



InGeoCloudS
Inspired GEOdata CLOUD Services



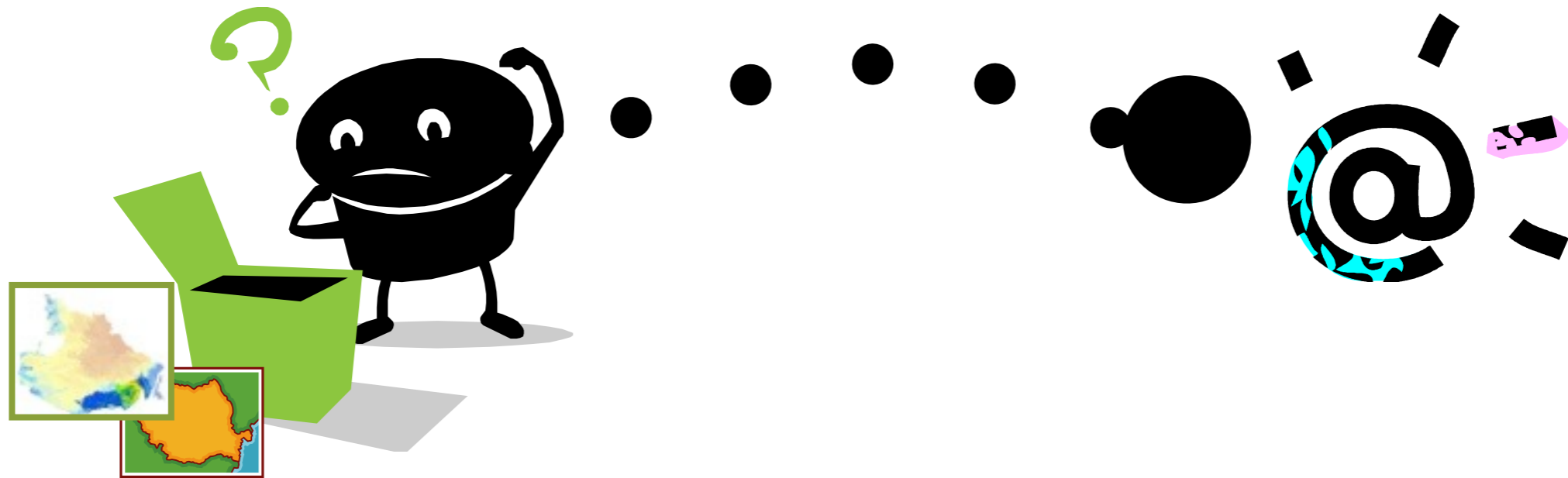
A geo-cloud platform for the publication of INSPIRE geodata

Principles and demonstration

Pierre LAGARDE (BRGM)

