

Review of sub-National SDIs in France

An outcome of the eSDI-Net+ project

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Abstract

The eSDI-Net+ project is about establishing "a European Network on Geographic Information Enrichment and Reuse". The Network is for the promotion of cross border dialogue and exchange of good practices on Spatial Data Infrastructures (SDIs) throughout Europe. It is about to get SDIs officers together. It meets the need to build a forum for the many initiatives and SDI stakeholders across Europe especially acting on local level.

A guideline for common parameters useful to assess SDI initiatives has been developed under the EUROGI leadership. National and application oriented SDIs have been characterised accordingly. The focus is on common issues, usability and socio economic impact of SDI and addresses the integration of SDI's and e-government policies. The methodology documents several key SDI questions that each sub-national SDI, identified by the national level, had to elaborate on. Seven categories exist: SDI identity card, SDI usage, networking people, socio-economic impact analysis, organisational aspects, coping with legal aspects and Technical functionalities-facilities-components.

Each national study serves identifying what is happening sub-nationally in the member states, what are the sub-national SDI's, what are the underlying business models, the organisational model etc.

This method has been applied to describe 49 SDI being implemented in France either at a thematic or local government level. The paper briefly presents the method and largely draw the picture of these French SDIs, their differences and similarities. It concludes on further research that emerges.

Keywords: local governments, SDI assessment, France, EUROGI

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1. ABOUT eSDI-Net+

1.1 Objectives

The objectives of eSDI-NET+ is to target users and bring together key European SDI stakeholders through a Thematic Network, a platform for communication and knowledge exchange at all levels, from local to global⁵.

Through the promotion of high-level decisions and technical discussion, the network will help to raise awareness of the important role SDIs play in the enrichment and reuse of geographic information (GI). In addition, eSDI-NET+ tackles the multicultural and multilingual barriers to accessing, exploiting, using and reusing GI. As a result, greater steps will be made towards interoperability through the expression of common standards between national digital collections and services, especially in cross-border contexts.

By defining and identifying examples of good practice, eSDI-NET+ integrates expert perspectives from across Europe to create synthesised SDI guidelines and standards. Through the network's membership, the gap between local and European levels will be narrowed, helping to support the better use of GI found in pan-European initiatives such as INSPIRE, GMES and GALILEO.

By mobilising such expertise, eSDI-NET+ offers the means to catalyse new initiatives, actions and services, maximising the potential of both GI and the communities it supports.

1.2 Who's who

eSDI-Net+ is a project funded by the European Commission (eContent+ programme⁶) and involves 20 partners. It started 01/09/2007 for 36 months duration. Eleven countries are represented in the consortium (Belgium, Czech Republic, Finland, Germany, Hungary, Italy, Poland, Portugal, Romania, Spain and Sweden). Several European associations are also members of the consortium (AGISEE, AGILE, EUROGI, GISIG) allowing for other organisation from other countries to get involved.

The consortium leader is the INI-GraphicsNet Stiftung an organisation that actively supports research and development, and the commercialisation of R&D results. Coordinating the network, IGS brings in its experience in dissemination and network management.

The European Umbrella Organisation for Geographic Information (EUROGI) plays in that context the specific role of bringing in the national GI associations that are among its members. Established in 1994 as a foundation under Dutch law, after a recommendation from the European Commission, who felt the need to have a single entity to deal with geographic information matters, EUROGI is an independent, non-governmental and not for profit organisation which represents the European GI community, focusing principally on its usage and the user's perspective. The mission of EUROGI is to maximize the effective use of geographic information for the benefit of the citizen, good governance and commerce in Europe and to represent the views of the geographic information community.

⁵ <http://www.esdinetplus.eu/about/objectives.html>

⁶ http://ec.europa.eu/information_society/activities/econtentplus/index_en.htm

EUROGI is the Work package 2 Leader (identification and analysis of good practices in the field of sub national SDI) and contributes actively on the development of the SDI assessment methodology, organisation, planning and realisation of national and regional workshops.

AFIGéO, the French association for geographic information is one of EUROGI members since its foundation. It shares similar objectives and took over the coordination of French activities in the frame of the project. Thus it organised the methodology application to the French situation and organised national workshops assembling sub-national SDIs representatives.

2. ASSESSING SUB-NATIONAL SDI

2.1 Developing a methodology for assessing SDI

Although some references exist to assess SDIs, (Giff 2007), no thorough methodology has been designed. The eSDI-Net+ project decided to hold an initial workshop inviting selected experts in the field in Rome 4-5 February 2008, As a result guidelines for common parameters useful to assess SDI initiatives was drafted (Salgé 2008-[1]). As an outcome a document has been produced and develops a common understanding of what a SDI is in the context for the future national workshops and the common methodology that will be used to prepare them. It has been translated into national languages in order to reach sub-national organisations. It also provides recommendations for running the national workshops.

