



INSPIRE Conference 2016

Barcelona, 26th - 30th September

An implementation of a spatial data infrastructure based on local open data, INSPIRE and Copernicus data sets



David HELLO
CEO TerraNIS

Lessons learnt ?



saturn project
Satellite Applications for Urban Mobility
(financed by URBANIS) - Coordination by
Intelligent Transport

4 demonstrations

- Road infrastructures safety & maintenance
- Heavy Goods Vehicles movements
- Urban atlas for urban policy decision making
- Transport infrastructure monitoring

+ A geoinformation platform aggregating georeferenced data from several sources including Open Data, INSPIRE, Copernicus, etc.

terranis
A New Information Service

Geoinformation services based on EO for agriculture, environment, and land management

cenoview **pixagri** **terramap**

... but

Difficult to find a single source for all the data needed for a project (e.g., urban planning, transport, environment, etc.)

Complexity of managing the heterogeneous data (e.g., INSPIRE, Open Data, Copernicus, etc.)

Need for a platform to aggregate and manage the data

Conclusions

INSPIRE is a good starting point for a project

Use of INSPIRE data is a good starting point for a project

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Data sources

Geo localized / geo referenced data sets

- Bordeaux Métropole
- Open Street Map
- Copernicus Core Services
- Copernicus Data Warehouse
- Several INSPIRE sources at regional + national level
- Aquaine Region, Métro France, IGN, BRGM, DREAL, etc.

More than 300 layers available

Spatial Data Infrastructure

geOrchestra **INSPIRE** **Copernicus** **Open Data**

Advanced web map viewer
with a rich interface



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Difficult to find a single source for all the data needed for a given application. For example, for urban mobility, you need data on roads, traffic, and public transport. This requires integrating data from multiple sources, which is a complex task.

Conclusions

INSPIRE is a good starting point for data, but it is not enough. You need to integrate local open data and Copernicus data to get a complete picture. The challenge is to create a Spatial Data Infrastructure that can integrate all these data sources and provide a user-friendly interface for data access and analysis.

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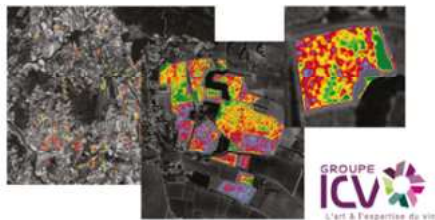
Spatial Data Infrastructure

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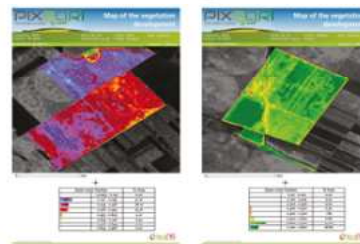
Advanced web map viewer
+ editor + data manager

Geoinformation services based on EO for agriculture, environment, and land management

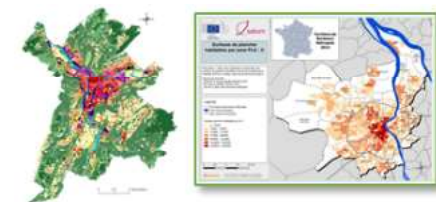
œnoview®



PIXAGRI
from precision to decision



terraMAP



 **Cerema**

 **AIRBUS**
DEFENCE & SPACE





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4 demonstrators

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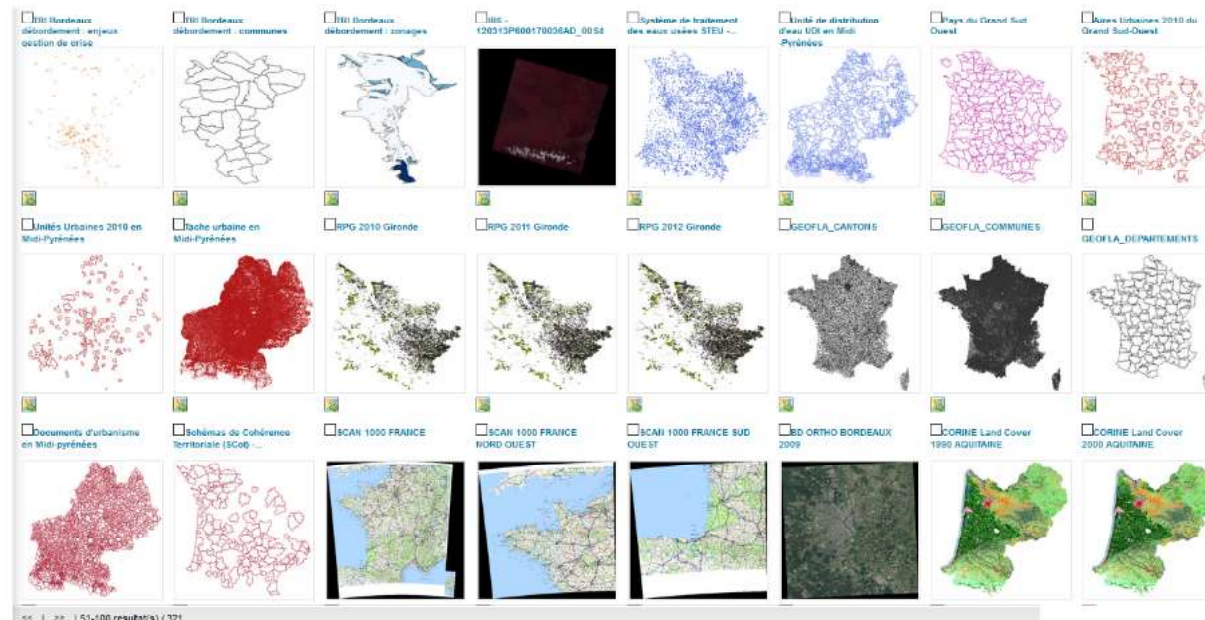


