

Diapositive 1

**FRENCH SPATIAL DATA INFRASTRUCTURES:  
A FOCUS ON USE**

PRELIMINARY RESULTS FROM THE GEOBS PROJECT

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Financial partners : Région Nouvelle Aquitaine, CNRS, Université de Bordeaux Montaigne

Good afternoon everyone,  
This presentation deals with the **the french SDIs and their users**  
**It will present the preliminary results produced by the GEOBS project.**  
The team is made up of 17 researchers from various french institutions  
**As for me**, my name is JGC and I'm a Research fellow at the French National Centre for Scientific Research (CNRS) located in Bordeaux, france

Diapositive 2

**WHY A RESEARCH PROJECT ABOUT FRENCH SDIs?**  
**WHY A FOCUS ON SDIs USE?**

Why do we conduct the research project GEOBS about the french SDIs with a focus about sdis' use ?

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**THE NATIONAL CONTEXT**

LARGE NUMBER OF FRENCH SDIs

22 regions

CURRENT TERRITORIAL REFORM THAT MERGES 22 REGIONS INTO 13

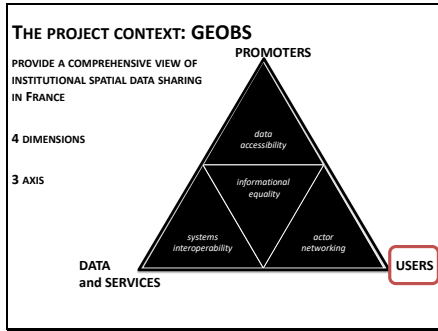
13 regions

National and sub-national SDIs in European Union member states from 2009 to 2011 (Source: EUROGI/eSDI-net 2014)

→ COMPLEX SPATIAL INFORMATION UNIVERSE  
COMPRISING REDUNDANCIES, MERGES, COMPETITION

**The reasons are mainly** to be found in the french context  
Compared to other members state in the European Union, France is unusual in its large number of SDIs  
In addition, the current territorial reform is currently merging the 22 previous regions into 13.  
These characteristics lead to a complex spatial information universe comprising redundancies, merges and, of course, competition

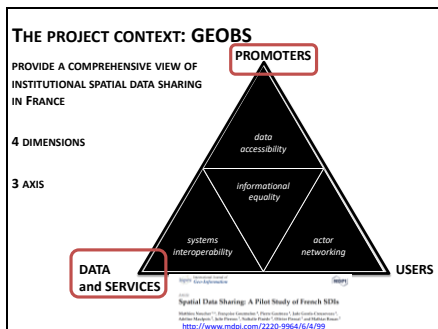
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In the context we talk about, GEOBS wants to provide a comprehensive view of institutional spatial data sharing in France based on four dimensions: data accessibility, interoperability of information systems, actor networking, and informational equality in the regions.

This goal lead to consider the data and the services provided by the SDIs, the users and their practices as well as the strategies of the promoters  
this presentation is restricted to the study of SDIs use

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In the context we talk about, GEOBS wants to provide a comprehensive view of institutional spatial data sharing in France based on four dimensions: data accessibility, interoperability of information systems, actor networking, and informational equality in the regions.

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However, results about the others axis are already available, in particular in the article recently published in the ISPRS journal

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**FOCUS ON SDIs USE**

**JUSTIFIED BY:**

- LOW ATTENTION TO THE STUDY OF SDI USERS
- SDIs ARE LARGE AND COMPLEX WEB-BASED SYSTEMS
- SOCIAL AND TECHNICAL COMPONENTS

**RESEARCH QUESTIONS:**

- WHO ARE THE USERS?
- WHAT KIND OF SDIs DO THEY USE?
- HOW DO THEY USE SDIs?
- WHAT ARE THE CHANGES OVER TIME?

The focus on SDIs use is **justified by the fact that** low attention is given to the study of SDI users.

This can be partly explained by the fact that SDIs are large and complex web-based systems that combine social and technical components.

This part of the Geobs project aims to answer the following research questions

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**FOCUS ON SDIs USE**

**DATA COLLECTION:** ONLINE SURVEYS IN 2012 AND 2017 BASED ON SIMILAR QUESTIONS

**DATA ANALYSIS:** SOCIAL NETWORK ANALYSIS

**USERS CONSIDERED:** PUBLIC BODIES WORKING FOR ENVIRONMENTAL MANAGEMENT (GOVERNMENT SERVICE, LOCAL AUTHORITY, PUBLIC INSTITUTION...)

