

# MEASURING INSPIRE COMPLIANCE OF REGIONAL SPATIAL DATA INFRASTRUCTURES

30/09/2016

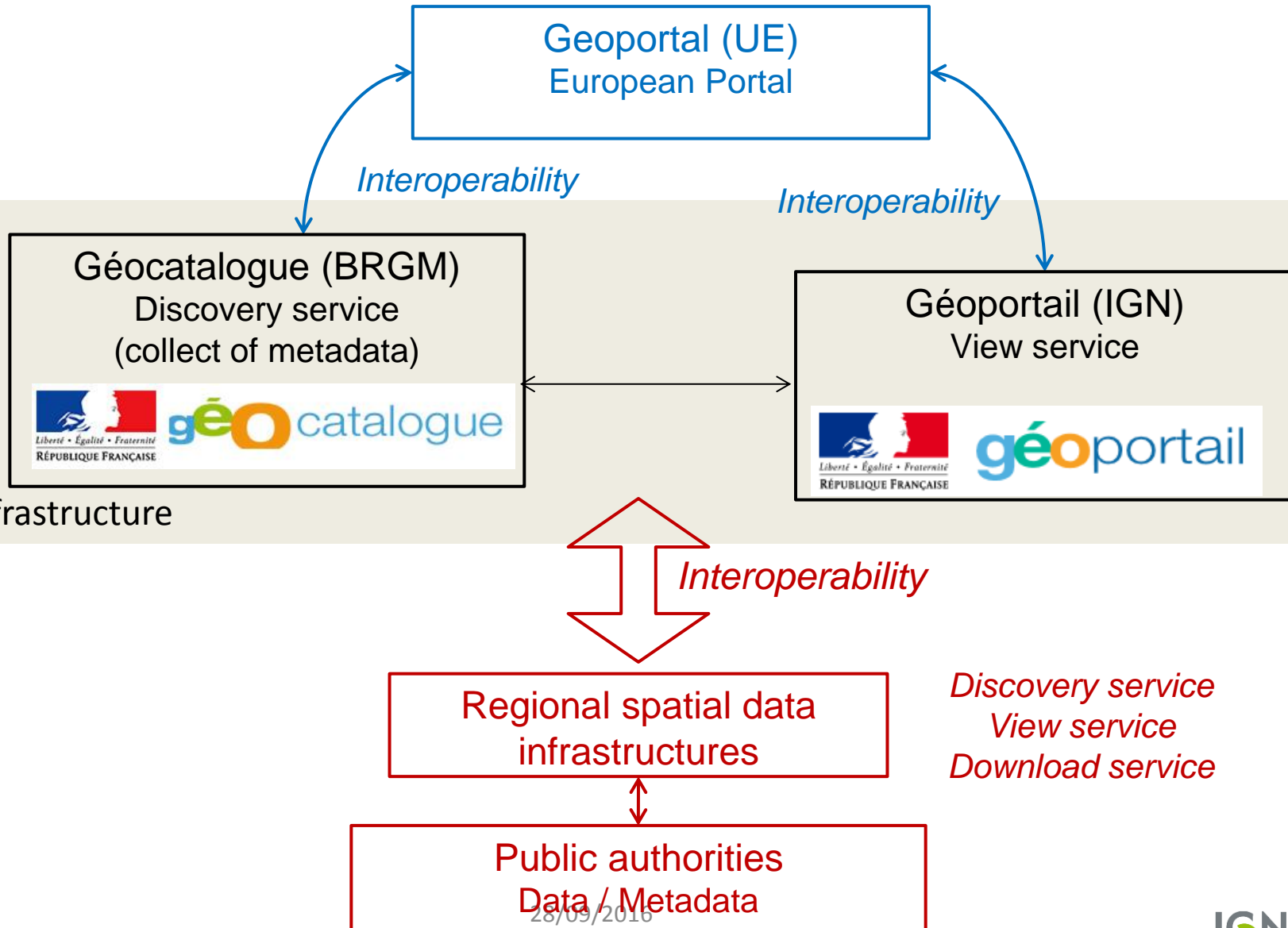
ADELINÉ COUPÉ

# MEASURING INSPIRE COMPLIANCE OF REGIONAL SPATIAL DATA INFRASTRUCTURES

- **IMPLEMENTATION OF INSPIRE DIRECTIVE IN FRANCE**
  - French national infrastructure
  - Role of the national Institute of Geographic and Forestry Information
  - Inspire and French regions
- **MEASURING INSPIRE COMPLIANCE OF REGIONAL SERVICES**

