

# Open Source Location Intelligence



**Geo** *BI*  
initiative

# GeoBI Initiative

the open source location  
intelligence ecosystem

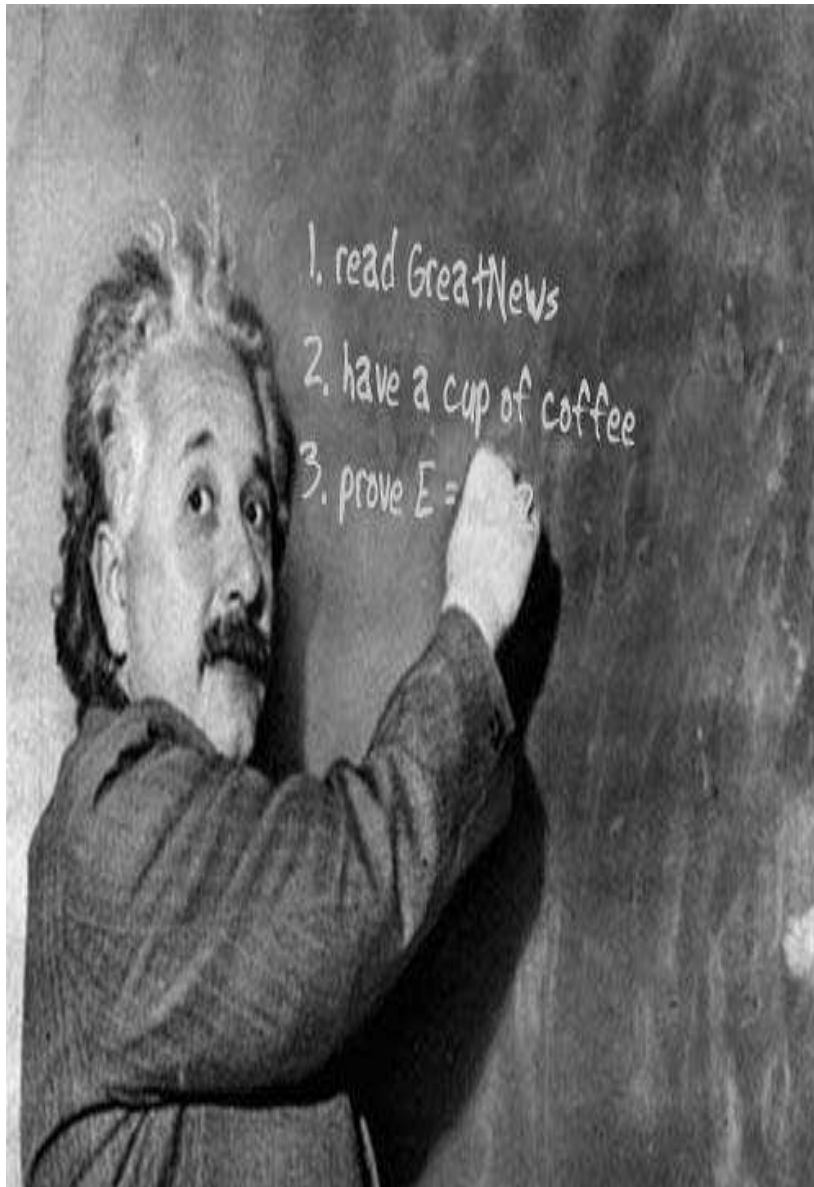
*andrea.gioia (AT eng.it) - Engineering*

*yves.jacolin (AT camptocamp.com) – Camptocamp*

November 9, 2010 - Grenoble



# Agenda



## Location Intelligence

- Short intro

## GeoBI Initiative

- What (mission & principles)
- Why (driver, barrier & goals)
- Who (members)
- When (Birthdate & roadmap)

## DEMO

- GeoReport
- GeoOlap

## Before to start...



*Aldo Risolvo on Flickr : <http://www.flickr.com/photos/cataldo/100933415/>*

## ...what is Location Intelligence?

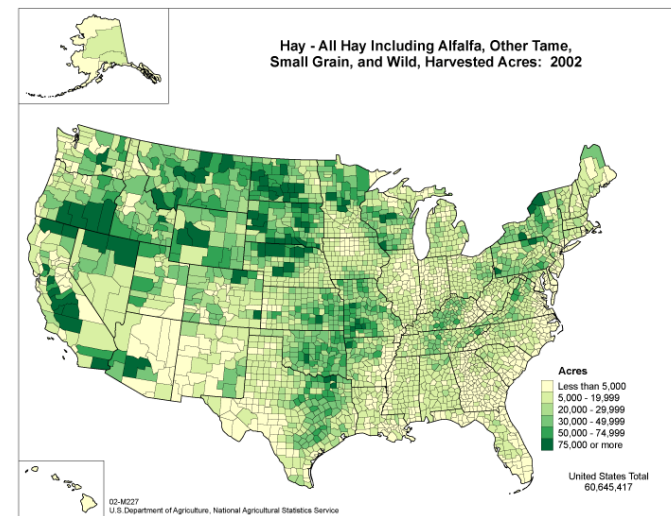
**Location Intelligence** is the capacity to **combining spatial data** with other **business data** in order to gain critical insights, **make better decisions** and optimize important processes and applications



