LIFO: Location Interoperability Framework Observatory

2020 COUNTRY FACTSHEET

FRANCE

Contents

1. Introduction

Location Interoperability Framework Observatory

The Location Interoperability Framework Observatory (LIFO[1]) monitors the implementation of location interoperability good practices in European public administrations.

The monitoring is based on the level of adoption of the recommendations set out in the five focus areas of the European Union Location Framework (EULF) Blueprint[2] (see Figure 1).

The EULF Blueprint provides guidance for implementing the European Interoperability Framework (EIF)[3] in the geospatial domain.

Consequently, the LIFO complements the EIF monitoring mechanism operated by the National Interoperability Framework Observatory (NIFO)[4].

LIFO is coordinated by the European Location Interoperability Solutions for e-Government (ELISE)[5] action in the Interoperability Solutions for European Public Administrations, Businesses and Citizens (ISA[2])[6] programme.

European Union Location Framework Blueprint
EULF Blueprint

Policy and strategy alignment
a consistent EU and Member State policy and legislative approach where location information plays a significant role

Digital government integration
making location a key enabler in G2B, G2C and G2G digital government processes and systems

Standardisation and reuse
adoption of recognised geospatial and location-based standards and technologies, enabling interoperability and reuse

Return on investment
ensuring funding of activities involving location information is value for money, and taking action to stimulate innovation and growth

Governance, partnerships and capabilities
effective decision making, collaboration, knowledge and skills related to the provision and use of location information in the context of digital government

Figure 1 - EULF Blueprint focus areas

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[1] https://joinup.ec.europa.eu/collection/elise-european-location-interoperability-solutions-e-government/solution/lifo-location-interoperability-framework-observatory/about
[2] http://data.europa.eu/w21/8e942bc2-657a-4289-b057-f2a285ee7375
[3] https://ec.europa.eu/isa2/eif_en
[4] https://ec.europa.eu/isa2/solutions/nifo_en
[5] https://joinup.ec.europa.eu/collection/elise-european-location-interoperability-solutions-e-government/about
[6] https://ec.europa.eu/isa2/home_en

The LIFO data collection is carried out through an online questionnaire sent to country representatives for digital government in the geospatial domain. The questionnaire is based on the LIFO analytical model[7]. This model is composed of primary indicators, calculated using information provided by respondents to the online questionnaire, and secondary indicators, reusing information from existing sources, for example, the monitoring under the INSPIRE Directive[8]. The indicators address good practices in the provision and use of location data in digital government and are shaped by the European policy context. They include measures relating to several EU directives and regulations including, for example, required datasets and means of access under both the INSPIRE Directive and the Open Data Directive[9], obligations under the General Data Protection Regulation (GDPR)[10], approaches under the Public Procurement Directive[11], and factors relevant to the EIF[12].

LIFO involves participating countries that are either EU Member States or other countries implementing the INSPIRE Directive. Results for the non-EU Member States, which apply EU legislative provisions on a voluntary basis, have their own alternatives, or apply the provisions only for specific aspects, must be read taking this into account.

The first LIFO data collection was in 2019 and the second in 2020. The LIFO 2020 model improves the monitoring capabilities of the model used in 2019, while being substantially aligned with it.

LIFO results are published on Joinup (see Figure 2) in the form of *Country factsheets*[13] and a *European State of Play Report*[14] and are available for users to explore in the *LIFO interactive dashboards*[15], which are linked in their turn to the *EULF Blueprint*[16].

Figure 2 - LIFO online resources

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[7] See Annex 1 for the scoring methodology used in the model and Annex 2 for a list of indicators

[8] See https://inspire.ec.europa.eu/inspire-directive/2. As reported in the EULF Blueprint, "Geospatial or location interoperability has been a major feature of both the ISA2 Programme and the predecessor ISA Programme. There was a strong basis for this with the adoption and implementation of INSPIRE. INSPIRE has driven forward the implementation of harmonised pan-European geospatial data for European environmental policy, and has paved the way to stronger location interoperability in other domains where harmonised geospatial data play a significant role.".

[9] https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32019L1024

[10] https://eur-lex.europa.eu/eli/reg/2016/679/oj

[11] http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32014L0024&qid=1428299560152&from=EN

[12] As introduced by the Communication from the European Commission of 23/3/2017: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2017%3A134%3AFIN

[13] https://joinup.ec.europa.eu/node/704194

[14] https://joinup.ec.europa.eu/node/704361

[15] https://joinup.ec.europa.eu/node/704247

[16] https://joinup.ec.europa.eu/collection/elise-european-location-interoperability-solutions-e-government/solution/eulf-blueprint/about

The information collected through LIFO can be used to examine current national and European status, compare countries, identify strengths and areas needing improvement, uncover best practice solutions, and plan appropriate measures, including potential partnerships and reuse of solutions.

The LIFO State of Play and the emerging best practices are incorporated in updates to the EULF Blueprint, ensuring the guidance framework remains up-to-date.
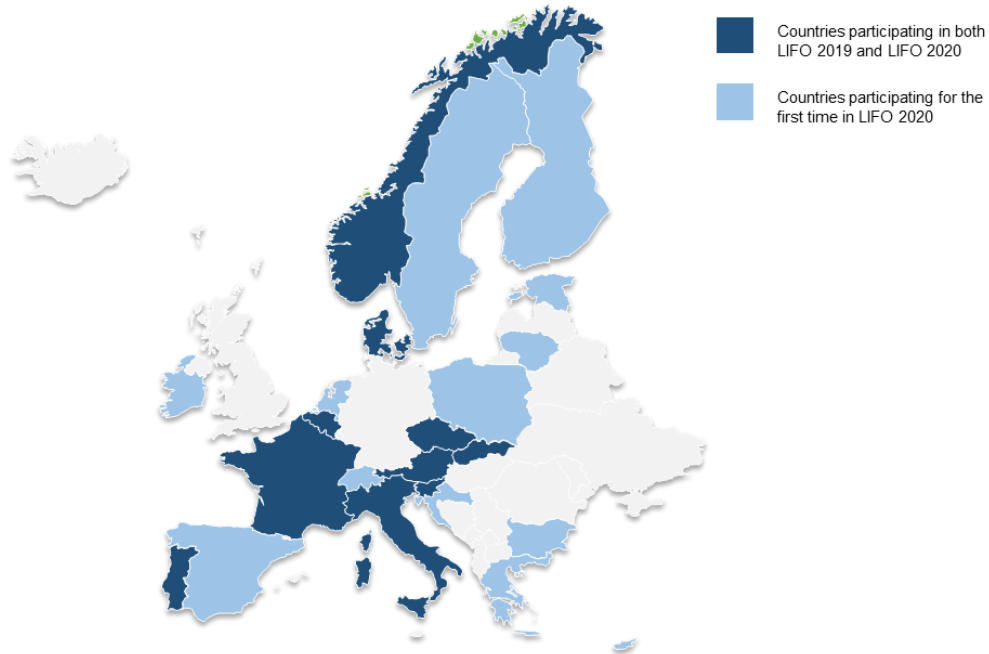
Figure 3 - LIFO participating countries in 2019 and 2020

The LIFO 2019 data collection involved 10 countries, whereas the LIFO 2020 data collection involved 23 countries. Appreciation is given to all participants who contributed to the survey responses and provided further information to ensure the results are representative of the national state of play (see Figure 3)[17].

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[17] Countries participating in both LIFO 2019 and LIFO 2020: Austria, Belgium, Czech Republic, Denmark, France, Italy, Norway, Portugal, Slovakia and Slovenia;
Countries participating for the first time in LIFO 2020: Bulgaria, Croatia, Cyprus, Estonia, Finland, Greece, Ireland, Lithuania, Netherlands, Poland, Spain, Sweden and Switzerland.

2. Structure of the document

This factsheet provides an overview of the information collected on location interoperability in France in 2020. Its main section is the Location Interoperability State of Play where information is provided at two levels:

- *Overview of results*, organised as follows:
    - 2020 Results: describes the location interoperability state of play in the country across all five focus areas, together with a summary chart and a table with the main strengths and weaknesses;
    - 2019/2020 Comparison: compares the overall results between 2019 and 2020 across the five focus areas for the country and in relation to European trends; these comparisons are displayed in a comprehensive chart;
- *Detailed results by focus area,* organised in five sections, each with the following:
    - **2020 results**: while the overview section gives a bird's eye view of the status across all focus areas, the focus area sections give a more detailed picture, with the vision and recommendations for the focus area, followed by an analysis of the state of play in the country for each of the recommendations. Two focus area charts are included, one displaying the average scores for each recommendation and the other the individual scores for the underlying indicators. In both charts, scores are compared with the average of the monitored countries. The titles of the charts are linked respectively to the tables of recommendations in each focus area and to relevant indicators in Annex 2.
    - **2019/2020 comparison:** describes how location interoperability practices have evolved between 2019 and 2020 and provides a chart comparing the results for each recommendation over the two years.

- Best Practices: This section highlights initiatives and applications provided as survey 'evidence' which demonstrate the adoption of EULF Blueprint good practices in one or more focus areas / recommendations.

Lists of abbreviations and definitions, figures and tables: these aid cross-referencing in the document.

Annexes to the document are:

- Annex 1: The method of scoring and normalisation applied to the indicators;
- Annex 2: A list of indicators used for each of the recommendations, together with a summary of 2020 indicator changes;
- Annex 3: Additional information for France comprising the questionnaire response, scores and charts from the response, and a 2019/2020 comparison table.

The 2020 LIFO monitoring information for France has been provided by *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

3.1.1 2020 Results

The information obtained through the LIFO 2020 data collection for France indicates an overall location interoperability maturity level, measured through the LIFO index, above the average of the participating countries. This is due to scores above the European averages (and at quite high maturity levels) in the "Digital Government Integration" and "Return on Investment" focus areas. The country is almost aligned with the European averages in the "Policy and Strategy Alignment" and "Governance, Partnerships and Capabilities" focus areas, and quite below the average in the "Standardisation and Reuse" focus area.

The three main good practices in the "Digital Government Integration" focus area, where the country obtains the highest score and the widest margin above the European average, are the optimised use of location data in some sectors, the frequent use of SDI to deliver digital public services, and the involvement of external parties when developing or delivering location-based digital public services. On the other hand, there is a low level of implementation maturity of the INSPIRE Directive based on the INSPIRE country fiche.

The country obtains its second highest score in the "Return on Investment" focus area. The two main factors that contributed to this result are the well-established approach to funding the exploitation of public sector reference data and the strategic approach to funding the exploitation of public sector reference data. The assessment of efficiency and effectiveness of location enabled services is on the contrary still not very mature.

The country's positioning in "Policy and Strategy Alignment" benefits from the availability of a wide range of location core reference datasets and the national licensing framework that regulates the availability of and access to public sector location datasets. The main relative weakness consists in the absence of general cross-sector legislation mandating the use of authoritative (location) datasets in the public sector.

The "Governance, Partnerships and Capabilities" focus area shows a mix of very good and less positive results. Among the former there is the recognised geospatial / public sector ICT or data competency framework that guides the training in geospatial skills. Conversely, the level of coordination between the organisations respectively in charge of the SDI and digital government and the involvement of relevant stakeholders in decision-making on the SDI are still limited. The practice of setting up formal agreements between public authorities to jointly develop and operate location-enabled public services is not well established.