CORPUS:	2012	2017	in common
SDIs	141	99	29
Users	446	256	unknown

It is based on online survey conducted in 2012 and 2017 and analysed with the social network analysis

The users considered by our study are from public bodies working for environmental management

In twenty twelve The online survey has generated a data base of four hundred and forty six users who identify one hundred and forty one SDIs

In Twenty seventeen the data base is made of two hundred and fifty six users who identify 99 SDIs, including twenty nine common sdis already mentioned in the survey of twenty twelve

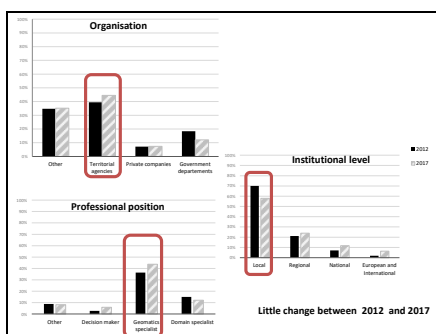
As the survey is anonymous, it is not possible to know the number of users who participated in 20 12 and 17

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**WHO ARE THE USERS?**  
**WHAT ARE THE CHANGES BETWEEN 2012 AND 2017?**

In the sections below, we will try to answer the research questions about the user axis

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The users are mainly civil servants from **territorial agencies**  
 They are involved in sub-national institutional levels (i.e., local, regional, national) and (3) they are mainly **Geomatics Specialist**  
 We can see that these characteristics are very stable between twenty twelve and Twenty seventeen

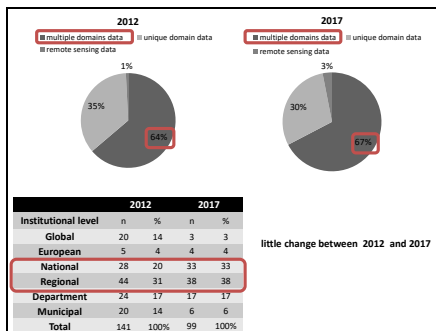
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WHAT KIND OF SDIs DO THE USERS USE?

WHAT ARE THE CHANGES BETWEEN 2012 AND 2017?

As for the SDIs and the changes,

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The SDIs identified by the users are infrastructures providing various data within diverse domains  
They are implemented mainly at national and regional levels  
againThe data show relatively small changes

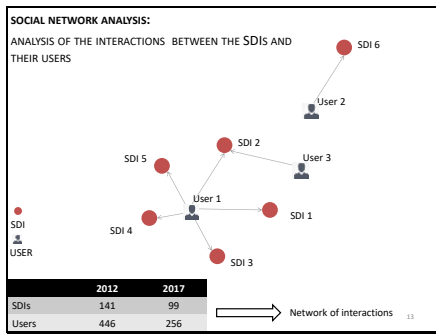
Diapositive 12

HOW DO THE USERS USE SDIs?

WHAT ARE THE CHANGES BETWEEN 2012 AND 2017?

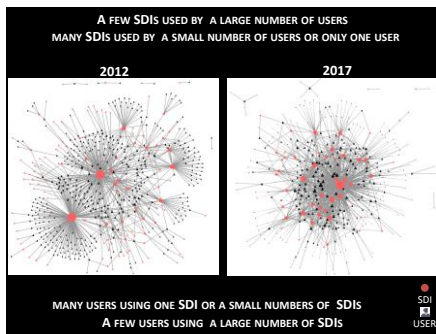
In order to explore how do the users use SDIs,  
a

Diapositive 13



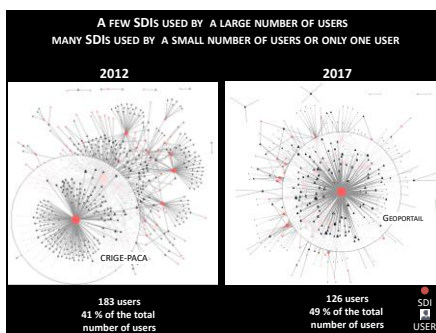
We have analysed the database with a social Network Analysis (SNA) allows the exploration of SDIs use based on properties that emerge from the network of interactions between the SDIs and their users.