Source: [http://en.wikipedia.org/wiki/Location\\_intelligence](http://en.wikipedia.org/wiki/Location_intelligence)

## Example: thematic maps

Thematic maps are maps that tell a story **about a place** more than merely describe where something is located **in space**



Source: *From Place to Space: The Psychological Achievement in Thematic Mapping*, Barbara Petchenik. 1979 - American Cartographer 1 Barbara Petchenik (1979).

# #1 - WHAT



Reynolds on Flickr : <http://www.flickr.com/photos/lwr/4519785041/>

**GeoBI Initiative** is an open community (composed by companies, organizations, and individuals) built upon a common aim:

**make open source Location Intelligence adoption pervasive**



## Key Principles

All members shares the following key principles:

- new value proposition
- separation of concerns
- incremental growth
- low TCO



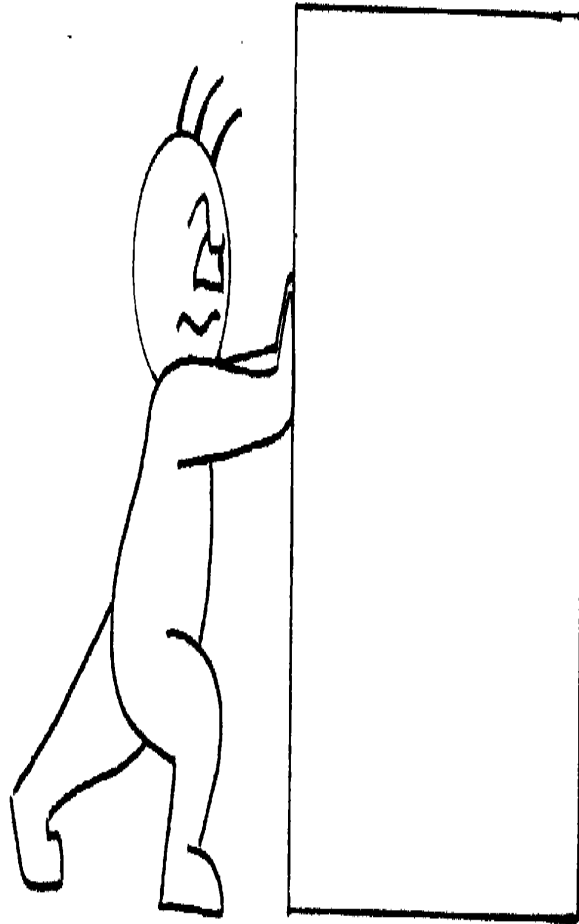
*Brenda Clarke on Flickr : <http://www.flickr.com/photos/brenda-starr/3509344402/>*

## #2 - WHY



Reynolds on Flickr : <http://www.flickr.com/photos/lwr/3940744688/>

## Internal drivers (there's the market)



Growing **awareness** of location-enabled services

**Spatial** data are **pervasive**

*“80% of all data stored in corporate databases have a spatial component”*

An introduction to GIS: linking maps to databases -  
Franklin&AI.

**Better** business **decisions**

*“Everything is related to everything else, but near things are more related than distant things”*



First law of geography - Waldo Tobler

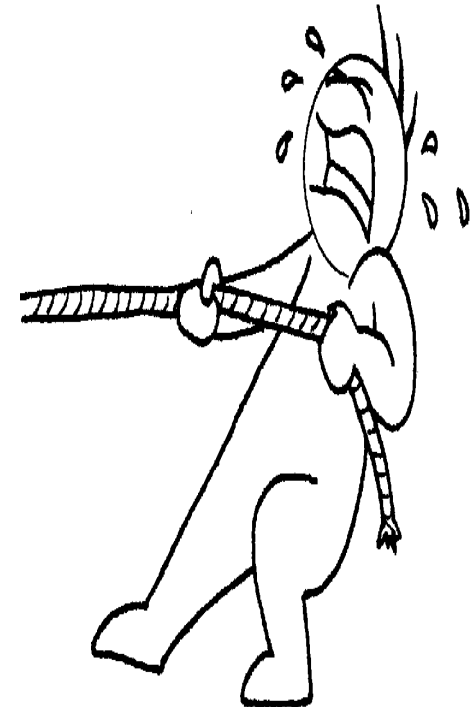
**Valorize a dormant asset**

# External drivers (there's the technology)

## Standards

### SW Repository

Presentation Layer	   
BI Suite	
Analytical Engines	 
Service Layer	 
Spatial DBMS	 
Spatial ETL	 
Spatial Data	



