



# LIFO: Location Interoperability Framework Observatory

2019 COUNTRY FACTSHEET  
FRANCE

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## 1. Introduction

The **Location Interoperability Framework Observatory (LIFO)** is a domain-specific observatory relating to location interoperability. It provides a tool **to monitor, assess and report on the state of play of location interoperability in policy and digital public services of EU Member States and other countries implementing INSPIRE.**

The LIFO complements the National Interoperability Framework Observatory ([NIFO](#)) that monitors, assesses and reports the progress in implementing the **European Interoperability Framework (EIF)**. The NIFO collects and shares details across all levels of the EIF relating to important initiatives in the Member States, uncovering best practices, areas needing improvement or where solutions could be developed.

The LIFO analytical model measures, through specific indicators, **the current level of adoption of the recommendations on location interoperability from the [EULF Blueprint](#)**, covering its five focus areas: *Policy and Strategy Alignment; Digital Government Integration; Standardisation and Reuse; Return on Investment; Governance, Partnerships and Capabilities*. The LIFO model is composed of primary indicators, based on information provided by respondents to a questionnaire, and secondary indicators, re-using information from existing sources, for example the INSPIRE monitoring.

The information collected through the observatory can be used to assess the current status, compare countries and plan appropriate measures, including potential partnerships and opportunities for sharing solutions. More in detail:

- it helps achieve the objectives of the EULF, for example: policy coherence, effective use of location information in digital public services, standards-based approaches, attention to data quality, effective partnerships, and increased awareness and skills;
- as a complementary tool for NIFO (and thanks to the alignment between EULF and EIF), LIFO helps monitor how the EIF is implemented in the geospatial domain;
- it provides visibility and access to guidelines and best practices for each country and across countries, for reuse and/or suggestion of similar / connected developments;
- it can be used as a self-assessment tool for public administrations towards their implementation of location interoperability, both internally and cross-border.

The LIFO is coordinated by the European Location Interoperability Solutions for e-Government ([ELISE](#)) action in the Interoperability Solutions for European Public Administrations, Businesses and Citizens ([ISA<sub>2</sub>](#)) programme.

Appreciation is given to the ELISE 'User Panel' of 10 Member States and other countries (namely, AT, BE, CZ, DK, FR, IT, NO, PT, SI and SK) who validated the model, answered the survey, and provided further information to ensure the results are representative of the national state of play.

The LIFO will be extended to all ISA<sub>2</sub> and INSPIRE implementing countries in 2020 in order to capture the full status of location interoperability across Europe.

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<sup>1</sup> The European Union Location Framework ([EULF](#)) is a geospatial domain interoperability framework allied to the EIF. Key EULF guidance is published in the EULF Blueprint.

## 2. Structure of the document

This factsheet provides an overview of the information collected on location interoperability in France in 2019. It contains the following chapters:

- [Location Interoperability State of Play](#): this chapter contains an overview of the implementation of the EULF Blueprint recommendations in the different focus areas. The paragraphs dedicated to each focus area contain graphs displaying the country's scores for the individual indicators and the average scores for each recommendation. In both cases, scores are compared with the average of the monitored countries. Descriptions and evidence are included to support the relevant scores.
- [Best Practices](#): which highlights existing initiatives and applications in different domains demonstrating the benefits of a consistent use and integration of location information and services in digital public services.

Annexes to the document are:

- The method of scoring and normalisation applied to the indicators;
- A glossary of the most relevant terms used in the document;
- The questionnaire with the replies provided for France and the corresponding scores.

The 2019 LIFO monitoring information for France has been provided by the Institut National de l'Information Géographique et Forestière (IGN – National Institute of Geographic and Forest Information).

## 3. Location Interoperability State of Play

### 3.1. Overview

France's practice is quite aligned with the trends of the ten surveyed countries (indicated as "Europe" in Figure 1) against the target state presented in the EULF Blueprint. However, differences in two focus areas should be noted:

- On "Governance, Partnership and Capabilities", France is better positioned than the average of surveyed countries, under all aspects pertinent to that focus area (stakeholder engagement in decisions concerning location information, partnerships and funding of geospatial initiatives, location intelligence capacity building);
- On "Policy and Strategy Alignment", conversely, significant gaps emerge on the use of location data for evidence-based policing and the use of INSPIRE as reference for public procurement.

"Digital Government Integration" is also an area where France fares relatively well due to the use of an open and collaborative approach and the active collaboration with external partners in the delivery of location-based services, which is partly compensated by gaps in other practices within that area. Conversely, France is behind the European average on "Standardisation and Reuse" and "Return on Investment", although with smaller gaps than for the "Policy and Strategy Alignment" area.

The value of the overall LIFO index is 0.50, against an average of 0.54<sup>2</sup>.

