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LIFO 2020 Guidelines and recommendations

*ISA² Action 2016.10: ELISE – European Location Interoperability Solutions for
e-Government*

LIFO

*Specific contract n°329 under Framework Contract Lot 3 – ABCIV
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List of acronyms

Acronym	Description
ELISE	European Location Interoperability Solutions for e-Government
EULF	European Union Location Framework
ICT	Information and Communication Technology
INSPIRE	Infrastructure for Spatial Information in Europe
ISA²	Interoperability Solutions for European Public Administrations, Business and Citizens
LIFO	Location Interoperability Framework Observatory
PSI	Public Sector Information
UP	User Panel (group of national contact points involved in the execution of Wave 1)
ISA² WGGS	ISA ² Working Group on Geospatial Solutions

Introduction

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

LIFO's analytical model measures, through specific indicators, the current level of adoption of the recommendations on location interoperability from the EULF Blueprint¹. Table 1 below lists all EULF Blueprint recommendations, grouped into five focus areas reported in the blue rows.

POLICY AND STRATEGY ALIGNMENT	
1.	Connect location information and digital government strategies in all legal and policy instruments
2.	Make location information policy integral to, and aligned with, wider data policy at all levels of government
3.	Ensure all measures are in place, consistent with legal requirements, to protect personal privacy when processing location data.
4.	Make effective use of location-based analysis and location intelligence for evidence-based policy making
5.	Use a standards-based approach in the procurement of location data and related services in line with broader ICT standards-based procurement
DIGITAL GOVERNMENT INTEGRATION	
6.	Identify where digital public services can be simplified or transformed using location information and location intelligence, and implement improvement actions that create value for users
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
8.	Adopt an open and collaborative methodology to design and improve location-enabled digital public services
9.	Adopt an integrated location-based approach in the collection and analysis of statistics on different topics and at different levels of government
STANDARDISATION AND REUSE	
10.	Adopt a common architecture to develop digital government solutions, facilitating the integration of geospatial requirements
11.	Reuse existing authentic data, data services and relevant technical solutions where possible
12.	Apply relevant standards to develop a comprehensive approach for spatial data modelling, sharing, and exchange to facilitate integration in digital public services
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

¹ The European Union Location Framework Blueprint is a guidance framework for effective use of location information in digital government services. See: <https://joinup.ec.europa.eu/collection/european-union-location-framework-eulf/eulf-blueprint>. The version of the EULF Blueprint updated as of 16/09/2020 is attached hereby as

RETURN ON INVESTMENT	
14.	Apply a consistent and systematic approach to monitoring the performance of location-based services
15.	Communicate the benefits of integrating and using location information in digital public services
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
GOVERNANCE, PARTNERSHIPS AND CAPABILITIES	
17.	Introduce integrated governance of location information processes at all levels of government, bringing together different governmental and non-governmental actors around a common goal
18.	Partner effectively to ensure the successful development and exploitation of location data infrastructures
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 1 - Blueprint Focus Areas and recommendations

The LIFO model is composed of primary indicators, based on information provided by respondents to a questionnaire, and secondary indicators, re-using information from existing sources, for example the INSPIRE monitoring.

The final model is the result of joint collaborations with Member States, providing their initial contributions during ISA² Working Group on Geospatial Solutions (WGGS) meetings and through exchanges with members of the dedicated LIFO User Panel, consisting of 18² volunteer representatives from the WGGS.

The representatives of the LIFO User Panel were engaged to collect information, either directly or from third parties, such as other organisations, public bodies, INSPIRE, eGovernment and thematic contact points or private sector stakeholders in their countries. The collected information contributed to the 'Wave 1' LIFO process which mapped location interoperability implementation across ISA² MS in 2019.

To facilitate the collection of information from User Panel representatives, the LIFO was launched in the form of an online survey, using the European Commission's official survey management tool: EUSurvey. The survey was organised to require a response for each indicator listed.

This document describes how to use the EUSurvey tool to provide the required LIFO information, including user recommendations and instructions for collection of quality information. The recommendations and instructions within this document, consider feedback provided from LIFO 'Wave 1' respondents.