Literature provides definitions of what a Spatial Data Infrastructure are. SDIs are quoted as “formal arrangements which main goal is to increase access and availability of geographic data across a given area” (Wikipedia 2008). More comprehensively, they are defined as “network-based solution to provide easy, consistent and effective access to GI and services by public agencies and others” (Crompvoerts 2008). The goal is for organisations to try reducing costs, to share experiences or data between themselves, to realise or to foster services for itself and for citizens, and to enhance the diffusion of public data to other stakeholders, especially private companies and citizens. The intention is to support the political, economic, social and personal developments.

SDI differs from a complex geographic information system of a territorial body as an SDI cannot operate without catalogues, assign key role to metadata and serve data to external users. It requires solving issues related to integration and harmonisation of data from different owners and data producers... Similarly Web services and Web GIS differ. The former is a mechanism over the Web offering services regarding data where the latter offers the usual GIS functionalities (mainly analysis functions) over the Web.

Extended goals of an SDI include making easier GI development and use, enhance collaboration between participants (individuals and organisations) in order to enhance the knowledge of the area and its shared comprehension. Thematic communities and communities of practice are often organised in a SDI. The SDI is something to be used at the user level.

As an SDI aims at maximizing the use of geo data sets that needs a coordinated action from government, thus a structure for promoting (geo)data sharing. The main components a SDI may provide include functions in the area of data, services and platform and functions in the area of networking people and organisation. The SDI

sustainability and the identification of SDI users are also topics that an assessment process has to consider.

2.2 Describing the eSDI-Net+ methodology for assessing SDI

In many countries, spatial data infrastructures are developed at a sub-national level. In the context of eSDI-Net+, sub-national means NUTS 1, NUTS 2, NUTS 3⁷ levels or any of their aggregations according to the administrative structure of the countries, referring to the nomenclature defined by of the European statistical office EUROSTAT. It means that SDI developed at lower levels (NUTS 4 to NUTS 6) are not considered unless they are identified as real good practice at the national level or NUTS 4 (or groups of NUTS 4) play effectively a stronger role than NUTS 3. It may exist sub-national SDIs that are not fitting with the administrative structure of the country. They will be also considered if they have either a large extension (at least as wide as a NUTS 3 area) or have a trans-national nature.

Consequently, one of the issues at the national level is how the sub-national SDIs cooperate among each other and with the national level? This process is known as the wider-interoperability of SDI's.

The methodology (Salgé 2008-[2]) identifies several key SDI questions that each sub-national SDI, identified by the national level, will have to answer. But the methodology is not a questionnaire to be blindly sent out and filled but a guideline for interviews of sub-national SDI officials and for recording the results of the national workshops. The criteria have been grouped into seven categories, each criteria corresponds to a question for which an answer is requested. As a résumé, the seven categories are as follow:

- category 1. **Administrative context and sub-national SDIs identity card:** Establishing the sub-national SDI identity card that includes objectives, mission statements and legal status.
- category 2. **SDI usage:** Assessing the sub-national SDI usage which includes the semantic issue as a matter of understanding the thematic questioning coming from the "thematicians" (e.g. land planner, ecologist, transporters, etc.) and see how GI assist them in answering. The thematicians have done their job for many years and they are not persuaded that the GI technology may assist them. Who will take the responsibility to spend money in that effort to bring together the two communities (community of practice, GI community). It is important to know how the sub-national SDI copes with the issue of liasing with community of practices.
- category 3. **Networking people:** Networking people is an issue that relates to the humanware and tries to identify what exists beyond the digital façade (the emerged part of the iceberg visible on the net) The sub-national SDI may have set up networking people mechanisms in order to create a climate of opinion, to identify common issues, share interest, and build consensus.
- category 4. **Socio-economic impact:** Analysing the socio economic impact intends to evaluate whether the sub-national SDI has undertaken socio-economic impact analysis. To assess this aspect, one can use different methods such as cost benefit analysis, cost avoidance. The objective here is to collect results if any, and identify innovative methods.

⁷ NUTS (Nomenclature des unités territoriales statistiques) is a nomenclature defined at the European level to describe the administrative structure of European countries.

- category 5. **Organisational issues:** Assessing the place of the sub-national SDI in the overall organisation of the territory is linked to the assumption that governments have the vision to deliver services being delivered by agencies. Can these services operate without (geo)data sharing?
- category 6. **Legal aspects:** Legal aspects of sub-national SDI are two fold. On the one hand it copes with the laws and regulations that the SDI has to comply with and on the other hand what is the legal status that the SDI should have to reach sustainability.
- category 7. **Technical aspects:** Technical facilities are related to the type of data involved within the sub-national SDI and the services offered to the users. As other initiatives are focussing on technical aspects of SDI, the methodology is not looking for details on the technical aspects.

Analysing what is available on the Internet, Interviewer can verify quantitative information gathered during the direct interview.

2.3 Context in France

For many years, AFIGÉO – l'Association Française pour l'Information Géographique - the French association for geographic information, has been proposing a regular meeting for all the actors who strive for the mutualisation of spatial data in their territory.