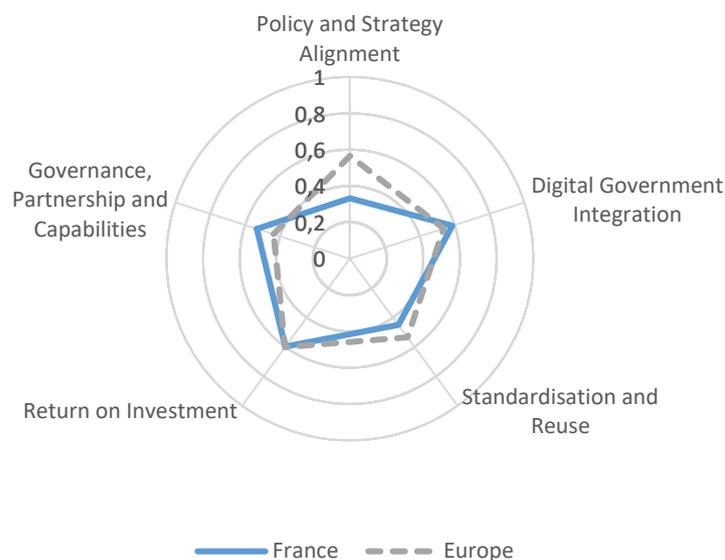


Figure 1 - Overall EULF Blueprint implementation

The following paragraphs describe in detail the results in each focus area.

<sup>2</sup> For the description of calculation method of the LIFO index and the other indicators and indexes see [Annex 2: LIFO 2019 Scoring methodology](#)

## 3.2. Policy and Strategy Alignment

Vision	
There is an aligned and coordinated policy and strategic approach across Europe for the use of location information that enables more efficient and effective integration of cross-sector and cross-border location-based applications, reducing costs and increasing social and economic benefit. Public sector location policies promote accessibility and interoperability. There are simple and consistent approaches to licensing, progressive open data policies that balance the needs of data users and suppliers, and authentic registers in which 'location' has a prominent role.	
Recommendation 1	Connect location information and digital government strategies in all legal and policy instruments
Recommendation 2	Make location information policy integral to, and aligned with, wider data policy at all levels of government
Recommendation 3	Comply with data protection principles as defined by European and national law when processing location data
Recommendation 4	Make effective use of location-based analysis for evidence-based policy making
Recommendation 5	Use a standards-based approach in the procurement of location data and related services in line with broader ICT standards-based procurement

Table 1 - Focus Area "Policy and Strategy Alignment" - vision and recommendations

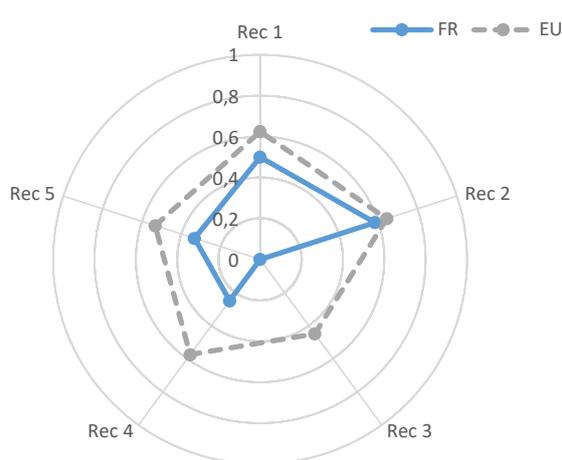


Figure 2 – Policy and Strategy Alignment – scores by recommendation

The “Policy and Strategy Alignment” focus area index for France is 0.33, significantly below the European average of 0.57. The country falls behind under all recommendations in the focus area. This can be seen particularly for [Error! Reference source not found.](#), where location-based evidence and analysis is very rarely used to help in developing relevant policies and monitoring outcomes, and [Error! Reference source not found.](#), where for public sector procurements of location information and/or services, general reference is made to INSPIRE or other standards but without providing specific details.

With reference to [Error! Reference source not found.](#), France has implemented a location strategy with some elements aligned with the digital government strategy<sup>3</sup>.

<sup>3</sup> See <https://www.numerique.gouv.fr/>, the official website (in French) gathering all the information concerning the digital transformation.

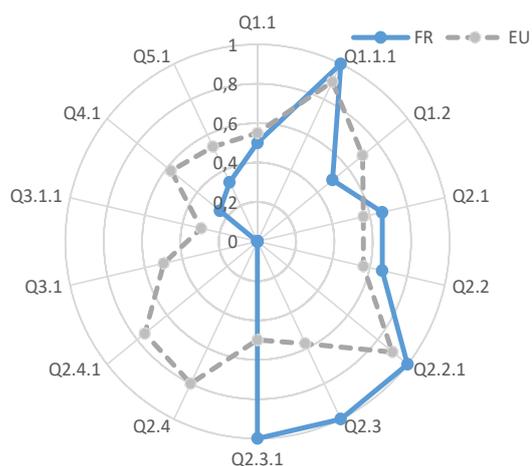


Figure 3 - Policy and Strategy Alignment - scores by indicator

Another good practice, for [Error! Reference source not found.](#), is that most location data and core reference datasets are available free of charge under an open licence without restrictions<sup>4</sup> with reference to a national licensing framework<sup>5</sup>, even if no guidelines on the publication of public sector data exist.