The score below the European average in the "Standardisation and Reuse" focus area is mostly due to the low conformity of spatial data sets and network services to the INSPIRE Directive. There are however positive aspects in this focus area, such as the well-organised approach to monitoring, testing and upscaling of new technological developments and the availability of APIs for all high value location datasets as part of a national strategy..

The value of the LIFO index for France combining the scores for all focus areas is 0.56, reflecting an overall maturity profile in line with the European average of 0.55.
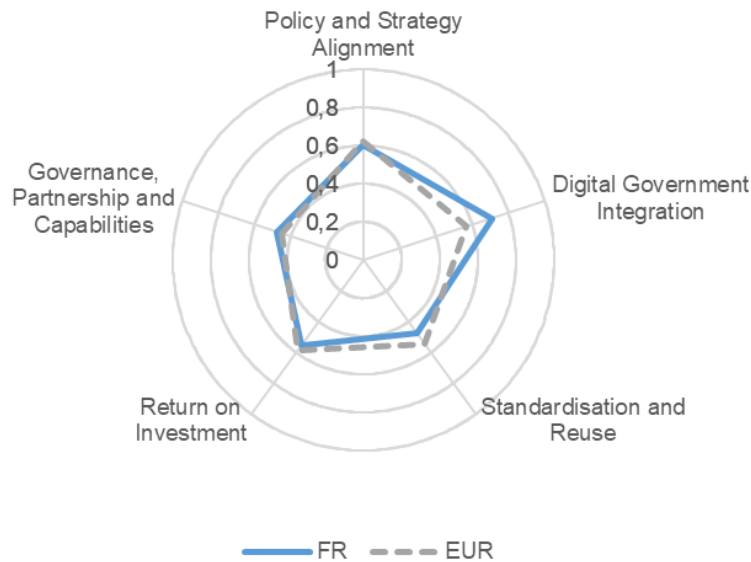
Figure 4 – Overall EULF Blueprint implementation

The following table summarises France's main strengths and weaknesses across the five focus areas:

Focus Area	Strengths	Weaknesses
Policy and Strategy Alignment	• A wide range of location core reference datasets is available for general use • A national licensing framework regulates access to and use of public sector location datasets	• The use in digital government of authoritative location datasets and services is not regulated by general cross-sector legislation
Digital Government Integration	• Rigorous approach to both service improvement and take-up of opportunities for new business or delivery models • The SDI is used in most cases to deliver digital public services across government • External parties are consistently involved when developing or delivering location-enabled digital services	• The status of implementation of the INSPIRE Directive is below the European average
Standardisation and Reuse	• Well-organised approach to monitoring, testing and upscaling of new technological developments	• Low conformity of spatial data sets with Regulation (EU) No 1089-2010. • Low conformity of the INSPIRE network services with Regulation (EC) No 976/2009

Focus Area		Strengths	Weaknesses
		• APIs are available for all high-value location datasets	
	Return on Investment	• There is a strategic approach to funding the exploitation of public sector location reference data • A variety of actions are implemented for impact-based improvement in location-enabled processes and services	• The assessment of efficiency and effectiveness of location-enabled services is based on a limited set of criteria
	Governance, Partnerships and Capabilities	• Training and awareness raising on geospatial skills are undertaken by some organisations as part of a recognised geospatial / public sector ICT or data competency framework	• The level of coordination between the organisation in charge of the SDI and the one coordinating digital government is still limited • Not all relevant stakeholders are involved in decision making on the SDI

Table 1 – Strengths and Weaknesses by Focus Area

3.1.2 2019/2020 Comparison

France is one of the countries that has participated in both the LIFO 2019 and LIFO 2020 data collections. Comparisons over the two years can be made both with the results for the country itself and with the European averages (see Figure 5).

As the number of participants has increased significantly from 10 in 2019 to 23 in 2020 (including the 10 from 2019), the figure shows two different 2020 European averages for comparison: firstly, the average for all countries participating in 2020 (yellow line); secondly, the average for the subset of countries that participated in both years (green line). The same figure also shows the 2019 averages.

The structure of the EULF Blueprint (and therefore of LIFO) in terms of focus areas and recommendations has remained the same over the years, allowing valid comparisons at these levels. However, changes were made in 2020 to a small number of specific indicators to reflect learning from 2019 and latest developments impacting location interoperability in Europe. Further details are available in Annex 2.

Between 2019 and 2020, the LIFO index for France has increased from 0.50 to 0.60. The 2020 LIFO index is in line with the 2020 European average of the participating countries in LIFO 2019 (0.61). The improvement is due to the positive variations primarily in the "Policy and strategy alignment" focus area, followed by the "Return on Investment", "Digital Government Integration" and "Standardisation and Reuse" focus areas. On the other hand, France has seen slightly worse results compared with 2019 in the "Governance, Partnerships and Capabilities" focus area.

The "Policy and Strategy Alignment" focus area had the most significant improvement, with its index increasing by 0.39 (from 0.33 in 2019 to 0.72 in 2020), thanks to the steps taken under several recommendations. In 2020, France has almost closed the gap with the

European average (the gap with the average of all participating countries, the yellow line in Figure 5, is -0.02, the one with the average of the countries participating in LIFO 2019 (the green line in Figure 5) is -0.08, while in 2019 this was -0.23). The transformative approach in this focus area is confirmed by the improvements made in all recommendations, with three of them reporting more significant progress. The significant gaps in the preparedness of public administrations for the implementation of the GDPR have been addressed and several organisations are now fully aware of location privacy issues and have implemented processes compliant with the Regulation (Recommendation 3) Location information is used more extensively to support decision making in different policy areas (Recommendation 4). Finally, in 2020 the country reports making specific references to the applicable parts of the INSPIRE Directive in public procurements of location data and services, which was not the case in 2019 (Recommendation 5).
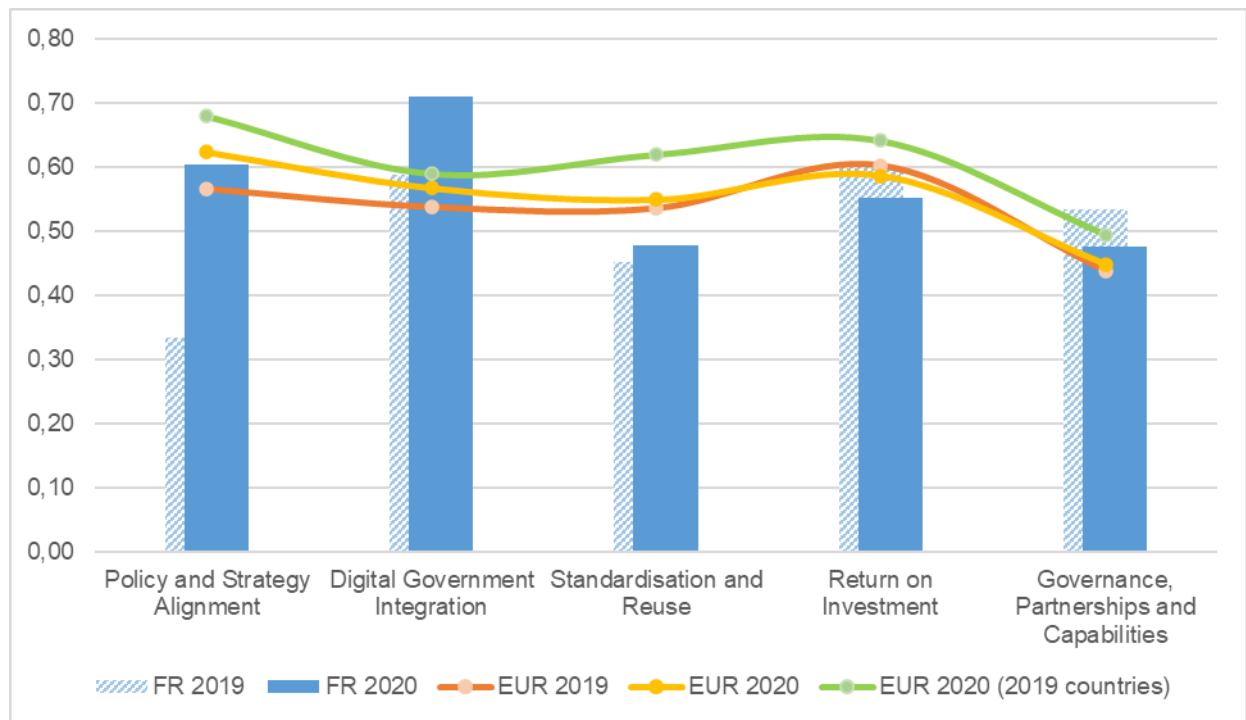
Figure 5 – Comparison between LIFO 2019 and LIFO 2020 - France

The "Digital Government Integration" focus area stands out as another point of strength for the country, both compared with the 2020 participating countries ('EUR 2020' in Figure 5) and with the other countries that also participated in 2019 ('EUR 2020 (2019 countries)' in the same figure). This focus area has improved in absolute terms, with its index increased by 0.12 (from 0.59 in 2019 to 0.71 in 2020). The improvement is linked to the steps made for optimising digital public services in the reuse of location data (Recommendation 6), as well the implementation of a variety of actions for the integration of location information in the production of location-based statistics (Recommendation 9).

The "Standardisation and Reuse" focus area index has also contributed to the overall improvement in France's positioning, with an increase of 0.03. This progress is linked mainly to the wider range of actions taken to ensure data quality (Recommendation 13).

France's positioning in the "Return on Investment" focus area has seen a regression both in absolute terms (-0.05 points compared with 2019) and in relative terms. The deviation from the EUR 2020 (2019 countries), which was null in 2019, has become negative (-0.09 in 2020). This compares with the average of countries participating in both years, which has itself increased by 0.04. This outcome is due to Recommendation 15, where the recalibration of the index gives

a less flattering, but more correct, picture of the maturity of the communication and promotional approach to facilitating the uptake of the benefits of location information.

The index for the "Governance, Partnerships and Capabilities" focus area has also decreased by 0.05 compared with 2019. This is due to the changes made to the indicators in the governance dimension (Recommendation 17), which should result in a more accurate picture of the current state of play.

The following sections present the results in detail for each focus area.

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	Ensure all measures are in place, consistent with legal requirements, to protect personal privacy 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 2 - Focus Area "Policy and Strategy Alignment" - vision and recommendations

3.2.1 2020 Results
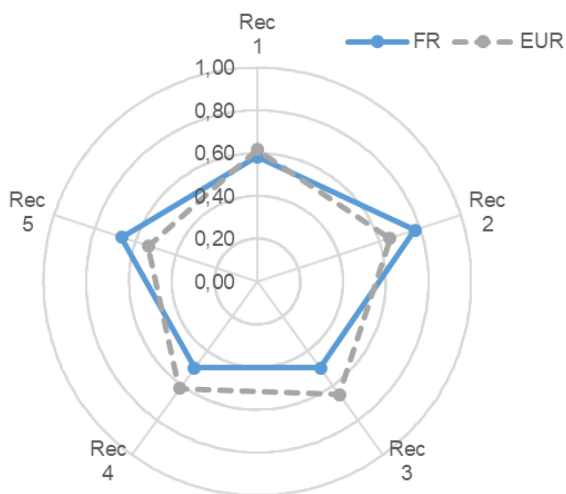
Figure 6 – Policy and Strategy Alignment – scores by recommendation

The scores for each recommendation in the "Policy and Strategy Alignment" focus area are shown in Figure 6 and the underlying indicator scores for each recommendation are shown in Figure 7. In both cases, the country scores are compared with the European averages.