Directed to the managers, partners and coordinators of existing or in project organisations, a 3rd encounters in Alsace Region (Dewynter 2008) was organised in June 2008 with the aim at reporting the sub-national SDI dynamics, specifying the dynamic articulations around the GI and Examining the impacts of the INSPIRE Directive and the decisions made within the framework of the State reforms concerning the evolution of these dynamics. It is worth noting that one of the regional counsellor for the Alsace Region pointed out that GI is dedicated to the territories and citizens, and that the advanced technologies must meet the territories and the political institutions needs.

Regional dynamics around GI grow in number in every French region. The platforms that attended the 3rd encounters offer heterogeneity in the status but converge toward the same goals and one can notice, with regrets, “a lack of commitment from the elected representatives”. The challenge can be summarised by “specialists, with a very technical vocabulary have to use an understandable language for the average Joe, like the elected representatives”. Geomaticians must follow “a more operational approach”. They must show that “the advanced tools can be useful when making decisions in everything concerning land and regional planning, geographic organisation and everything happening in different networks”. That demonstrates the high level of maturity that the sub-national SDIs already reached.

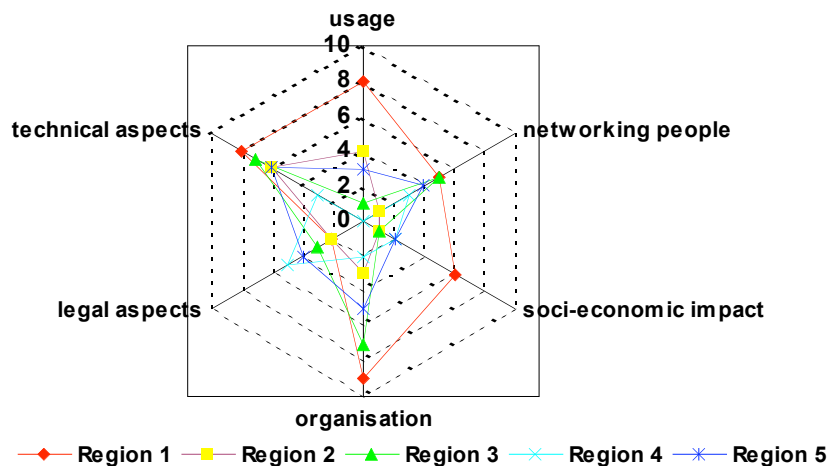
2.4 Applying the methodology to France

It was thus easy to identify the activities in the country at the sub-national level that qualify to be considered as a sub-national SDI and their officers i.e. the person that chairs the “executive” committee of the SDI and the person that is responsible for the day to day running of the sub-national SDI. The detailed process was as follows:

- Phase 1: initialisation [summer 2008]
 - Database development
 - Populating database with desktop information

- Phase 2: interviews of sub-national SDI officers [Sept-Dec 2008]
 - Filled-in form sent to interviewed person
 - Phone discussion (at least once for 2 hours)
 - Written summary sent for approval
 - update Database and finalise form
- Phase 3: cross analysis [Dec 2008-January 2009]
 - Step 1: preparation
 - Creation of one Excel file populated by the forms
 - Creation of one Excel file per category
 - Step 2: analysis
 - For each question identification of similarities and differences between answers
 - Creation of pie charts or histograms or "shopping lists"
 - Realisation of a slide show for each category
- Phase 4: synthesis [Feb 2009]
 - Identification of the questions for which the answers provide a list of possible items as a "shopping list" for Sub-national SDI or can be ordered from "low-level" to "high level" or are of importance for a European synthesis
 - For each of the categories, 1 paragraph description of main findings for each question that are of importance for a European view
 - For each question for which the answers can be ordered, assign a quote for each sub-national SDI, assign a weight, compute a final quote for further use in the radar-chart (see figure 1)

Figure1: radar chat



- Provision of reaction to the process from interviewed people
 - Selection of questions that characterise areas of good practice
- Nine good practices are then derived in term of usage, networking people, socio-economic impact, organisation, legal aspects and technical aspects, as well as in term of data sharing level, openness, service provision,
- Phase 5: restitution [2009]

○ 17 February	Poitiers	Poitou Charente
○ 13 March	Dijon	Rencontres GéoBourgogne
○ 12-14 May	Paris	Les rencontres SIG-La Lettre
○ 28 May	Strasbourg	Conférence du Rhin supérieur
○ 15-16 June	Rotterdam	GSDI11
○ 29-30 June	Lille	4ème Dynamiques régionales
○ 26-27 Nov	Torino	SDI Best Practices conference

3. 49 ASSESSED SUB-NATIONAL SDIs OF FRANCE

3.1 Administrative context and sub-national SDIs identity card

France is a centralised country that has started some 30 years ago to get decentralised. Thus two line of government exists with clear separation of duties (see table 1).