Lastly, no specific information was available through the survey concerning GDPR preparedness under location information aspects ([Error! Reference source not found.](#)), except that the IGN (the organisation that has provided the answers to the survey) is fully prepared under that respect<sup>6</sup>.

### 3.3. Digital Government Integration

Vision	
Location is well integrated in digital government processing supporting G2G, G2B and G2C interactions, through location related services across government. Users do not have to supply the same mandatory information multiple times. There is visibility of common coordinating and support structures, expert groups and technologies, a strong user voice in the design, evaluation and improvement of location-based services, and good evidence of take-up of services.	
Recommendation 6	Identify where digital government services and processes can be modernised and simplified through the application of location-enabled services and implement improvement actions
Recommendation 7	Use INSPIRE and SDI models, data and services for delivering cross-sector and cross-border digital public services to citizens, businesses, government and other parties
Recommendation 8	Adopt an open and collaborative methodology to design and improve location-enabled digital public services
Recommendation 9	Adopt an integrated location-based approach in the collection and analysis of statistics on different topics and at different levels of government

Table 2 - Focus Area "Digital Government Integration" - vision and recommendations

The "Digital Government Integration" focus area index for France is 0.59, compared with the European average of 0.54. This is an area where France presents an overall effective alignment with the EULF Blueprint recommendations. In particular, this is due to good practices with reference to [Recommendation 6](#). Firstly, opportunities are taken to introduce new business models with the use of location data and services based on co-delivery with the private sector or on digital platform concepts to engage multiple parties from different sectors. Furthermore, a certain number of key public services use location information in a very extensive and value-added way. For example, besides the land register, comprehensive use

<sup>4</sup> See <https://doc.data.gouv.fr/>

<sup>5</sup> The official licence described at <https://www.etalab.gouv.fr/wp-content/uploads/2017/04/ETALAB-Licence-Ouverte-v2.0.pdf> (in French) concerns all kind of public data, including location information.

<sup>6</sup> As reported in Annex 1, indicators for which no information is available are however not computed in the focus area and overall LIFO indexes.

of location information is made in the Common Agricultural Policy<sup>7</sup>, in the Geoportal for Urban Planning<sup>8</sup> and in the defence area, while location information is used as a ground-breaking contribution for the Core Street Maps<sup>9</sup>.

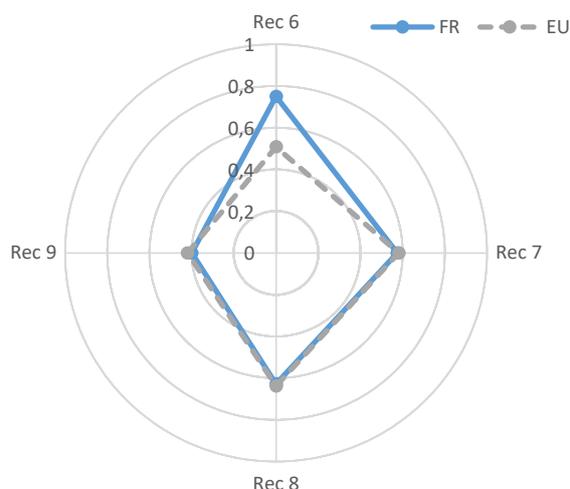


Figure 4 - Digital government integration – scores by recommendation

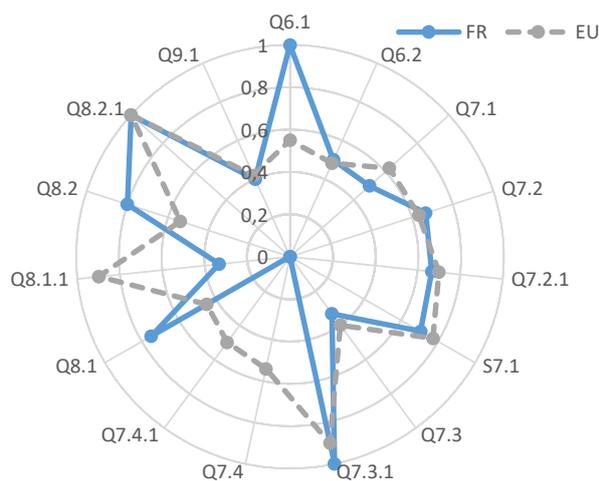


Figure 5 - Digital government integration - scores by indicator

the sets of relationships between anonymised postal addresses and geographical position, is jointly produced by the Postal Services and IGN;

As for [Error! Reference source not found.](#), the public sector SDI is used by the private sector and other organisations in a certain number of cases for the delivery of new and innovative applications, products and services<sup>10</sup>. INSPIRE location datasets are used for many digital public services, in sectors such as environment, marine, transport, property / land administration, local and regional planning, health, culture and tax policy. There are also examples of cross-sector digital public services delivered using harmonised (although not INSPIRE-harmonised) location data and services<sup>11</sup>.

Lastly, France has reached full implementation of the INSPIRE Directive in terms of identification of spatial datasets, while there is still some way to go under all other dimensions, particularly concerning spatial data interoperability through common data models<sup>12</sup>.