The "Policy and Strategy Alignment" focus area index for France is 0.60, almost aligned with the European average of 0.62. The country has performed better than the European benchmark in two of the five recommendations, distinguishing itself especially in the alignment between location data policy and wider data policy (Recommendation 2). Very good results have been reached under the other recommendations as well.

There is a significant degree of alignment in the location and digital government strategies (Recommendation 1)[18]. There are also sector legislation and binding agreements mandating the use in digital government of authoritative location datasets and services.

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[18] http://cnig.gouv.fr/?page_id=20086

The pan-government guidelines[19] on the publication of public sector data, build on the law for the digital republic[20] that mandates for public sector information open by default, make explicit reference to location aspects (Recommendation 2).

All public sector location datasets are available under a national licensing framework. As part of the Government's policy in favour of the opening up of public data ("Open Data"), Etalab[21] has designed the "Open Licence"[22]. This licence, drawn up in consultation with all the actors concerned, facilitates and encourages the re-use of public data made available free of charge.

The guidelines on sharing and reuse of core reference datasets[23] provide that the data published on the open platform of public data "data.gouv.fr" can be reused according to the terms defined in the licence associated with them. A wide range of location reference datasets are made available in compliance with these guidelines, under the aforementioned Open Licence. The relevant datasets are:

- addresses;
- administrative units;
- air quality;
- buildings;
- cadastral parcels;
- elevation;
- geographical names;
- hydrography;
- land cover;
- land use;
- population distribution and demography;
- statistical units;
- transport networks.
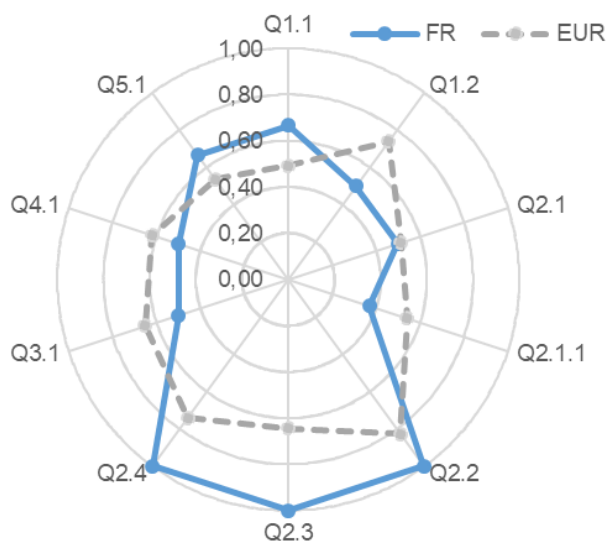
Figure 7 – Policy and Strategy Alignment – scores by indicator

For a small number of other datasets, such as the health statistics, commercial use is not permitted.

The most important core reference datasets referring to location information are called RGE[24] (Référentiel à grande échelle, large scale reference system). The RGE has orthophotographic, topographic and address, parcel and elevation components. The state has entrusted the IGN with the development of the RGE. To do this, it uses its own resources as well as partnerships with producers mainly in the public sphere.

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[19] https://www.cnil.fr/sites/default/files/atoms/files/guide-open-data.pdf

[20] https://www.legifrance.gouv.fr/loda/id/JORFTEXT000033202746/

[21] A department of the DINUM (Direction interministérielle du numérique), whose mission is to coordinate the design and implementation of the State's strategy in the field of data

[22] https://www.etalab.gouv.fr/licence-ouverte-open-licence; see best practice FR5

[23] https://guides.etalab.gouv.fr/

[24] https://www.data.gouv.fr/fr/datasets/referentiel-a-grande-echelle-rge/

Some organisations are fully prepared for GDPR under location data privacy aspects; no complaints have been reported so far in that regard (Recommendation 3).

Location-based evidence and analysis is used to help in developing policies and monitoring outcomes in several relevant policy topics (Recommendation 4). Some important examples of such use are:

- RPG[25], the Graphical Parcel Register (Registre Parcellaire Graphique), a geographical database used as a reference for the assessment of Common Agricultural Policy (CAP) subsidies;
- the Artificialisation Observatory (Observatoire de l'artificialisation des sols)[26], which aims to document data useful for monitoring the artificialisation of soil and the space consumed;
- LIDAR HD[27], a programme that aims to acquire light detection and ranging information in HD covering the whole country; the data acquired can be used to guide policy making in various domains, such as the prevention of flood risks and the exploitation of forests;
- the Geoportal on Urban Planning (Géoportail de l'urbanisme)[28], which provides urban planners within and outside the public administration with information to optimise their activities and allows citizens to easily find information on their plots of land and the pertinent rights of way and other constraints.

Public sector procurements of location information and services make specific references to the applicable parts of the INSPIRE Directive and / or national / international standards (Recommendation 5).

3.2.2 2019/2020 Comparison

As it can be seen in Figure 8 there are significant improvements compared to the previous year under all recommendations, in particular Recommendation 3, Recommendation 4 and Recommendation 5.
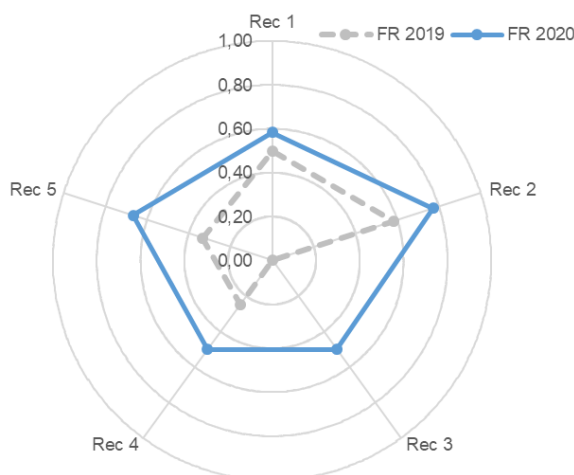
Figure 8 - Policy and Strategy Alignment

In 2020, the country has made a step forward in terms of alignment in the location strategy of digital government elements (Recommendation 1). The use of authoritative location data is regulated by sector-specific legislation, as in 2019.

The pan-government guidelines on the publication of public sector data now cover location aspects, while in 2019 this was not reported (Recommendation 2). The turning point was the publication in late 2019 by the CNIL (Commission Nationale de l'Informatique et des Libertés – National Commission for Informatics and Freedom) of the above mentioned guidelines on the publication and reuse of public sector data.

Other dimensions of the alignment between location data policy and general data policy have not changed: it has been confirmed that a wide range of location core reference datasets is

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[25] https://www.data.gouv.fr/fr/datasets/registre-parcellaire-graphique-rpg-contours-des-parcelles-et-ilots-culturaux-et-leur-groupe-de-cultures-majoritaire/
[26] https://artificialisation.biodiversitetousvivants.fr/
[27] https://www.ign.fr/institut/nos-activites/lidar-hd-une-couverture-nationale-dici-2025
[28] https://www.geoportail-urbanisme.gouv.fr/

available for general use, and the extent of availability of location datasets under the same licensing conditions is also still the same as in 2019.

The most significant progress has been under Recommendation 3, as in 2020 it has been reported that some organisations have become fully aware of and prepared for location data privacy issues and required processes. In the previous year, it was reported that organisations were generally unprepared. This improvement is the result of a large public awareness campaign, with workshops and training, launched by CNIL, following the extension of its responsibilities in this domain.

The country has also extended the use of location-based evidence, applying it in some relevant policy topics (Recommendation 4). In 2019 it was reported that location evidence was rarely used for such purposes.

Under Recommendation 5, France made a step forward in term of standardisation of public sector procurements of location data and services. In 2020, the country has started making specific references to the applicable parts of the INSPIRE Directive and/or of the national standard frameworks, compared with the generic references reported in 2019.

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 that create value for users
Recommendation 7	Use spatial data infrastructures (SDIs) in digital public services and data ecosystems across sectors, levels of government and borders, integrated with broader public data infrastructures and external data sources
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 3 - Focus Area "Digital Government Integration" - vision and recommendations

3.3.1 2020 Results
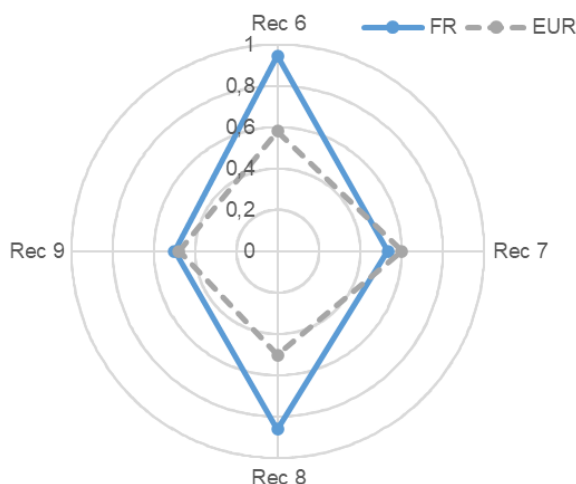
Figure 9 - Digital Government Integration – scores by recommendation

The scores for each recommendation in the "Digital Government Integration" focus area are shown in Figure 9 and the underlying indicator scores for each recommendation are shown in Figure 10. In both cases, the country scores are compared with the European averages.

The "Digital Government Integration" focus area index for France is 0.71, some way above the European average of 0.57. The country scored higher than the European averages for Recommendation 6 and Recommendation 8, and is basically aligned with the averages for Recommendation 7 and Recommendation 9.

With respect to Recommendation 6, key digital public services are optimised in their use of location information through opportunities taken to introduce new business models involving, for example, co-delivery with the private sector or use of digital platform concepts to engage multiple parties.

There are examples of highly optimised and innovative use of location data in some of the sectors where location information plays a significant role in digital public services, such as:

- education: Édugéo[29] is an online service that has been thought out and designed to facilitate the acquisition of fundamental concepts included in geography programmes, from elementary to the high schools;

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[29] https://www.edugeo.fr/ ; see best practice FR3

- environment: the National Observatory of Soil Artificialisation (ONAS)[30] monitors the evolution of space consumed at the level of municipalities; it uses AI technologies to construct a new basis for collecting land cover and land use data.

In some other sectors (agriculture, defence, disaster management and civil protection, property and land administration, regional and urban development) there are also some good examples of comprehensive use of location information. These examples include:

- agriculture[31]: the National Establishment of Agricultural and Marine Products (FranceAgriMer) was created by the merger of five agricultural and maritime offices (Ofimer, Livestock Office, ONIGC, Onippam and Viniflhor) with the Market News Network (RNM). It is a place of information, exchanges, reflection, arbitration and management for the French agriculture and fisheries sectors. The tasks of FranceAgriMer include:
  - implement technical and financial, national and European support mechanisms and manage market regulation mechanisms;
  - ensure a follow-up of the markets, provide economic expertise, contribute to technical cooperation actions and the development of the sectors internationally;
  - organise dialogue, consultation and the implementation of public policies.
- defence[32]: 80 to 90% of weapons and information systems use complete geographic information on the environment, such as the "GEODE 4D" programme which integrates the fields of hydrography, oceanography, meteorology and geography essential for 3D positioning and navigation over the intervention perimeters of the armed forces, and exploits data from different sources (e.g. paper maps useful for understanding the tactical environment, topographic surveys essential for the registration of positions or inertial units, digital models of terrain, 3D models of infrastructures). Thus, geographic information feeds into all operations, from strategic watch to their management, including operational planning.
- disaster management and civil protection[33]: SIGALEA is the risk and hazard mapping software of INERIS, the National Institute for Industrial Environment and Risks. SIGALEA is a decision support tool for existing or new installations providing industrial safety mapping services. It is used within the framework of the Technological Risk Prevention Plans (PPRT). SIGALEA makes it possible to geolocate dangerous phenomena on a geographical database by associating to each of them:
  - a type of thermal, toxic or overpressure effect;
  - distances up to which the effect will be perceived, according to the associated regulatory thresholds;
  - a level of probability;
  - the speed of spread.