# IMPLEMENTATION OF THE INSPIRE DIRECTIVE IN FRANCE

# INSPIRE INFRASTRUCTURE IN FRANCE








# INSPIRE AND IGN

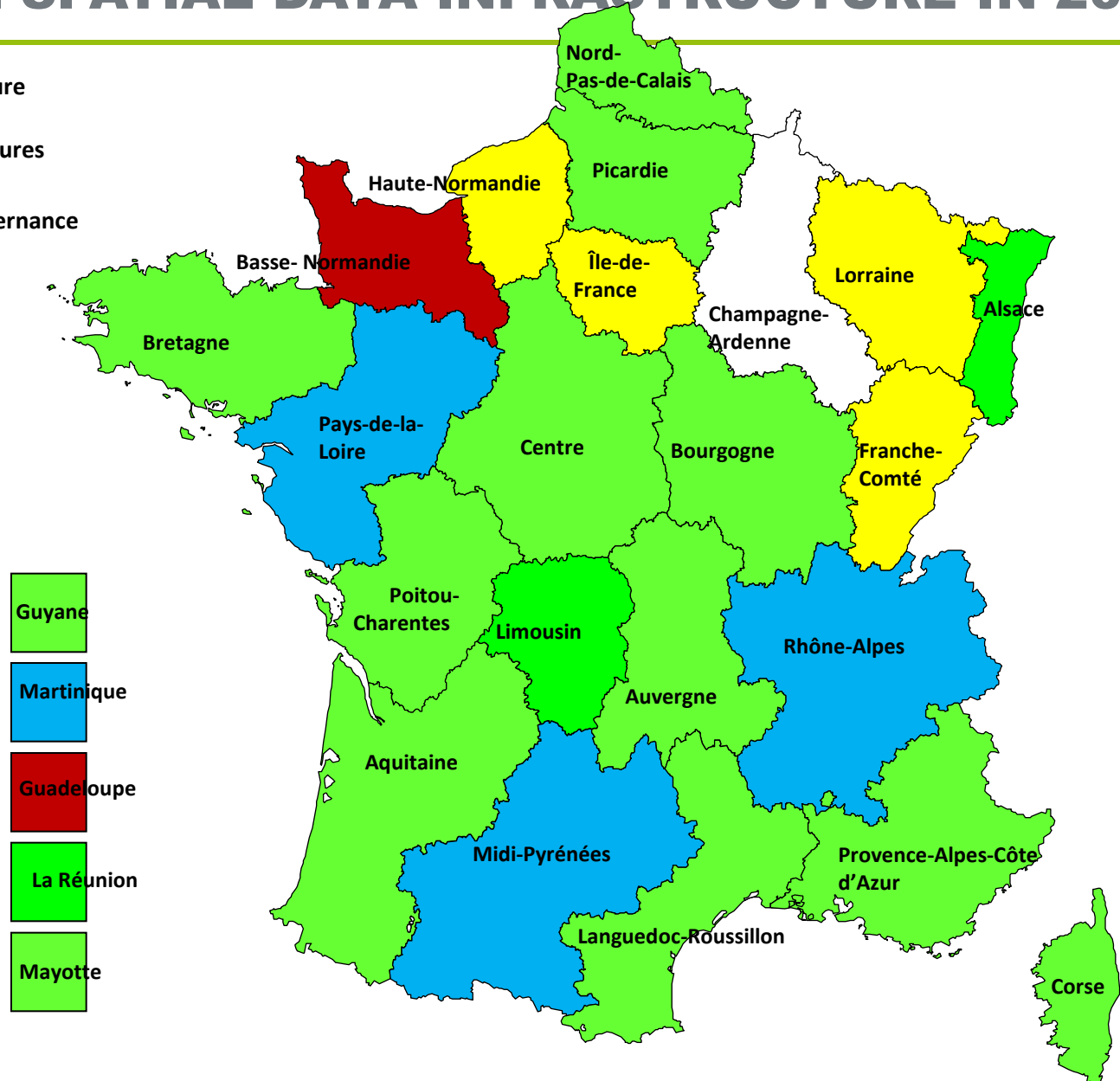
- **THE NATIONAL INSTITUTE OF GEOGRAPHIC AND FORESTRY INFORMATION AND INSPIRE:**
  - Participation in European Projects, in specifications writing
  - Support in France for the Ministry of Ecology
    - Formation to Inspire Metadata for French regions
    - Formation to Data Model Transformation
    - Measure of service compliance for regional spatial data infrastructure
    - Help with reporting to the European Commission
  - Implementation of the French National Geographical website « Géoportail »
  - Concerned as a reference data producer