The LIFO 'Wave 2' in 2020 will be expanded to include additional ISA² MS. 'Wave 1' countries will also be asked to update their input from 2019 as part of LIFO 'Wave 2'. LIFO 'Wave 2' will apply lessons learned from 'Wave 1', to make the process as smooth and useful as possible.

² As of 03/09/2020.

1. Definition and completion of LIFO model

The LIFO objectives are to:

- identify and analyse the state of play in MS, related to the use of location data and INSPIRE in digital government;
- provide a self-assessment tool for the public administrations towards their implementation of location interoperability, both internally and cross-border;
- enable easier comparison of location interoperability initiatives across Member States to facilitate the implementation of a Digital Single Market;
- determine and share best practice initiatives in location interoperability; LIFO can be used to plan appropriate measures, including potential partnerships and identifying opportunities for sharing solutions;
- provide a domain-specific observatory complementing and contributing to the National Interoperability Framework Observatory (NIFO) within ISA².

The LIFO model is built around the Recommendations in the five Focus Areas of the EULF Blueprint and is made up of indicators relating to the priority groups of actions in the "How to" section for each Recommendation.

The LIFO is composed of:

- **48 primary indicators**, which are specifically created for LIFO and measured through direct questions to the panel of LIFO contact points;
- **4 secondary indicators**, taken from external sources, following principles of relevance for the scope of LIFO.

The primary indicators are scored through first level questions and, for some of them, second level questions, returning additional specifications on the content of the reply given the first level questions. The survey³ submitted to the MS respondents involved in the LIFO 'Wave 1' execution, collected information needed for calculation of scores associated with each of the indicators.

In order to support MS respondents in becoming familiar with the completion of the LIFO, a set of supporting tools have been implemented, taking into consideration respondent feedback from the initial pilot of the LIFO in 2017 and from the 2019 Survey. These are:

- data collection using an online survey instead of an excel spreadsheet;
- instructions and recommendations for respondents to complete the LIFO, including a glossary of terms and abbreviations used;
- help map the sources used for each question at national level to facilitate the data collection process and identify other stakeholders potentially needed to collect relevant information;
- using a functional email address to provide a dedicated support avenue for clarifications regarding LIFO indicators or on the selection of available replies;

³ The complete survey is available in [Instructions for completion of LIFO survey](#)

- hold regular meetings to monitor progress and deal with wider questions regarding the execution of the project.

EUSurvey⁴ has been adopted as the LIFO data collection tool, as for Wave 1 in 2019. This document addresses the request for guidance on the survey. It includes:

- a guide for an effective use of the online survey ([chapter 2](#));
- a set of instructions and recommendations for replying to the questions included in the questionnaire ([chapter 3](#));
- a selection of frequently asked questions - FAQ ([FAQ](#));
- a glossary with a list of significant terms and their relevant meaning ([Glossary 5](#)).

⁴ <https://ec.europa.eu/eusurvey/>

2. LIFO survey user guide

The aim of the LIFO survey user guide is to help respondents from participating Member States (MS) to supply appropriate information to the Location Interoperability Framework Observatory (LIFO).

The online survey structure is organised in a series of tabs as shown in Figure 1.