  SIGALEA also performs spatial analyses to map the effects of dangerous phenomena and technological hazards to raise awareness.

  The Institute also contributes in a substantial way to the mapping of environmental inequalities in the territory by collecting, inventorying and evaluating a large amount of available environmental data of a very different types.
- property and land administration[34]: The Geoportal on Urban Planning also mentioned in 3.2.1 enables citizens and professionals to consult all urban planning documents and public

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[30] https://artificialisation.biodiversitetousvivants.fr/

[31] https://www.franceagrimer.fr/

[32] https://www.ign.fr/espace-presse/lign-renouvelle-son-engagement-pour-une-geographie-militaire-hautement-qualifiee; https://www.defense.gouv.fr/english/portail-defense/dossiers/archives-des-dossiers/l-espace-au-profit-des-operations-militaires/les-fonctions-spatiales-au-service-des-operations/geode-4d-mieux-connaitre-et-comprendre-l-environnement-geophysique-des-theatres

[33] https://www.ecologie.gouv.fr/direction-generaleprevention-des-risques-dgpr and https://www.ineris.fr/fr

[34] https://www.geoportail-urbanisme.gouv.fr/

utility easements that have been uploaded by their competent authorities. The Géoportail de l'urbanisme enables citizens to:
- locate their land;
- display and query the zoning and planning regulations that apply to it;
- review online all or part of the town planning documents (with geographical data and regulations of the municipality);
- find out about public utility easements affecting the use of their land;
- download geographical data (zoning) and textual data (regulations in .pdf format);
- display overlaying layers of information (selection of parameters, cadastral background, aerial photo, etc.);
- create and distribute their own map (prescriptions to be represented, drawing tools).

- regional and urban development[35]: the Simplified Street Plan (Plan de Corps de Rue Simplifié - PCRS) is a single base plan made up of structured and standardised data guaranteeing the efficiency and interoperability of very large-scale databases. The PCRS map describes the immediate environment around sensitive and non-sensitive networks in order to facilitate their location and improve the safety of related worksites. Producing a PCRS by directly adopting a large-scale topographic reference frame (RTGE) makes it possible to have more detailed and more precise information, supporting multiple uses and reinforcing decision-making for various land use planning considerations.
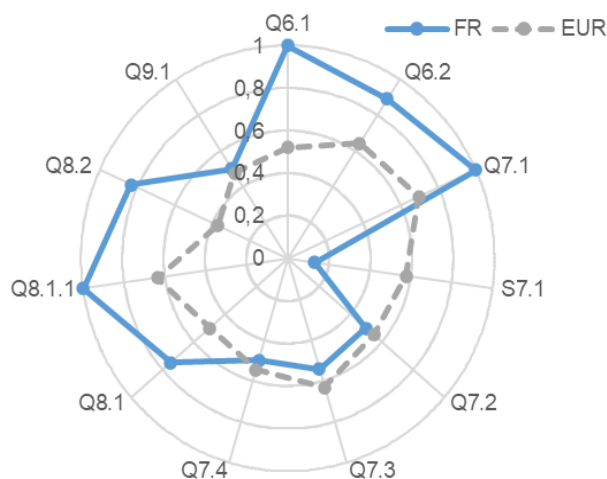
Figure 10 – Digital Government Integration – scores by indicator

The SDI is used in most or all cases to deliver digital public services across different sectors and levels of government (Recommendation 7). The Geoportal on urban planning is a meaningful example of a cross-government digital public service reusing data from the SDI. INSPIRE conformant datasets and services are only marginally used in this domain.

The country is also actively involved in delivering some cross-border digital public services using their spatial data infrastructure. INSPIRE conformant datasets and services are also not used in these cases.

On the whole, the implementation maturity of the INSPIRE Directive is below the European average.

In most of the sectors where location information is used with a certain degree of optimisation, a hybrid approach is used involving both national and sectoral SDIs. The main sectoral SDIs used are:

- agriculture: FranceAgriMer;
- disaster management and civil protection: DGPR;
- property and land administration: Geoportal on Urban Planning.

The public sector SDI is used in a certain number of good examples by the private sector for the delivery of new and innovative applications, products and services. It is often used in particular by start-ups, especially those that have been supported by IGN-France in the frame

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[35] https://etudis.fr/pcrs/

of the business accelerator plan (called INGfab)[36]. One of the most successful examples is InSunWeTrust[37] that uses the public sector SDI to optimise the installation of solar panels.

The country has adopted an open and collaborative methodology to design and improve location-enabled digital public services (e.g. through consultations, user groups, feedback requests, iterative development) in most cases and at all levels: local, sub-national and national (Recommendation 8). External parties are also involved in the delivery of location-based public services under different circumstances, such as:

- services are contracted to the private sector or NGOs under public sector accountability;
- public authorities scale back their role relying on models such as public/private partnerships;
- public authorities collect data through particular processes or services to make the data openly available for external parties to develop their own products and services;
- public authorities use location data from external parties (e.g. businesses, citizens, NGOs) in their digital public services;
- the government encourages 'civic hacking' to develop new ideas, technologies or methodologies that help solve civic problems and improve the lives of citizens.

The country has implemented the following actions for the adoption of a location-based approach in the collection and analysis of statistics on different topics (Recommendation 9):

- implementing an accurate and up-to-date knowledge base containing information of where citizens and businesses are located;
- using a common geospatial reference framework for statistics to enable timely, accurate and efficient production of location-based statistics;
- collecting census data based on the location reference framework for statistics
- capturing the spatio-temporal dimension of statistics in a format enabling it to be used readily in a GIS for geo-statistical analysis;
- contributing to European projects aiming at establishing a data and production infrastructure for location-based statistics.

3.3.2   2019/2020 Comparison
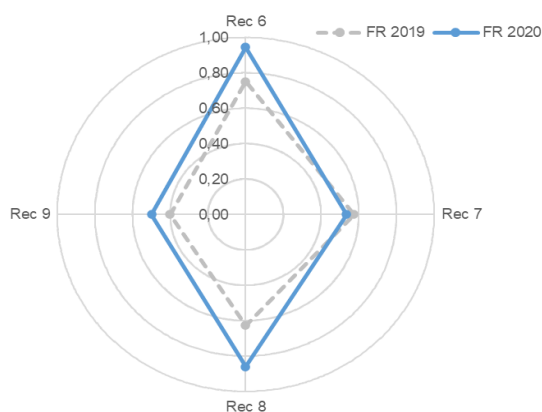
Figure 11 – Digital Government Integration – 2019/2020 comparison

Compared with the previous year, as shown in Figure 11, there are improvements for Recommendation 6, Recommendation 8 and Recommendation 9, while the scores are at broadly the same level for Recommendation 7.

The highest improvement is for Recommendation 8, where the country has extended the range of options by which external parties are involved to develop or deliver location-based digital public services. Another positive development is that a collaborative approach to design location-enabled digital public services is now reported at all levels (local, sub-national and national).

More examples of both comprehensive and innovative use of location information in digital public services have been reported in different sectors, compared with 2019 (Recommendation

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[36] See best practice FR4
[37] https://www.insunwetrust.solar/

6). The country has also shown some improvement in adopting a wider range of actions to ensure an integrated location-based approach in the collection and analysis of statistics (Recommendation 9).

Finally, under Recommendation 7, there has been an improvement in the use of the public sector SDI by the private sector for the delivery of new and innovative applications, products and services. The overall score must be seen in the light of the several changes to existing indicators and some new indicators added; in particular, the change in the composition of the INSPIRE country fiche has determined a significant decrease of the corresponding indicator compared with 2019.

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 4 - Focus Area "Standardisation and Reuse" - vision and recommendations

3.4.1 2020 Results
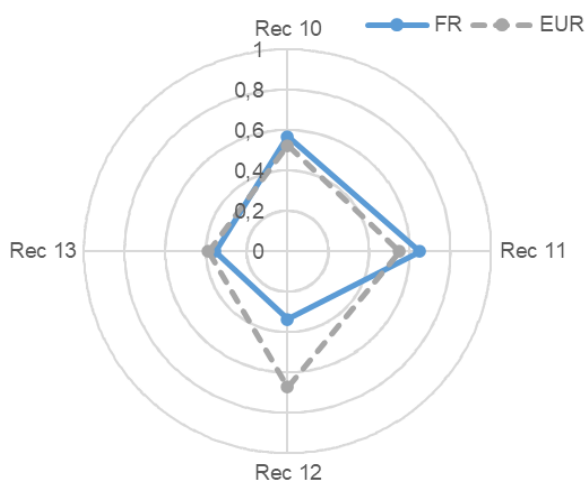
Figure 12 – Standardisation and Reuse – scores by recommendation

The scores for each recommendation in the "Standardisation and Reuse" focus area are shown in Figure 12 and the underlying indicator scores for each recommendation are shown in Figure 13. In both cases, the country scores are compared with the European averages.

The "Standardisation and Reuse" focus area index for France is 0.48, compared with a European average of 0.55.

The country has adopted the EIF / EIRA based architectural approach to design and develop digital government solutions, facilitating the integration of geospatial requirements (Recommendation 10). A well-organised approach has been adopted to monitoring, testing and upscaling of new technological developments. Most high-value location datasets are accessible using APIs, made available as part of a national strategy to foster data discoverability and based on recognised standards (e.g. OGC API - Features, OGC SensorThings API).

The country reuses generic ICT solutions from other national or international catalogues in the SDI (Recommendation 11). As for the reuse of authentic data, almost all the main registers of location information have been implemented by public administrations, namely[38]:

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[38] Except where differently reported, registers are implemented in the "Geoportail" https://www.geoportail.gouv.fr/

- addresses[39];
- geographical names;
- administrative units;
- cadastral parcels[40];
- buildings;
- hydrography;
- transport networks;
- code lists.

International standards (like ISOTC211, OGC, IHO and GDF) or adaptations of international standards (e.g. INSPIRE) are used on top of some stand-alone domestic standards to develop a comprehensive approach for spatial data modelling (Recommendation 12).

The conformity of spatial data sets and of network services to the INSPIRE implementing rules and technical guidelines is well below the European average.