# FRENCH REGIONS

- **REGIONS ARE A KEY ACTOR IN FRENCH INSPIRE INFRASTRUCTURE:**
  - Collect data and metadata from territorial authorities
  - Send metadata to the national discovery service (Geocatalogue)
- **IN MANY REGIONS, SPATIAL DATA INFRASTRUCTURES HAVE DEVELOPED**
  - Implementation of view, download and discovery services
  - Help for local actors in the implementation of Inspire Directive

# REGIONAL SPATIAL DATA INFRASTRUCTURE IN 2014

-  1 region => 1 infrastructure
-  1 region => 2 infrastructures
-  Research of unique governance
-  Research of governance
-  isolated



# REGIONS IN 2016

## ■ A CONTEXT OF EVOLUTION

- From 22 to 13 regions in metropole





# MEASURING INSPIRE COMPLIANCE OF REGIONAL SERVICES

# ANALYSIS OF WEB SERVICES COMPLIANCE

- IN SUPPORT OF THE MINISTRY OF ENVIRONMENT, IGN OFFERS FREE ANALYSIS ON WEB SERVICES OF REGIONAL SPATIAL DATA INFRASTRUCTURES
- WHAT KIND OF SERVICES?
  - WFS
  - WMS
  - WMTS
- WITH WHAT TOOLS?
  - Spatineo
  - Inspire metadata validator



# TESTS

## ■ WHAT IS TESTED?

- With Spatineo
  - Presence of mandatory operations : GetMap, GetCapabilities...

### Objectifs de conformité aux normes pour ce service

Ce service est actuellement validé en utilisant les ensembles de tests de standardisation suivants :

- Services de consultation INSPIRE, profile INSPIRE de la norme ISO 19128:2005 (WMS 1.3)



### Résultats de validation (18/5/2016 13:30)

Valider à nouveau



### ✘ Services de consultation INSPIRE, profile INSPIRE de la norme ISO 19128:2005 (WMS 1.3): échoué

Tests de conformité XML général

▶ 1 test réussi

▼ 1 test échoué

#### Validation du schéma

Le document de capacités doit passer la validation mécanique avant le schéma XML

ligne 145, emplacement 9: string value " does not match pattern for xs:NMTOKEN

ligne 170, emplacement 9: string value " does not match pattern for xs:NMTOKEN

ligne 197, emplacement 9: string value " does not match pattern for xs:NMTOKEN

ligne 222, emplacement 9: string value " does not match pattern for xs:NMTOKEN

# TESTS

## ■ WHAT IS TESTED?

- With Spatineo
  - Verification of the result of the requests

### Temps de réponse

Temps de réponse (ms) †	Heure des requêtes	Résultat	
17552	11/9/2016 22:40	✓	Afficher les détails
12849	5/9/2016 22:38	✓	Afficher les détails
12059	20/8/2016 22:37	✓	Afficher les détails
11973	2/9/2016 22:43	✓	Afficher les détails
11965	21/8/2016 13:32	✓	Afficher les détails
11935	25/8/2016 22:38	✓	Afficher les détails
11889	22/8/2016 22:42	✓	Afficher les détails
11371	18/9/2016 22:41	✓	Afficher les détails
11231	22/8/2016 22:37	✓	Afficher les détails
10931	21/8/2016 22:37	✓	Afficher les détails