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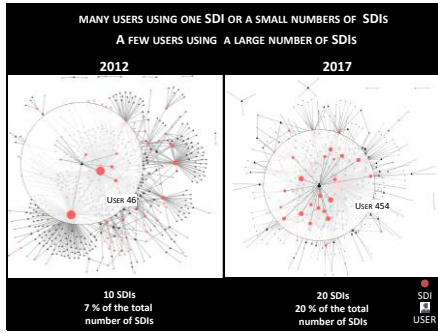
We can see these networks with the SDIS in red and the users in back. By measuring the number of connexions of each node, we can see that a few SDIs are connected with a large number of users, while many SDIs are used by a small number of users. On the user' side, It appears that many users are using one SDI or a small numbers of SDIs and A few users are using a large number of SDIs

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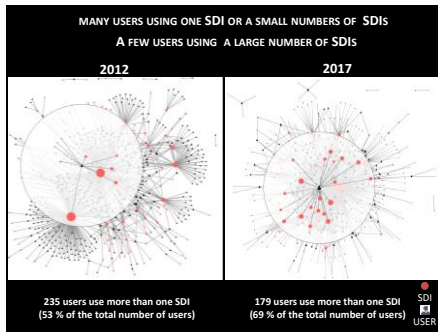
By Taking a closer look at the graph we can identify the most important SDIs, that is, the ones having a high number of users, such as CRIGE PACA and the GEOPORTAIL which is the most connected SDIs in 2012 and in 2017

Diapositive 16



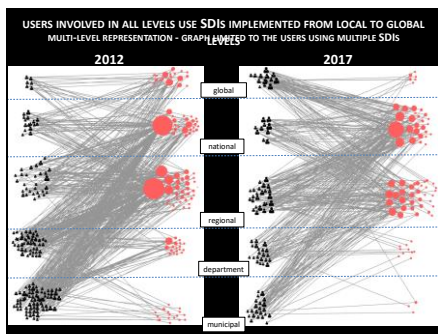
a closer look at the graph allows us also to identify the users using a high number of SDIs like the user N°46 using 10 SDIs (accounting for 7% of the total SDIs in 2012) or the user N°454 using 20 SDIs (accounting for 0.5% of the total SDIs in 2012)

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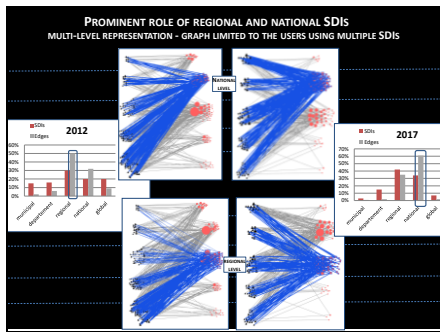
Even if a small majority of user combined multiples SDIs in 2012, 5 years later this trend appears to strengthen. Almost 70% of the users combine multiple SDIs

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These figures present networks representations where the nodes are all grouped at the institutional level in order to reveal the respective importance of each level. It is limited to the users using multiple SDIs. It appears that users involved in all levels use SDIs implemented from local to global levels.

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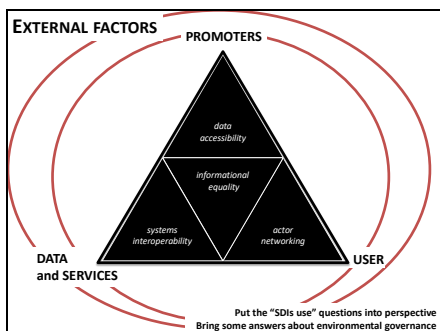


In particular the prominent role of national and regional SDIs can be clearly observed

In 2012, Multi-level representations highlight the important role of regional SDIs considered as the key level for the successful implementation of the INSPIRE Directive in the French national context.

In 2017, national SDIs are the most important, as more than 60 % of the network edges connect a user to a national SDI

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additional analyzes are currently under way in order to integrate information about interoperability, accessibility, actor networking, as well as the external factors such the current territorial reform

In this way, it will put these questions into perspective and bring some answers about environmental governance

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**THANKS FOR YOUR ATTENTION**

FOR MORE INFORMATION: <http://geobs.cnrs.fr>  
<http://www-ueem.univ-brest.fr/pops/projects/geobs>

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Logos for UMR 5319 Passages (Bordeaux), UMR LETG (Brest), UMR PRODIG (Paris), UMR LaBRI (Bordeaux), and EA MICA (Bordeaux).

Thanks for you attention