Regarding [Recommendation 8](#), a collaborative approach is applied both to the design and improvement of location-enabled digital public services in several cases at local and national level and to service delivery in a variety of ways. Examples are:

- the Géoplateforme project<sup>13</sup>, which supplies shared tools to encourage collaborative production of geodata;
- Orthophotos<sup>14</sup>, produced both by local bodies and IGN-France;
- the National Address Base<sup>15</sup> containing

<sup>7</sup> See for instance TélÉPAC, a portal for the management of the aid request on the common agricultural policy (CAP) that uses extensively location information; <https://www3.telepac.agriculture.gouv.fr/telepac/auth/accueil.action>

<sup>8</sup> <https://www.geoportail-urbanisme.gouv.fr/>

<sup>9</sup> [http://cnig.gouv.fr/?page\\_id=11745](http://cnig.gouv.fr/?page_id=11745)

<sup>10</sup> For instance, public sector geospatial information is used by the videogame industry (3D modelling of buildings).

<sup>11</sup> Several examples (such as the reuse of the Building and Dwelling Register data, or businesses that, for example, produce printed and digital information services) are provided in [https://en.digst.dk/media/14139/grunddata\\_uk\\_web\\_05102012\\_publication.pdf](https://en.digst.dk/media/14139/grunddata_uk_web_05102012_publication.pdf)

<sup>12</sup> See the INSPIRE country fiche, 2019 issue

<sup>13</sup> See Best Practice [FR1](#).

<sup>14</sup> For specific link see: [https://geoservices.ign.fr/documentation/diffusion/documentation-offre.html#ortho\\_images](https://geoservices.ign.fr/documentation/diffusion/documentation-offre.html#ortho_images)

<sup>15</sup> <https://adresse.data.gouv.fr/>

- The product Litto 3D®<sup>16</sup>, a continuous 3D representation of sub-marine and terrestrial relief with high precision that may be used, for instance, to study the consequences of sea-level rises, is co-edited by the SHOM (the French Navy's Hydrographic and Oceanographic Agency) and IGN.

More, in general, IGN is implementing a vast programme of collaborative production of location data with the private sector, which is becoming a strong trend for location data production in France. This approach is stated in two documents (the agreement with the government that contains the objectives and the target performances, and the activity plan).

Finally, [Error! Reference source not found.](#) is where France presents the least alignment with the EULF Blueprint, however, the score is in line with the European average. In this respect, the country implements the following actions for the integration of location and statistical information in the production of location-based statistics:

- a common geospatial reference framework for statistics to enable timely, accurate and efficient production of location-based statistics<sup>17</sup>;
- collection of census data based on the location reference framework for statistics;
- location-based statistics are updated dynamically to give an up-to-date snapshot on which to make decisions;

### 3.4. Standardisation and Reuse

Vision	
Core data has been defined and a funding model has been agreed for its ongoing maintenance and availability. Consistent use of geospatial and location-based standards and technologies, enabling interoperability and reuse, and integration with broader ICT standards and technologies, including the standards and solutions promoted by the ISA2 programme. Use of these standards in all areas related to the publication and use of location information in digital public services, including metadata, discovery, view, exchange, visualisation etc.	
Recommendation 10	Adopt a common architecture to develop digital government solutions, facilitating the integration of geospatial requirements
Recommendation 11	Reuse existing authentic data, data services and relevant technical solutions where possible
Recommendation 12	Apply relevant standards to develop a comprehensive approach for spatial data modelling, sharing, and exchange to facilitate integration in digital public services
Recommendation 13	Manage location data quality by linking it to policy and organisational objectives, assigning accountability to business and operational users and applying a "fit for purpose" approach

Table 3 - Focus area Standardisation and Reuse - vision and recommendations

The "Standardisation and Reuse" focus area index for France is 0.45, some way behind the European average of 0.54.

<sup>16</sup> See <https://data.shom.fr/#donnees>

<sup>17</sup> <https://www.geoportail.gouv.fr/actualites/nouvelles-donnees-insee-demographie-et-niveau-de-vie#>

A positive note is that, from the architectural and development perspective ([Error! Reference source not found.](#)), APIs are available<sup>18</sup> for all high value public sector datasets including location datasets as part of a national strategy; however, in the same area the approach to discover, explore and incorporate new technological features or emerging technologies, is rather ad-hoc.