On the one hand the national government has de-concentrated offices at Région (NUTS 2) and Département (NUTS 3) levels. The government representative is the prefect (Préfet). The "Préfet de Région" has hierarchical precedence over the "Préfet de Département". The later have hierarchical precedence on several "sous-Préfets". Each ministry has its own de-concentrated offices that report both to the ministry and to the appropriate Préfet.

On the other hand local governments exist at the Région, Département, commune levels. The population elects them and they all are freely administrated and managed. No precedence exists between levels except if the law decides otherwise.

Figure 2: French administrative organisation

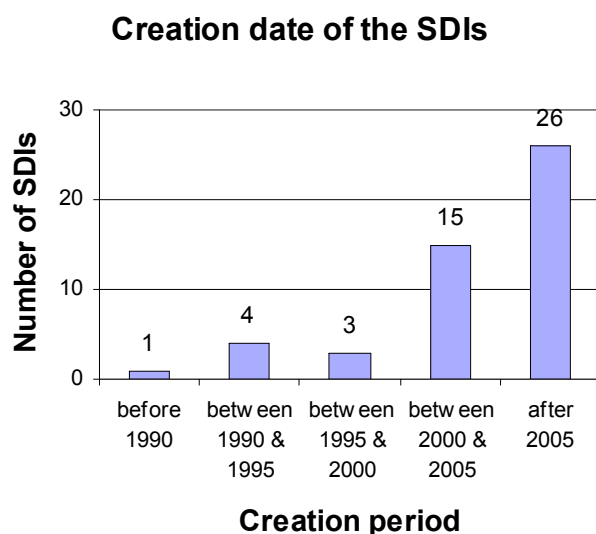
France	Administrative units	National government	Local government
NUTS 0	Métropole + DOM Main land + overseas	Ministries Ministerial departments	
NUTS 2	22+4 Régions	Préfecture de Régions Directions (directorate) régionales	Conseil régional
NUTS 3	96+4 départements	Préfectures de département Directions départementales	Conseil général
		Sous-préfecture	
			Intercommunalité
NUTS 6	36000 communes		Conseil municipal

49 sub-national SDIs have been identified, 46 from main land France and 3 overseas. Among those having been described (46 only as 3 have not answered by the deadline, 9 of them are thematic SDIs and 37 have a real sub-national nature: 2 of them are overlapping several regions, 20 SDI are at the Region level, 1 is overlapping two département of the same region, 14 are at the département level.

Analysing the mission statements of each sub-national SDI provided a checklist of the possible elements ranging from technical and organisational aspects to strategies for territories. 60% of the analysed SDIs have no legal status on their own. Most of them are part of existing governments. It gives a feeling of fragility. Funding is often coming from the EU (e.g. FEDER, Leader) from the state or from local governments. Members of the SDI also provide funding through subscription fees. Private sector funding is the absolute exception.

Human resources dedicated to run the SDI is limited, 1/3 of them declare having less than one full-time person. If few sub-national SDIs in France started at beginning of the 90's, the real acceleration started in 2007 (figure 2). 76% are said operational.

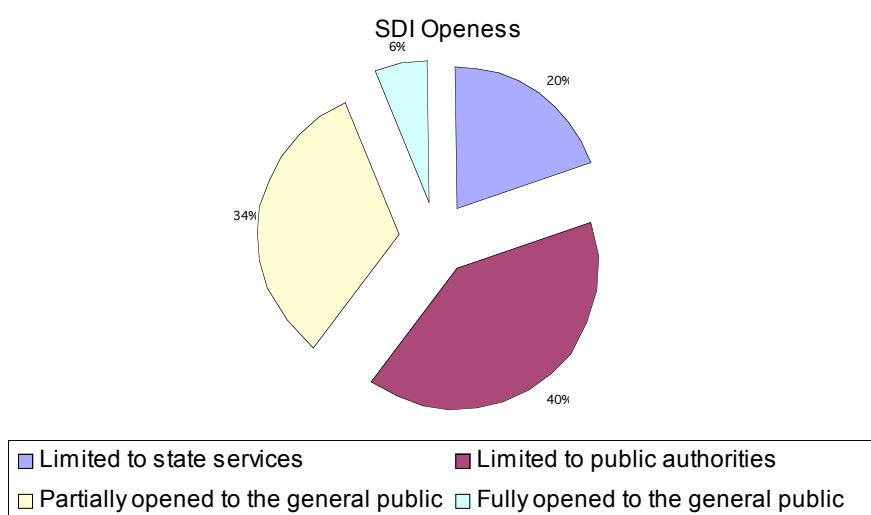
Figure 2 creation date of the analysed sub-national SDI



3.2 SDI usage

The user technical requirements that the sub-national SDIs are expected to fulfil relate to improving the accessibility to data that meet quality and quantity criteria. Expected services encompass data co-visualisation, processing, production and up and downloading. Cost sharing, good practice and know-how exchange, networking people and organisation as well as INSPIRE implementation are required to be fulfilled by the SDI. Political requirements are also met such as land knowledge, description and spatial analysis, management and land planning.

