# Open SDI

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http://www.kcopendata.eu

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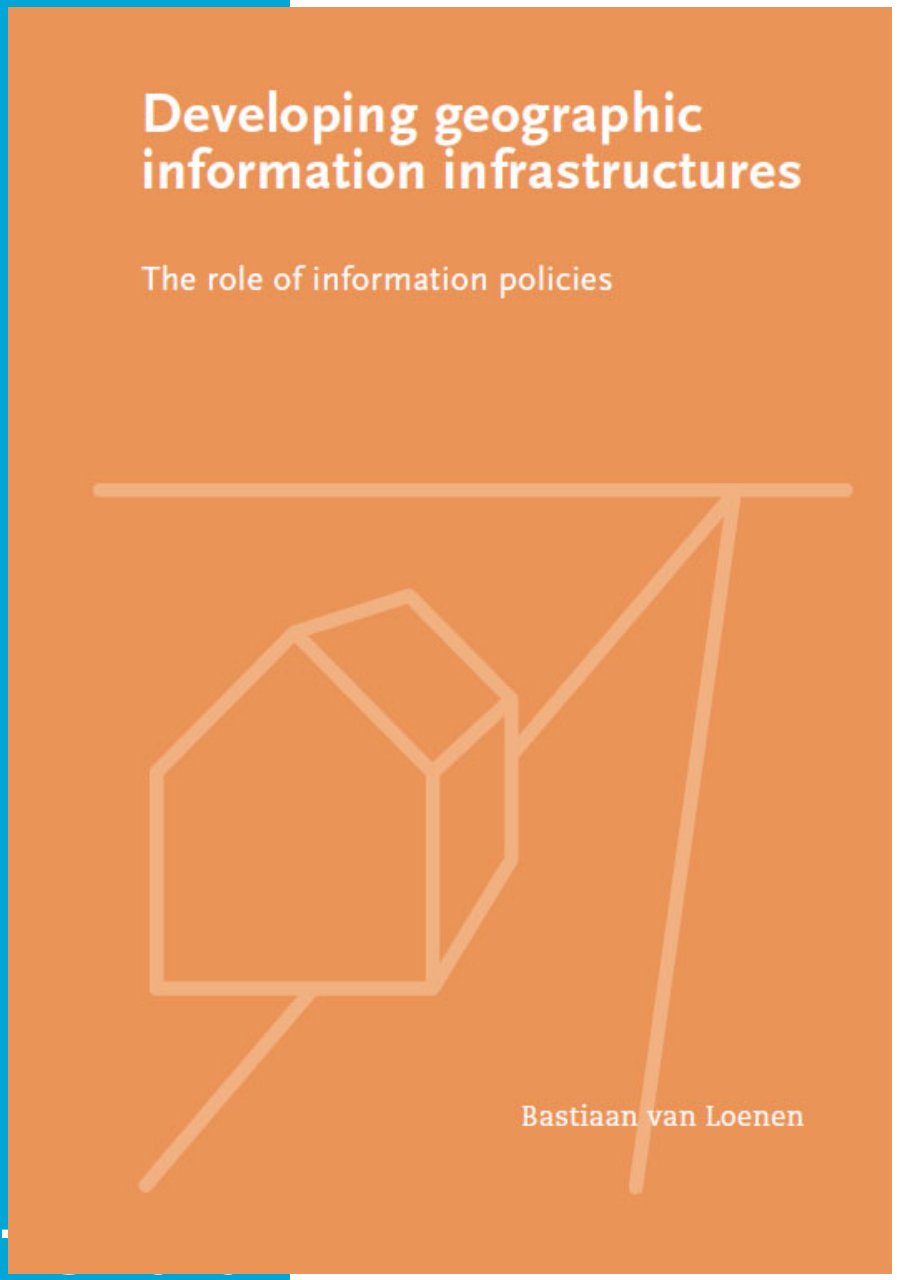
Developing geographic information infrastructures
The role of information policies
Bastiaan van Loenen


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# Spatial data infrastructure

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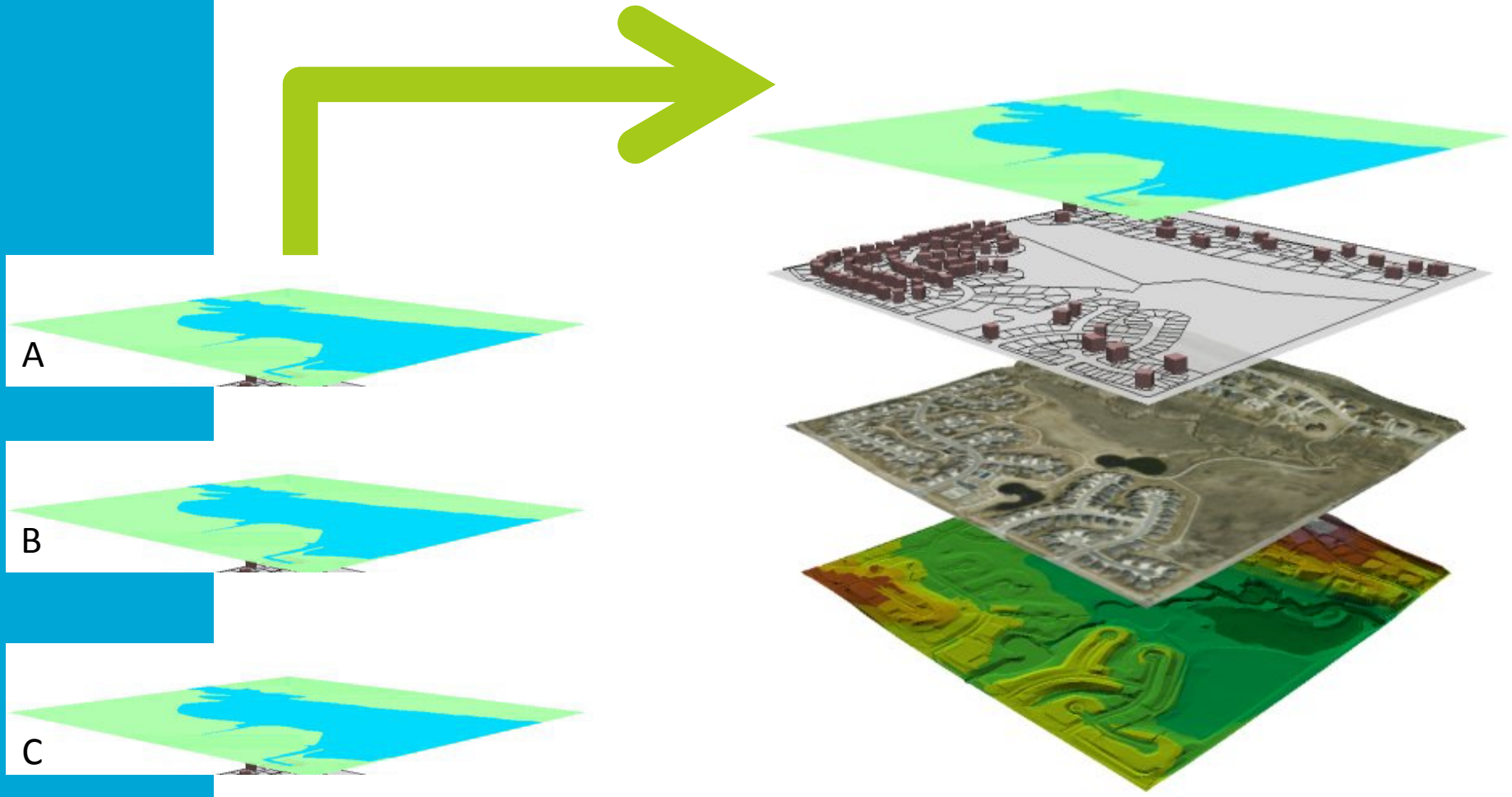
# Spatial data infrastructure