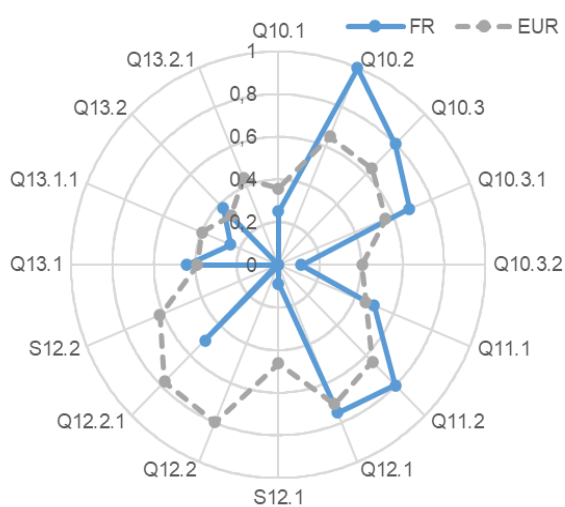*Figure 13 - Standardisation and Reuse – scores by indicator*

National and international / European specifications (e.g. GeoDCAT-AP) and tools (e.g. GeoDCAT-AP API) are the standardised metadata approaches used to facilitate discoverability of spatial and non-spatial data.

A wide array of actions is implemented to assure quality of location data (Recommendation 13).

In the design phase, these actions include:

- development and application of a framework for analysis of data quality;
- linking of data quality standards to data standards.

In the measurement phase, the actions implemented are:

- regular measurement of data conformity to quality parameters set out in the data policy;
- data quality dashboards for critical information such as authentic data.

The Data Commission of the Conseil National de l'Information Géographique (CNIG - National Council for Geographic Information) [41] is responsible for data quality standards and has established a working group in charge of evaluating the geostandards regarding quality, checking the presence of quality specifications in any new or new version of a CNIG standard subject to validation by the Data Commission, and making external quality metadata "less optional" in French geocatalogues.

Location data quality governance relies on the:

- alignment of data quality improvement roadmap with the information governance vision and strategy;
- responsibilities of the Data Commission and the activity of the above-mentioned working group for data quality;

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[39] https://www.data.gouv.fr/fr/datasets/base-adresse-nationale/

[40] https://cadastre.gouv.fr/scpc/accueil.do

[41] http://cnig.gouv.fr/?page_id=640

- collection of feedback from users to report problems and help improve data quality.

3.4.2 2019/2020 Comparison

Progress in this focus area is mainly linked to Recommendation 13, where a wider range of initiatives has been taken to ensure data quality.
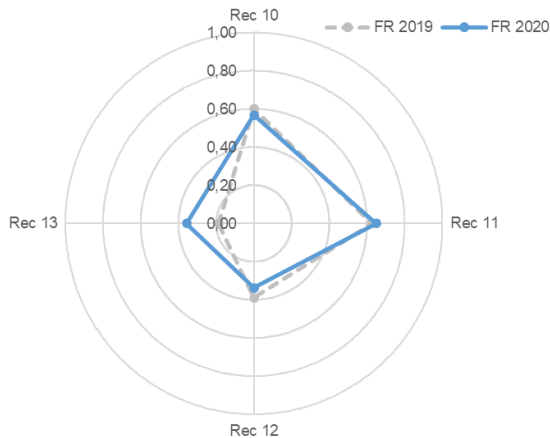
Figure 14 – Standardisation and Reuse – 2019/2020 comparison

The slight improvement under Recommendation 11 is due to the implementation of three more registers of location information in 2020.

There have been two major improvements under Recommendation 10:

- an EIF / EIRA-based architectural approach is widely adopted in the design and development of location based digital public services", while in 2019 the approach made no reference to the EIF / EIRA;
- a better organised approach has been adopted to discover, explore and incorporate new technological features or emerging technologies.

These increases have been offset by the relatively low scores for the two new indicators on the adoption of APIs (particularly concerning the actions to stimulate the uptake and usefulness of APIs).

With respect to Recommendation 12, the score has decreased because the degree of conformity of the network services to the INSPIRE implementing regulation is reported as being significantly lower than in 2019.

3.5. Return on Investment

	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 location-based services
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 5 - Focus Area "Return on Investment" - vision and recommendations

3.5.1 2020 Results
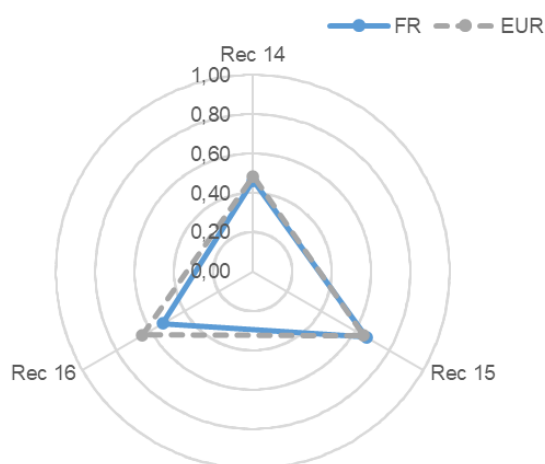
Figure 15 – Return on Investment – scores by recommendation

The scores for each recommendation in the "Return on Investment" focus area are shown in Figure 15 and the underlying indicator scores for each recommendation are shown in Figure 16. In both cases, the country scores are compared with the European averages.

The "Return on Investment" focus area index for France is 0.55, somehow below the European average of 0.58. This is due to the assessment of efficiency and effectiveness of location enabled services relying on a limited set of parameters and to the range of actions to facilitate the reuse of public location data and services less diversified than the average.

Assessments of the efficiency and effectiveness of location-based services are carried out, at organisational level, by evaluating the return on investments, reusability, increased participation and user satisfaction, but do not consider many other relevant dimensions, such as adaptability, availability, responsiveness, simplification of administrative processes, enhanced business opportunities, to name a few (Recommendation 14). A positive note is the implementation of several actions for impact-based improvement in location-enabled processes and services, such as:

- 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 on the availability and benefits of location data and location-enabled digital public services is frequent and thorough (Recommendation 15). There is dedicated directorate at IGN-France driving the communication activities[42]. These have included a public consultation process launched by IGN-France to design a new horizon with producers and users of geographic information: the geo-commons[43]. The term "commons" refers to resources that are produced, disseminated and then managed collectively by a community according to a set of governance rules that guarantee the integrity and availability of these resources over time. Professionals and users of geographic and forestry information were invited to express their vision on the use of geodata in the digital society and to specify the role and priorities of the IGN in the "common" movement. This unprecedented consultation for the institute ended on 4 June 2021 with 164 contributions.

France has implemented several measures to make the process of searching, finding and accessing location data and web services as easy as possible for companies, research institutions, citizens and other interested parties (Recommendation 16). These measures include:

- an open data portal merging location data and non-location data[44];
- a national discovery geoportal integrating INSPIRE and non-INSPIRE data and harvested by the European Data Portal [45]
- thematic portals complementing general search facilities with "specialist" search;

The following actions are implemented to support private, non-profit and academic actors in the development of new products and e-services:

- adoption of an open data policy;
- promotion of open data policy through hackathons;
- testbeds for trial use of public sector data;
- 'innovation labs' or 'innovation hubs';
- adding data and services from non-governmental actors to the public sector (spatial) data infrastructure;
- collecting best practice examples of how private companies, citizens, academic institutions and other users make use of INSPIRE/SDI data and services;
- making public sector experts available to advise on / participate in the external use of data in the SDI.

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[42] See best practice FR4
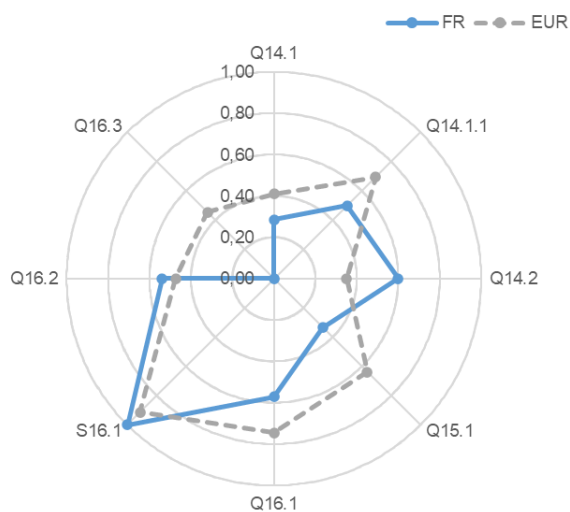[43] https://www.ign.fr/concertation-publique-sur-les-geo-communs
[44] https://www.data.gouv.fr/fr/
[45] https://www.geoportail.gouv.fr/

Figure 16 – Return on Investment – scores by indicator

There are policies supporting the reuse of public sector information both within public administration and by the private sector[46].

Regarding the approach adopted for funding public sector location reference data, various support mechanisms have been implemented by local authorities and the state to support open data access and reuse. These include:

- the observatory of territorial open data[47], continuously assessing the openness of data in local authorities on quantitative and qualitative dimensions;
- OpenDataLocale[48], a project aimed at supporting small and medium sized municipalities in their open data initiatives;

- Validata[49], a platform for validating open data produced by local authorities. It offers its users the possibility of verifying the conformity of this data with respect to the models defined within the framework of the Common Local Data Base (SCDL).

The private sector also invests in this field by offering many solutions for public actors: consulting, training, technical platforms for the publication and exploitation of data, production of reusable applications[50].

3.5.2 2019/2020 Comparison
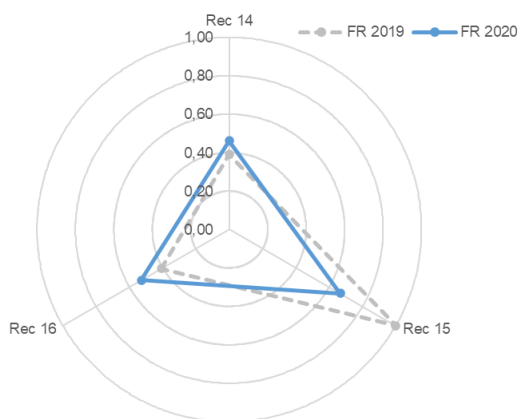
Figure 17 – Return on Investment – 2019/2020 comparison

The regression of the index in this focus area is due to Recommendation 15, where the recalibration of the index gives a less flattering, but more correct, picture of the maturity of the communication and promotional approach to facilitating the uptake of the benefits of location information.

On the positive side, the country reported a wider extent of the actions implemented to actively support private, non-profit and academic actors in the development of new products and e-services (Recommendation 16). Thematic portals complementing general search facilities with "specialist" search capabilities were also added to the set of actions to make the process of searching, finding and accessing location data and web services as easy as possible for stakeholders.

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[46] https://guides.etalab.gouv.fr/juridique/reutilisation/

[47] https://www.observatoire-opendata.fr/lobservatoire/

[48] https://opendatafrance.gitbook.io/opendatalocale/

[49] https://validata.fr/doku.php

[50] https://www.observatoire-opendata.fr/lobservatoire/

A wider range of factors has been used to assess the efficiency and effectiveness of location-based services ([Recommendation 14](#)). Those additional factors include:

- 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 specific location data or services and to prioritise investment across the governmental portfolio.