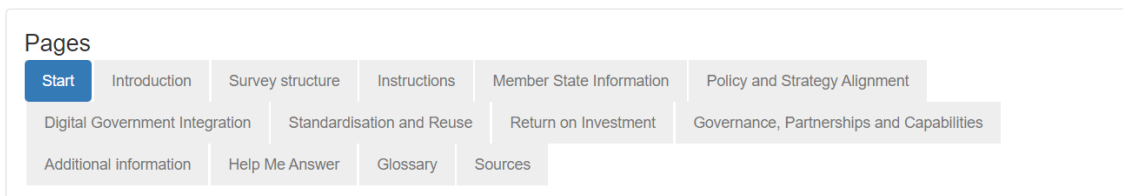


Figure 1 – Online LIFO survey structure by tabs

- **Introduction:** a brief general description of LIFO with references to EULF Blueprint;
- **Survey structure:** information on how the survey is structured;
- **Instructions:** user guidance and information for effective completion of the survey;
- **Member State information:** respondent is requested to provide basic identification data;
- Sub-sections for each Focus Area:
 - o **Policy and Strategy Alignment:** questions referring to Recommendations 1 to 5;
 - o **Digital Government Integration:** questions referring to Recommendations 6 to 9;
 - o **Standardisation and Reuse:** questions referring to Recommendations 10 to 13;
 - o **Return on Investment:** questions referring to Recommendations 14 to 16;
 - o **Governance, Partnerships and Capabilities:** questions referring to Recommendations 17 to 19;
- **Additional information:** where the respondent can provide any new additional information on best practices on location interoperability in their country, not provided previously.
- **Help Me Answer:** a page containing the online version of Chapter 3, “Instructions”, of the present guidelines
- **Glossary:** a list of significant terms with their relevant meaning and, where applicable, the source from which they are taken from;
- **Sources:** the observatories, studies and surveys from where the secondary indicators are taken.

This tabular structure allows navigating between sections by:

- clicking on the "Next" button at the end of each section, which will take the respondent to the beginning of the following section or;

- clicking on any of the tabs at the beginning of each section, which will take the respondent directly to any one of the other sections.

Questions are grouped according to the following concepts of the EULF Blueprint:

- Focus Area (5)
- Recommendation (19)
- Group of "how to" (actions) (33)

Examples of how questions are grouped is shown in Figure 2 below.



Figure 2 - Example of grouping questions

Each question corresponds to an indicator. Indicators are shown in bold before the corresponding question (Figure 3).

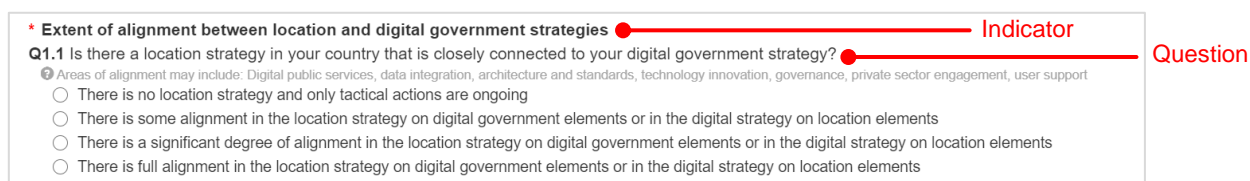


Figure 3 - Example of an indicator and corresponding question

By replying to the question, the respondents provide the information necessary to calculate the corresponding indicator score.

When the respondent ticks an option that requires additional information, a second level question appears (Figure 4). If in Figure 4, Q2.4 when the respondent ticks "Yes", the second level questions 2.4.1 and 2.4.2 appear, in order to allow the respondent to provide additional details. Alternatively, if respondents tick "No or no guidelines on the publication of public sector data exist", no second level question appears.

*** Adoption of national guidelines on the publication of Public Sector Information**

Q2.4 Do your national or sub-national/local guidelines on the publication of public sector data cover location aspects?

No or no guidelines on the publication of public sector data exist

Yes

2.4.1 What aspects do they cover?

2.4.2 Is there an URL to access the documents?

Figure 4 - Example of second level questions


In order to give a complete overview of the LIFO, the survey displays both:

- the questions relevant to the **"primary" indicators**, for which information must be provided directly by the respondent to the survey;
- a set of **"secondary" indicators**, for which information is collected directly from other sources, without the respondent being requested to provide any additional information.

Mandatory responses to primary indicator questions are marked with * (Figure 4). Failing to answer all mandatory questions will not allow for the survey to be closed and submitted. Questions relevant to the secondary indicators are "for information only" and include a reference to the source of the information. These questions are not numbered and survey respondents cannot reply to them (Figure 5).

Status of implementation of the INSPIRE Directive

What is the INSPIRE implementation status under the various keys obligations of the directive?

 Secondary indicator from INSPIRE Country fiche - This is a read-only question. Do not answer

Step 1: Identify spatial datasets

Step 2: Document datasets (metadata)

Step 3: Provide services for identified spatial datasets (discovery, view, download)

Step 4: Make spatial datasets interoperable by aligning them with the common data models

Figure 5 - Example of a secondary indicator with a read-only question

Survey questions are numbered according to the corresponding EULF Blueprint Recommendation. For example, Q7.3 is the third question referring to Recommendation 7. For some questions (and for some specific replies given to these questions), second level questions require additional information to expand on the reply given to the first level question. Second level questions have an additional level of numbering (for example, Q7.4.1 is the first "second level question" providing additional information on the first level question Q7.4).