'collect it once, use it many times'

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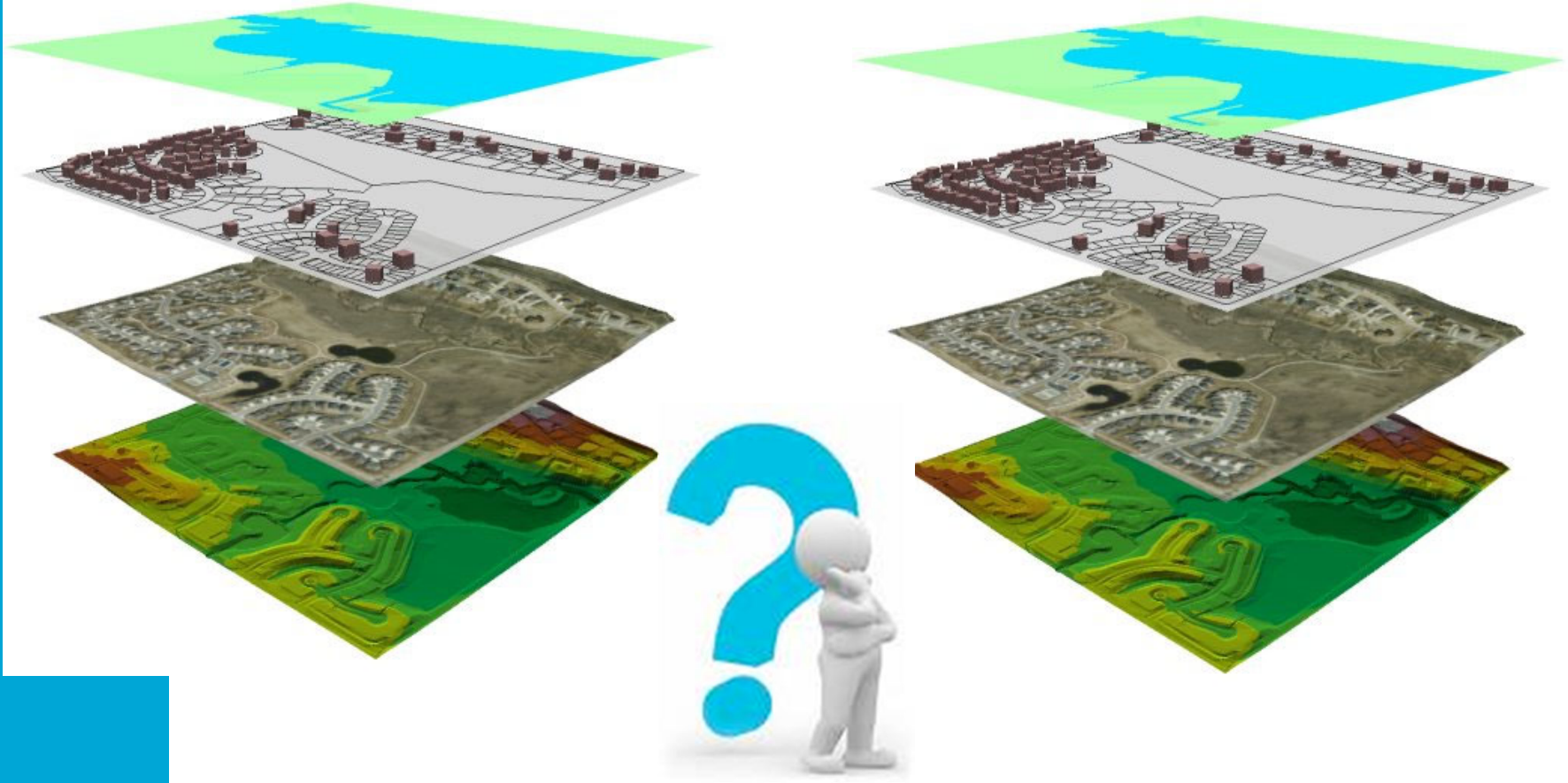
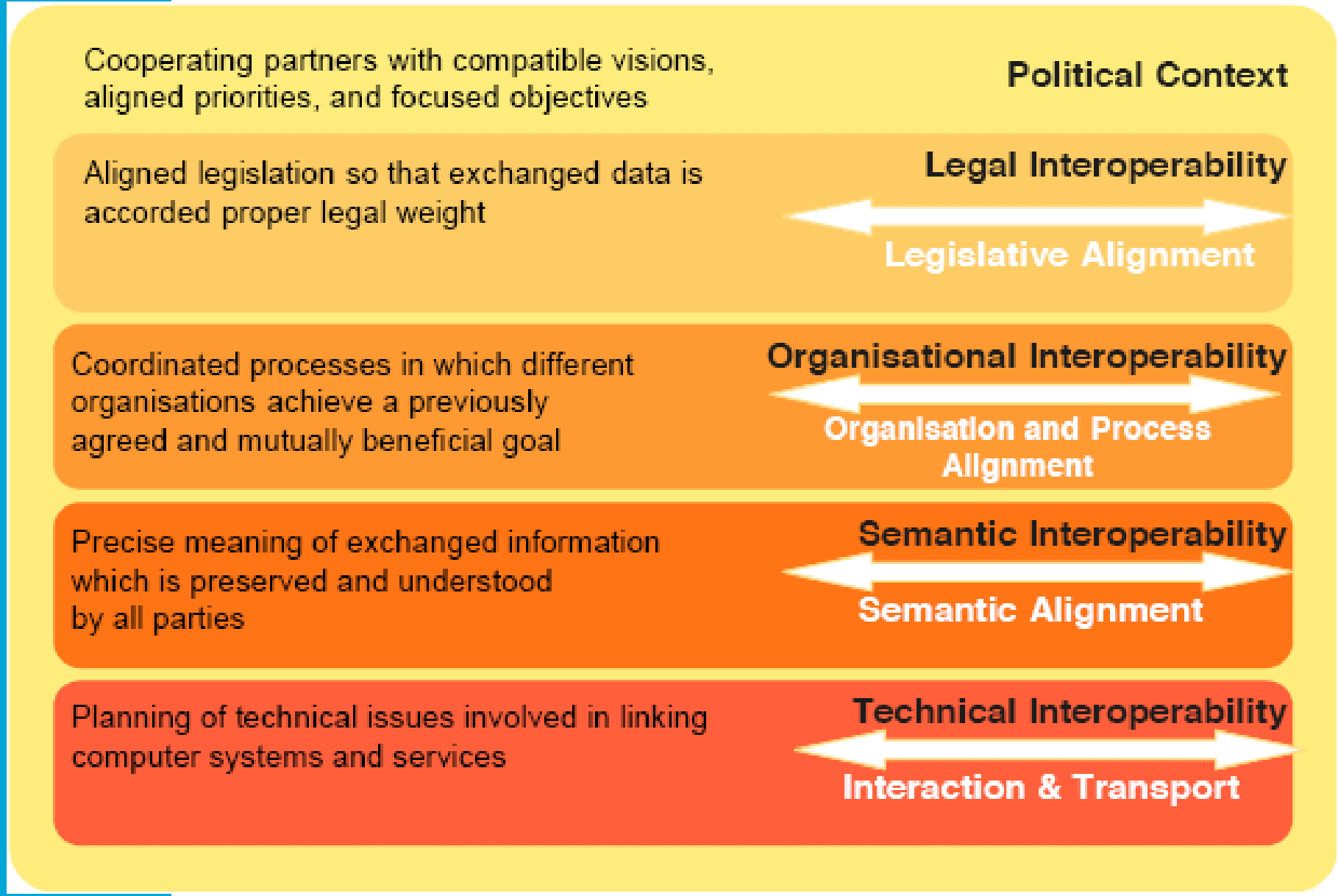
# Spatial data infrastructure