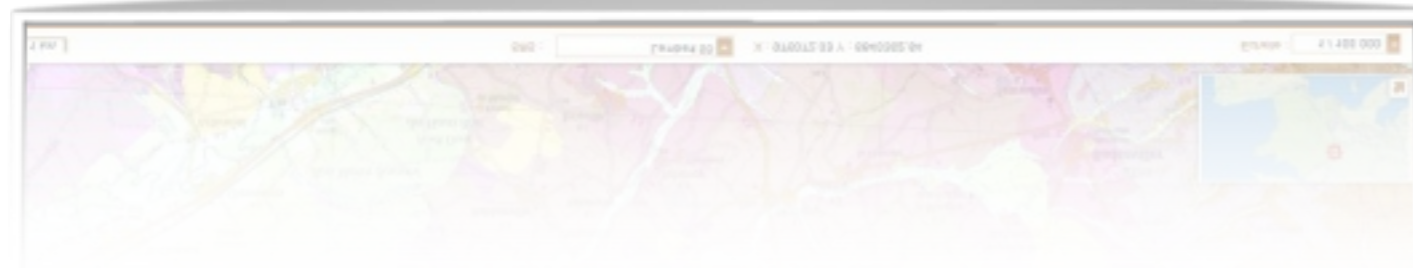
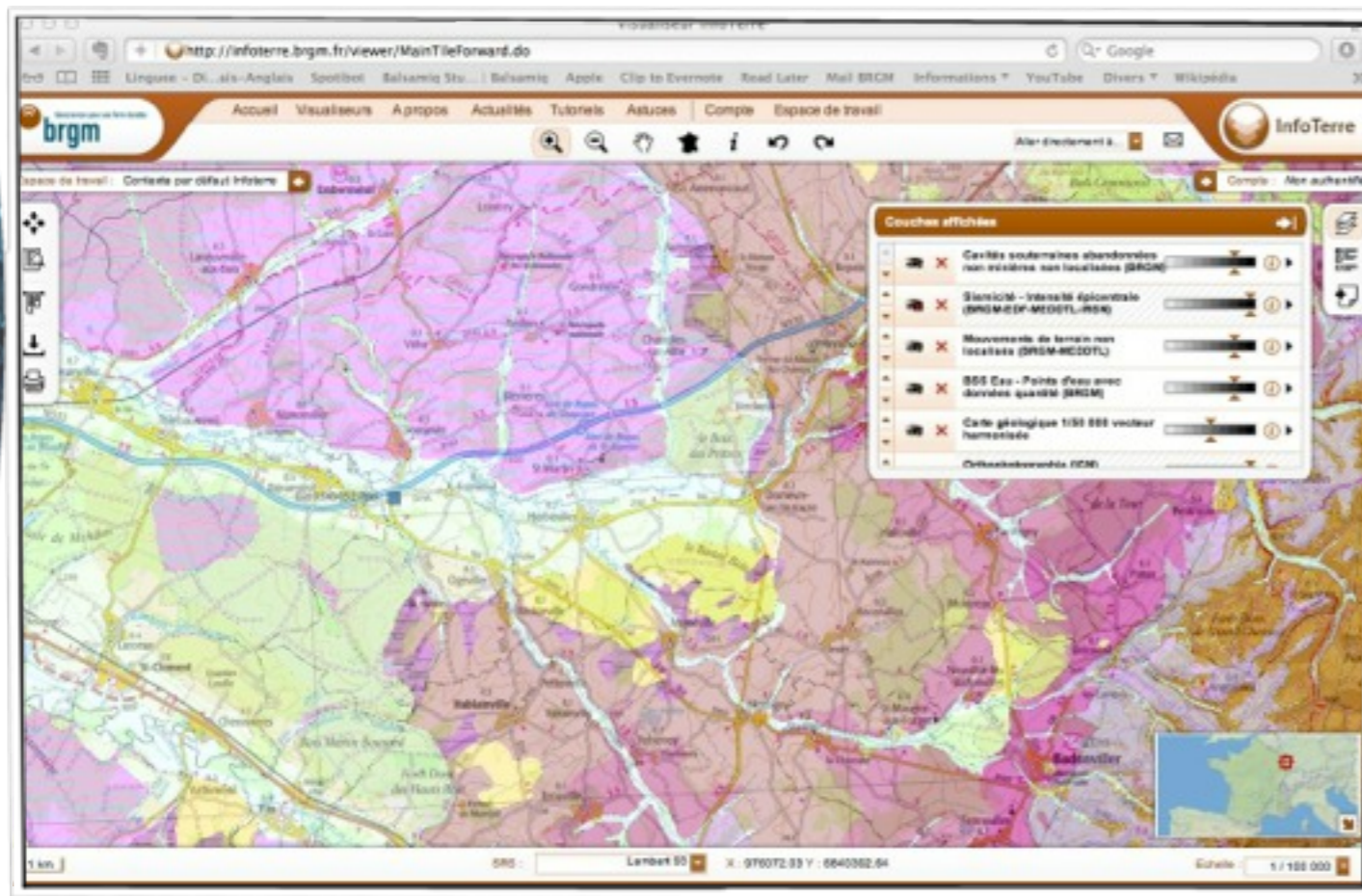
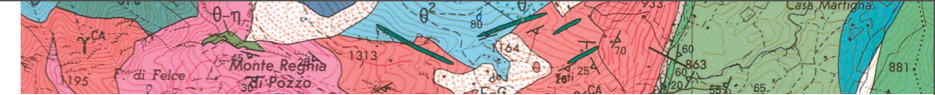


A platform to publish geo data



- Spatial Data about environment product or collected by provider
- How to communicate information to citizens ?
- How to share and re-use my geo-data ?
- How to respect INSPIRE requirements ?