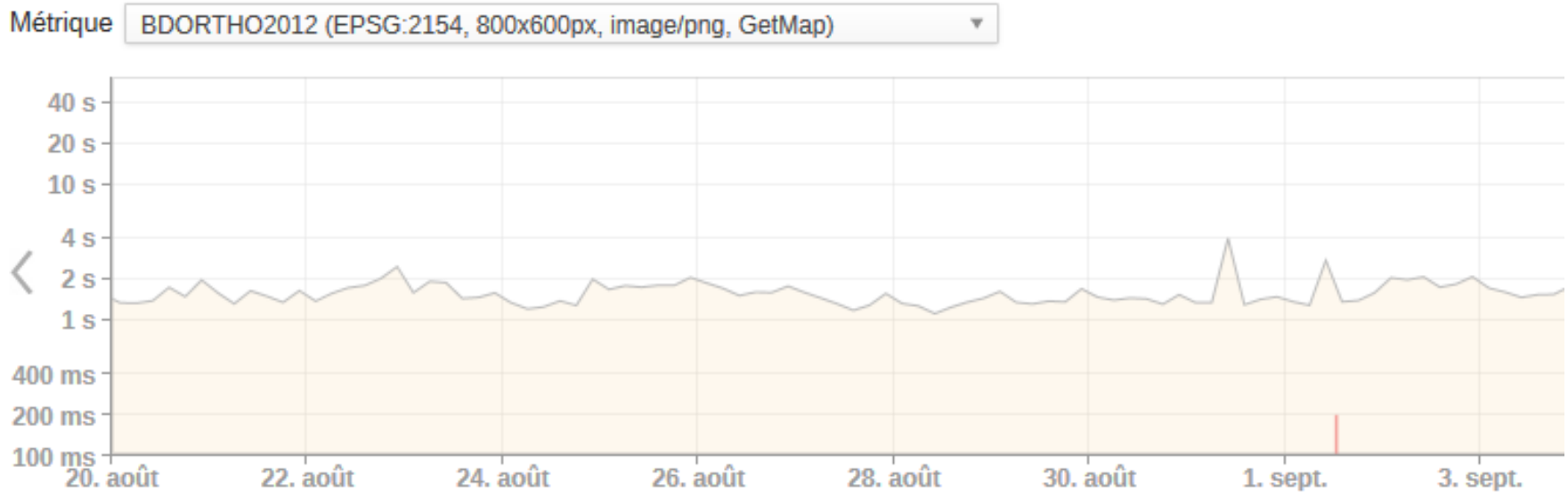
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# TESTS