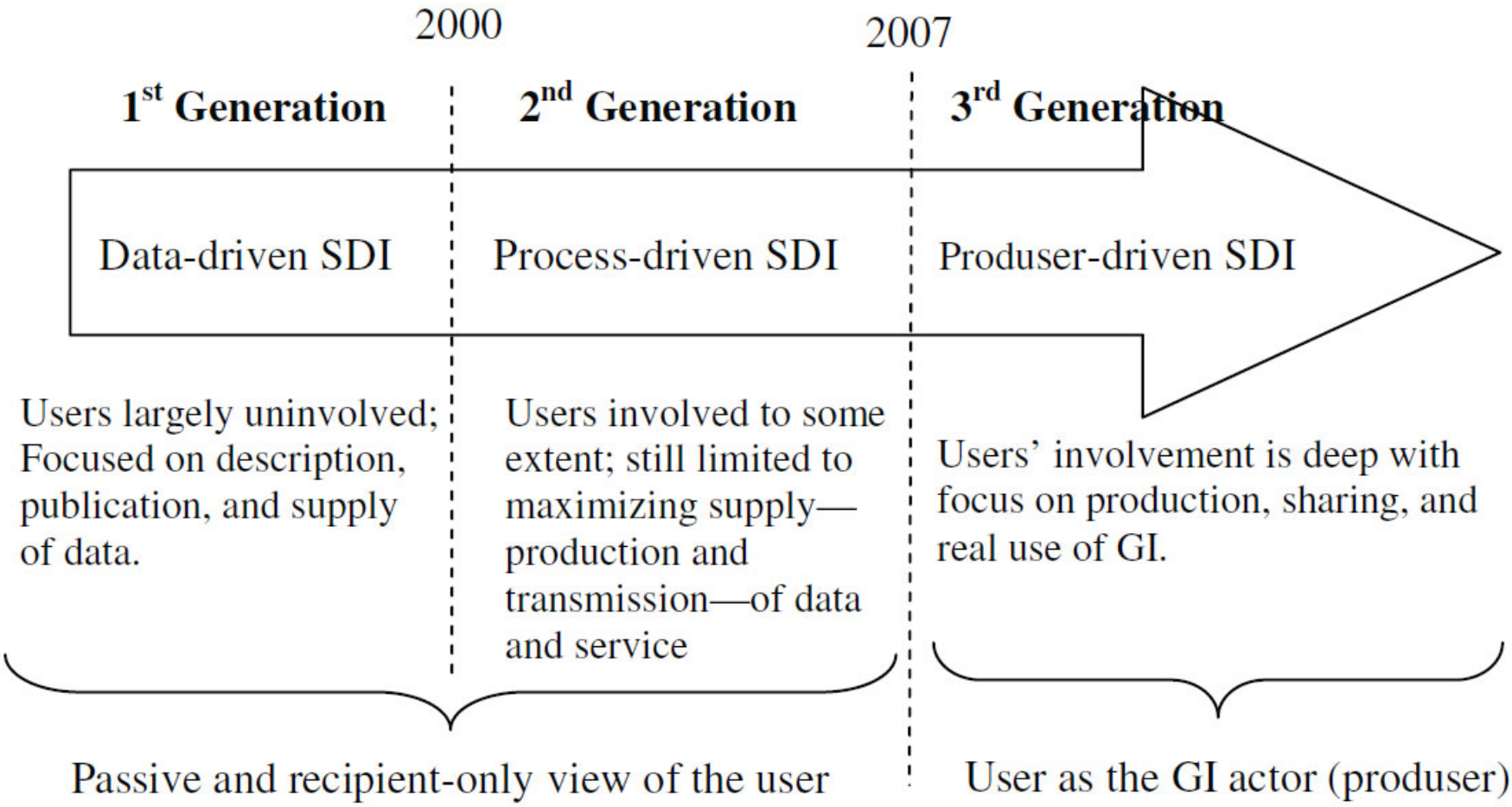
'collect it once, use it many times'






Source: European interoperability framework

# SDI theory




Source: Budhathoki & Bertram, Nedovic-Budic (2009)

# SDI in practice

- Users "will probably be the most mentioned group and yet actually the least considered" (McLaughlin and Nichols, 1994).

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# Private (non-profit) sector data

- Platform economy
- Enormous volumes of data collected

- Data may very well be in the public interest
- Access and re-use problematic

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# Towards an Open SDI?

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# Open SDI

A working definition:

> "An SDI where all stakeholders commonly ***govern, share and use*** open geodata"

In essence:

Open SDI = Open spatial data (product) + open infrastructure (process)

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# OpenSDI: Open spatial data

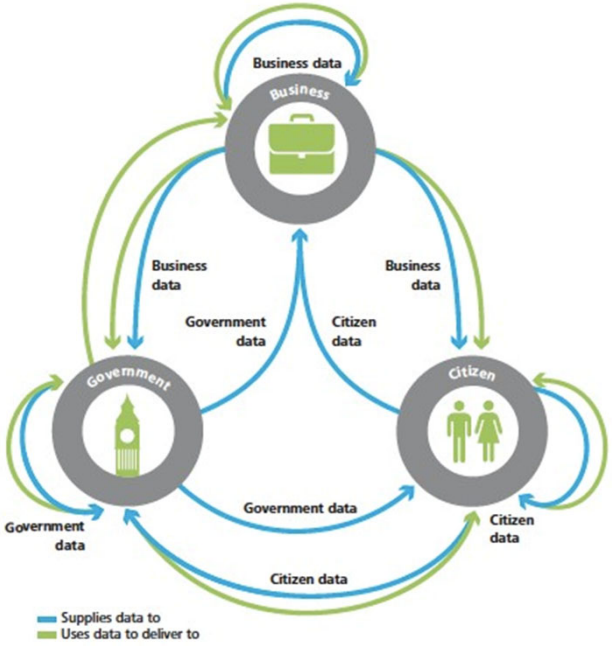
1. Application of principles of open government data to spatial data

Government data shall be considered open if it is made public in a way that complies with the principles below:

1. Complete
   *All public data is made available. Public data is data that is not subject to valid privacy, security or privilege limitations.*
2. Primary
   *Data is as collected at the source, with the highest possible level of granularity, not in aggregate or modified forms.*
3. Timely
   *Data is made available as quickly as necessary to preserve the value of the data.*
4. Accessible
   *Data is available to the widest range of users for the widest range of purposes.*
5. Machine processable
   *Data is reasonably structured to allow automated processing.*
6. Non-discriminatory
   *Data is available to anyone, with no requirement of registration.*
7. Non-proprietary
   *Data is available in a format over which no entity has exclusive control.*
8. License-free
   *Data is not subject to any copyright, patent, trademark or trade secret regulation. Reasonable privacy, security and privil*

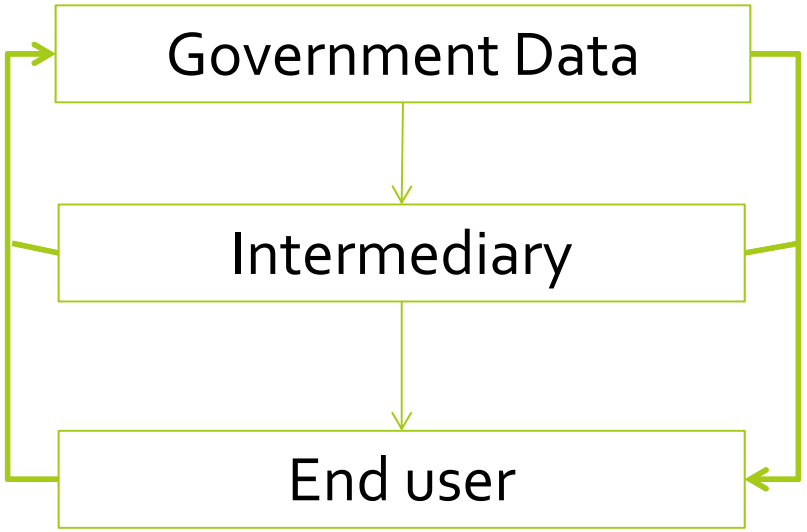
Compliance must be *reviewable*.