Figure 3: SDI openness



Referring to figure 3, most of the analysed SDIs are only open to the public administration where only 3 declare to be full opened to the general public. When the SDI is limited in access one third are open to the national government services only. Nonetheless the trend seems to go to more openness.

The target users are mainly those using geographic information as part of their day-to-day responsibilities, i.e. using it for their operational questioning. The second target group are the GI professionals. 58% of the SDI declares the decision makers as one of their targeted users. The general public generally forms a secondary target group. Decision makers gain a better access to existing geographical data helping them to take sound decisions and to improve citizen involvement in the territory management. No surprisingly, the analysed SDIs claim to meet the user requirements. Work optimisation, networking partners and access to and publishing of data are mainly quoted as effective usefulness.

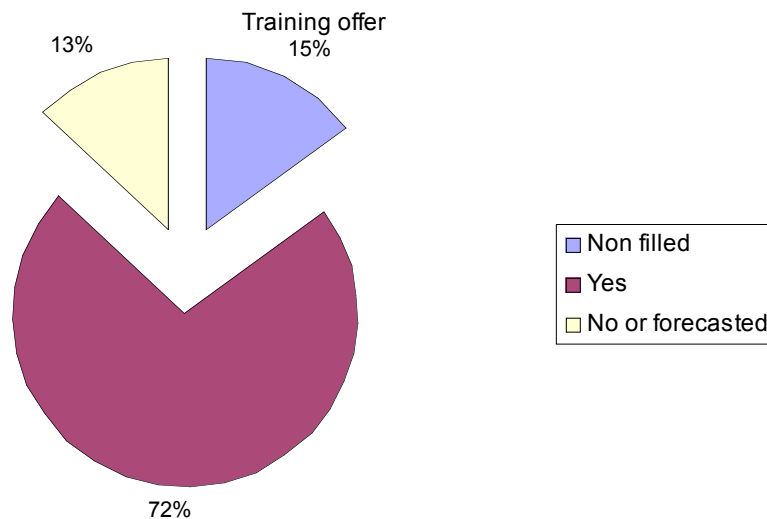
Most of the analysed SDI undertakes internal evaluation of the service offered through activity review and indicators. They justify the expenses through cost-savings, requirement meeting, subsidiarity principle and free access to data within the SDI. The SDI improved the workflows and working methods as it provides a platform for linking separate stakeholders. SDI enables the optimisation of GIS as it prevent for example duplicating efforts.

3.3 Networking people

Most of the analysed SDI has structured the network of people involved in the process. Steering committees, coordination committees, working parties are organised. User sub-communities are often set up, but the main barriers remain the lack of time, resources or knowledge of what GI and SDI are for. Few of them have built formal relationships with professional associations; they rely on the own network of the SDI users to liase.

Most of the analysed SDI has developed training mechanisms (figure 4) although they consider that no pre-requisite is required to use the SDI.

Figure 4: training offer



Capacity building is among the duties of the analysed SDI. Technical encounters, on line tools and technical assistance are quoted for that purpose.

3.4 Socio-economic impact

No socio-economic impact analysis has been performed by any of the analysed SDI although few are eager to undertake one and to exchange on that issue. This is due to not only lack of time and resources but also absence of tools and methods.

Several studies are mentioned on topics such as access policy to data or sustainable development diagnostic. Some indicators are mentioned such as usage rate for administration of satisfaction questionnaires. Timesaving and cost savings for selected SDI partners are said available.

The SDI impact on enterprises is not yet formally assessed. Nonetheless some private sector partners do have developed new products and services for the SDI and its partners. Commercial opportunities are viewed as seldom, indirect and hard to estimate. But on the other hand, the SDI existence trend to develop the demand from the administrations. The impact on the citizen is also non-evaluated.