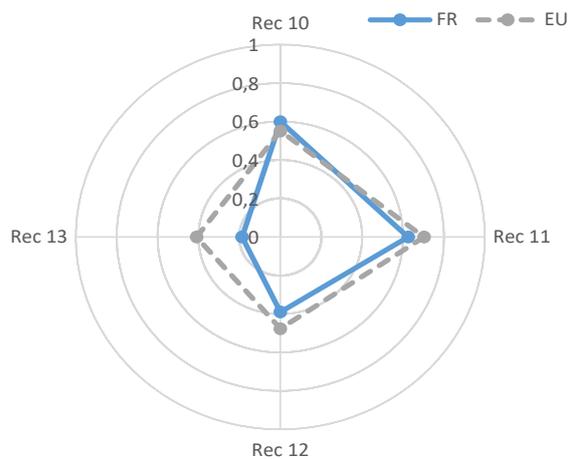


Figure 6 - Standardisation and Reuse – scores by recommendation

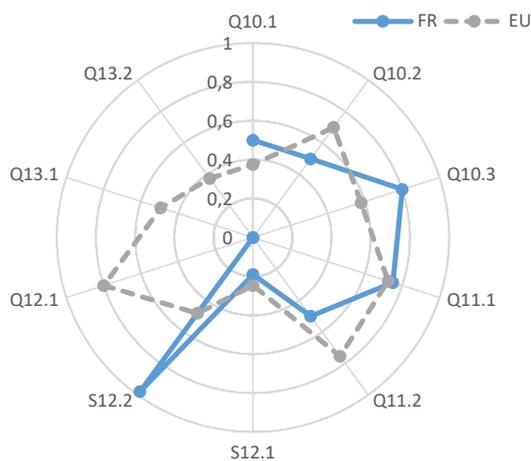


Figure 7 - Standardisation and Reuse - scores by indicator

Concerning reuse practices ([Error! Reference source not found.](#)), ICT solutions from other national or international catalogues are reused in the SDI<sup>19</sup>; on the downside, the number of core registers of location information implemented is below the European average.<sup>20</sup>

In terms of adoption of standards, ([Error! Reference source not found.](#)), almost all network services are in conformity with Regulation (EC) No. 976-2009. On the other hand, only a small number of spatial data sets are in conformity with Regulation (EU) No. 1089-2010. The GeoDCAT-AP specification is not used to connect geospatial data and general data.

As for [Error! Reference source not found.](#), the following actions have been put in place to ensure location data quality governance:

- alignment of data quality improvement roadmap with the information governance vision and strategy;
- existence of a cross-unit or cross-organisation special interest group for data quality;
- collection of feedback from users to report problems and help improve data quality.

<sup>18</sup> Apicarto is a website which gathers mapping cartography APIs for dematerialising administrative procedures; see <https://apicarto.ign.fr/>

<sup>19</sup> See the collaborative space developed by the IGN, an ICT solution that allows partners to access data through national catalogues: <https://espacecollaboratif.ign.fr/>

<sup>20</sup> Addresses, geographical names, cadastre and a graphic register of parcels. The hydrography register is also being implemented.

### 3.5. Return on Investment

Vision	
There is a strategic approach to national and European funding, procurement, and delivery of location information and location-based services to minimise costs and maximise benefits for government, businesses and citizens, recognising best practices, and building on INSPIRE and standardisation tools. The funding and sourcing model for collection and distribution of core location data takes into account user needs from different sectors and the strategic importance of continued supply of data at a suitable quality. Procurement recognises INSPIRE and other standardisation tools in a meaningful way. There are compelling impact assessments and business cases, a rigorous approach to targeting and tracking benefits, and good evidence that benefits are being achieved.	
Recommendation 14	Apply a consistent and systematic approach to monitoring the performance of their location information activities
Recommendation 15	Communicate the benefits of integrating and using location information in digital public services
Recommendation 16	Facilitate the use of public administrations' location data by non-governmental actors to stimulate innovation in products and services and enable job creation and growth

Table 1 - Focus area Return on Investment - vision and recommendations

The “Return on Investment” focus area index for France is 0.60, consistent with the European average.

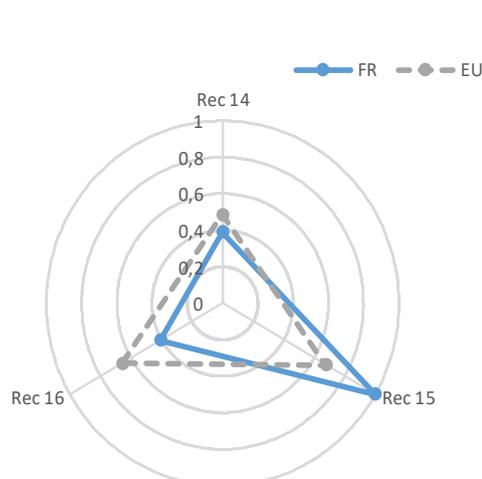


Figure 8 - Return on Investment - scores by recommendation

With reference to [Recommendation 14](#), measurements of the efficiency and effectiveness of location-based services are made exclusively through monitoring of user satisfaction. However, impacts of location-enabled services are assessed in a variety of ways:

- identification and monitoring of the benefits of location information;
- regular monitoring of “upstream” (i.e. production and dissemination) and “downstream” (i.e. use) aspects of location data and services;
- use of the monitoring information to fund improvements in particular location data or services and to prioritise investment across the governmental portfolio.

Communication of the benefits of integrating and using location information in digital public services ([Recommendation 15](#)) is systematically done, with a good body of evidence already communicated. In fact, IGN-France has a dedicated directorate for communication<sup>21</sup>.

<sup>21</sup> See Best practice [FR2](#).