2. Government data + **non-government** data



# 2018: open government data…

(Voluntary)
Feedback
Advice
Data/products

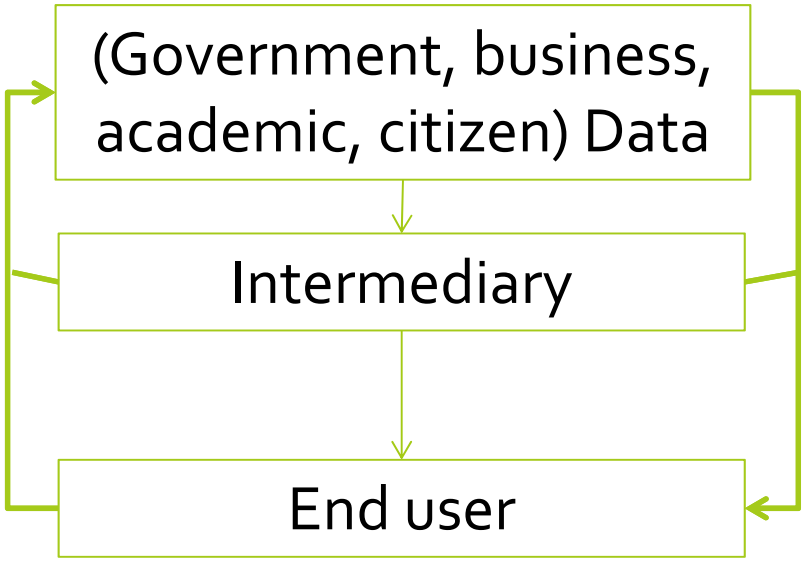



Right to:
- Access
- Re-use

(open) governme
data

# … to open [..] data

(Voluntary)
Feedback
Advice
Data/products




Right to:
- Access
- Re-use

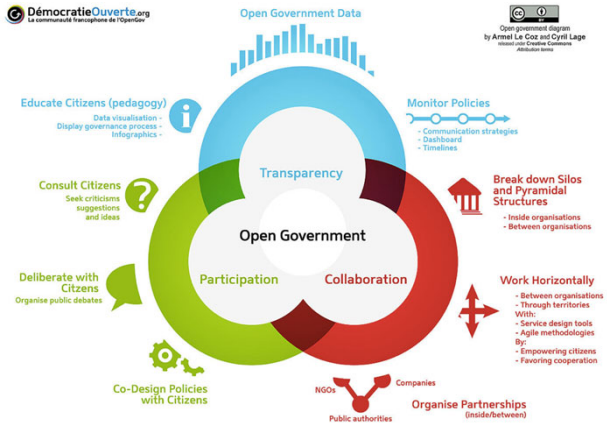
(open) data

# Open infrastructure

Simple: open governance + open implementation =
a co-created spatial data infrastructure

'Open government':

- Transparency
- Participation
- Collaboration




Stages of co-creation:

1. co-initiation
2. co-design
3. co-implementation
4. co-evaluation

# Open SDI

## From open by default to open by preference

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# The user

- Open data 2010:"Open by default"
- Open data 2018: "Open by preference", based on user needs

- But who is **THE** user? and
- Shall we satisfy **all** user needs?

# Users vary in:

- purpose of use (explorer, aggregator, enabler, enricher, developer, end user);
- geographic scope of the use (local, national, regional, global)
- nature of the user (commercial, government, scientific, citizen);
- user capabilities: (access to) (technical, creative, domain, business) skills and know-how/ understanding of open data (expert knowledge and skills to laymen knowledge and skills);
- (access to) resources/ funding opportunities;
- (access to) technical connectivity;
- frequency of use (permanent to once off);
- nationality (local or international user);
- understanding of the (business) opportunities;
- etc

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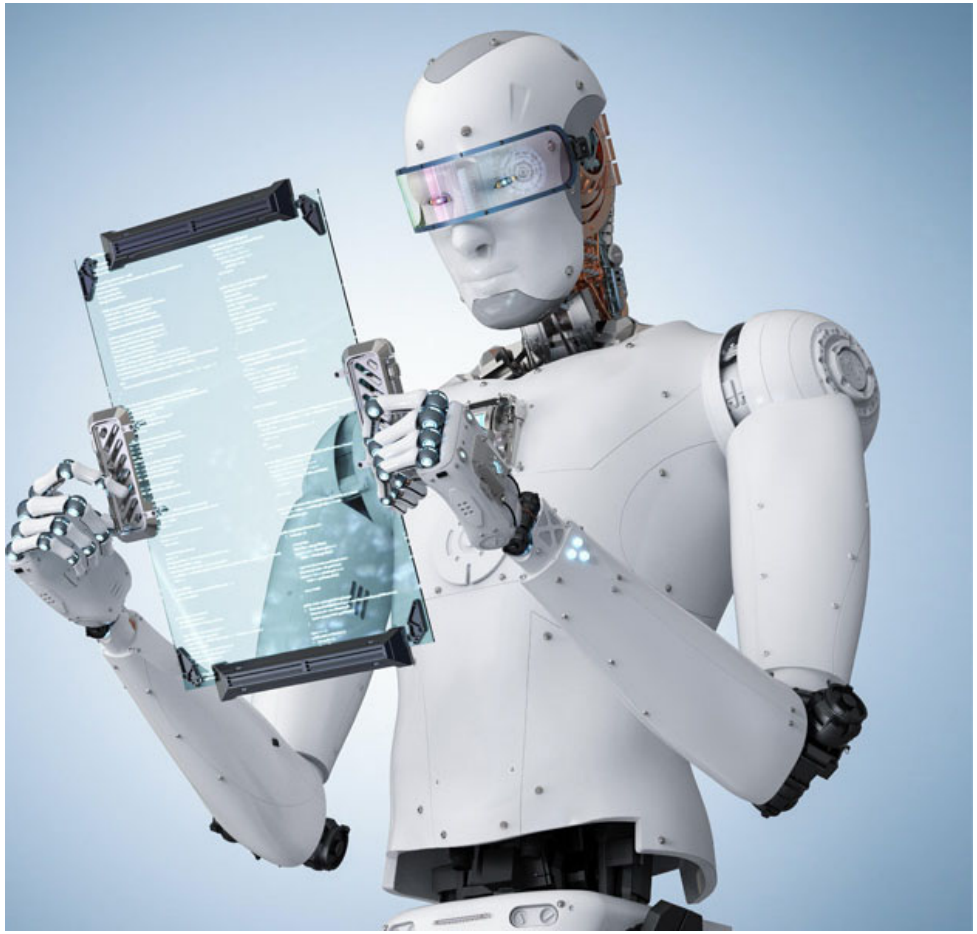
# New user



Source: https://www.strategy-business.com

# General user requirement

- Needed spatial data Content

- Findable
- Accessible
- Interoperable
- Re-usable

- Open data

- Open participation

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# Open INSPIRE?