...but there are also barriers :(



JarkkoS on Flickr : <http://www.flickr.com/photos/jarkkos/424291584/>

# Lack of integration

## Strategical barrier



It's not easy to **balance**  
cooperation at the **technology** level  
and  
competition at the **market** level

## Cultural barrier



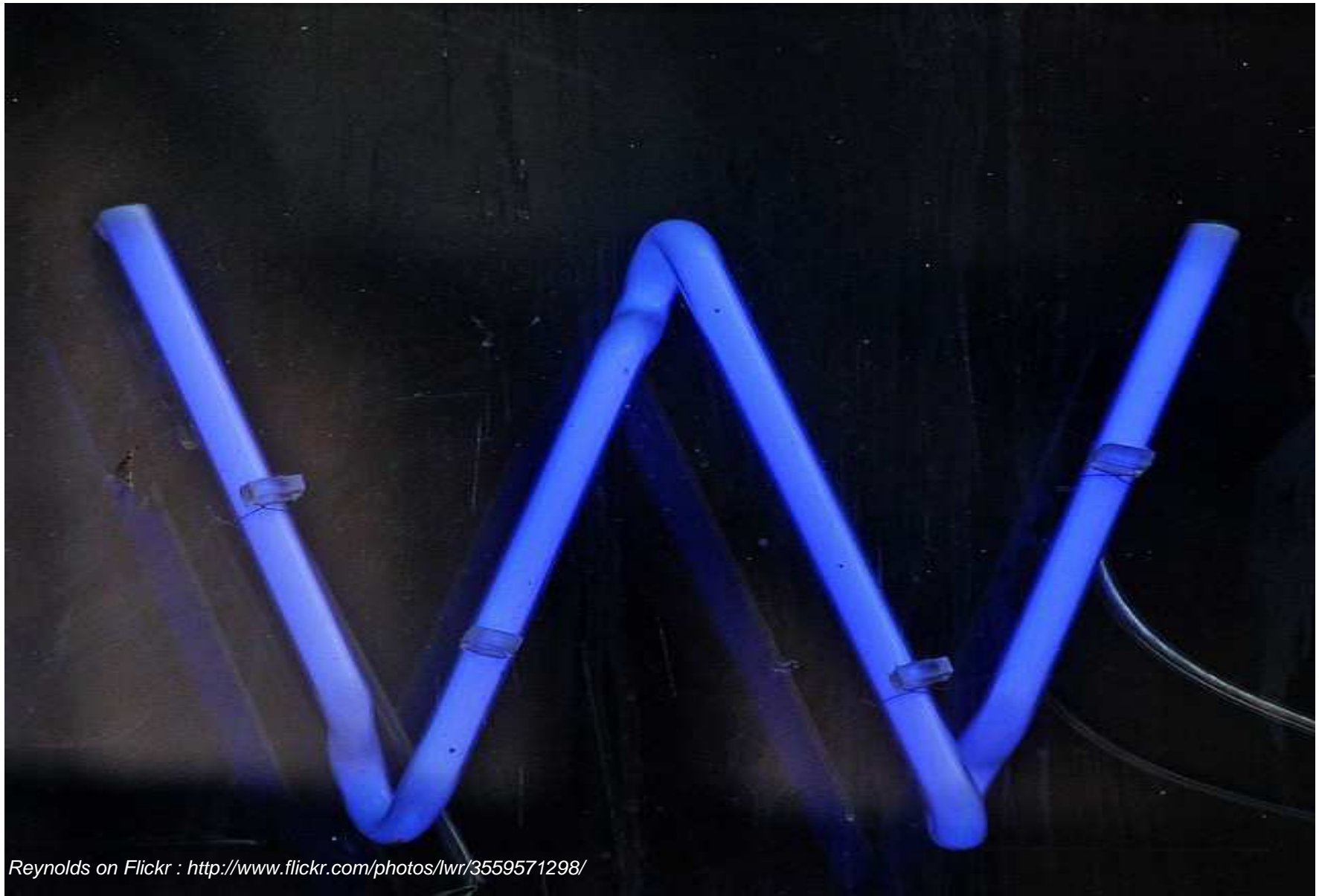
Geo and BI  
**two world coming**  
**together**  
(ignorance & misperceptions)

# GeoBI Initiative has been set up to

- **improve** the coordination work in the LI area
- **disseminate** BI & GIS knowledge
- **promote** BI & GIS integration
- **strengthen** connections among members
- **create** a research network
- **turn** research results into applications.