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 States 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, taking into account the needs and expectations of stakeholders at Member States 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 actors around a common goal
Recommendation 18	Partner effectively to ensure the successful development and exploitation of Spatial 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 6 - Focus Area "Governance, Partnerships and Capabilities" - vision and recommendations

3.6.1 2020 Results
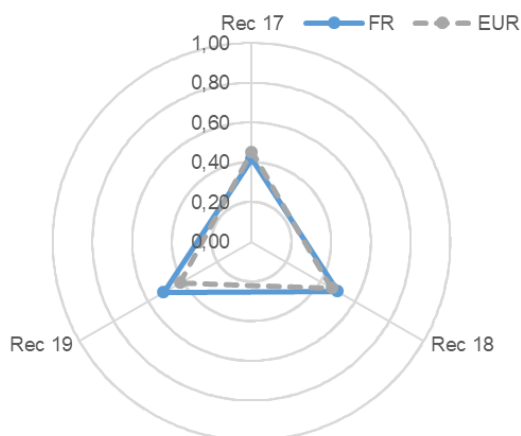
Figure 18 – Governance, Partnerships and Capabilities – scores by recommendation

Scores for each recommendation in the "Governance, Partnerships and Capabilities" focus area are shown in Figure 18 and the underlying indicator scores for each recommendation are shown in Figure 19. In both cases, the country scores are compared with the European averages.

The "Governance, Partnerships and Capabilities" focus area index for France is 0.48, compared with the European average of 0.45. The country is slightly below the average in terms of governance of location information processes (Recommendation 17) while it is better positioned than the average for its capacity building practices (Recommendation 19) and is aligned with the average for its use of partnerships (Recommendation 18).

Some training and awareness raising actions on geospatial skills are organised as part of a recognised geospatial competency framework (e.g. the courses organised by the National School of Geographic Sciences (École nationale des sciences géographiques - ENSG-Géomatique, reporting to IGN) or within a public sector ICT or data competency framework (Recommendation 19). Among the initiatives organised to raise awareness and develop geospatial skills, there are:

- a public sector location information / GI champion;
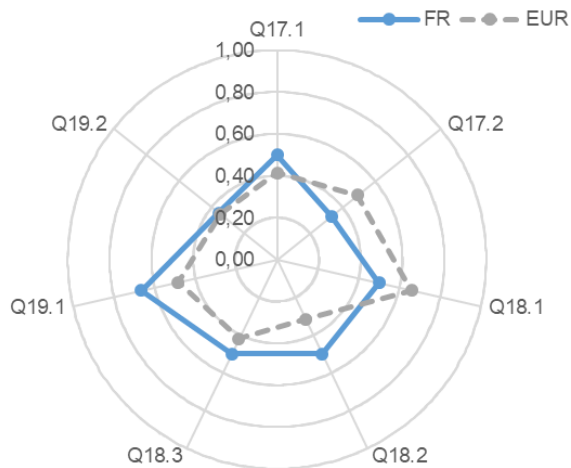
Figure 19 - Governance, Partnerships and Capabilities – scores by indicator

- training for specialists (e.g. developers or data analysts);
- spatial literacy / GI elements in Digital Innovation Hubs;
- a special interest group for knowledge sharing within the geospatial community;
- INSPIRE training modules.

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[51] (). Cross-border[52] and public-private partnership agreements are also in place.

The integrated governance of location information processes includes some joint decision making on the role of SDI in digital transformation, but without the involvement of all interested communities 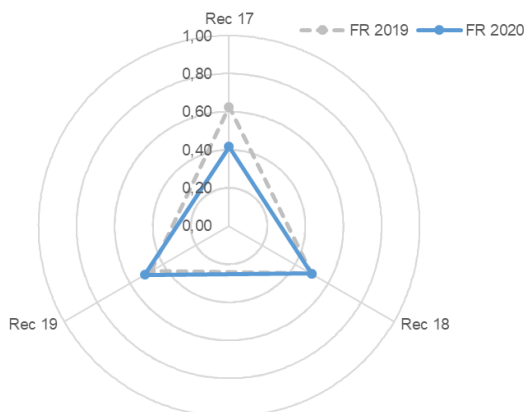(location and digital government, thematic domain representatives), administrative levels (central and local) and sectors (public, private, academic, society) (Recommendation 17). The joint coordination exerted by the organisations respectively responsible for SDI and digital government is not fully integrated nor relies on a single governance group.

3.6.2 2019/2020 Comparison

As for Recommendation 17, the decrease is mainly due to changes made to both indicators under this recommendation.

Figure 20 – Governance, Partnerships and Capabilities - 2019/2020 comparison

The country reports a narrower range of initiatives to raise awareness and develop geospatial skills (Recommendation 19), but this has been offset by the change of scale of one of the other indicators.

The same level of partnerships (Recommendation 18) has been confirmed, and the score is consequently the same for 2019 and 2020.

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[51] Examples thereof are:
  - Reference3D® (http://professionnels.ign.fr/reference3d),co-published with Spot Image, a database of grayscale orthophotoimages covering the whole world;
  - 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.

[52] IGN-France delivers the data of EuroGeographics' EuroGlobalMap as a WFS for Open ELS.

4. Best practices

Best Practice FR1	Géoplateforme, the collaborative initiative for the management of geodata

Policy domain: Geospatial

Process owners: France's National Geographic Institute (IGN)

Short description: The Géoplateforme is the future public space for geographical information in France. It will consist of a catalogue 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.

Recommendations: Digital Government Integration (8)

Link: https://www.ign.fr/geoplateforme/la-geoplateforme-en-bref

Best Practice FR2	Dedicated organisation for the communication of geospatial activities and benefits at IGN-France

Policy domain: Geospatial

Process owners: France's National Geographic Institute (IGN)

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[53], newsletters, website, digital communication (on social networks) and webinars (typically attended by audiences up to 500-700 persons).[54]

Recommendations: Return on Investment (15)

Link: https://www.ign.fr/institut/notre-organisation; https://www.youtube.com/user/IGNcommunication http://www.ign.fr/

Best Practice FR3	Edugéo

Policy domain: Geospatial, Education

Process owners: France's National Geographic Institute (IGN)

Short description: Édugéo is primarily intended for teachers and their students. This service aims to give schools public access to a set of geographic resources.

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[53] For instance, the last issue, http://www.ign.fr/institut/ign-magazine/ign-magazine-ndeg96, included an article about an app to facilitate access to the geodetic network.
[54] A recent event was held in January 2021 on collaborative tools for enterprise data.

This online service has been thought out and designed to facilitate the acquisition of fundamental concepts included in geography programmes, from elementary school level to the final year in high school.

It relies on an online mapping tool enabling users to:

- view aerial photographs, old maps, external data, etc.;
- create and save drawings with points, lines and shapes;
- compare different datasets to assess changes;
- save drawings in MAP format, but also KML, GPX or GML.

The embedded statistical tool allows users to represent localised phenomena in the form of a map with statistical, economic and scientific data in geographic formats (geojson, KML) or spreadsheets associated with municipalities or departments (xls, csv).

Different types of maps are available and configurable (thematic map, colour range, proportional symbols, diagrams, heat map, etc.). These maps can then be saved, printed and used in the Édugéo tool to add an additional layer of information. Sample data is available to familiarise the user with the features offered by the tool.

Edugéo also provides a series of educational notebooks produced by professors and school inspectors, with ready-to-use case studies and labs facilitating the use of resources and tools, addressing concepts included in school curricula.

Educational scenarios involving Édugéo are available on Édubase, a national bank of educational scenarios operated by the Digital Education Department (DNE). Édubase enables users, from a single interface, to search for an educational scenario illustrating a programme theme related to digital education.

Recommendations: Digital Government Integration (6), Governance, Partnerships and Capabilities (19)

Link: https://www.edugeo.fr/

Best Practice FR4	IGNfab

Policy domain: Geospatial, Business innovation support

Process owners: France's National Geographic Institute (IGN)

Short description: IGNfab, the geoservices project accelerator set up by IGN, aims to help SMEs and start-ups to develop innovative products and services using the description of the territory and geolocation in the environmental sector, land use planning, town planning, agriculture, forestry, energy, transport, defence and security, education, health, tourism, culture, and so on. Throughout its six seasons, IGNfab has supported companies with a wide range of IGN data and resources.

Support through INGfab lasts one year, during which IGNfab advises and helps the participants in the programme in the development of their project, providing technical expertise and access to its developers, as well as ad hoc training according to their needs. Being the winner of an IGNfab call for projects also means having access to IGN data, development platforms and specific materials, in a dedicated space of 200m².

Finally, participants benefit from access to the institutional and commercial network of IGN, which is made up of business partners and innovation support structures (competitiveness clusters, network of incubators, etc.).

Recommendations: Digital Government Integration (7); Return on Investment (16)

Link: https://www.ign.fr/ignfab

Best Practice FR5	Open Licence

Policy domain: Open data

Process owners: Etalab

Short description: The Licence Ouverte / Open Licence is a French free licence published by Etalab for open data from the State of France. Since 2017, it has been one of the reference licences for the publication of public data. The licence was designed to be compatible with Creative Commons Licences, the Open Government Licence, and the Open Data Commons Attribution Licence. Information released under the Open Licence may be re-used with attribution, in the form of a URL or other identification of the producer.

The "Open Licence" has the following characteristics:

- great freedom to reuse information:
    - an open and free licence which provides the necessary legal certainty for producers and re-users of public data;
    - a licence that promotes the widest possible re-use by allowing the reproduction, redistribution, adaptation and commercial exploitation of data;
    - a licence that is part of an international context by being compatible with the standards of Open Data licences developed abroad and in particular those of the British government (Open Government Licence) as well as other international standards (ODC-BY, CC-BY 2.0);
- a strong requirement for transparency of the data and quality of the sources by making it mandatory to mention the authorship;
- it represents an opportunity for pooling other public data by setting up a reusable standard for use by local authorities who would like to embark on the opening up of public data.

Recommendations: Policy and Strategy Alignment (2); Digital Government Integration (7)

Link: https://www.etalab.gouv.fr/licence-ouverte-open-licence

List of abbreviations and definitions

Abbreviations

Abbreviation	Meaning
API	Application Programming Interface
CNIG	Conseil National de l'Information Géographique (National Council for Geographic Information)
CNIL	Commission Nationale de l'Informatique et des Libertés (National Commission for Informatics and Freedom)
CSW	Catalogue Service – Web
DINUM	Direction Interministérielle du Numérique (Interministerial Directorate for Digitalisation)
DBGT	Geo-Topographic Data Base
DCAT-AP	Data Catalogue vocabulary – Application Profile
EIF	European Interoperability Framework
ELISE	European Location Interoperability Solutions for e-Government
ENSG	École nationale des sciences géographiques (National School for Geographic Sciences)
EULF	European Union Location Framework
ESRI	Environmental Systems Research Institute
Foss4G	Free and Open Source Software for Geospatial
FranceAgriMer	National Establishment of Agricultural and Marine Products
GDF	Geographic Data Files
GDPR	General Data Protection Regulation
GI	Geographic Information
GML	Geography Markup Language
GPX	Global Positioning System Exchange Format
G2B	Government to Business
G2C	Government to Citizen
G2G	Government to Government
HD	High definition
ICAR	Centralized Inventory of Addresses and Streets
ICT	Information and Communication Technology
IGN	Institut Géographique National (National Geographic Institute)
IHO	International Standards Acronym
INERIS	Institut National de l'Environnement Industriel et des Risques (National Institute for Industrial Environment and Risks)
INSPIRE	Infrastructure for Spatial Information in the European Community
ISA[2]	Interoperability Solutions for European Public Administrations, Businesses and Citizens Programme
ISO	International Standard Organisation
KML	Keyhole Markup Language
LIDAR	Light Detection and Ranging
LIFO	Location Interoperability Framework Observatory
MAP	Map Composition Files
NGO	Non-Governmental Organisation
NIFO	National Interoperability Framework Observatory
OGC	Open Geospatial Consortium
ONAS	Observatoire National de l'Artificialisation des Sols (National Observatory of Soil Artificialisation)
PCRS	Plan de Corps de Rue Simplifié (Simplified Street Plan)
PPNR	Plans de Prévention des Risques Technologiques (Technological Risks Prevention Plans)