First level questions are closed-ended and are presented in various formats, i.e.:

- statements with tick box categories allowing only one reply from a predefined list (Figure 6) or statements with multiple choice tick box categories (Figure 7) , where the question asks respondents to "tick all that apply"

*** Delivering digital public services across government using a spatial data infrastructure (SDI)**
Q7.1 To what extent is the SDI used in delivering digital public services across government (in different sectors and levels of government)?
ⓘ In general terms, an 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/information' (Bernard et al, 2005)

- In some cases
- In many cases
- In most / all cases
- The SDI is not used at all
- Don't know

Figure 6 - Example of "single choice" question

*** Extent to which public administrations have implemented registers of location information**
Q11.2 What registers of location information are implemented? Please tick all that apply
ⓘ (!) If the answer "None / Don't know" is selected, please don't check any of the other answers

- Addresses
- Geographical names
- Administrative units
- Cadastral parcels
- Buildings
- Hydrography
- Transport networks
- Glossary
- Code lists
- Other. Please specify
- None
- Don't know

Figure 7 - Example of "multiple choice" question

Open-ended items are also allowed for the second level questions to collect additional information on the content of the reply given to the first level questions (Figure 4).

Respondents can save their inputs at any time by clicking on the button "Save as a draft" on the right side of each page and resume the survey by using the link they receive via email when saving the draft. They may also download a PDF of their inputs at that time.

When respondents have finished the survey, they click on "Submit" in the "Sources" tab at the end. Respondents will not be allowed to submit their survey unless they have replied to all mandatory questions (marked with *) (Figure 4). If any mandatory question has not been answered, they will be taken back to the first incomplete section in the survey.

3. Instructions for completion of LIFO survey

Table 1 below includes relevant notes for completion of the LIFO survey. For each question (both first and second level) related to primary indicators used in the LIFO survey, appropriate instructions are provided in order to make completion of LIFO survey effective by submitting relevant, quality information.

Table 2- LIFO Notes for completion of survey questions LIFO Notes for completion of survey questions

Question		Notes for completion
Focus Area: Policy and Strategy Alignment		
Recommendation 1		
Q1.1	<p>Is there a location strategy in your country that is closely connected to your digital government strategy?</p> <p>1) <input type="checkbox"/> There is no location strategy and only tactical actions are ongoing</p> <p>2) <input type="checkbox"/> There is some alignment in the location strategy on digital government elements or in the digital strategy on location elements.</p> <p>3) <input type="checkbox"/> There is a significant degree of alignment in the location strategy on digital government elements or in the digital strategy on location elements.</p> <p>4) <input type="checkbox"/> There is full alignment in the location strategy on digital government elements or in the digital strategy on location elements.</p>	<p>This question refers to the alignment of location and digital government strategies.</p> <p>Areas of alignment may include: digital public services, data integration, architecture and standards, technology innovation, governance, private sector engagement, user support.</p> <p>The respondent should tick the option that best summarises the alignment level of the two strategies in the country, from 1) no location strategy 2) partial alignment 3) advanced alignment 4) full alignment.</p> <p>If only one strategy encompassing location and digital government topics exists, then this situation may be considered as falling under option 4.</p> <p>The information needed for replying may be collected from the (central) organisation(s) responsible for leading - and eventually coordinating - the definition and implementation of the two strategies.</p> <p>Definitions of the terms 'digital government strategy' and 'location information strategy', used in the question, are provided in the glossary (chapter 4).</p>
Q1.1.1	<p>Please supply links to the location strategy and digital government strategy.</p>	<p>This second level question may be answered if one of the options from 2 to 4 is ticked in Q1.1.</p> <p>The respondent should provide a valid link to relevant policy documents to give evidence on the alignment level declared in the first level question.</p> <p>If those links are not open to the public, specify that specific credentials are required to access the documentation.</p>
Q1.2	<p>To what extent is the use in digital government of authoritative location datasets and services regulated by legislation and/or binding agreements?</p> <p>1) <input type="checkbox"/> There is no legislation or binding agreements</p> <p>2) <input type="checkbox"/> There is sector legislation and/or sector binding agreements</p> <p>3) <input type="checkbox"/> There is general cross-sector legislation and/or cross-sector binding agreements</p>	<p>This question relates to the existence of legislation and/or binding agreements (sector, cross-sector or none) mandating the use in digital government of authoritative location datasets and services.</p> <p>Tick one of the options.</p> <p>More detailed information may be specified in the free text field at the end of the recommendation, by indicating the question these details refer to.</p> <p>The definition of the terms 'authoritative data' and 'sector legislation', used in the question, are provided in the glossary (chapter 4).</p>
Recommendation 2		

