HAL
open science

Beyond INSPIRE and opendata, review of some challenges and opportunities that Public Agencies are facing in Geo-Environmental data infrastructures

François Robida

To cite this version:

François Robida. Beyond INSPIRE and opendata, review of some challenges and opportunities that Public Agencies are facing in Geo-Environmental data infrastructures. INSPIRE Conference 2016, Sep 2016, Barcelone, Spain. hal-01355129

HAL Id: hal-01355129

https://brgm.hal.science/hal-01355129

Submitted on 14 Oct 2016

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

In a disruptive environment, review of some challenges and opportunities that public geo-information agencies are facing

François ROBIDA - BRGM

INSPIRE Conference 2016
Barcelona, 26th - 30th September
#INSPIRE_EU2016

Géosciences pour une Terre durable
brgm

Digital transformation

Agenda

1. Our mission of public geo-environment agencies
2. Challenges of a disruptive environment
3. Some tracks towards a bright future !

Géosciences pour une Terre durable
brgm

Agenda

1. Our mission of public geo-environment agencies
2. Challenges of a disruptive environment
3. Some tracks towards a bright future !

Géosciences pour une Terre durable
brgm

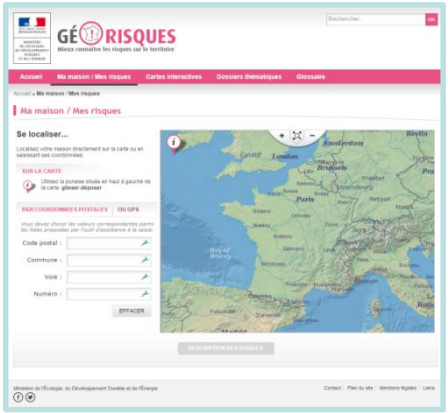
Public geo-information agencies

- Geological surveys, Mapping agencies, Met agencies, Stats agencies
- A mission : to produce, manage and deliver **reference data** (+information) for all types of users (public, private, citizen)
- Reference data
  - trusted
  - up to date
  - widely used, and referenced…
  - visible, accessible, understandable, and credible to information users
  - authoritative ???
- Our mandate???

INSPIRE Conference 2016
Barcelona, 26th - 30th September
#INSPIRE_EU2016

What we (geol surveys) have done in the last 15 years

- Engaged the development of interoperable thematic data infrastructures
- To give access to public data about our subsurface environment
- Based on our national mission
- Built upon international standards (OGC, GeoScML,…)
- Strongly supported the design and implementation of INSPIRE
- Contributed to the development of tools/apps to access / re-use « our » data



Géosciences pour une Terre durable
brgm

Some of the geoscience data infrastructures based on those principles

Tomorrow, "inspired" business as usual ???

EUROPEANPLATEOBSERVINGSYSTEM

Research Infrastructure and E-Science for Data and Obser
Earthquakes, Volcanoes, Surface Dynamics and Tectonics

Géosciences pour une Terre durable

Agenda

1. Our mission of public geo-environment agencies
2. Challenges of a disruptive environment
3. Some tracks towards a bright future !