The Web Mapping solution !



- a web site dedicated to the geodata access
- Functionalities to navigate within my data
- Request attributes of my data
- Publication of data as service : from (geo-)files to web services OGC

Web mapping solution , so easy ?

● Technical challenges

- Geo-Data storage on the Web
- Publication of OGC services
- Performance issues (QOS)
- Web dedicated Infrastructure
- IT skills requirements

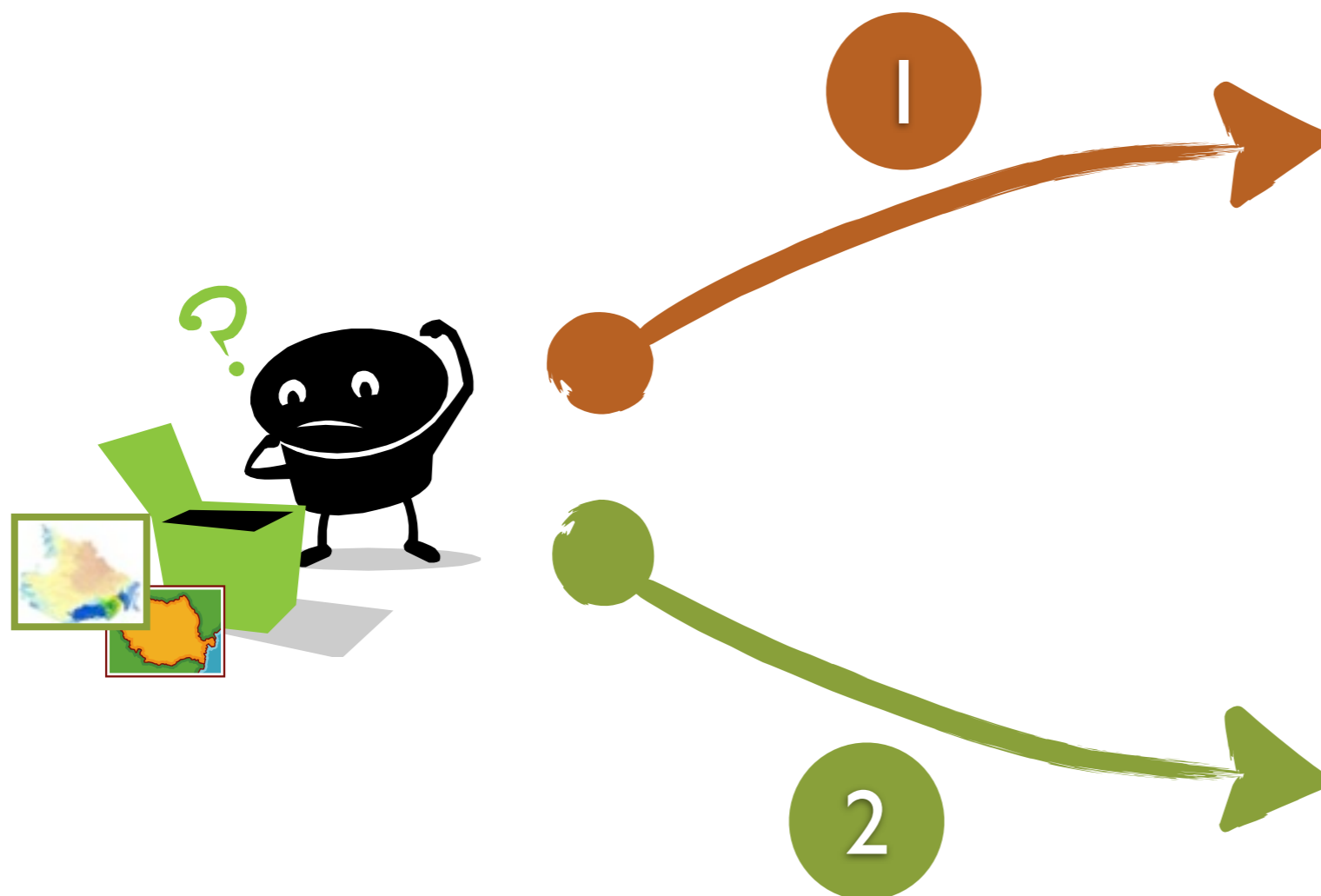
● Functional challenges

- Background map (references data)
- Process of publication and update
- Coordinate Reference system of data
- Portrayal choice

Web mapping for INSPIRE, not enough...