**Break LI adoption/integration barriers  
through  
integration & evangelization**

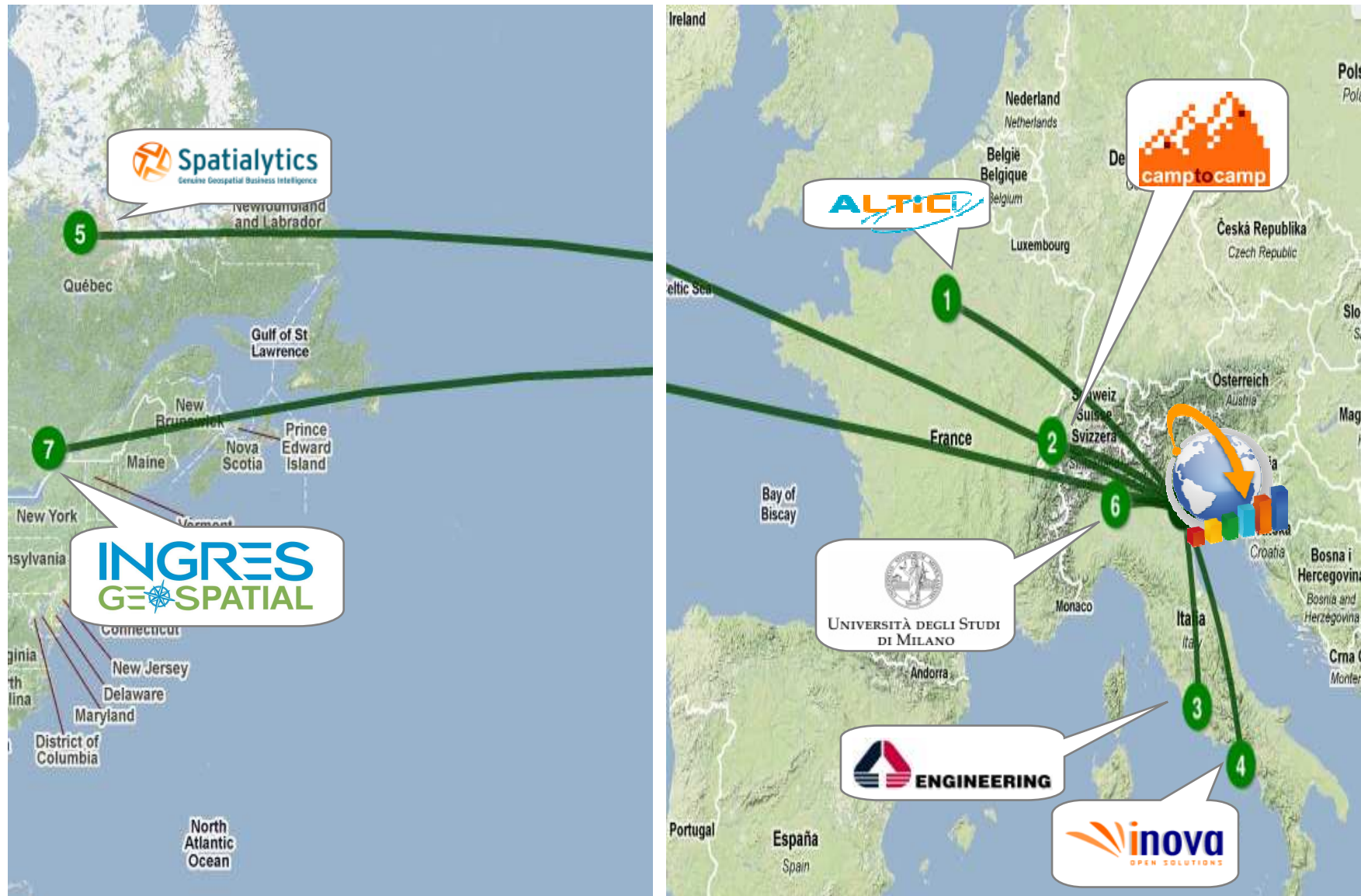
## #3 - WHO



Reynolds on Flickr : <http://www.flickr.com/photos/lwr/3559571298/>



# Geographical map



Source: <http://www.sourcemap.org/object/geobi-initiative>



# Technological map

## Standards

### SW Repository

Presentation Layer



BI Suite



Analytical Engines



Service Layer



Spatial DBMS



Spatial ETL



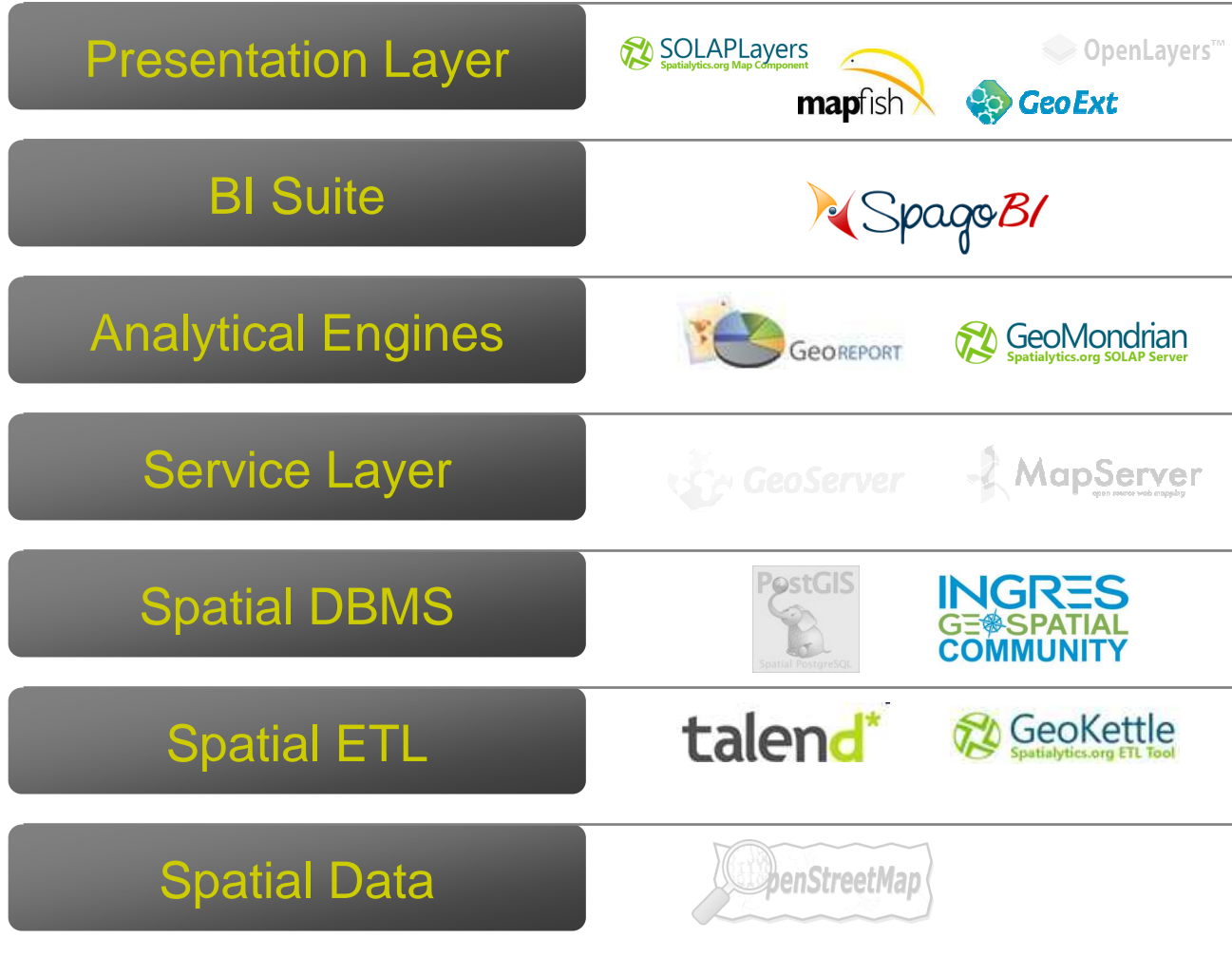
Spatial Data



# Technological map

## Standards

### SW Repository



# New members are welcome!



Tom Magliery on Flickr - <http://www.flickr.com/photos/mag3737/1914076277/>