Géosciences pour une Terre durable
brgm

A disruptive environment

new rules

> The Open Data wave

Disruption of the economic model of some actors

Everything is (almost) accessible to anyone to create products and services

> *And not ties for G8 meetings…*

Géosciences pour une Terre durable
brgm

A disruptive environment

new players

> Citizen science / Citizen observatories / crowdsourcing

« Authoritative » data
vs
openxxx

Géosciences pour une Terre durable
brgm

A disruptive environment

New players

> Production of data by industry : google

Authoritative data

vs

Industry datasets

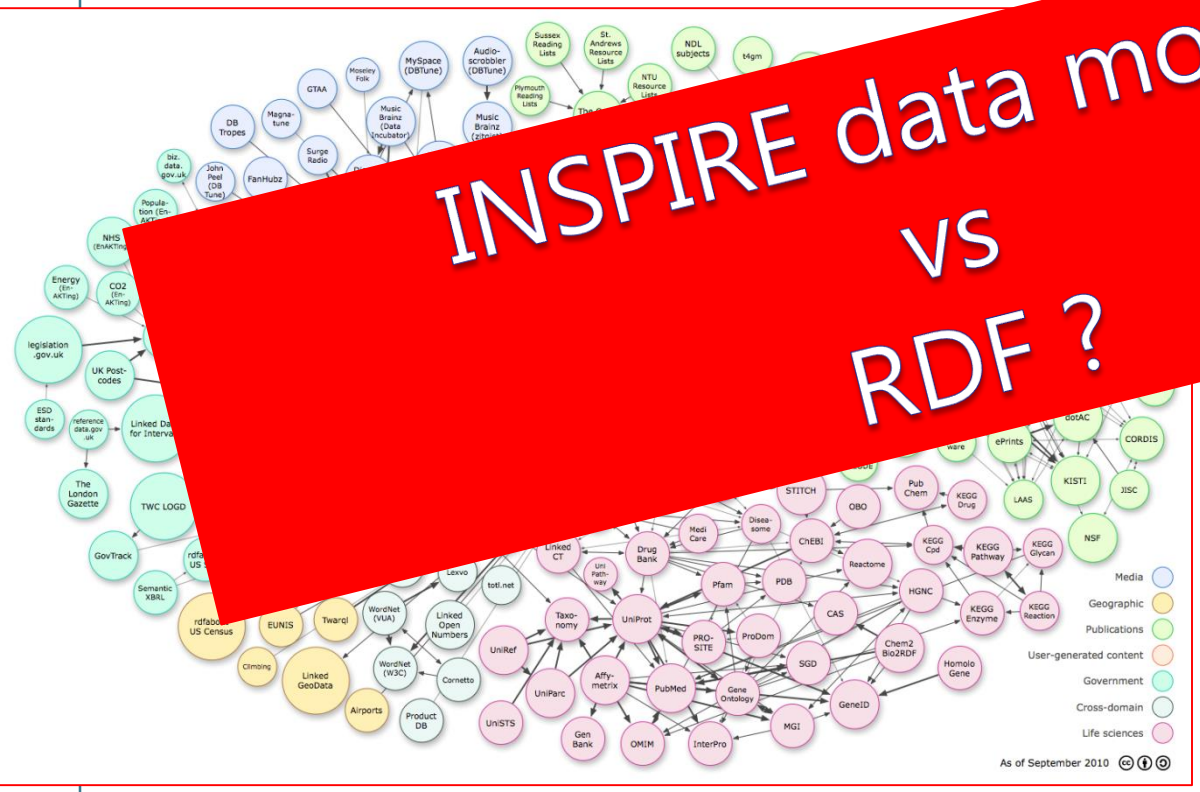
a public
with almost 10
that have been vetted
ganized. The company has 6
million drill holes that are being
processed into that database."