- Description of data and services in metadata
- Publication of OGC services compliance with INSPIRE Requirements for **discovery, visualisation and download**
- Respect of Quality Of Services (performance)
- Compliance with INSPIRE data model

Current solutions ?



Conception and
Development
INSPIRE
solution by the
provider

« Push » my
(geo-)data in a
regional/national
geo-portal

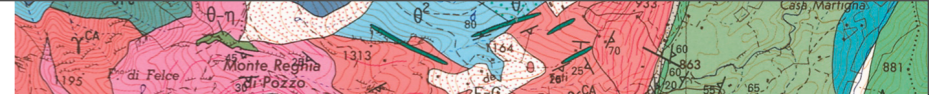


Current solutions...

	Conception and Development INSPIRE solution by the provider	« Push » my (geo-)data in a regional/ national... geo-portal
Pros	I do what I want	Simplicity
Cons	Costs IT Skills Delay	My publication process ? INSPIRE philosophy ? Respect of my IPR ?

A Geo-SAAS approach

- Each producer **creates his maps** and **publishes his services** and **metadata** when he wants...
- Each producer could reference his maps and his services in his website
- Reuse easily others layers available, in particular background,...
- And don't worry by the IT and technical challenges...



Simplify the publication of geodata and maps

1

Produce (or collect) environmental data with spatial information

2

Push geodata in my environment

3

Create my Map

4

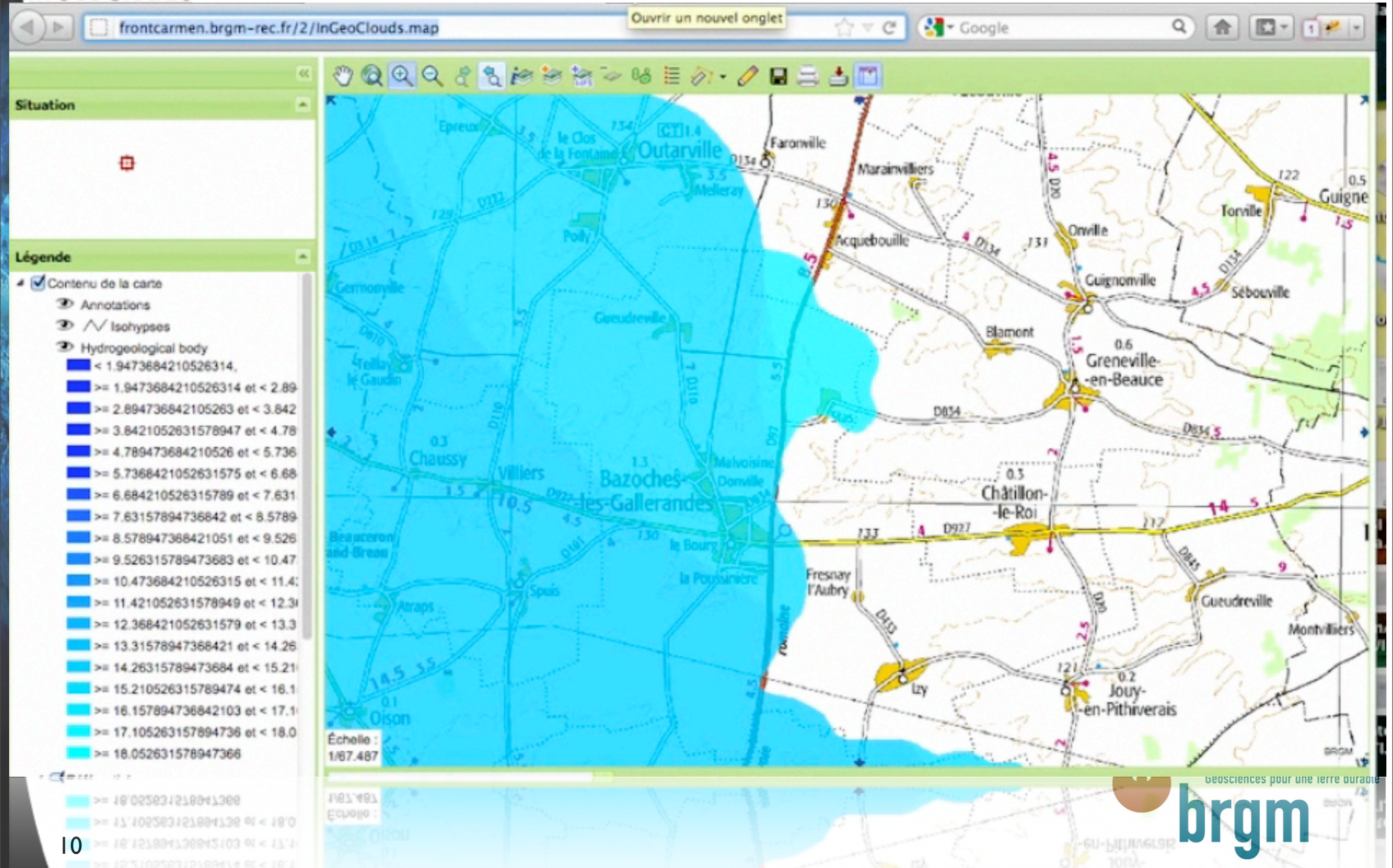
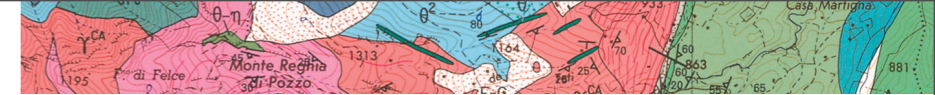
Add my map and my services as a link