<p>Q2.1</p>	<p>To what extent is location data available free of charge under an open licence without restrictions or with minimum restrictions?</p> <p>1) WITHOUT RESTRICTIONS</p> <p>1.1) <input type="checkbox"/> Don't know 1.2) <input type="checkbox"/> No location data 1.3) <input type="checkbox"/> Some location data 1.4) <input type="checkbox"/> Most location data 1.5) <input type="checkbox"/> All location data</p> <p>2) MINIMUM RESTRICTIONS</p> <p>2.1) <input type="checkbox"/> Don't know 2.2) <input type="checkbox"/> No location data 2.3) <input type="checkbox"/> Some location data 2.4) <input type="checkbox"/> Most location data 2.5) <input type="checkbox"/> All location data</p>	<p>This question refers to the availability of location data, free of charge, under an open licence without restrictions or with minimum restrictions.</p> <p>'Without restrictions' means public domain licence, e.g. CC0, ODC or national equivalent. 'Minimum restrictions' means attribution or indication of changes required, e.g. CC-BY, ODC-BY or national equivalent.</p> <p>Datasets do not qualify if there are:</p> <ol style="list-style-type: none"> Charges in some circumstances (e.g. volumes of data or types of access) Restrictions on commercial use, derived use, geographical use or duration of use Share alike requirements <p>Tick one of the options for 'Without restrictions' and one of the options for 'Minimum restrictions'.</p> <p>Sources of information needed for replying may be the catalogues for spatial data and the open data portals, as the conditions for access and use, generally expressed through a licence, are described in the metadata records published in those catalogues and portals.</p> <p>The definition of the term 'open licence', used in the question, is provided in the glossary (chapter 4).</p>																																																
<p>Q2.1.1</p>	<p>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?</p> <table border="1" data-bbox="343 1142 798 1993"> <thead> <tr> <th>Without restrictions</th> <th>Minimum restrictions</th> <th></th> </tr> </thead> <tbody> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Addresses</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Administrative units</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Air quality</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Buildings</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Cadastral parcels</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Elevation</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Geographical names</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Health statistics (illness and cause of death)</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Hydrography</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Land cover</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Land use</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Population distribution and demography</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Protected sites</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Statistical units</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td>Transport networks</td></tr> </tbody> </table>	Without restrictions	Minimum restrictions		<input type="checkbox"/>	<input type="checkbox"/>	Addresses	<input type="checkbox"/>	<input type="checkbox"/>	Administrative units	<input type="checkbox"/>	<input type="checkbox"/>	Air quality	<input type="checkbox"/>	<input type="checkbox"/>	Buildings	<input type="checkbox"/>	<input type="checkbox"/>	Cadastral parcels	<input type="checkbox"/>	<input type="checkbox"/>	Elevation	<input type="checkbox"/>	<input type="checkbox"/>	Geographical names	<input type="checkbox"/>	<input type="checkbox"/>	Health statistics (illness and cause of death)	<input type="checkbox"/>	<input type="checkbox"/>	Hydrography	<input type="checkbox"/>	<input type="checkbox"/>	Land cover	<input type="checkbox"/>	<input type="checkbox"/>	Land use	<input type="checkbox"/>	<input type="checkbox"/>	Population distribution and demography	<input type="checkbox"/>	<input type="checkbox"/>	Protected sites	<input type="checkbox"/>	<input type="checkbox"/>	Statistical units	<input type="checkbox"/>	<input type="checkbox"/>	Transport networks	<p>The respondent is required to indicate which core location datasets included in the list are available free of charge under an open licence without restrictions or with minimum restrictions.</p> <p>The meaning of 'without restrictions' and 'minimum restrictions' is provided with the note for Q2.1. All other restrictions and charging in any circumstances do not qualify.</p> <p>According to the Open Data Directive (i.e. Directive (EU) 2019/1024), the definition of "High value dataset" is provided in the glossary (chapter 4), as well as the definition of the term 'open licence', used in the question.</p> <p>The list of datasets is not intended to equate with the official initial list referred to in art. 14 of the Open Data Directive. The LIFO is not monitoring compliance with the ODD. Instead, it is a representative list of different types of public location datasets that are likely to be in high demand over time from external users. It is not anticipated that all of these datasets will be included in the initial phase of the Open Data Directive. Some thematic location datasets in the initial official ODD list may also not appear in the list.</p> <p>Multiple options may be ticked.</p> <p>The respondent may also indicate other datasets not listed by ticking the option 'Other' and providing the details in the free text field that appears.</p>
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<input type="checkbox"/>	<input type="checkbox"/>	Weather observations												
<input type="checkbox"/>	<input type="checkbox"/>	Other (please specify)												
Q2.1.2	<p>Where datasets in the above list are not openly available (i.e. there are charges or excessive restrictions), what are the most common reasons? Tick all that apply.</p> <p>1) <input type="checkbox"/> Charges for commercial use 2) <input type="checkbox"/> Charges in other situations (e.g. volumes of data, types of access) 3) <input type="checkbox"/> Charges for any use 4) <input type="checkbox"/> Commercial use not permitted 5) <input type="checkbox"/> No derivations allowed 6) <input type="checkbox"/> Share alike required 7) <input type="checkbox"/> Other (please specify)</p>	<p>If some datasets listed in Q2.1.1 are not available free of charge under an open licence without restrictions or with minimum restrictions, the respondent is required to indicate what restrictions are applied by ticking the options that summarises the most common reasons.</p> <p>Multiple options may be ticked.</p> <p>The respondent may also indicate other reasons not listed by ticking the option 'Other' and providing the details in the free text field that appears.</p>												
Q2.2	<p>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.)?</p> <p>1) <input type="checkbox"/> Location core reference datasets are not generally available 2) <input type="checkbox"/> Some location core reference datasets are available for general use 3) <input type="checkbox"/> A wide range of location core reference datasets are available for general use</p>	<p>This question refers to the availability of location core reference datasets, also known as base registers, in the context of a wider data policy. Here the focus is not the availability of those datasets as such, but the availability of location data established and fostered in a more general data policy.</p> <p>The answer should be consistent with the answers provided for the previous questions.</p> <p>Tick one of the options.</p> <p>The definition of the term 'core location data', used in the question, is provided in the glossary (chapter 4).</p>												
Q2.2.1	<p>Please supply a link to your policy or guidelines on sharing and reuse of core reference datasets.</p> <p>Does this refer to location information?</p>	<p>This second level question is required to provide additional information about the existence of a wider data policy, including the core reference datasets in general. In particular, provide a link to policy documents and/or guidelines and indicate if they refer to location information. The answer should include a valid link and yes/no to declare if the documents linked, also refer to location data or not. The reply to the question should be provided in the same free text field where the link is provided.</p>												
Q2.2.2	<p>Please supply some examples of core reference datasets also providing their reference/link.</p>	<p>If the option 2 or 3 is ticked in Q2.2, the respondent may additionally provide examples of core location reference datasets made available, by providing more details and a reference/link.</p>												
Q2.3	<p>To what extent is location data available under a common licensing framework for all government data?</p> <p>1) <input type="checkbox"/> Location data tends to be available through different licensing arrangements from different data providers 2) <input type="checkbox"/> A common licensing framework exists but location datasets are not available under that framework 3) <input type="checkbox"/> Many location datasets are available under the same licensing conditions but not as part of a national licensing framework 4) <input type="checkbox"/> Many location datasets are available under a national licensing framework 5) <input type="checkbox"/> All public sector location datasets are available under a national licensing framework</p>	<p>The question refers to the availability of location data under a common licensing framework for all government data.</p> <p>With regard to the questions Q2.1, Q2.1.1 and Q2.1.2 referring to the license/restrictions applied to specific location data, here the focus is the existence of a common licensing framework.</p> <p>The respondent should tick the option that most closely resembles the maturity and effectiveness in the situation in the country, from 1) the use of different licences 2) no dataset available under the common licensing framework 3) same licence without a national framework 4) availability of many location datasets under a national licensing framework or 5) all location data under a common licensing framework.</p>												
Q2.3.1	<p>Please supply a link to your common licensing framework.</p> <p>Does this refer to location information?</p>	<p>This second level question may be answered only if one of the options from 2 to 5 is ticked in Q2.3.</p>												