## #4 - WHEN



takomabelot on Flickr : <http://www.flickr.com/photos/takomabelot/2604494470>

7/7/2010

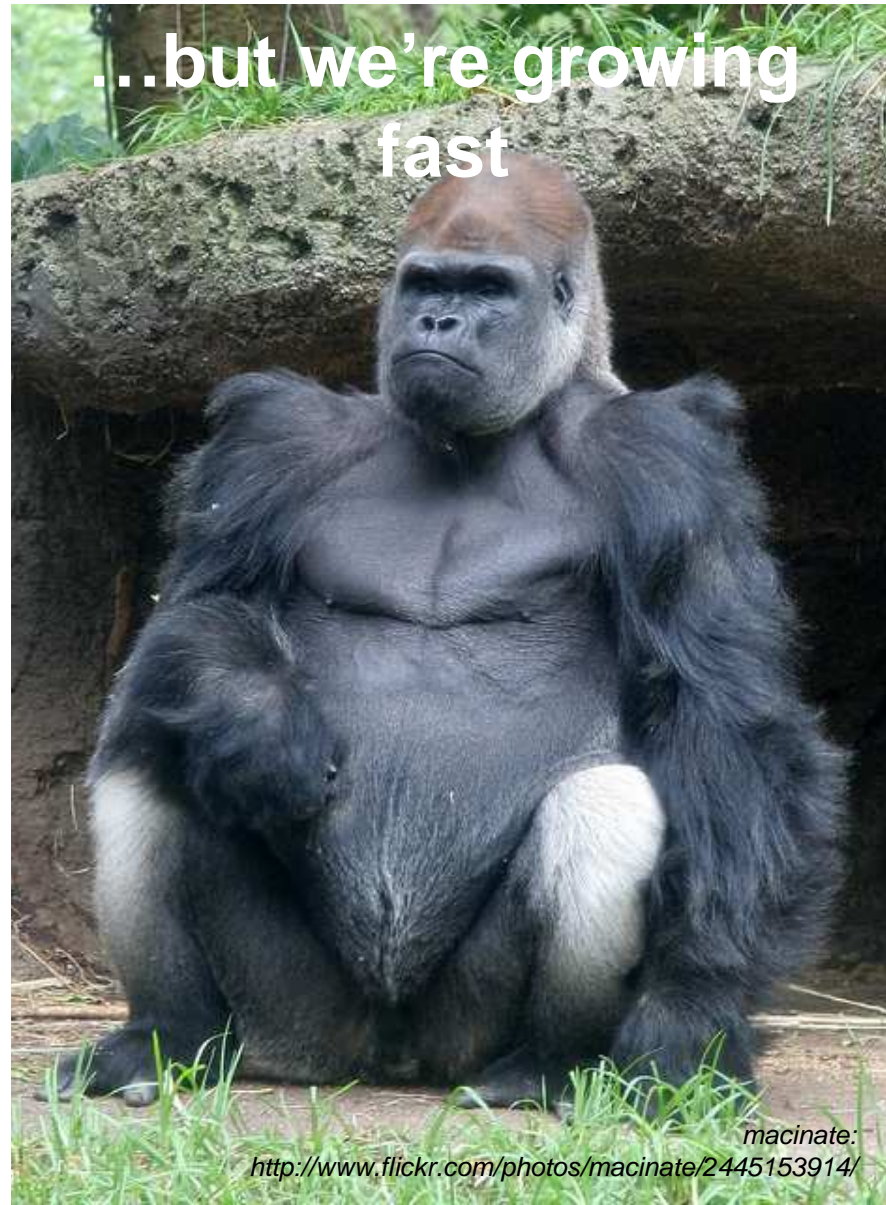
We're just born...



Masashi Mochida:

<http://www.flickr.com/photos/41460120@N04/4808158366/in/photostream/>

...but we're growing fast



macinate:

<http://www.flickr.com/photos/macinate/2445153914/>

# Roadmap

## Members:

- GeoExt 1.0
- Ingres 10.1
- SOLAP Layers 2.0
- SpagoBI 3.0 (GeoMondrian & GeoReport)
- Gèo+

## Initiative:

- Call for participation
- Webinars & whitepapers
- Events