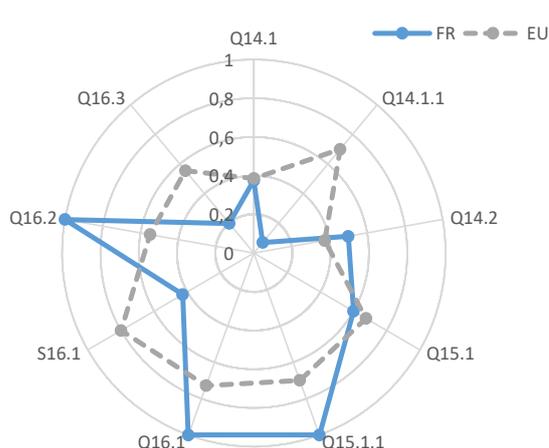


Figure 9 - Return on Investment - scores by indicator

With reference to [Recommendation 16](#), France has policies supporting the reuse of public sector information. In practical terms, however, a limited set of channels have been implemented to make searching, finding and accessing location data and web services as easy as possible for companies, research institutions, citizens and other interested parties:

- 1) a national data portal merging location data and non-location data;
- 2) a national discovery geoportal integrating INSPIRE and non-INSPIRE data;
- 3) a geoportal harvested by the European Data Portal.

The set of initiatives to actively support private, non-profit and academic actors in the development of new products and e-services is less varied than the European average: in this domain, France has implemented "Innovation labs" or "innovation hubs", promoting open data policy and brokering access to open data through hackathons. However, there is no strategic approach to facilitating the access to public sector location reference data by funding initiatives and solutions in that direction.

### 3.6. Governance, Partnerships and Capabilities

Vision	
There is high level support for a strategic approach to the funding and availability of location information at Member State and EU level, based on INSPIRE and other tools to achieve interoperability. Effective governance, partnerships, work programmes, responsibilities and capabilities to progress such an approach have been established, considering the needs and expectations of stakeholders at the Member State and EU level. Governments recognise the importance of 'location' understanding and skills and invest in awareness raising, training and resourcing. Service design takes account of user capabilities. Specialists form communities to share knowledge and develop new ideas related to location information. As a result, there is a sufficient level of understanding and skills to develop, deploy and use effective location-based services.	
Recommendation 17	Introduce an integrated governance of location information processes at all levels of government, bringing together different governmental and non-governmental players around a common goal.
Recommendation 18	Partner effectively, to ensure the successful development and exploitation of location data infrastructures.
Recommendation 19	Invest in communications and skills programmes, to ensure sufficient awareness and capabilities to drive through improvements, in the use of location information in digital public services and support growth opportunities.

Table 2 - Focus area Governance, Partnerships and Capabilities- vision and recommendations

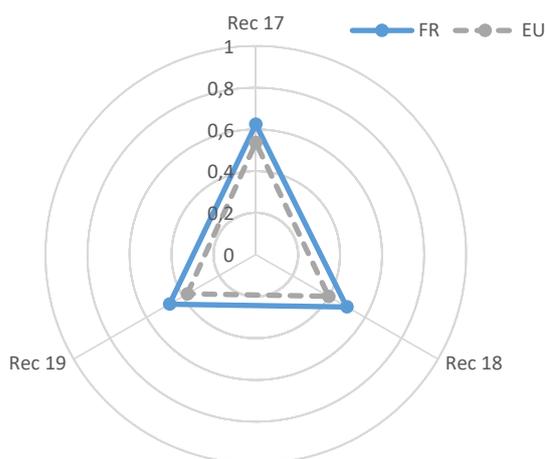


Figure 10 - Governance, Partnerships and Capabilities – scores by recommendation

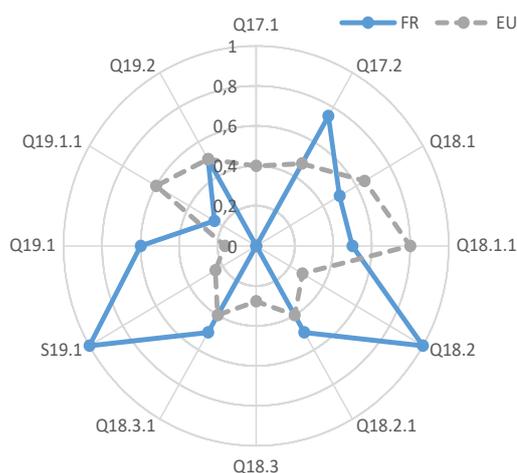


Figure 9 - Governance, Partnership and Capabilities - scores by indicator

The “Governance, Partnerships and Capabilities” focus area index for France is 0.53, compared with the European average of 0.44. In this focus area, France is positioned significantly better than the average, ranking third among the surveyed countries.

On [Recommendation 17](#), stakeholders of relevant communities, thematic domains, administrative levels (central and local) and sectors (public, private, academic, society) are involved in decision making on the role of location information in Digital Government through:

- set-up of a joint decision-making body with precise scope and mandate;
- participation of geospatial stakeholders in decision-making bodies of different sectors, domain and administrative levels.

This governance structure is mainly embodied in two institutions:

- the National Council for Geographic Information (CNIG)<sup>22</sup>, joining forces between SDI and Digital Government;
- the digital government supervisory body, the Inter-ministerial Direction for Digital Technology (DINUM)<sup>23</sup>, which is entrusted specific responsibilities on location information / SDI matters.