Abbreviation	Meaning
RPG	Registre Parcellaire Graphique (Graphical Parcel Register)
RGE	Référentiel à grande échelle (Reference frame at large scale)
RNM	Réseau des Nouvelles des Marchés (Network of News from Markets)
SCDL	Socle Commun des Données Locales (Common Local Database)
SDI	Spatial Data Infrastructure
URI	Uniform Resource Identifier
WCS	Web Coverage Service
WFS	Web Feature Service
WMS	Web Map Service

Definitions

Term	Meaning	Link
Application Programming Interface (API)	A set of functions and procedures that allow the creation of applications which access the features or data of an operating system, application, or other service.	Application Programming Interface | Joinup (europa.eu)
Authentic data	Data that provides an accurate representation of reality with quality parameters that are fit for the intended purposes.	Authentic data | Joinup (europa.eu)
Authoritative data	Data from officially regarded sources. A subset of spatial data may be described as 'authoritative data', where it has legal value because it is defined by a competent authority.	Authoritative data | Joinup (europa.eu)
Core location dataset / High value dataset	Open Data Directive introduces the concept of 'high-value datasets' as datasets holding the potential to (i) generate significant socio-economic or environmental benefits and innovative services, (ii) benefit a high number of users, in particular SMEs, (iii) assist in generating revenues, and (iv) be combined with other datasets. Given this, the Directive requires that such datasets are available free of charge, are provided via Application Programming Interfaces (APIs) and as a bulk download, where relevant, and are machine-readable. The Directive does not include the specific list of high-value datasets—which is expected in the future—but only their thematic categories, one of which is 'Geospatial'. The 'high value dataset' concept is also considered in national data policy and programmes in different European countries, typically incorporating 'core' datasets, including geospatial data.	High Value Dataset | Joinup (europa.eu)
Core reference dataset	Core reference dataset can be defined as the minimum set of authoritative, harmonised and homogeneous framework data needed to either meet common requirements for applications at cross-border, European and global levels or to geo-reference and locate other thematic data. In the latter case, core data may be used as a framework on which other richer, more detailed, thematic geospatial and statistical data would rely.	http://ggim.un.org/meetings/GGIM-committee/documents/GGIM5/E-C20-2015-4%20Fundamental%20Data%20Themes%20Report.pdf
Digital government	Government designed and operated to take advantage of information in creating, optimising, and transforming, government services.	Digital government | Joinup (europa.eu)

Term	Meaning	Link
ESPD	The ESPD (European Single Procurement Document) is a self-declaration by economic operators providing preliminary evidence replacing the certificates issued by public authorities or third parties. As provided in Article 59 of Directive 2014/24/EU, it is a formal statement by the economic operator that it is not in one of the situations in which economic operators shall or may be excluded; that it meets the relevant selection criteria and that, where applicable, it fulfils the objective rules and criteria that have been set out for the purpose of limiting the number of otherwise qualified candidates to be invited to participate. Its objective is to reduce the administrative burden arising from the requirement to produce a substantial number of certificates or other documents related to exclusion and selection criteria	Commission Implementing Regulation (EU) 2016/7 of 5 January 2016
Evidence-based policy making	The development of public policy which is informed by objective evidence, e.g. through data related to the content of the policy.	Evidence-based policy making	Joinup (europa.eu)
GeoDCAT-AP specification	Data Catalogue vocabulary (DCAT) Application Profile extension for describing geospatial datasets, dataset series, and services.	GeoDCAT-AP	Joinup (europa.eu)
Geographical Information (GI) Champion	The GI Champion can be appointed to drive through the changes related to running a major GI improvement programme, promoting public sector modernisation through the use of GI, and ensure that the organisation is aware of and convey the benefits of geospatial information and technologies. A GI champion may also be appointed with a pan-government remit.	LIFO Guidelines and Recommendations
Key digital public services	The most frequently accessed and sometimes mandatory public services which are delivered with the extensive use of ICT, e.g. registration of land and property, health and welfare, civil status registration, transport, environmental protection, energy production and distribution, public safety, transport, public education etc. National legislation may define which services must be considered key.	https://joinup.ec.europa.eu/collection/european-union-location-framework-eulf/document/recommendation-6
Location data framework	Location data framework describes all the elements – including data assets, standards and technologies, policies and guidance, people and organisations – that are required to unlock the power of location. An SDI is a location data framework	LIFO Guidelines and Recommendations Unlocking the Power of Location: The UK's geospatial strategy 2020 to 2025
Location information strategy	A strategic approach for managing and maximising the value of location information.	Location information strategy	Joinup (europa.eu)

Term	Meaning	Link
OpenAPI	Specification for machine-readable interface files for describing, producing, consuming, and visualising RESTful web services.	https://swagger.io/specification/
Open and collaborative methodology	Any system of innovation or production that relies on goal-oriented yet loosely coordinated participants who interact to create a product (or service) of economic value, which they make available to contributors and noncontributors alike. Prominently used for the development of open source software.	https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1096442
Open licence	An open licence is a way for the copyright holder (creator or other rightsholder) to grant the general public the legal permission to use their work. The applied open licence is usually indicated directly on the work and wherever the work is shared. As in the case of other licences, open licences do not imply a transfer of copyright or other intellectual property rights. Someone granting an open licence for their work still remains the copyright holder of their materials and can themselves use the materials as they wish, e.g. to commercialise their project outcomes.	https://ec.europa.eu/programmes/erasmus-plus/programme-guide/part-c/important-contractual-provisions/open-licence-intellectual-property-rights_en
RESTful web services	Web services built on Representational State Transfer (REST) principles, where resources used by the services are made available through URIs (Uniform Resource Identifiers) and can be updated without affecting the service.	https://docs.oracle.com/javaee/6/tutorial/doc/gijqy.html
Sector legislation	Legislation about a particular domain (e.g. health, environment) or sub-domain (e.g. hospitals, water). Within INSPIRE, reference can be made to the nine thematic clusters, which have associated legislation, e.g. E-PTRT (European Pollutant Release and Transfer Register) IED (Industrial Emissions Directive).	https://inspire.ec.europa.eu/call-facilitators-%E2%80%93-thematic-clusters/50
Spatial Data Infrastructure (SDI)	In general terms, a Spatial Data Infrastructure (SDI) may be defined as 'a framework of policies, institutional arrangements, technologies, data, and people that enable the effective sharing and use of geographic information' [Bernard et al, 2005]. INSPIRE as an SDI for European environmental policy is defined as 'metadata, spatial data sets and spatial data services, network services and technologies, agreements on sharing, access and use, and coordination and monitoring mechanisms, processes and procedures, established, operated or made available in accordance with the Directive'.	Spatial Data Infrastructure | Joinup (europa.eu)

List of figures

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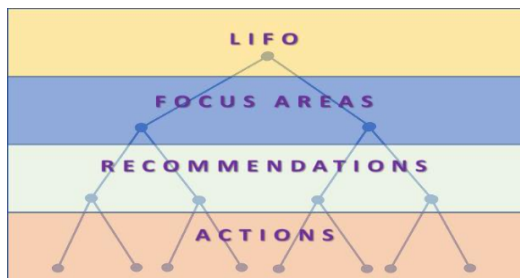
Annex 1: LIFO 2020 Scoring methodology

Figure 21 – Hierarchy of indicators and indexes

The LIFO analytical model, described in the *LIFO 2020 Guidelines and recommendations*[55], is based on a hierarchy of indicators and indexes, as represented in Figure 21: from bottom to top, (action) indicators, recommendation indexes, focus area indexes and LIFO index.

(Action) Indicators: A number of actions[56] have been selected in the EULF Blueprint as being representative of the scope of the recommendations to which they belong. An indicator has been designed to measure how monitored countries are progressing towards the "vision" outlined in the EULF Blueprint for each of these actions. Each primary indicator is represented by a code *Qx.y.z* where *x* is the recommendation number, *y* the progressive indicator number for that recommendation and *z* (where applicable) a second-level indicator providing additional information on the corresponding Qx.y first level indicator. Information to calculate each primary indicator is collected through the replies provided by participating countries to a question for each indicator. The model also includes secondary indicators, represented by a code *Sx.y*. These latter are computed reusing information from existing sources, for example, the INSPIRE monitoring. See Annex 2 for a list of the indicators and pertinent questions for each recommendation.

Each indicator is calculated 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 of 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 to represent each country's performance at the respective levels. The relationships between (action) indicators, recommendation indexes, focus area indexes and the overall LIFO index are described in Table 7.

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
Action	48	Scores calculated using different scoring methods converted to standard normalised scores in range 0-1.

Table 7 – 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 indicator gets a null score. This is shown as zero in the indicator charts, and the indicator is ignored in calculating the index scores.

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[55] https://joinup.ec.europa.eu/sites/default/files/inline-files/2020_LIFO_Guidelines_2.pdf
[56] Described in the "How" section of each Recommendation.

Annex 2: LIFO 2020 Indicators

Focus Area: Policy and Strategy Alignment			Changes vs 2019
No.	**Indicator**	**Question**	
Recommendation 1			
Q1.1	Alignment between location and digital government strategies	Is there a location strategy in your country that is closely connected to your digital government strategy?	Change in scale
Q1.1.1	Link to strategies	Please supply links to the location strategy and digital government strategy.	
Q1.2	Use in digital government of authoritative location datasets and services	To what extent is the use in digital government of authoritative location datasets and services regulated by legislation and/or binding agreements?	
Recommendation 2			
Q2.1	Licensing policy	To what extent is location data available free of charge under an open licence without restrictions or with minimum restrictions?	Change in scale
Q2.1.1	Licensing policy – covered datasets	Which of the following core location datasets with high importance for multiple external users (also known as "high value datasets" in national and European open data strategies) can be accessed (e.g. through APIs or downloads) free of charge under an open licence without restrictions or with minimum restrictions?:	New question
Q2.2	Core reference data policy on location data	Are core location reference datasets (for the list of core location datasets please refer to Q2.1.1) made available as part of a broader core reference data policy (which also includes people, businesses, vehicles etc.)?	Change in scale
Q2.3	Use of common data licensing frameworks	To what extent is location data available under a common licensing framework for all government data?	Change in scale
Q2.4	Coverage of location data by national guidelines on the publication of Public Sector Information	Do your pan-government guidelines on the publication of public sector data cover location aspects? "Cover location aspects" means that in the guidelines some specific geospatial topics are highlighted (e.g. formats, encoding, accessibility trough specific web services, specific legislation,).	
Recommendation 3			
Q3.1	Preparedness for GDPR under location aspects	How well-prepared are controllers and processors of public sector location data in your country for GDPR, including awareness of potential location data privacy issues	

		and processes in place to comply with the rights of data subjects?	
Recommendation 4			
Q4.1	Use of location-based analysis for evidence-based policy making	Is location-based evidence and analysis used to help in developing relevant policies and monitoring outcomes?	
Recommendation 5			
Q5.1	References to INSPIRE and relevant standards in procurement documents	For public sector procurements of location information or services, what references are made to INSPIRE and relevant standards in the procurement documents?	