+ **A geoinformation platform** aggregating georeferenced data from several sources including Open Data (<http://saturn.terranis.fr/en>)

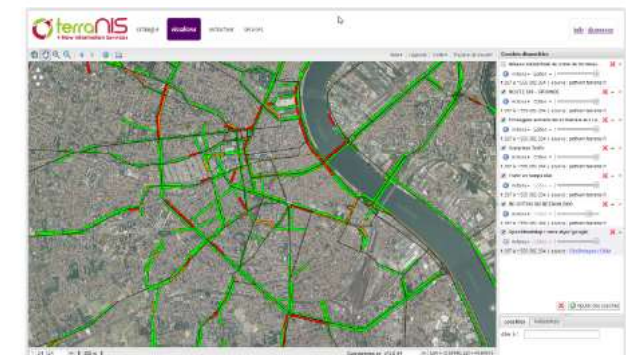
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Spatial Data Infrastructure

geOrchestra



*Advanced web map viewer
+ editor + data extractor*



**Data & metadata
ingestion**



WPS addons



**Sentinel data
harvesting**

Lessons learnt ?





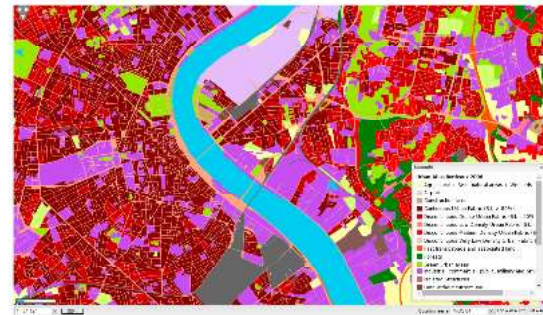
Great ...

Increasing and abundant offer / many data sources of different kinds

Use of standards (OGC/INSPIRE) is more and more ... the standard

Some great effort made on the data access through easy-to-use web sites

Quality / reliability of the data



Elevation
1



Land cover
18



Orthomagery
44



Geology
5



Statistical units
29



Buildings
26



Soil
3



Land use
17



Human health and safety
173



Utility and governmental ser...
131



Geographical grid systems
4



Environmental monitoring fa...
8



Production and industrial fac...
27



Agricultural and aquaculture...
6



Area management/restrictio...
77



Natural risk zones
95



Geographical names
6



Bio-geographical regions
3



Habitats and biotopes
14



Species distribution
3



Energy resources
19



Mineral resources
13



Administrative units
51



Addresses
23



Cadastral parcels
4



Transport networks
19



Hydrography
59



Protected sites
18



... but

Still many data sets are not available in common GIS formats and/or through standard protocols ("discovery/harvesting" sometimes cumbersome)

Authentication sometimes needed (token/key)

Data sets exist ... but are not published !

Complexity of licensing for non-specialists (OdbL, CC, GPL, etc). "Can I use this data for commercial purposes ?"

Reliability of the originator not always proven

Fake Open Data (freemium)



Conclusions

INSPIRE = a growth enabler for SMEs

- Improve or create new services with a sustainable economic model

Use of an INSPIRE-compliant SDI highly recommended (harvest, store, catalog, view, extract, share)

Licensing can be real issue for non-specialists

SATURN experience fully reused with the EC FabSpace2.0 project (<https://www.irit.fr/FabSpace/>)



FAB
SPACE 2.0



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Difficult to find a single source for all the data needed for a project. The data is often scattered across different sources and formats. The data is often outdated or not up-to-date. The data is often not georeferenced or not in a suitable format for analysis.

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Conclusions

INSPIRE is a good starting point for data. However, it is not enough. Local open data and Copernicus data are essential for a complete and up-to-date spatial data infrastructure. The data is often scattered across different sources and formats. The data is often outdated or not up-to-date. The data is often not georeferenced or not in a suitable format for analysis.

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