Such an approach, positions France relatively highly on governance. Regarding Recommendation 18, formal agreements exist between public authorities in the country to finance, build and operate a small

number of location data services or digital public services using location data<sup>24</sup>. Cross-border<sup>25</sup> and public-private partnership agreements also exist.

Furthermore, there are several initiatives to raise awareness on and develop geospatial skills, although not as part of a recognised or accredited competency framework ([Recommendation 19](#)). Among them there are: the appointment of a public sector location information / GI champion; training for specialists, e.g. developers, data analysts; spatial literacy / GI elements treated in Digital Innovation Hubs; special interest groups for knowledge sharing within the

<sup>22</sup> <http://cnig.gouv.fr/>

<sup>23</sup> <https://www.numerique.gouv.fr/dinum/>

<sup>24</sup> See Best Practice [Error! Reference source not found.](#). Examples are: Reference3D® (<http://professionnels.ign.fr/reference3d>), co-published with Spot Image, a database of grayscale orthophotoimages covering the whole world and FranceRaster®, co-published with ESRI France, a pyramid of images covering 13 different scales (<http://www.professionnels.ign.fr/franceraster>), currently in its completion phase.

<sup>25</sup> IGN-France delivers the data of EuroGeographics' EuroGlobalMap as a WFS for Open ELS.

geospatial community; public or cross-government events specialising in location information / GI topics; and availability of INSPIRE training modules.

## 4. Best practices

<b>EULF Best Practice FR1</b>	<b>Géoplateforme, the collaborative initiative for the management of geodata</b>
<b>Policy domain:</b> Geospatial	
<b>Process owners:</b> National Geographic Institute (IGN)	
<p><b>Short description:</b> The Géoplateforme is the future public space for geographical information in France. It will consist of a catalog of data and APIs, of generic user-friendly applications, learning databases and algorithms. It brings together users and / or producers of data and services that can be federated around themes or technical communities. It is based on an innovative mechanism for collaborative data enrichment or updating, thus offering the possibility of generating savings in resources both at IGN and at partners and improving the quality of data. The project is supported by national and local administrations, as well as by operators of the public and private sector.</p>	
<b>Recommendations:</b> <a href="#">Recommendation 8</a> ( <a href="#">Error! Reference source not found.</a> )	
<b>Link:</b> <a href="http://www.ign.fr/institut/sites/all/files/2018_synthese_geoplateforme_laureate.pdf">http://www.ign.fr/institut/sites/all/files/2018_synthese_geoplateforme_laureate.pdf</a> (project overview in French)	

<b>EULF Best Practice FR2</b>	<b>Dedicated organisation for the communication of geospatial activities and benefits at IGN-France</b>
<b>Policy domain:</b> Geospatial	
<b>Process owners:</b> National Geographic Institute (IGN)	
<p>IGN has established a directorate in charge of communication activities, directly reporting to the Director General of the organisation. The directorate uses many channels to promote the use of location data and benefits for users: IGN news magazine<sup>26</sup>, newsletters, website, digital communication (on social networks), webinars (to which 500 to 700 persons attend).<sup>27</sup></p>	
<b>Recommendations:</b> <a href="#">Recommendation 15</a> ( <a href="#">Error! Reference source not found.</a> )	
<b>Link:</b> <a href="http://www.ign.fr/">http://www.ign.fr/</a>	

<sup>26</sup> For instance, Issue 96, <http://www.ign.fr/institut/ign-magazine/ign-magazine-ndeg96>, publishes an article about an app to facilitate to the geodetic network.

<sup>27</sup> An event in December 2019, concerned the implementation of public services connected to IGN's data.

## Annex 1: LIFO 2019 scoring methodology

The LIFO scoring methodology is based on a hierarchy of indicators and indexes.

**(Action) Indicators:** A certain number of actions<sup>28</sup> have been selected in the EULF Blueprint as being representative of the scope of the recommendations to which they belong. For each of these actions, an indicator has been designed to measure how monitored countries are progressing towards the “vision” outlined in the EULF Blueprint. Each indicator is calculated

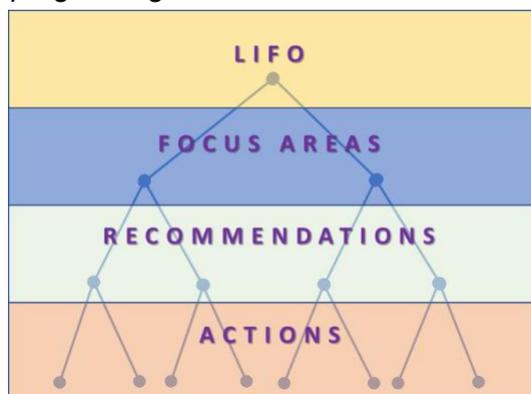


Figure 12 – Hierarchy of indicators and indexes hierarchy

on a specific scale, which best reflects the nature of the action (e.g. if it can be measured over a continuous or a discrete scale, if it is a binary phenomenon i.e. yes/no or similar, etc.). Indicators are then normalised over a scale 0-1, as follows:

*Score attributed to the answer / Maximum Applicable Value:* where the Maximum Applicable Value is the upper end of the scale that the non-normalised Value of the indicator can reach.