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# Open INSPIRE: theory

- Content: 34 data themes
- FAIR:
  - F: required publication in portal, metadata
  - A: right to access, access through standard network services, standardised metadata
  - I: harmonised data specifications, standardised metadata
  - R: open standards
- Open: Increasing number of open datasets & PSI recast (2018): high value datasets

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# Communication on PSI reuse (COM(2018) 234 final)

- High value datasets
  - Available via APIs
  - Free of charge

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# Suggested high value datasets (2018/0111(COD) ) **including** (…)

- Spatial data subject to Directive 2007/2/EC (INSPIRE), including postcodes, national and local maps (cadastral, topographic, marine, administrative boundaries, at a scale of at least 1:20.000)

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# Open INSPIRE: theory

- Content: 34 data themes (needed?)
- FAIR:
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- PSI recast (2018): high value datasets
- Open participation?

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# Co-creation: INSPIRE and third parties

*Article 12 Inspire directive*

Member States shall ensure that public authorities are given the technical possibility to link their spatial data sets and services to the network referred to in Article 11(1). **This service shall also be made available upon request to third parties** whose spatial data sets and services comply with implementing rules laying down obligations with regard, in particular, to metadata, network services and interoperability.

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# Open FAIR needed Content in practice

- User that needs "Transportation network (roads)" data for Poland
- Start in the INSPIRE geoportal: http://inspire-geoportal.ec.europa.eu/

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inspire-geoportal.ec.europa.eu 80% Search

# INSPIRE GEOPORTAL

European Commission

Enhancing access to European spatial data

European Commission > INSPIRE > Geoportal

Home | Priority Data Sets Viewer | INSPIRE Thematic Viewer | Harvesting status | Find out more about

## Welcome to the INSPIRE Geoportal

The INSPIRE Geoportal is the central European access point to the data provided by EU Member States and several EFTA countries under the INSPIRE Directive. The Geoportal allows:

- monitoring the availability of INSPIRE data sets;
- discovering suitable data sets based on their descriptions (metadata);
- accessing the selected data sets through their view or download services.

The metadata used in the Geoportal are regularly harvested from the discovery services of EU Member States and EFTA countries. The status of harvesting is available here.

Feedback regarding the functionality as well as data set availability is welcome here.

### Priority Data Sets Viewer


The application displays the availability and provides access to the selected priority data sets used for environmental reporting. It allows filtering by environmental domain, environmental legislation and country.

Browse Priority Data Sets

### INSPIRE Thematic Viewer


The application displays the availability and provides access to all EU MS data sets falling under the scope of INSPIRE Directive filtered by data themes and countries (i.e. Annex I, II and III).

Browse INSPIRE Thematic Data Sets

# Transport networks Data sets in Poland

27 | 2 | 4

Filters: Downloadable Viewable Show data with national coverage

| Title | Properties |
|---|---|
| Sieci transportowe (skala 1:10000) dane w modelu INSPIRE | |
| Sieci transportowe (skala 1:10000) dane w modelu INSPIRE | |
| Sieci transportowe (skala 1:10000) dane w modelu INSPIRE | |
| Sieci transportowe (skala 1:10000) dane w modelu ELF/INSPIRE | |
| Baza Danych Obiektów Topograficznych - województwo świętokrzyskie | |
| Baza Danych Obiektów Topograficznych - województwo warmińsko-mazurskie | |
| Baza Danych Obiektów Topograficznych - województwo wielkopolskie | |
| Baza Danych Obiektów Topograficznych - województwo zachodniopomorskie | |
| Baza Danych Obiektów Topograficznych - województwo pomorskie | |
| Baza Danych Obiektów Topograficznych - województwo dolnośląskie | |
| **Title** | **Properties** |

Show 10 entries Showing 1 to 10 of 27 entries

Previous 1 2 3 Next

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European Commission

Enhancing access to European spatial data

European Commission > INSPIRE > Geoportal > Download details

Home | Priority Data Sets Viewer | INSPIRE Thematic Viewer | Harvesting status | Find out more

## Sieci transportowe (skala 1:10000) dane w modelu INSPIRE

Download Options

View Options

Data set Metadata

**Resource Title**

Sieci transportowe (skala 1:10000) dane w modelu INSPIRE

**Resource Abstract**

Zbiór Sieci transportowe powstał w wyniku harmonizacji i integracji danych Bazy Danych Obiektów Topograficznych. Dane zostały przekształcone zgodnie ze specyfikacją "D2.8.I.7 Data Specification on Transport Networks – Technical Guidelines" do schematu INSPIRE 4.0.

**Lineage**

Dane źrodłowe ZKBDOT TN zostały przekształcone zgodnie z modelem INSPIRE w zakresie tematu Sieci transportowe opisanym w specyfikacji "INSPIRE Data Specification on Transport Networks – Guidelines v3.2"