Create an account on the platform



InGeoCloudS

From data to the map



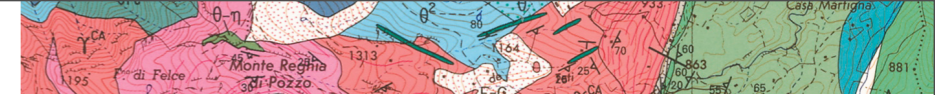


Automatisation the INSPIRE compliance (as soon as possible)



- Metadata creation and INSPIRE compliance test
- OGC:WMS service compliance with INSPIRE
- OGC:WFS service (INSPIRE requirements)
- Download services (direct download)
- Test bed for data model

INSPIRE functionalities



admincarmen.brgm-rec.fr/HTML_PRIVATE/index.php

Google

Paramètres généraux

Gestion de la carte

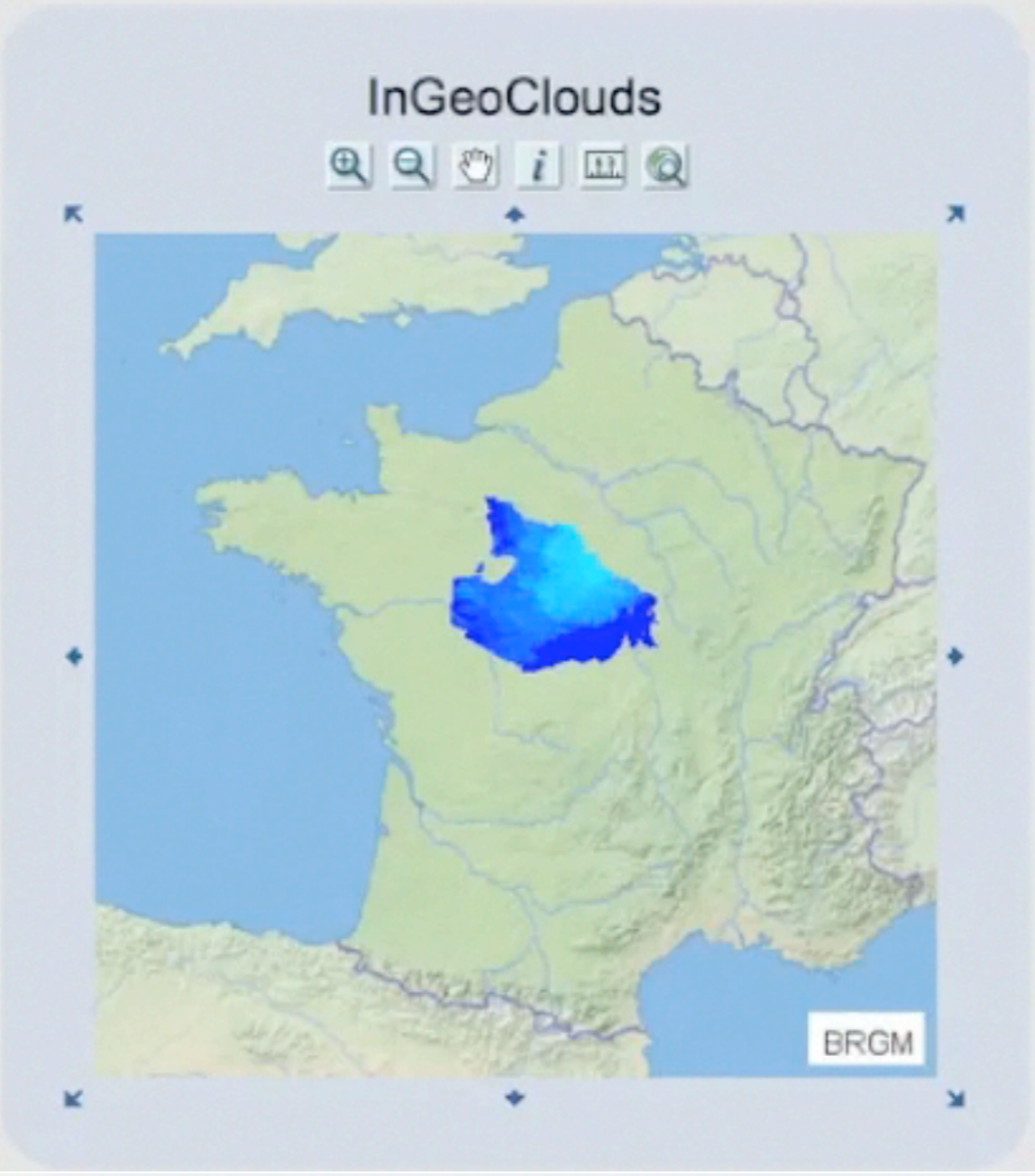
- Paramètres de la carte
 - Sécurité
 - Organisation de la légende
 - Organisation de la légende d'impression
 - Taille de l'image
 - Étendue de la carte
 - Vue globale
 - Éléments additionnels
 - Autres paramètres

Gestion des couches


- Couches de la carte
 - Isohypses
 - Hydrogeological body
 - Scan 1/25 000 Topographique
 - Scan 1/100 000
 - Carte du monde au 1/1 000 000
 - Carte du monde au 1/10 000 000
 - Carte du monde au 1/50 000 000