Note: Optional questions in the LIFO survey capture supplementary information relevant to corresponding mandatory questions about the actions. The mandatory questions (i.e. those marked ‘\*’ in the survey) are scored whereas the

optional questions are not scored.

**(Multi-level) Indexes:** Indexes aggregate the Action Indicators at the levels of Recommendations, Focus Areas and LIFO overall, in order to represent the performance of each country at the respective levels. The relationships between (Action) Indicators, Recommendation Indexes, Focus Area Indexes and the overall LIFO Index are described in the table below.

Level	No.	Scoring method
LIFO	1	Average of the 5 Focus area indexes
Focus area	5	Average of scores for all recommendations associated with a focus area
Recommendation	19	Average of normalised scores for all indicators associated with a recommendation <sup>29</sup>
Action	61	Scores calculated using different scoring methods, converted to standard normalised scores in range 0-1.

Table 6 – Relationships between indicators and indexes

Action indicators, Recommendation indexes and Focus Area indexes are thus equally weighted in the calculation of their respective upper level indexes.

Note: Some questions have a “don’t know” response as an option. Respondents are encouraged to provide answers wherever possible. Where a “don’t know” response is given, the question has a null score. This is shown as zero in the indicator charts and the question is ignored in calculating the index scores.

<sup>28</sup> Described in the “How” section of each Recommendation

<sup>29</sup> In the event of a failure to respond or an “I don’t know” answer, the indicator in question scores zero and it is excluded from the computation of the average score for the above levels.

## Annex 2: Glossary

Term	Meaning	Link
European Location Interoperability Solutions for e-Government (ELISE)	The action in the ISA <sub>2</sub> programme responsible for maintaining the EULF Blueprint and coordinating the LIFO.	<a href="https://joinup.ec.europa.eu/collection/elise-european-location-interoperability-solutions-e-government/about">https://joinup.ec.europa.eu/collection/elise-european-location-interoperability-solutions-e-government/about</a>  <a href="https://ec.europa.eu/isa2/home_en">https://ec.europa.eu/isa2/home_en</a>
European Union Location Framework (EULF)	An EU-wide, cross-sector interoperability framework for the exchange and sharing of location data and services. It consists of a package of recommendations, guidance, methodologies, case studies, training, pilots and collaborative action required by public administrations and stakeholder communities to facilitate the free flow of location data and ensure its effective use in e-government services.	<a href="https://joinup.ec.europa.eu/collection/european-union-location-framework-eulf/about">https://joinup.ec.europa.eu/collection/european-union-location-framework-eulf/about</a>
EULF Blueprint	Guidance framework for a wide audience to implement the EULF vision. The EULF Blueprint is updated periodically to embrace new developments in digital government.	<a href="https://joinup.ec.europa.eu/collection/european-union-location-framework-eulf/eulf-blueprint">https://joinup.ec.europa.eu/collection/european-union-location-framework-eulf/eulf-blueprint</a>
EULF Vision	Vision and framework for 'location-enabled government', based on applying good practice in a number of 'focus areas'. It identifies the objectives, transition strategy and high-level actions needed in each focus area.	<a href="https://joinup.ec.europa.eu/sites/default/files/inline-files/ReqNo_JRC94727_lb-na-27125-en-n%20.pdf">https://joinup.ec.europa.eu/sites/default/files/inline-files/ReqNo_JRC94727_lb-na-27125-en-n%20.pdf</a>
Focus area	Best practice domain relevant to the effective use of location information in policy and digital public services. The focus areas identified in the EULF Vision and adapted in the EULF Blueprint are: Policy and Strategy Alignment, Digital Government Integration, Standardisation and Reuse, Return on Investment, Governance, Partnerships and Capabilities.	

Term	Meaning	Link
Indicator	Quantitative measurement of the performance / practice of an organisation or entity. In the context of the LIFO, the indicators evaluate the degree of alignment of the practices implemented by Member States to the EULF Blueprint recommendations. LIFO includes “primary indicators”, which are specifically created for the Observatory and are measured through direct questions to LIFO contact points, and “secondary indicators”, taken from external sources, following principles of relevance for the scope of LIFO.	
INSPIRE implementing countries	Group of countries that have engaged to implement the INSPIRE directive or parts thereof. It includes: EU Member States, EFTA Members and a group of non-member states.	<a href="https://inspire.ec.europa.eu/INSPIRE-in-your-Country">https://inspire.ec.europa.eu/INSPIRE-in-your-Country</a>
Recommendation	EULF location interoperability best practices in the EULF Blueprint focus areas. Each of the 19 EULF Blueprint recommendations, contains a description of the rationale for following the recommendation and the expected benefits (why?), a checklist of associated actions (how?), potential problem areas to address in implementing the recommendation (challenges), a variety of best practices across Europe where this has been done successfully, links to relevant parts of the EIF, and further reading related to the recommendation.	