# DEMO



National Library NZ on The Commons on Flickr :  
[http://www.flickr.com/photos/nationallibrarynz\\_commons/3326203787](http://www.flickr.com/photos/nationallibrarynz_commons/3326203787)



## DEMO1: GeoReport

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**GeoRreport** is a geographical extension of traditional reporting systems.

It allows to **plot every kind of dataset directly on a map** (i.e. multidimensional data model is not required)

## DEMO1: GeoReport an example of collaboration

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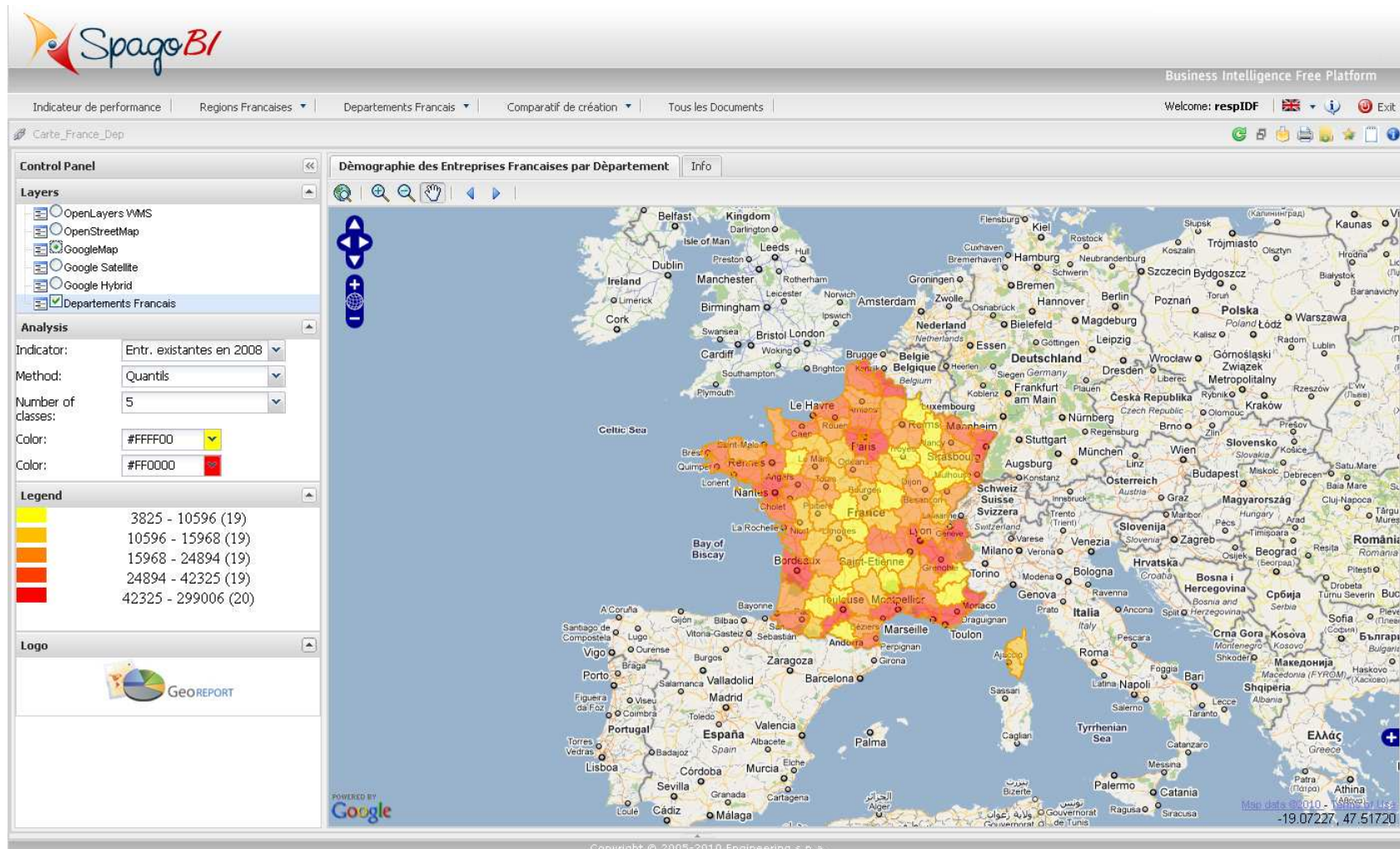
Originally created by **INOVA**