Carte

InGeoClouds




Localisation



Légende

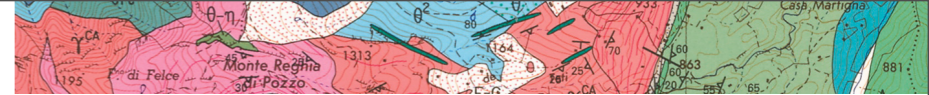
- Tous les thèmes
- Isohypses
- Hydrogeological body
 - < 1.9473684210526314
 - >= 1.9473684210526314 et < 2.894736842105263
 - >= 2.894736842105263 et < 3.8421052631578947
 - >= 3.8421052631578947 et < 4.789473684210526
 - >= 4.789473684210526 et < 5.7368421052631575
 - >= 5.7368421052631575 et < 6.684210526315789
 - >= 6.684210526315789 et < 7.631578947368421
 - >= 7.631578947368421 et < 8.5789473684210526
 - >= 8.5789473684210526 et < 9.526315789473684
 - >= 9.526315789473684 et < 10.473684210526315
 - >= 10.473684210526315 et < 11.421052631578949
 - >= 11.421052631578949 et < 12.368421052631579
 - >= 12.368421052631579 et < 13.31578947368421
 - >= 13.31578947368421 et < 14.26315789473684
 - >= 14.26315789473684 et < 15.210526315789474
 - >= 15.210526315789474 et < 16.157894736842103
 - >= 16.157894736842103 et < 17.105263157894736
 - >= 17.105263157894736 et < 18.052631578947366
 - >= 18.052631578947366 et < 19.000000000000000
 - >= 19.000000000000000 et < 20.000000000000000
 - >= 20.000000000000000 et < 21.000000000000000
 - >= 21.000000000000000 et < 22.000000000000000
 - >= 22.000000000000000 et < 23.000000000000000
 - >= 23.000000000000000 et < 24.000000000000000
 - >= 24.000000000000000 et < 25.000000000000000
 - >= 25.000000000000000 et < 26.000000000000000
 - >= 26.000000000000000 et < 27.000000000000000
 - >= 27.000000000000000 et < 28.000000000000000
 - >= 28.000000000000000 et < 29.000000000000000
 - >= 29.000000000000000 et < 30.000000000000000
 - >= 30.000000000000000 et < 31.000000000000000
 - >= 31.000000000000000 et < 32.000000000000000
 - >= 32.000000000000000 et < 33.000000000000000
 - >= 33.000000000000000 et < 34.000000000000000
 - >= 34.000000000000000 et < 35.000000000000000
 - >= 35.000000000000000 et < 36.000000000000000
 - >= 36.000000000000000 et < 37.000000000000000
 - >= 37.000000000000000 et < 38.000000000000000
 - >= 38.000000000000000 et < 39.000000000000000
 - >= 39.000000000000000 et < 40.000000000000000
 - >= 40.000000000000000 et < 41.000000000000000
 - >= 41.000000000000000 et < 42.000000000000000
 - >= 42.000000000000000 et < 43.000000000000000
 - >= 43.000000000000000 et < 44.000000000000000
 - >= 44.000000000000000 et < 45.000000000000000
 - >= 45.000000000000000 et < 46.000000000000000
 - >= 46.000000000000000 et < 47.000000000000000
 - >= 47.000000000000000 et < 48.000000000000000
 - >= 48.000000000000000 et < 49.000000000000000
 - >= 49.000000000000000 et < 50.000000000000000