Géosciences pour une Terre durable
brgm

A disruptive environment

New technologies / paradigms

> Semantic web / Linked data



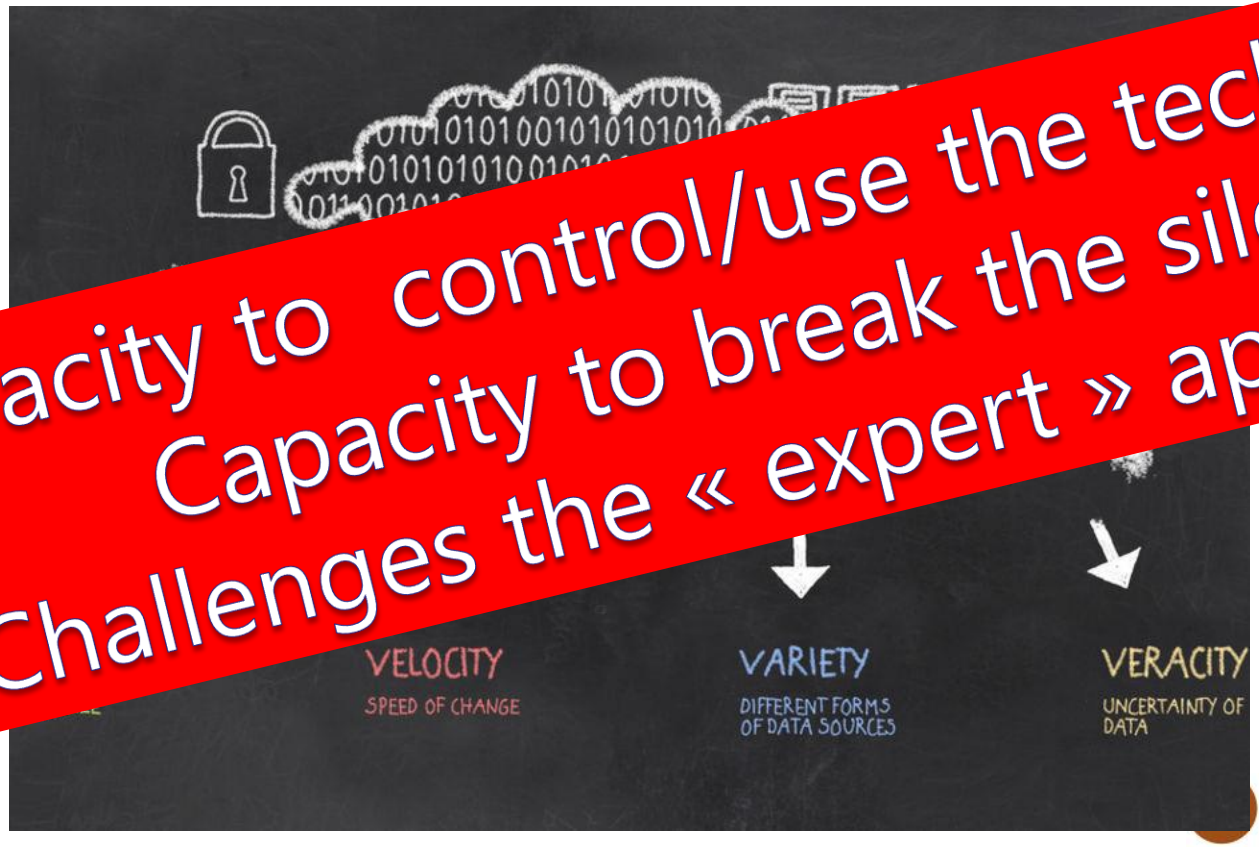
INSPIRE data models
vs
RDF ?

Semantic Web

A disruptive environment

New technologies / paradigms

> Big data



Capacity to control/use the technology
Capacity to break the silos
Challenges the « expert » approach

Géosciences pour une Terre durable
brgm

A disruptive environment

New technologies / paradigms

- Cloud

A European Open Science Cloud (EOSC) will offer Europe's 1.7 million researchers and 70 mi
science and technology professio
environment to store, shar
volumes of informati
revolution.

data
igh-
supercomputing
effectively access and
datasets stored in the Cloud.

Local vs shared infrastructures
Public / private

AWS Cloud Credits for Research

The AWS Cloud Credits for Research Program (formerly AWS Research Grants) supports researchers who seek to:

Géosciences pour une Terre durable
brgm

And at the end…

> the winner is

- Copernicus/Sentinel…?
- A unique capacity to monetize services

> What about our capacity to keep the control/access of the data necessary for the performance of public policies ?

Géosciences pour une Terre durable
brgm

Agenda

1. Our mission of public geo-environment agencies
2. Challenges of a disruptive environment
3. Some tracks towards a bright future !

Géosciences pour une Terre durable
brgm

The « reality » of public agencies

> Our strengths

- **Expertise on data**
- Independence of economic interests
- Understanding of users needs (???)

> Our weaknesses

- **Silos**
- « Over quality » syndrome (experts know what is good)
- Ignorance of our real challengers…
- Capacity to attract and keep expertise (data scientists…)

Géosciences pour une Terre durable
brgm

Some possible orientations for our future…

- → to be the "**reference point**" of expertise about data of our domain (**trusted third party**)
- → do not be limited to a role of data curators
- → be active in development of **standards** (user oriented)
- → invest on understanding of **usages and needs**
- → make sense of data (**data science**)
- → provide added value on data **(services)**
- → develop public-private partnerships in a framework that guarantees the "public interest", for instance co-operating platforms for specific domains (ie for smart cities or infrastructures)
- → **Strengthen our capacity to act in collaborative environments,**
- → **Based on sustainable and balanced governance and economic arrangements**

Géosciences pour une Terre durable
brgm

Thank you for your attention

François ROBIDA
f.robida@brgm.fr

www.brgm.fr

Géosciences pour une Terre durable
brgm