Focus Area: Digital Government Integration			**Changes vs 2019**
No.	**Indicator**	**Question**	
Recommendation 6			
Q6.1	Improvement of location information use in digital public services	To what extent is there a process for identifying opportunities and implementing improvements to key digital public services in their use of location information, including considering new business and delivery models?	Change in scale
Q6.2	Optimal use of location information is used optimally in key digital public services	Please select up to 6 sectors where location information has the most significant role to play in digital public services. For these sectors, please specify how well 'optimised' is the use of location data in digital public services. In this respect, 'optimisation' relates to extent of use and contribution to innovation and quality of service.	Change in scale
Recommendation 7			
Q7.1	Use of SDI in cross-government digital services	To what extent is the SDI used in delivering digital public services across government (in different sectors and levels of government)?	Change in scale
S7.1	Implementation status of the INSPIRE directive	Average of indicators for the five actions in the INSPIRE country fiche: - Availability of spatial data and services - Conformity of metadata - Conformity of spatial data sets - Accessibility of spatial data sets through view and download services - Conformity of the network services	Change of calculation method for the INSPIRE country fiche
Q7.2	Use of SDI in cross-border services	Is the country actively involved in delivering cross-border digital public	Change in scale

			services using their spatial data infrastructure (SDI)?	
Q7.3	SDI approach used	Please specify the main SDI approach used for delivery of key digital public services in the sectors selected in 6.2.	New question
Q7.4	Use of the public sector SDI by private sector and other organisations (e.g. NGOs)	To what extent is the public sector SDI used by the private sector and other organisations (e.g. NGOs) for delivery of 'new and innovative' applications, products and services?	
Recommendation 8				
Q8.1	Use of an open and collaborative methodology in location-enabled digital public services	To what extent is an open and collaborative methodology applied, to design and improve location-enabled digital public services at local, sub-national or national level (e.g. through consultations, user groups, feedback requests, iterative development)?	
Q8.1.1	Level of government where a collaborative approach is used	At what level of government is the collaborative approach applied?	Single choice in 2019, multiple choice in 2020
Q8.2	Collaboration with external parties in service delivery	When developing or delivering location-based digital public services, in what ways are external parties involved? This includes the private sector, NGOs and citizens.	Change in scale
Recommendation 9				
Q9.1	Approach for integration of statistical and location information	What actions are implemented for the integration of location and statistical information in the production of location-based statistics?	

Focus Area: Standardisation and Reuse			**Changes vs 2019**
No.	**Indicator**	**Question**	
Recommendation 10			
Q.10.1	Adoption of a common architectural approach	In your country, does the architecture for location data and services in the SDI fit within a broader national ICT architecture approach that is applied in the design, re-engineering, interconnectivity and reuse of ICT and data in digital public services?	
Q10.2	Procedure to incorporate new technological features	Please describe the approach (if any) to discover, explore and incorporate new technological features or emerging technologies.	
Q10.3	Status of development of APIs for INSPIRE / SDI	Please describe the status of development of APIs for SDI / INSPIRE.	

Q10.3.1	Access to high-value location datasets through APIs	Which core "high value" location datasets can be accessed using APIs?	New question
Q10.3.2	Action to foster APIs take-up	Where there are APIs for location datasets, what steps are commonly taken to stimulate take-up and ensure they are as useful as possible?	New question
Recommendation 11			
Q11.1	Reuse of generic ICT solutions in the SDI	Please describe the reuse status of generic ICT solutions in the SDI.	Single choice in 2019, multiple choice in 2020
Q11.2	Implementation of location information registers	What registers of location information are implemented?	
Recommendation 12			
Q12.1	Use of geospatial standards	What type of geospatial domain standards are used in your country?	Change of question
S12.1	Conformity of spatial data sets to INSPIRE implementing rules	Conformity of spatial data sets with Regulation (EU) No 1089/2010 (from INSPIRE monitoring)	
Q12.2	Use of a standardised metadata approach	To what extent is a standardised metadata approach adopted to facilitate discoverability of spatial and non-spatial data through joint access mechanisms such as those listed in the question Q16.1?	New question
Q12.2.1	Use of specifications for combining spatial and non-spatial metadata	Where an approach to facilitate a joint discoverability of spatial and non-spatial data is adopted, what specifications and tools are used to a significant degree to combine spatial with non-spatial metadata in national implementations?	New question
S12.2	Conformity of the INSPIRE network services with INSPIRE implementing rules	Conformity of the INSPIRE network services with Regulation (EC) No 976/2009 (from INSPIRE monitoring)	
Recommendation 13			
Q13.1	Approach to location data quality	What actions are typically implemented to assure quality of location data in your country?	
Q13.1.1	Use of data quality standards	What data quality standard is applied to location data?	New question
Q13.2	Approach to location data quality governance	What type of actions relating to location data quality governance are put in place in your country?	
Q13.2.1	Collection of feedback from users	Where feedback is obtained from users, what approach is taken?	

Focus Area: Return on Investment			Changes vs 2019
No.	**Indicator**	**Question**	
Recommendation 14			
Q14.1	Performance monitoring of location-enabled digital public services	What of the following elements are evaluated to assess the efficiency and effectiveness of location-based services in your country?	
Q14.1.1	Performance monitoring scope	Are the measurements done: [ ] At a project or service level [ ] At an organisational level [ ] At an SDI / national level [ ] A combination of the above	
Q14.2	Approach to impact-based improvement	What actions are implemented for impact-based improvement in location-enabled processes and services in your country?	
Recommendation 15			
Q15.1	Approach to communication of benefits	Is communication delivered on the availability and benefits of location data and location- enabled digital public services to raise awareness and understanding using, for example, factsheets, news articles, web-based communication, videos, events?	Change of question
Recommendation 16			
Q16.1	Ease of searching, finding and accessing location data	What measures are implemented to make the process of searching, finding and accessing location data and web services as easy as possible for companies, research institutions, citizens and other interested parties?	
S16.1	Existence of policies supporting the reuse of PSI	Existence of policies supporting the reuse of Public Sector Information by the private sector (from the Open Data Maturity Report)	
Q16.2	Support to the development of products and services by external parties	Which of the following actions are implemented in your country to actively support private, non- profit and academic actors in the development of new products, services or research using public sector location data?	Change of scale
Q16.3	Existence of a strategic approach to funding location reference data	Is there a strategic approach to funding public sector location reference data to make access at point of use cost effective?	

Focus Area: Governance, Partnerships and Capabilities			Changes vs 2019
No.	Indicator	Question	
Recommendation 17			
Q17.1	Involvement of stakeholders in decision making on location information in digital government	To what extent are all relevant communities (location and digital government), domains (thematic), administrative levels (central and local) and sectors (public, private, academic, society) involved in decision making on the role of location information in Digital Government?	Multiple choice in 2019, single choice in 2020
Q17.2	Coordinated governance of SDI and digital government	To what extent do organisations responsible for SDI and Digital Government coordination deal jointly with the governance of the SDI in the context of Digital Government?	Multiple choice in 2019, single choice in 2020
Recommendation 18			
Q18.1	Use of formal agreements between public authorities in the country to operate location data services	To what extent do formal agreements exist between public authorities in the country to finance, build and operate location data services or digital public services using location data?	
Q18.2	Use of formal agreements to operate cross-border location data services	To what extent do formal agreements exist with public authorities in other countries to finance, build and operate cross-border location data services or digital public services using location data?	
Q18.3	Use of public–private partnerships to operate location data services	To what extent do public-private partnerships exist to finance, build and operate location data services or digital public services using location data?	
Recommendation 19			
Q19.1	Use of a strategic approach to geospatial capacity building	To what extent is there a strategic approach to skills and training for innovative geospatial solutions?	Multiple choice in 2019, single choice in 2020
Q19.2	Awareness raising initiatives in the geospatial domain	What type of initiatives are organised to raise awareness and develop geospatial skills?	Change in scale

Note: Some indicators have been modified in LIFO 2020 compared with LIFO 2019[57], with the aim to improve the capability of the LIFO analytical model to represent consistently the state

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[57] LIFO 2019 indicators are listed at https://joinup.ec.europa.eu/node/704929, while LIFO 2020 indicators are listed at https://joinup.ec.europa.eu/node/704251

of play of location interoperability at country and European level. The main changes, and the focus areas / recommendations impacted are:

- Digital Government Integration:
  - Reduced focus on INSPIRE as reference SDI for the delivery of location-enabled services (Recommendation 7);
  - Changes in the calculation of INSPIRE country fiche indicators (Recommendation 7).
- Standardisation and Reuse:
  - More emphasis on the use of APIs for access to and reuse of location data, with new indicators (Recommendation 10);
  - New indicators on the use of metadata for joint discoverability of spatial and non-spatial data (Recommendation 12).
- Governance, partnerships and capabilities:
  - Questions on governance (approaches to joint involvement of all relevant stakeholders in the governance of SDI – Recommendation 17) and capabilities (approaches to geospatial training and skills - Recommendation 19) have passed from multiple choice to single choice

Where changes have been made to the indicators from 2019 to 2020, they are classified as follows:

- "Change in scale": one or more options of reply have been added (or eliminated);
- "Change of question": the question has been completely redrafted;
- "New question": the question was not included in LIFO 2019 questionnaire;
- "Single choice in 2019, multiple choice in 2020": in 2019 it was possible to select only one option as reply, in 2020 more than one option can be selected;
- "Multiple choice in 2019, single choice in 2020": in 2019 it was possible to select more than one option as reply, in 2020 only one option can be selected.

Annex 3: LIFO 2020 Additional information: France

Title	Attachments[58]
LIFO Survey questionnaire 2020 – France	📎 LIFO Survey 2020 France
LIFO Survey questionnaire 2020 scores and charts – France	📎 LIFO 2020 scores and charts France

FOCUS AREA	FR 2020 v FR 2019			FR 2020 v EUR 2020 (all countries)			FR 2020 v EUR 2020 (2019 countries)			FR 2019 v EUR 2019		
	FR 2019	FR 2020	+/-	EUR 2020	FR 2020	+/-	EUR 2020	FR 2020	+/-	EUR 2019	FR 2019	+/-
Policy and strategy alignment	0.33	0.60	0.27	0.62	0.60	-0.02	0.68	0.60	-0.08	0.57	0.33	-0.24
Digital government integration	0.59	0.71	0.12	0.57	0.71	0.14	0.59	0.71	0.12	0.54	0.59	0.05
Standardisation and reuse	0.45	0.48	0.03	0.55	0.48	-0.07	0.62	0.48	-0.14	0.54	0.45	-0.08
Return on investment	0.60	0.55	-0.05	0.58	0.55	-0.03	0.64	0.55	-0.09	0.60	0.60	-
Governance, partnerships and capabilities	0.53	0.48	-0.05	0.45	0.48	0.03	0.49	0.48	-0.01	0.44	0.53	0.09
LIFO INDEX	0.50	0.56	0.06	0.55	0.56	0.01	0.60	0.56	-0.04	0.54	0.50	-0.05

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[58] Attachments can be accessed by clicking on the respective icon when opening the factsheet in Adobe Acrobat Reader, provided that the application preferences are set to do so.