3.5 Organisational issues

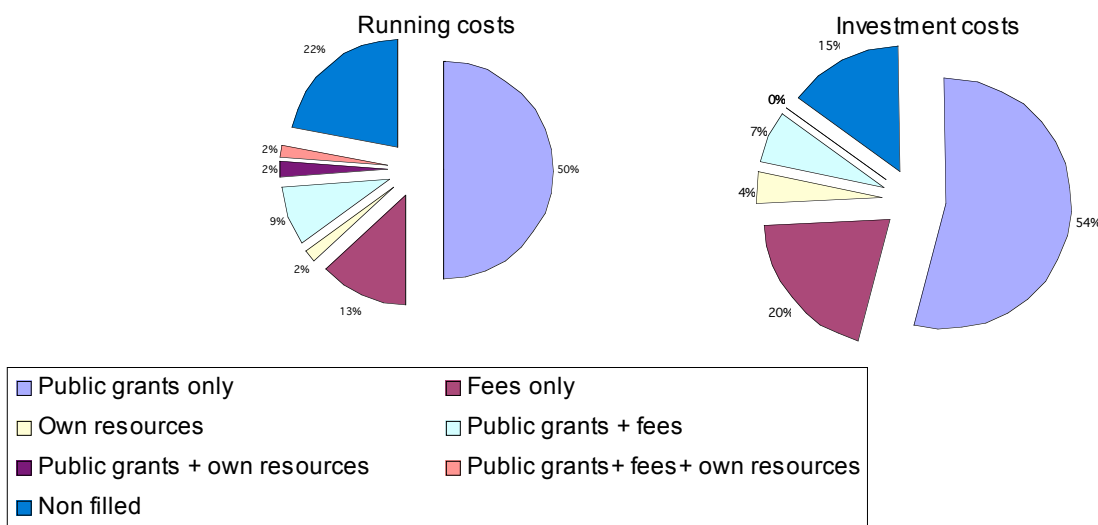
Where the SDI is open to them, local governments are often involved through formal arrangements such as contracts, memorandum of understanding, partnerships or subscriptions. One third of the analysed SDI offers them support, some time in funding from Europe, the state or the regional or departmental councils. SDIs are pretty much close to the political agenda, including land planning, risk management, sustainable development, and public policy evaluation.

Half of the analysed SDIs go beyond their original remits in providing expertise, in being transformed into information resources, in raising awareness of the decision makers in specific areas such as risk management of ICT deployment.

As they provide data and services sharing, SDIs play a central role in join up government, through collaborative tools, competences clarification, networking people.

Most of the SDIs are funded by public funds (figure5), the contribution from subscription fees represent less than one third of the total budget. Less than 5% comes from selling services.

Figure 5: budget issues



3.6 Legal aspects

Surprisingly, legal aspects are the less populated part of the interviews. Those of the analysed SDIs having answered identify two main issues. Considering data

acquired by the SDI, the contractual agreements or the European or national regulations must be enforced. The subsidiarity principle is applied, each partner is responsible for the data it places on the SDI and for the metadata. Considering data published by the SDI, again the legal texts are referred to, and the user either through charters or protocols signs usage agreements.

Only 28% of the analysed SDIs said to be responsible for handling the intellectual property rights. The others rely on their hosting institution to handle them. IPR is viewed as important to protect rights of the producer, general interest, commerce and data sensitivity. Data owners are keen to deliver their data to the SDI only if they are sure that their distribution is limited. On the other hand, IPR limits data sharing, actions of national and local administrations with the argument that data being paid by public money should be made available to all.

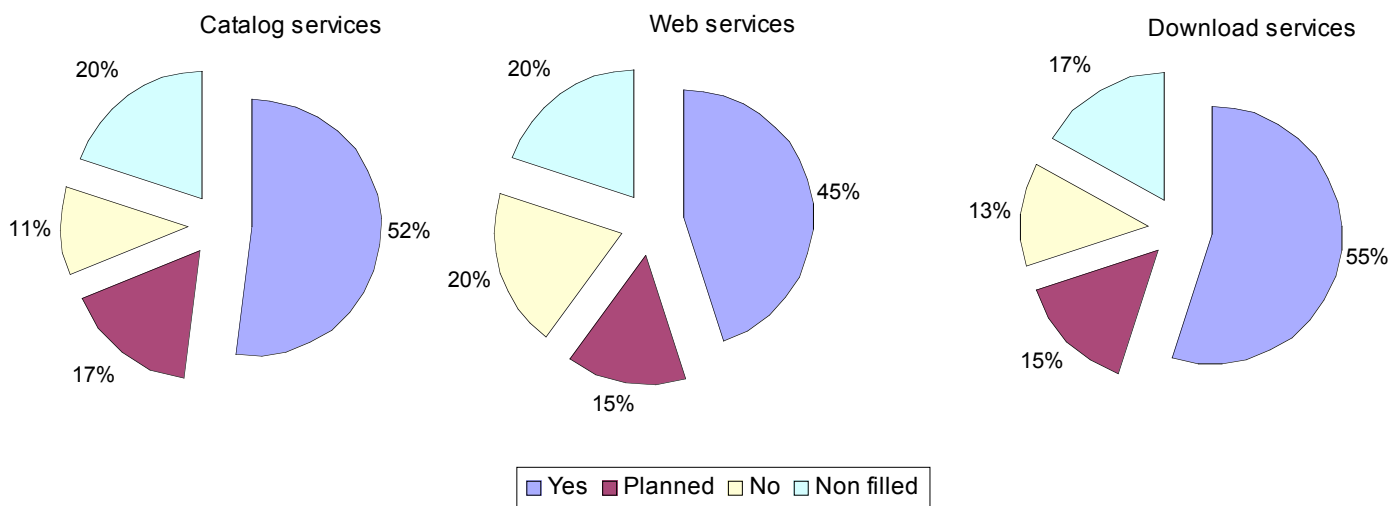
In most of the SDIs, users are considered to be well informed on what they are allowed to do with the data and services they access through the SDI. In case of any infringement, half of the SDIs that have answered consider it bears responsibility, but often it is said that the producer is responsible for its data and the user for its uses.