**Unique Resource Identifier**

**Code:** TN

**Namespace:** PL.PZGiK.202.ZKBDOT

**Spatial Data Theme**

**Conditions Applying To Access And Use**

brak warunków

**Limitations On Public Access**

brak ograniczeń

**Geographic Bounding Box**


**Responsible Party**

**Organisation name** Centralny Ośrodek Dokumentacji Geodezyjnej i

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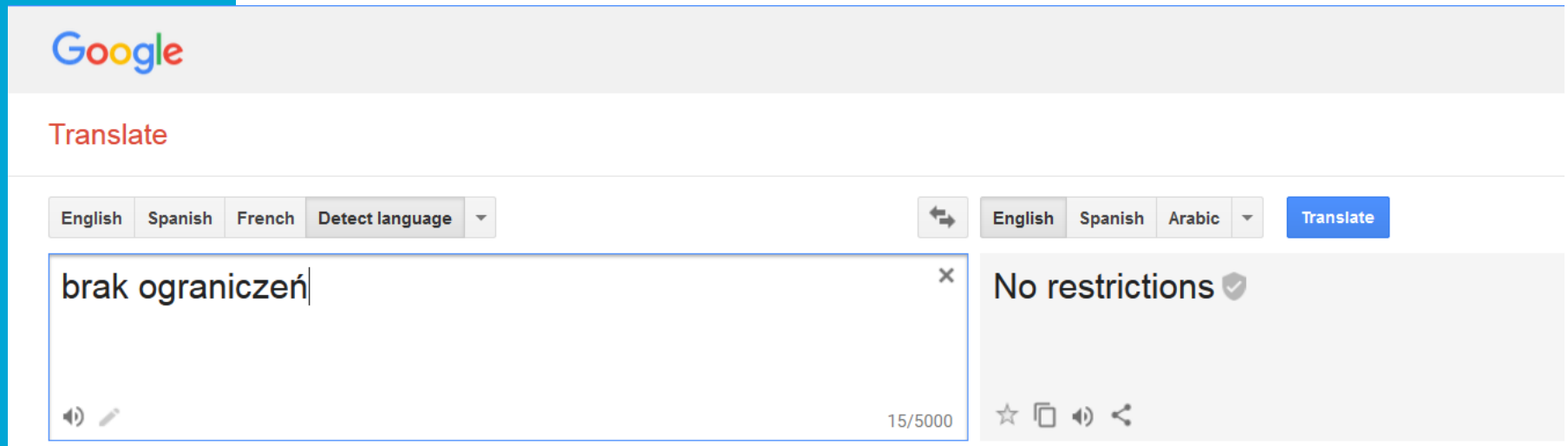
Google
Translate
English
Spanish
French
Detect language
English
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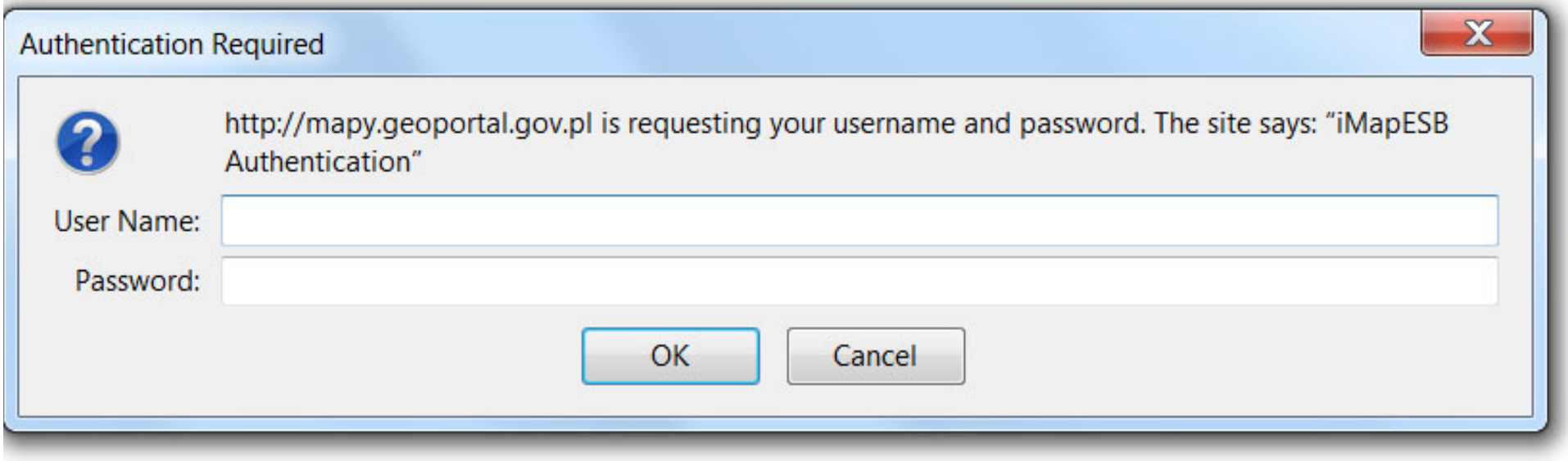
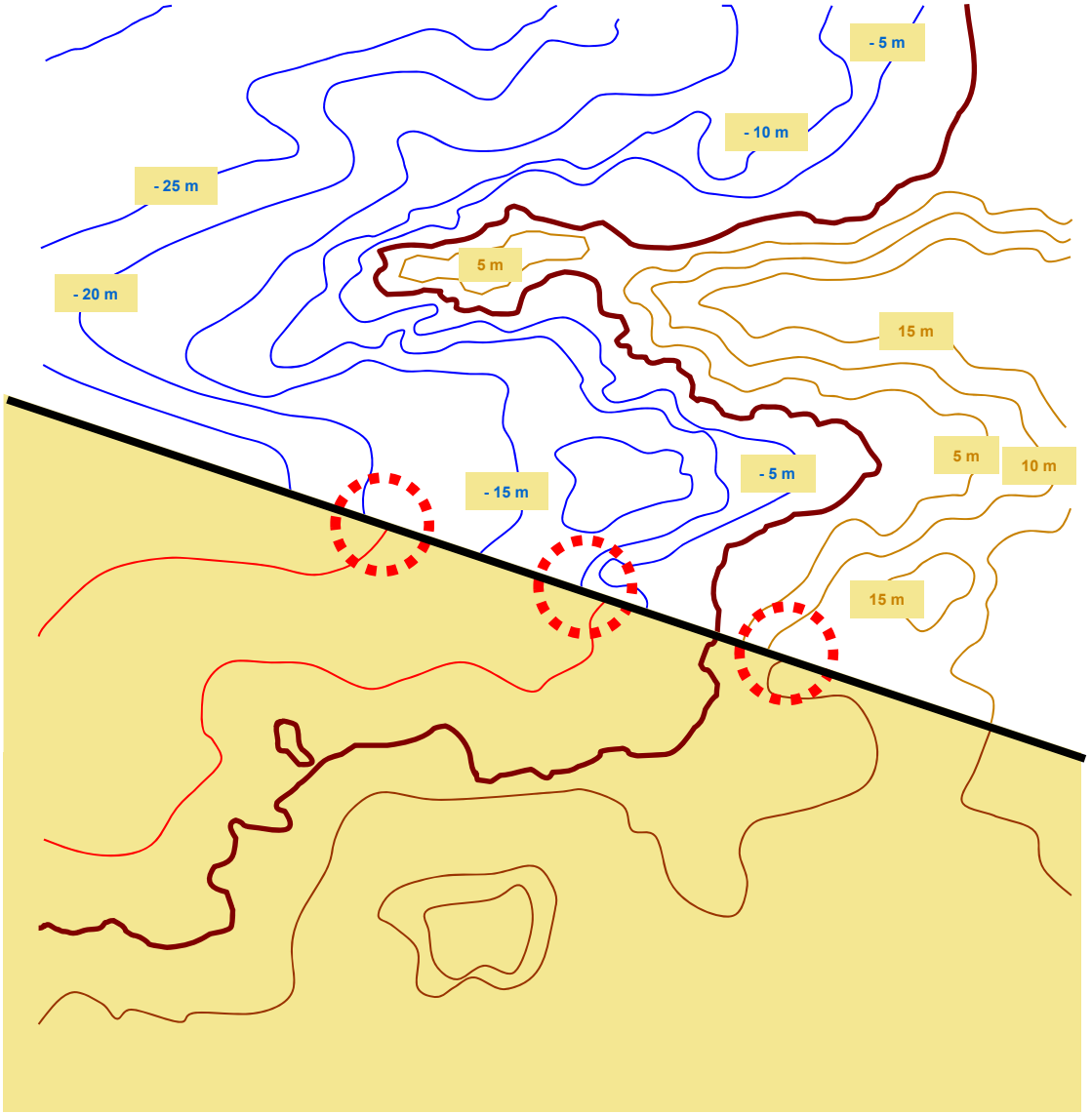
Arabic
Translate
brak ograniczeń
15/5000
No restrictions


Authentication Required
http://mapy.geoportal.gov.pl is requesting your username and password. The site says: "iMapESB Authentication"
User Name:
Password:
OK
Cancel

# “When two do the same thing” by Peter Deak



# OpenFAIRContent of INSPIRE in practice

- FAIR:
  - F: +/-
  - A: +/-
  - I: +/-
  - R: ?
- Open: +/-
- Content: ?
- Open participation: ?

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# Conclusion

1. Users important stakeholder in SDI
2. Users "will probably be the most mentioned group and yet actually the least considered"
3. Open SDI = Open spatial data + open infrastructure (process)
4. INSPIRE: OpenFAIR(needed)Content
   - INSPIRE in theory: Open FAIR(needed)Content
   - INSPIRE in practice: ~~OpenFAIR(needed)Content~~
5. INSPIRE: Open process:
   - INSPIRE in theory: +/-
   - INSPIRE in practice: ?

