation

INSPIRE creates opportunities and faces challenges for collaboration at a notable scale that digital government engages with- especially in terms of interoperability, reuse, sharing and data.

However, we need to develop a shared understanding and start thinking beyond our **geo-bubble**

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I was not in Strasbourg/Kehl...

A view on our good **context awareness** and some <u>difficult terms</u>

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ELISE "New directions in digital government using INSPIRE" workshop, Kehl 2017: Conclusions (1)

- Location information is key to **information centricity** and **digital innovation**
- SDIs have contributed to government policies on opening up their data to **users** outside of government
- Location data is used in many **customer-facing** and **back office** applications, for **comprehensive analytics** (**location intelligence**) and in highly dynamic situations (e.g. **smart cities**, disaster management)
- Collaborations between public and private sectors, the drive towards a digital single market, and the increasing adoption of the "**once-only**" principle have placed further demands on government data strategies for increased **harmonisation and use of standards**
- There are benefits of better services, increased participation, savings in terms of cost and time, and support for **innovation** and **growth**
- Barriers include a lack of the **skills** and knowledge, cost of moving from **legacy** systems, **fragmentation** of existing ICT and data standards, data licensing **restrictions**, expectations of citizens for **data privacy**

International Journal of Spatial Data Infrastructures Research, Vol 13 (2018), Borzacchiello et al.

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ELISE workshop, Kehl 2017: Conclusions (2)

- INSPIRE underpins SDIs and **location strategies** in Europe and has been vital in achieving EU **spatial data harmonisation**
- Although INSPIRE addresses environmental policy, its core themes of reference data are applicable across all areas of government policy
- INSPIRE has also contributed to wider European data policy:
  - promoting **access** to public data and *open data*
  - **simplifying licensing**
  - supporting the drive towards **harmonised data**
  - in some MS, contributing to **core data** initiatives, applying the **once-only** principle
- However, INSPIRE came in the early stages of **digital government** - early efforts focused on transposition, understanding the **implementing rules**, and organising publication through web-based **network services**
- INSPIRE specifications were based on generic **use cases** identified by experts - the real test lay in the development of applications

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ELISE workshop, Kehl 2017: Conclusions (3)

- The challenge for INSPIRE lies in the use of the data:
  - supporting applications in other policy areas
  - integrating both **INSPIRE and non-INSPIRE data**
  - more dynamic applications using '**big data**'
  - new **business models** of **digital government**, some of which **integrate organisations** from the public and private sectors
  - making INSPIRE data easy to find and use
  - ensuring awareness and **skills** are at the right level
- More fundamental challenges also exist, perhaps in terms of:
  - defining the role of INSPIRE in a world in which geospatial data is no longer a **silo for specialists**
  - growth in applications and **data types** linked to location data
  - Embracing technological advance – **IoT**, *AI*, **machine-created data validation**, and **digitisation of services**
  - **privacy**, **trust** and need for broader **digital skills**
- INSPIRE has paved the way for **harmonised geodata** in Europe, some MS have well developed integrated strategies but there is much more to do.

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"INSPIRE – What If?" workshop, Kehl 2017: Recommendations (1)

- Make INSPIRE easier to use for mainstream ICT professionals and developers
  - **Simple APIs**
  - Central **access points, caching data**
  - "**Pub-sub" messaging** to download **changed objects**
- Focus on data content and on creating (preferably **open**) national or pan-European data sets, which are quality-assured and of high-value to a broad user community
  - High quality up-to-date data
  - Data required for specific applications
  - Results rather than raw data
  - **Open data**
  - **User registration**

INSPIRE Conference 2017: INSPIRE What If? Summary Report

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"INSPIRE – What If?" workshop, Kehl 2017: Recommendations (2)

- Make INSPIRE more **user-centric** and **user-driven**
  - Few direct users
  - Focus on developers
  - Learn from open data initiatives
- Improve communication and promote INSPIRE's **success stories**
  - Multiple communication channels to show data is being used, e.g. **cookbooks**, practical examples **hackathons**
  - **Soft guidance** e.g. good practices
  - Make data "**crawlable**" on the web
- Clarify the roles of the public and the private sectors, especially with respect to **data offering(s)**, **data integration** and **value adding services**
  - Using APIs will increase private sector use
  - Different models for implementing SDI solutions from wholly public sector to highly-reliant on the private sector
  - "Why not leave it to Google?" v "There is a distinct and important role for **authoritative data**"

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That is a lot to 'unpack'

- *Moreover, INSPIRE says a lot about data but little directly about government*

- *We may need to clarify what we mean by **data for**:*
    - **'government' (i.e. only policies or also the justiciary*?)**
    - **'public services' (online service, public office, public task …)****

- *Technology has a socio-technical and organisational context, as recognised in very many INSPIRE conference presentations- great!*

* an administrator of justice
** with apologies to Paul Waller (University of Bradford)

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"Effective and efficient building block of digital government transformation"

Change

- *Have any organisations really transformed already? Was it gradual or a revolution? Was it through desire or necessity?*

- *Do we already have any examples of INSPIRE'S influence? Do we only consider the public sector to be in scope?*

- *Has INSPIRE helped organisations to be more*

  - **effective? – for what topics?**

  - **more efficient? Which processes?**

- *What is the common, reusable, shareable and fundamental nature of SDIs that will help <u>others</u> outside of INSPIRE understand its building block role?*

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Do not forget my preamble... but do be prepared for some challenging discussion