BRGM

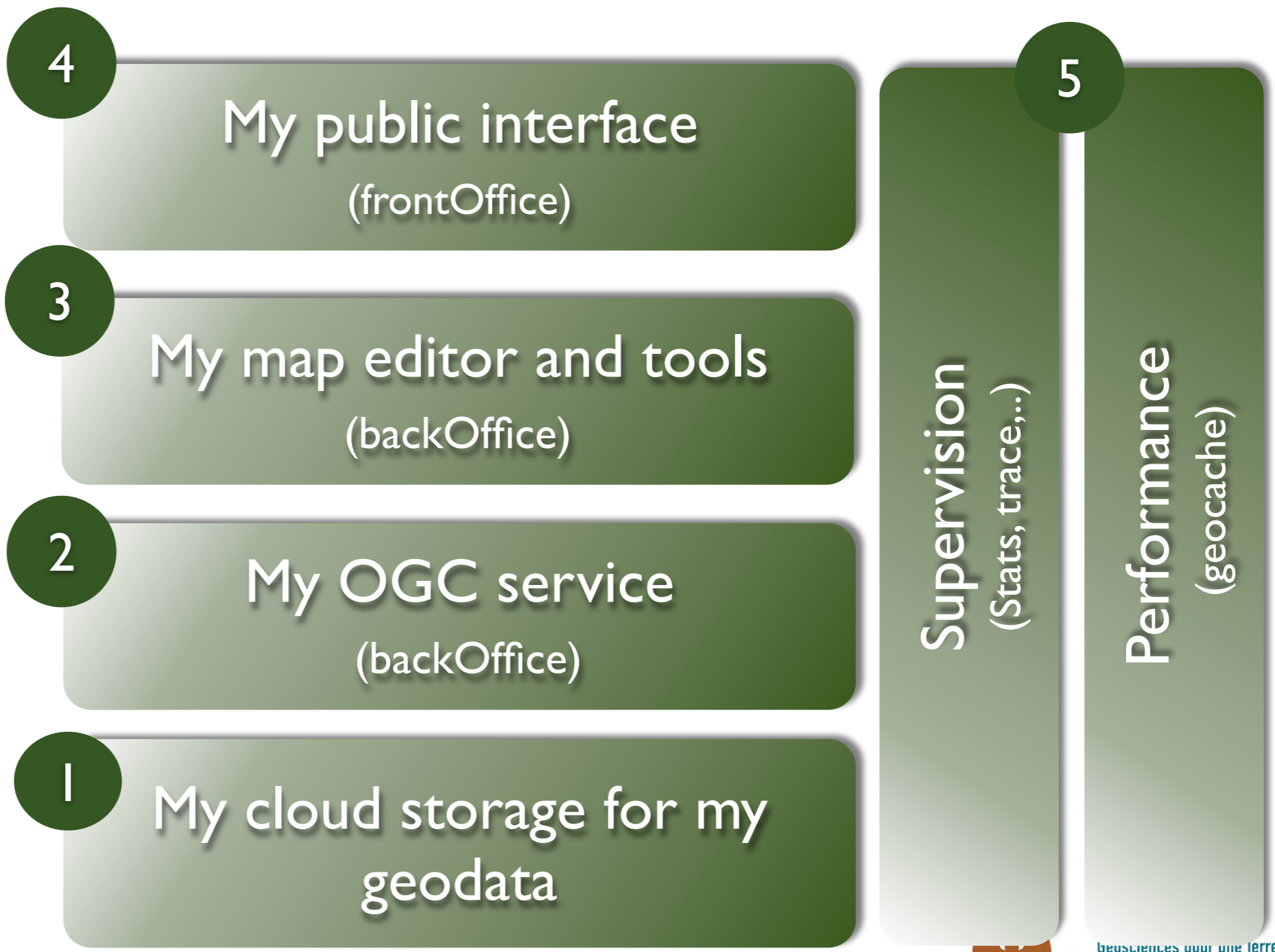
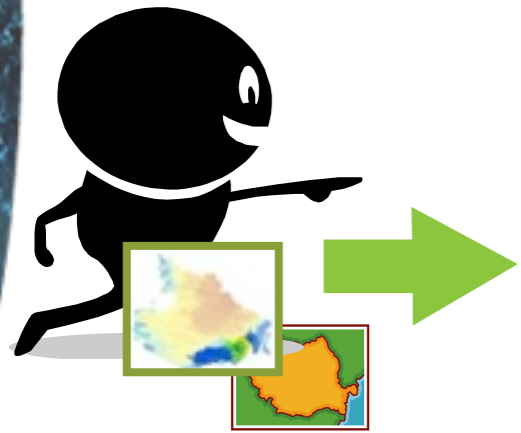


Opportunities to « create values» with geo (big) data

- offers to reference data and maps in a unique catalog to users (the «InGeoClouds catalog» with CSW harvest)
- Allows the aggregation of different public data published with automatic process (identical dataset)
- Indexes geodata and attributes published by all producers (big data)
- Depends on the business model (free/ pay-for-use)



A cloud infrastructure to manage the evolution of the geo-platform



Interest of a cloud infrastructure



- Manage the evolution of the provider's accounts
- Automatically manage the user's demand
- Allow the pooling of resources, in particular WMS/WFS, cache components
- Simplify the update of tools and software

Progress of the project...

- In France, a technical solution is available (Ministry of Environment / BRGM) : CARMEN (carmen.naturefrance.fr) as opensource project deployed in the BRGM's infrastructure
- InGeoClouds could be an opportunity to :
 - Push the technical solution in a cloud infrastructure
 - Add new functionalities
 - Propose the service in different needs at local, national and european level and R&D projects
 - Define a business model



InGeoCloudS
Inspired GEOdata CLOUD Services



Questions ?