3.7 Technical aspects

Metadata (72%) and reference data (91%) are the primary focus of the analysed SDIs. They also focus on thematic data (87%) within diverse domains including administration and census, land and regional planning, economy, transport, culture, education, environment. Most of them specify quality levels for data and services. Only 26% of them claim to have undertaken consistency checking with the INSPIRE themes but they all will undertake such a check as soon as the directive will be effectively implemented.

Where the analysed SDIs provide services (figure 6), it is limited to the SDI partners using Intranet or Extranet for catalogue services, web services, download services.

Figure 6: SDI services



Only 17% of the analysed SDIs have developed on-line visualisation services although all of them will develop soon such a service as well as downloading facilities. All of them document metadata but few of them have metadata on services. 61% of them follow an agreed standard off which two third are ISO compliant.

25% of the analysed SDIs have implemented a geoportal but all of them will have one by 2010. At the time of the analysis only one is already interoperable with www.geoportail.fr, the national geoportal. Most of the analysed SDIs are monolingual. No plans for multilinguism are available.

3.8 Good practice assessment

Based on the answers to the questionnaire, several questions have been selected for the purpose of good practice identification. For each of them, possible answers have been ranked from 1 to 4 or 5 and a weight has been assigned. Ranking the analysed SDIs was possible in a similar way as ranking proposals issued after a call for tender. An excerpt of the ranking system is given in table 2 for category 3 "networking people assessment" that was referred to in section 2.2.

For each category, table 3 provides the weight assigned to the category, the worst value, the average value and the best value assigned to the SDIs, together with the maximum value that could be given

Table 2: excerpt of the ranking system

Q3: Networking people assessment	0	1	2	3	4	5	weight
general aspects							
Q3.1: Have you structured the network of those that are involved or have been already in place?	non filled	no	partners meeting	technical committee	coordination committee	Steering committee	20
Q3.2: In the process of networking people have you defined so called "community of interest" community of practice?	non filled	no	club of users	loose working party	organised working group		16
Q3.3: How do you organise the networking of the stakeholders?							
Q3.4: Which are the most important barriers (awareness of SDI concept, refusing the networking)?							
Q3.5: How does the sub-national SDI networking facilities interrelate with professional networks?	non filled	no communication	internal mechanism	free external mechanism	organised external mechanism		8
raising awareness							
Q3.6: Have you defined competences and skill requirements for using SDI?							
Q3.7: Do you organise and/or offer mechanisms for training users?							
Q3.8: Have you capacity building mechanisms?							
Q3.9: Do you think education of users is important in structuring the network and in using the SDI?							
Q3.10: Are you networking the SDI experts or "educating" the users to be SDI users?							
							44

Table 3: ranking the SDIs

Category	2 SDI usage	3 Networking people	4 Socio- economic impact	5 Organisational issues	6 Legal aspects	7 Technical aspects	
Weight	3	2	1	3	1	3	
"worst"	0	0	0	4	0	0	20
Average	21	27	10	23	9	20	262
"best"	34	44	27	36	19	33	400
Possible max	46	44	28	44	19	37	516

From that process nine radar charts have been drawn which present good practices, 3 from the thematic SDIs (see figure 7), 3 from the Régional SDIs (see figure 8) and 3 from the Départemental SDIs (see figure 9).