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# Next steps

- Start with the Inspire objectives to determine primary user groups of Inspire
- Inspire not periodically reviewed or updated:
  - Need for an update?
- Build on the recast PSI directive
- Towards a co-created European SDI

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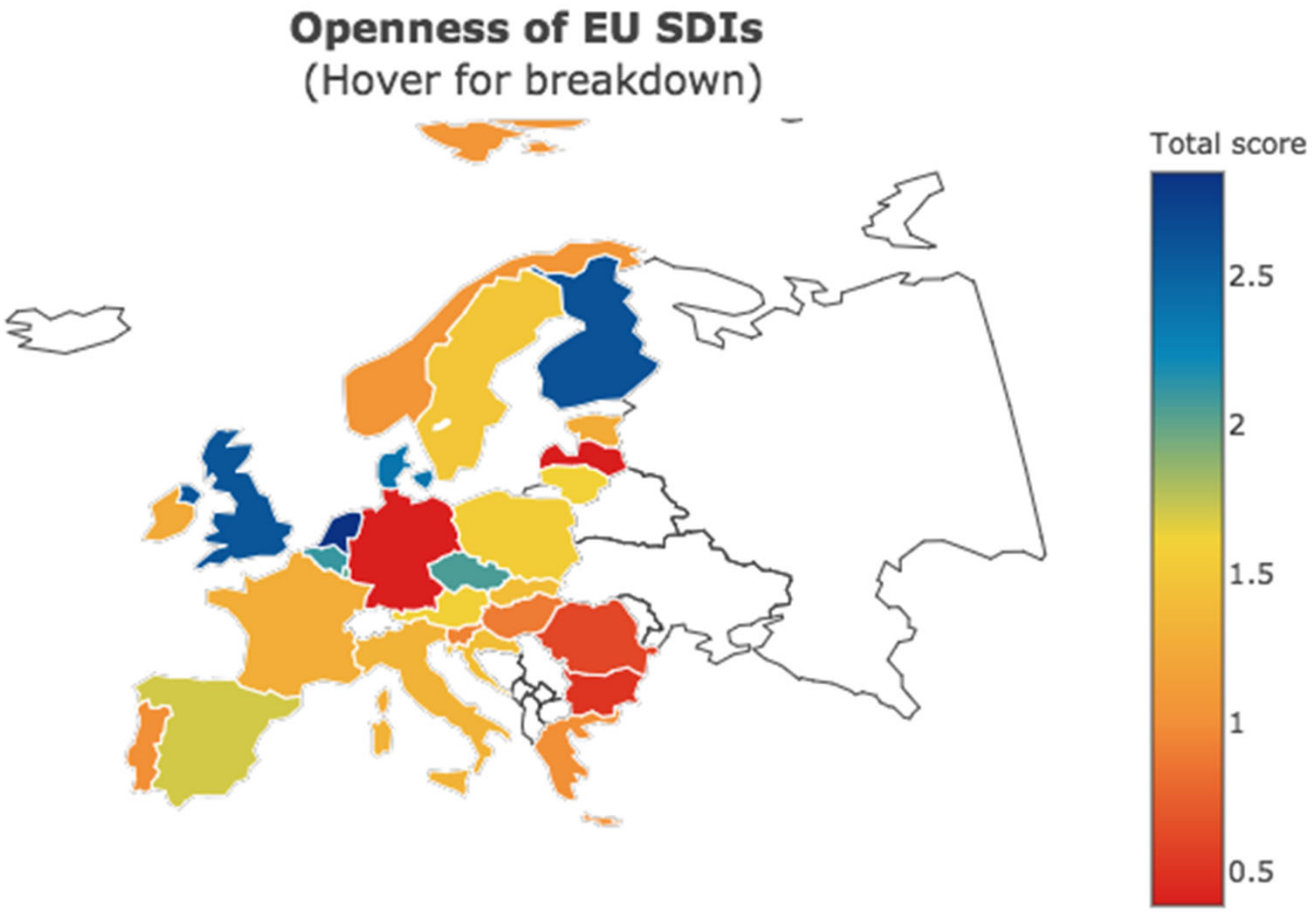
# 2017 Map of Open SDI