## ■ WHAT IS TESTED?

- With Spatineo
  - Performance

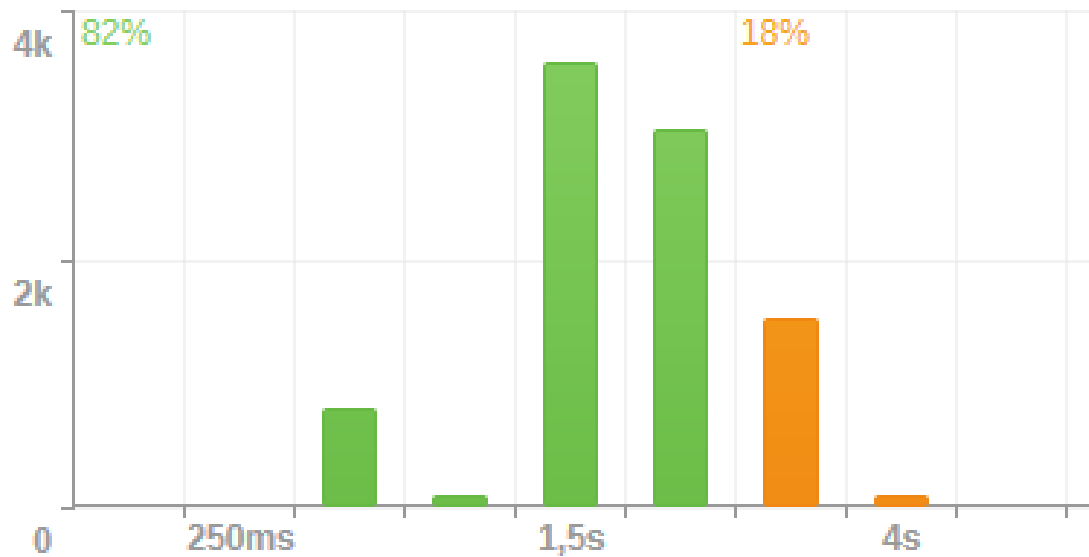


# TESTS

## ■ WHAT IS TESTED?

- With Spatineo
  - Availability

**Disponibilité du service**  
99,9% de la période sélectionnée



# TESTS

## ■ WHAT IS TESTED?

- With Spatineo
- Capacity

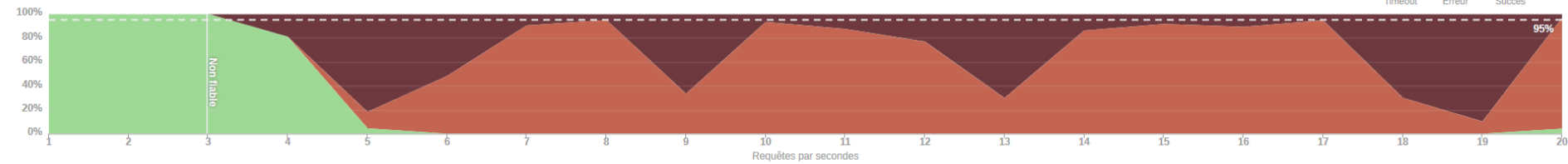
WMS GetMap: BDORTHO2012 (EPSG:2154, 800x600px, image/png)

Service Serveur WMS GéoBourgogne #8684  
 Endpoint du service <http://datacarto.geobourgogne.fr/WMS/wms.php?>  
 Charge maximum 20 requêtes par secondes

Temps de réponse des requêtes réussies



Pourcentage de chaque catégorie



Fiabilité dégradée depuis	3 req/s	Non fiable depuis	3 req/s
Nombre total de requêtes	4 820	Succès	94
Temps moyen de réponses réussies	33,0 s	5% >	~1,1 s
Nombre total d'octets reçus	35,1 MB	Nombre moyen d'octets par requête	24,9 kB

Erreurs	1 352	Timeouts	3 374
Mediane	~37,7 s	95% <	~59,9 s

[Télécharger JSON](#)



# TESTS

## ■ WHAT IS TESTED?

- With Inspire validator
  - Service Metadata compliancy

### Schema Validation Issues

Please note that schema validation issues could likely be at the origin of the issues reported in the 'Inspire Validation Issues' section below.

*Relevant documentation:*

- See [INSPIRE Metadata Implementing Rules: Technical Guidelines based on EN ISO 19115 and EN ISO 19119 \(Version 1.2\)](#)

*Validation Schema(s) used for validation:* [19139 XSchemas TS RC \(2006 May 4\)](#)

- **In content of element <SV\_ServiceIdentification>: The content model does not allow element <Q{.../srv}coupledResource> to appear immediately after element <Q{.../srv}operatesOn>. Expected <Q{.../srv}operatesOn> or nothing. at column 31, line 2239**

### Inspire Validation Issues

- **Information on the degree of conformity with the implementing rules on interoperability of spatial data sets and services is required**

*Relevant documentation:*

- See [TG Requirement 28](#) in [INSPIRE Metadata Implementing Rules: Technical Guidelines based on EN ISO 19115 and EN ISO 19119 \(Version 1.3\)](#)
- See [Metadata for spatial data services](#) in [Commission Regulation \(EC\) No 1205/2008 of 3 December 2008 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards metadata](#)

*Expert documentation*

- [UML Requirement Diagram](#)



# CONCLUSION

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- FIVE REGIONS IN THE PROCESS OF BEING ANALYZED.
- FIRST OBSERVATIONS:
  - Service metadata are often absent or don't respect Inspire requirements
  - Performance and capacity on big data layers such as imagery don't reach Inspire requirements.