Figure 7: radar chart of the 3 thematic SDI good practices

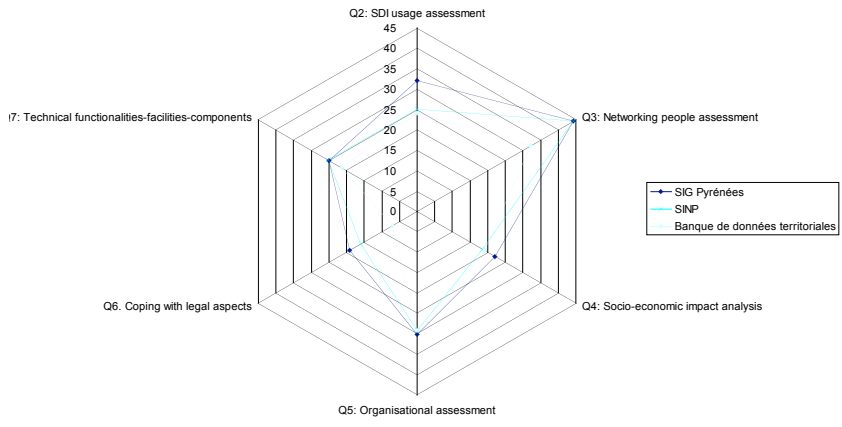


Figure 8: radar chart of the 3 Regional SDI good practices

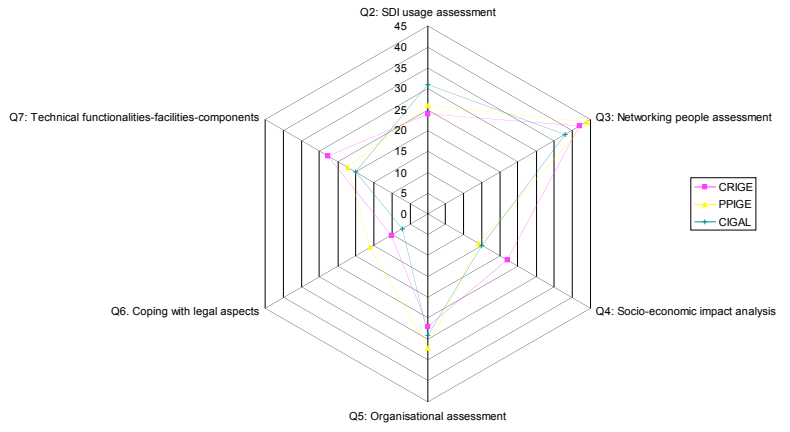
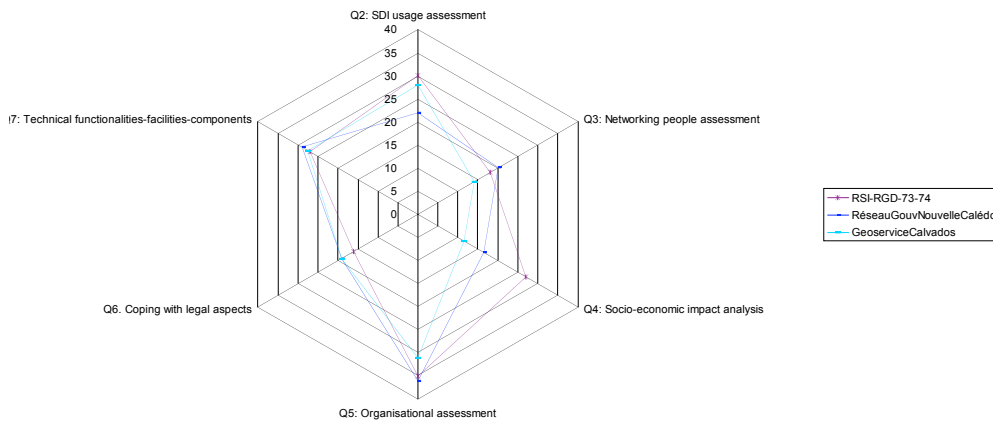


Figure 9: radar chart of the 3 departmental SDI good practices



It is interesting to note that within each of the identified group of SDIs (thematic, regional, departmental) the 3 selected good practices share similarities in terms of the quotation, while the radar chart shape differs while comparing the three groups.

For example, the regional and thematic SDIs seem to be good practices in term of networking people while the Départemental SDIs are good performing on organisational aspects.

4. LESSONS LEARNT, FURTHER RESEARCH AND CONCLUSION

The length of the questionnaire is certainly one of the main reproaches from the SDIs officers. The questions are often quoted hard to answer and too complex leading to discrepancies in the answers. That makes it difficult to actually compare the SDIs due to the subjectivity of the answers. On the other hand, the interviewed people were really interested to enter the discussion and keen to compare their own situation with the other French SDIs and learn from the other European countries. They even quoted that the questionnaire was useful for them as it raises issues they had no time to think of although they are key for their future.

It is clear that the lack of neutral evaluation schema and associated metrics was a major difficulty. The sub-national SDIs assessment required the selection of the questions that have significant answers and best allow identifying good practices. The team also had to propose a ranking quotation for each question thought to be significant enough for the good practice purpose. The assessment was thus subjective and biased by the evaluator own criteria on what is a good practice. Within the frame of eSDI-Net+ project, the method used in France will be reviewed and a standardised method will be applied for all the identified SDIs in Europe.

This one shot SDIs assessment project is too time consuming to be repeated regularly. It is thus required to refine the methodology and agree on a ranking system that could be use throughout the world to propose good practices. There is thus a requirement to devise a "closed questionnaire" which does not allow for free text. The issue is to sharpen the questions with boxes to tick on. It will allow for a possible "on line" answering system allowing for automatically populating a database. Based on the closed questionnaire, and on automatic cross analysis, a quotation system must be devised allowing for ranking the SDIs. If the ranking system is table enough it will be possible to follow each SDI quotation on a regular basis. It will enable the identification of SDIs effective trajectory through time and of possible winning trajectories.

This chapter presented a methodology for assessing sub-national and thematic SDIs and its application to the French case study. It concludes on the limitation of the methodology and further research is needed. By the time the experiment was done, other methodologies are now proposed (crompvoets 2008). As the eSDINet+ project will have identified more than 200 sub-national SDIs in Europe and gathered fact sheets on each of them, it will be possible to further experiment the proposed multi-view framework to assess SDIs.

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