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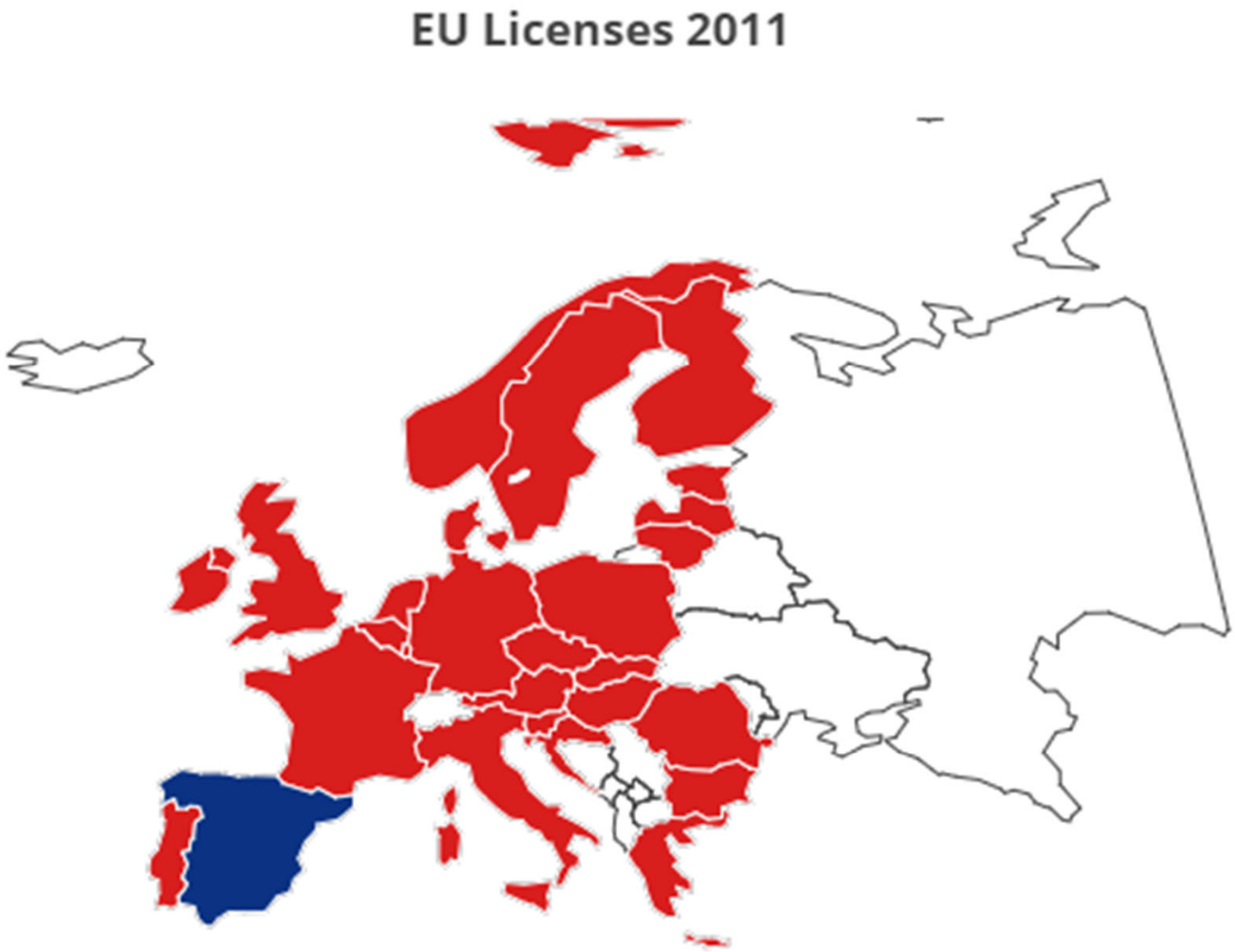
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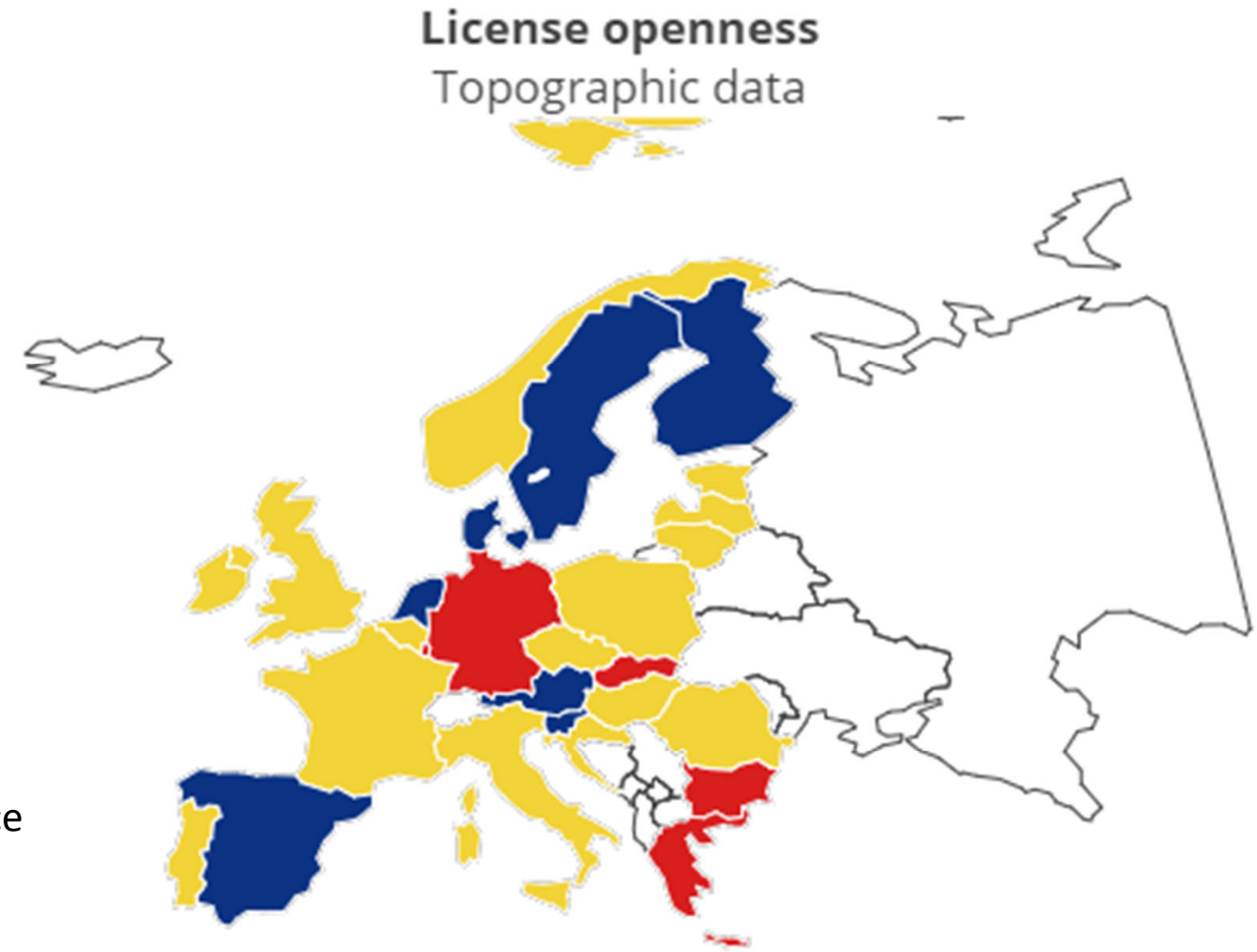
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Topographic data
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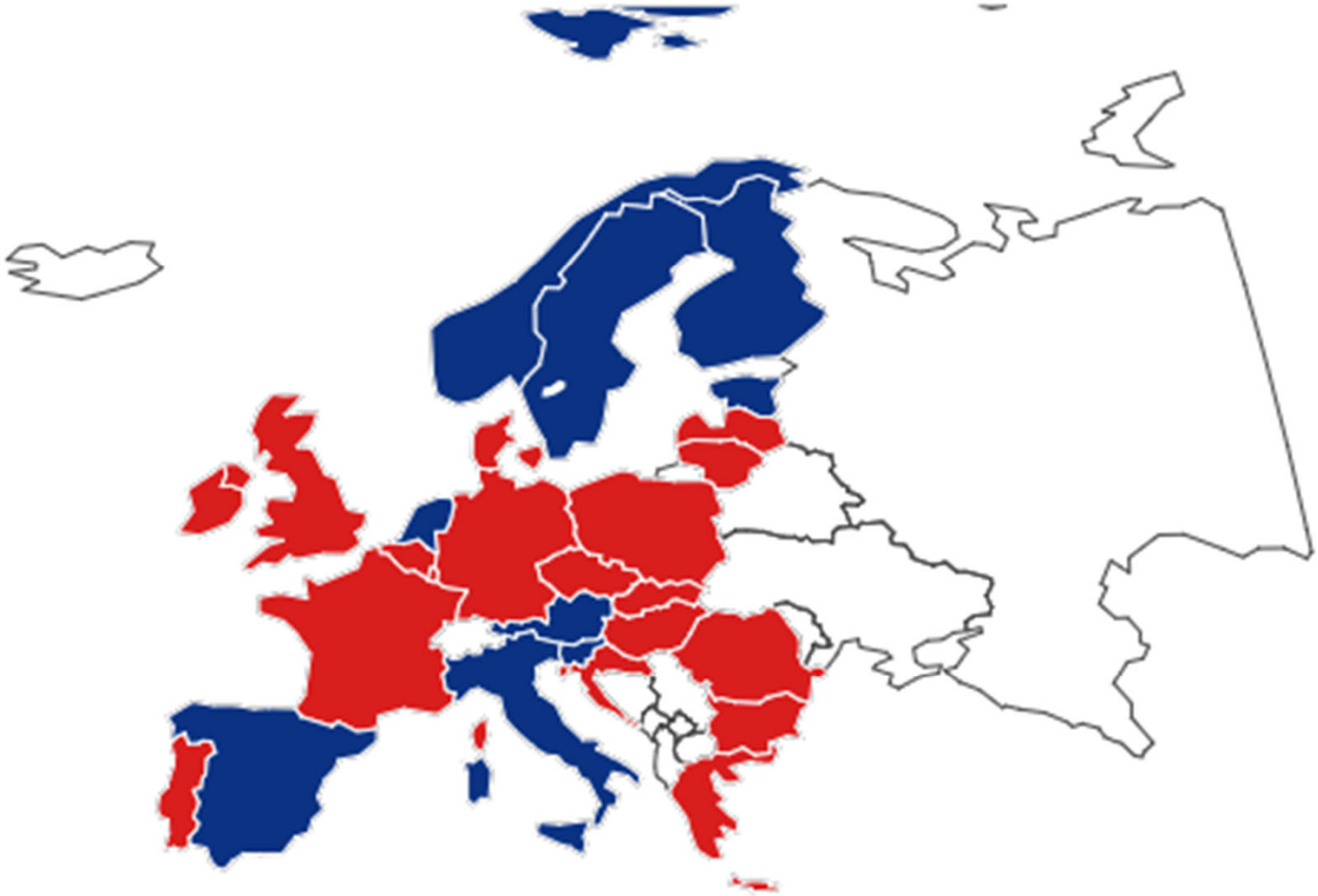

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# Thank you for your attention

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Delft University of Technology

Comments? Questions? Interested to contribute?

Let us know!

b.vanloenen@tudelft.nl

Visit our website

http://kcopendata.eu/openSDI

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# Literature


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