Position Paper for the workshop "INSPIRE – What if…?" in Delft, March 23, 2017

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<u>Process:</u> A look into the future 10 years from now is very speculative. I look at it rather from the perspective how INSPIRE could evolve incrementally along with the evolution of ICT in general and the geospatial practices in particular.

We should build on the existing legal and guidance framework, and at the same time create the capability to explore and test new technical options (let's call it "INSPIRE labs").

A useful approach to such experimentation is to build additional components for testing new ways on top of the existing infrastructure as this will also expose compatibility issues and it provides a re-usable implementation option.

Updating technical guidelines, or the legal framework, should only be considered once the benefits of the change for users of INSPIRE have been proven in practice and they clearly outweigh the cost of migrating the infrastructure for all data providers, service providers, users and software vendors to new revisions. This applies in particular in the case of incompatible changes.

One of the problems with the process of creating the current INSPIRE implementing rules and technical guidelines was that typically only the mandated implementation workflow was tested before adoption, but it was not verified sufficiently that the proposed infrastructure would address existing user needs. Going forward, emphasis should be placed on keeping the INSPIRE baseline stable, unless the value of changing it is very clear.

<u>Architecture:</u> There are technological trends that are worth to be explored in what I called "INSPIRE labs" above. This could be done using additional components on top of the existing INSPIRE infrastructure.

The main one is to look at sharing spatial data in a more Web-friendly way. W3C and OGC have been and are working on this topic, where the key results are captured in the following Best Practice documents:

- Data on the Web Best Practice, W3C Recommendation, 31 January 2017[1]
- Spatial Data on the Web Best Practice, W3C Working Group Note (Draft)[2]

The following best practices are important for making SDIs aligned with today's practices on the Web:

- Use globally unique persistent HTTP URIs for features. This is already a recommendation in INSPIRE[3], but rarely followed by current implementations.
- Make your spatial data indexable by search engines. Discovering INSPIRE data should not require the use of a geoportal and it should be possible to browse the data that is presented in a clear and understandable way without additional tools. Data presented as HTML pages should be useful to a user, link to related information and encourage others to link to the page when they share related information. This best practice also implies a structure for the resources to be provided.
- Expose data through RESTful, easy-to-use APIs, supporting multiple formats and simple queries.
- Publish the data in WGS 84 and the Web Mercator coordinate reference systems, too, as these are the basis of many spatial data tools and APIs on the Web.

interactive instruments has started to explore these topics in a testbed organised by Geonovum[4], using a proxy on top of Web Feature Services. In a project under the ELISE action of the ISA[2] programme of the European Commission we continue our work on this topic in the context of INSPIRE and are looking at tools and recommendations to support publication and search for location data and associated solutions on the Web.

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[1] https://www.w3.org/TR/dwbp/
[2] https://www.w3.org/TR/sdw-bp/
[3] http://inspire.ec.europa.eu/ids
[4] http://geo4web-testbed.github.io/topic4/