Based on **Mapfish** and **GeoExt** projects backed by **Camptocamp**

Integrated into **SpagoBI Suite** by **Engineering**

The **demo** I'm going to show has been made by **Altic**

# DEMO1: GeoReport in action



# DEMO1: GeoReport in action

The screenshot displays the SpagoBI Business Intelligence Free Platform interface. The main window shows a map of France with a data popup for the department of Seine-et-Marne. The popup contains the following information:

- Nom du département : SEINE-ET-MARNE
- Entr. existantes en 2008 : 47 168
- Eses crées en 2008 : 5 699
- Taux de création d'entr. en 2008 : 12.08 %

Below this information is a legend titled "TCE08DEP" with a color scale ranging from 6 to 18. The legend shows five color-coded categories:

Color	Range	Count
Yellow	3825 - 10596	(19)
Orange	10596 - 15968	(19)
Red-Orange	15968 - 24894	(19)
Red	24894 - 42325	(19)
Dark Red	42325 - 299006	(20)

The interface also includes a Control Panel on the left with layers (OpenLayers WMS, OpenStreetMap, GoogleMap, Google Satellite, Google Hybrid, Departements Français) and analysis settings (Indicator: Entr. existantes en 2008, Method: Quantils, Number of classes: 5, Color: #FFFF00, Color: #FF0000). The bottom of the screen shows the SpagoBI logo and the text "Open Source Business Intelligence".

## DEMO2: GeoOLAP

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GeoOLAP is a geographical extension of traditional OLAP systems.

It allows to **dynamically slice, dice and drill through data** (i.e. multidimensional data model is required)


## DEMO2: GeoOLAP an example of collaboration

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Demo made by **Camptocamp**

Based on **GeoMondrian** projects backed by  
**Spatialytics**

# DEMO2: GeoOLAP in action



European Environment Agency

**Spatial dimension(s)**

SEA BASINS ▾

All members

➕ Add new dimension ▾

**Thematic dimension(s)**

LCF LEVEL 1 ▾


All members


➕ Add new dimension ▾

**Measure**

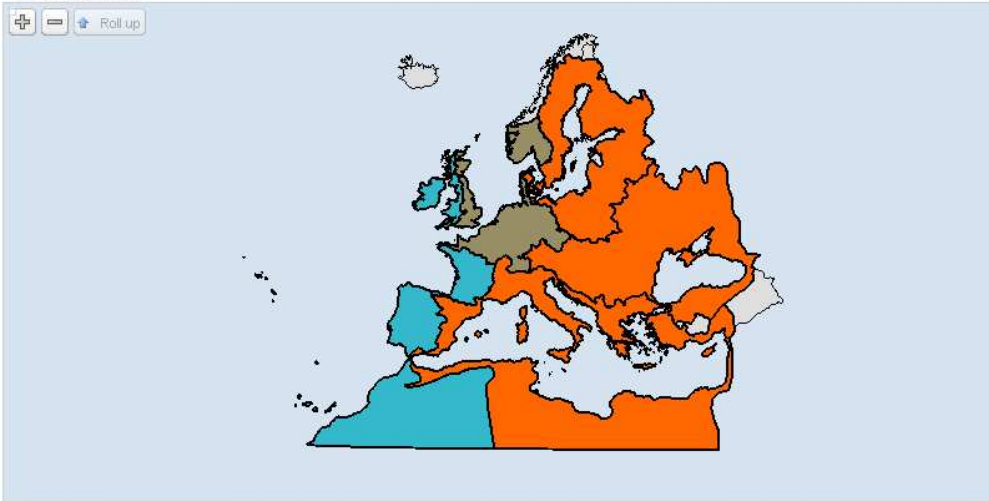
AREAHA ▾

Relative values (%)