		<p>The question requires the respondent to provide additional information about the common licensing framework. In particular, please provide a link to the framework and indicate if it refers to location information.</p> <p>The answer should include a valid link and yes/no to declare if that framework also refers to location data or not. The reply to the question should be provided in the same free text field where the link will be provided.</p>
Q2.4	<p>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 through specific web services, specific legislation, ...).</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No or no guidelines on the publication of public sector data exist</p>	<p>Tick one of the options.</p> <p>The respondent should first check for the existence of national guidelines on the publication of PSI. If any, the question requires the respondent to declare if those guidelines cover location aspects or not.</p>
Q2.4.1	<p>If YES, - what aspects they cover? - is there an URL to access the documents?</p>	<p>This second level question may be answered only if the "yes" option is ticked in Q2.4.</p> <p>The question requires the respondent to provide additional information about the aspects covered by the national guidelines on the publication of public sector data.</p> <p>Key topics to consider include data sharing, open data, authentic data, data licensing (including reuse), privacy, data protection.</p>
Q2.4.2	<p>If YES, - is there a URL to access the documents?</p>	<p>This second level question may be answered only if the "yes" option is ticked in Q2.4.</p> <p>The question requires the respondent to provide a valid link to the national guidelines.</p>
Recommendation 3		
Q3.1	<p>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?</p> <p>1) <input type="checkbox"/> Organisations are not prepared 2) <input type="checkbox"/> Some significant gaps in preparations, little awareness or preparedness 3) <input type="checkbox"/> Some organisations fully prepared 4) <input type="checkbox"/> Most organisations fully prepared 5) <input type="checkbox"/> All organisations fully prepared 6) <input type="checkbox"/> Don't know</p>	<p>The question refers to the preparation level of controllers and processors of public sector location data for GDPR.</p> <p>Tick one of the options.</p> <p>The implementation of GDPR may involve a large number of organisations (agencies, municipalities, regions, etc.) and, although the GDPR legislation was adopted at a national level, the actual implementation will take place in various organisations at different levels.</p> <p>Contact the national Data Protection Authority, if this information is not directly available, to verify if an annual report on the application of GDPR exists. Check also if specific reference is made to location data.</p> <p>For questions like this, when the implementation of EULF Blueprint actions is the responsibility of a number of organisations or sub-national levels, this could be included in a survey, to be filled in by the individual organisations. It could also be an opportunity to recommend specific monitoring, where missing.</p>
Q3.1.1	<p>Are you aware of any complaints, cases or fines in relation to breaches of location data privacy in your country that can be used to spread awareness and learning for others? Please share any details.</p>	<p>This second level question may be answered only if one option, with the exception of 1 and 6, is ticked in Q3.1.</p> <p>The question requires the respondent to provide information on complaints, cases or fines known, either giving a brief descriptive text or by reference, supplying a valid link to documents or web pages dedicated.</p>

Recommendation 4		
Q4.1	Is location-based evidence and analysis used to help in developing relevant policies and monitoring outcomes? 1) <input type="checkbox"/> No 2) <input type="checkbox"/> Very rarely 3) <input type="checkbox"/> In some relevant policy topics 4) <input type="checkbox"/> In most relevant policy topics 5) <input type="checkbox"/> In all relevant policy topics	Tick one of the options. A definition of ' evidence-based policy making ' is provided in the glossary (section 4).
Q4.1.1	Please supply some important examples of where location-based evidence has been used in developing policy and monitoring policy outcomes, also providing references/links.	If one of the options from 3 to 5 is ticked in Q4.1, the respondent may additionally provide some examples on the relevant topics where location-based evidence and analysis are used and how, by providing relevant details and references/links.
Recommendation 5		
Q5.1	For public sector procurements of location information or services, what references are made to INSPIRE and relevant standards in the procurement documents? 1) <input type="checkbox"/> No references to INSPIRE or particular national or international standards 2) <input type="checkbox"/> General reference to INSPIRE or other standards but no specific details 3) <input type="checkbox"/> Specific references to the applicable parts of the INSPIRE Directive and / or national / international standards 4) <input type="checkbox"/> Reference to a standards-based architecture document describing where and how the requested components fit	Respondents should look at whether documents such as requests for tenders, request for expression of interest and similar, to procure location information and/or services, contain reference to INSPIRE; other geospatial reference standards and / or in the service requirements, considering the most common situation: <ul style="list-style-type: none"> • If no mention is made of any geospatial standard, even if this should be taken into account as a reference, would fall under case 1); • If procurement documents usually generically mandate that the procurement should be compliant with INSPIRE or other national / international applicable standards, for example through a mention in the premises of the document, without specifying which provision of INSPIRE or other standards would apply and therefore without any guidance helping the tenderer to design the offer in line with the applicable standards, this would fall under case 2); • If the procurement documents usually mandate explicitly that a certain part, or all, of the service must comply with a specific provision of INSPIRE or with a specific part of applicable standards, this would fall under case 3); • If the procurement documents make reference to a specific architectural standard and describe how the service, data or any other component to be procured must fit and be compliant with the architecture, this would fall under case 4).
Q5.1.1	Please supply links to one or more examples of procurement documents where references to INSPIRE or other relevant standards are made	The question requires the respondent to supply some examples and additional information on procurement documents where references to INSPIRE or other relevant standards are made, also providing a valid link.
Q5.1.2	Is use made of the European Single Procurement Document (ESPD)? Yes / No	The answer should include yes/no to declare if the European Single Procurement Document (ESPD) is used or not, in the procurement process. The definition of the term ESPD , used in the question, is provided in the glossary (chapter 4).
Focus Area: <i>Digital Government Integration</i>		
Recommendation 6		
Q6.1	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? 1) <input type="checkbox"/> Little or no consideration given to optimising the use of location information in digital public services	The question refers to the existence of a process for identifying opportunities and implementing improvements to key digital public services in their use of location information. Tick one of the options. The process is likely to differ from organisation to organisation, so tick the most common situation. The question covers a broad range of public sector organisations. If necessary, consult a selection of