 Execute query

 Export as PDF ▾

Change map style ▾




Choropleths:

- 376,457 to 470,358
- 470,358 to 564,259
- 564,259 to 658,160
- 658,160 to 752,061
- 752,061 to 845,962

SEA BASINS	Agriculture internal conversions	Changes of Land Cover due to natural and multiple causes	Conversion from other land cover to agriculture	Forests creation and management	No	MeasuresLe
						AREAHA
						LCF LEVEL
Atlantic Ocean	845,962	150,543	313,473	2,117,797	81,	
Baltic Sea	444,427	16,689	8,097	423,087	54,	
Black Sea	376,457	26,489	24,294	668,239	63,	
Mediterranean Sea	460,460	191,638	109,691	627,962	79,	
North Sea	621,639	67,090	28,425	493,397	69,	

# DEMO2: GeoOLAP in action



European Environment Agency

**Spatial dimension(s)**

NUTS LEVEL 0 ▾

➕ Add new dimension ▾

**Thematic dimension(s)**

LCF LEVEL 1 ▾

*All members*

➕ Add new dimension ▾

**Measure**

AREAHA ▾

Relative values (%)

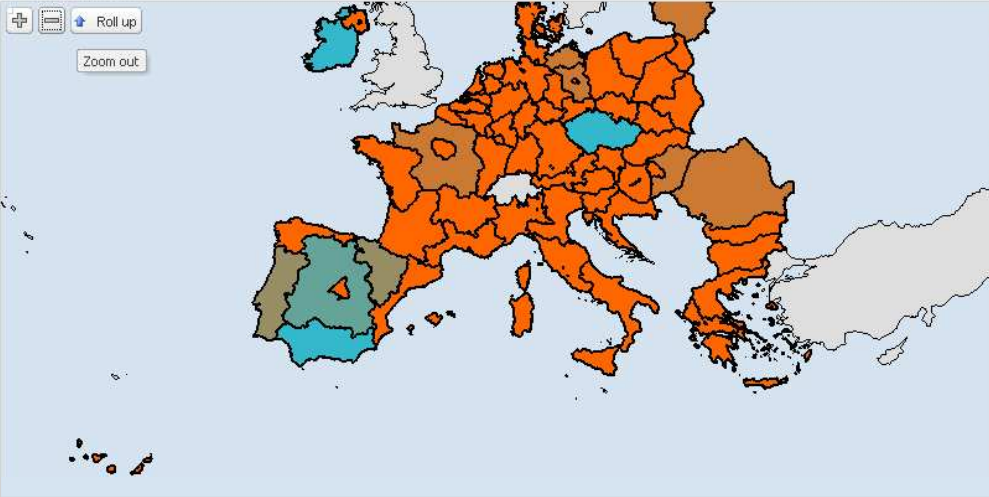
Execute query

Export as PDF ▾

Change map style ▾

Roll up

Zoom out



**Choropleths:**

- 1 to 60,628
- 60,628 to 121,255
- 121,255 to 181,882
- 181,882 to 242,509
- 242,509 to 303,136

NUTS LEVEL 1 ▾	Agriculture internal conversions	Changes of Land Cover due to natural and multiple causes	Conversion from other land cov
AT1 OSTÖSTERREICH	804		34
AT2 SÜDÖSTERREICH	170		1,405
AT3 WESTÖSTERREICH	135		9,033
BE1 RÉGION DE BRUXELLES-CAPITALE / BRUSSELS HOOFDSTEDELIJK GEWES			
BE2 VLAAMS GEWEST	2,267		1,433
BE3 RÉGION WALLONNE	6,460		269
BG1 SEVERNA BULGARIA	13,612		288
BG2 YUZHNA BULGARIA	31,060		1,151
CH0			
CY0 KYPROS / KIBRIS			
CZ0 CESKA REPUBLIKA	298,711		1,443
DE1 BADEN-WÜRTTEMBERG	23,565		61
DE2 BAYERN	23,928		3,625





# Thanks



## Links



[www.slideshare.net/spagoworld](http://www.slideshare.net/spagoworld)

[www.geobi.org](http://www.geobi.org)

[www.camptocamp.com](http://www.camptocamp.com)

[www.spagobi.org](http://www.spagobi.org)

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