	<p>2) <input type="checkbox"/> Usually limited steps taken to improve the use of location information in digital public services on a case by case basis</p> <p>3) <input type="checkbox"/> Improvements targeted at key digital public services usually through incremental upgrades to the use of location information</p> <p>4) <input type="checkbox"/> A rigorous approach taken to improving the use of location information in digital public services through an analysis of the end-to-end process of service delivery</p> <p>5) <input type="checkbox"/> Opportunities taken to introduce new business models with, for example, co-delivery with the private sector, use of digital collaboration platforms, or public sector participation in data ecosystems involving location data.</p>	<p>organisations to gain a consensus. A survey on this and other questions may help, particularly if the selection of organisations may be too wide in order for it to be sufficiently representative and their contact persons could not be consulted directly.</p> <p>A definition of the term 'key digital public services', used in the question, is provided in the glossary in chapter 4.</p>
<p>Q6.2</p>	<p>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.</p> <p>Agriculture: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Business: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Civil registry: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Crime: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Defence: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Disaster Management and Civil Protection: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Education: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Energy: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Environment: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Health: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Marine: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Property and land administration: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Regional and urban development: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Tourism and culture: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Transport: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p> <p>Work and retirement: <input type="checkbox"/> don't know <input type="checkbox"/> sub-optimal <input type="checkbox"/> basic <input type="checkbox"/> comprehensive <input type="checkbox"/> innovative</p>	<p>The question requires the respondent to provide information on the significant use of location information in digital public services, by selecting the six sectors, among those listed, where that location information has the most important role to play.</p> <p>For each of six sectors, the respondent should tick the degree of optimisation in the use of location information between:</p> <ul style="list-style-type: none"> • <i>Sub-optimal</i> – clear opportunities for improving or increasing the use of location data • <i>Basic</i> - mainly straightforward use of location information • <i>Comprehensive</i> - some good examples of optimised use of location information • <i>Innovative</i> – wide range of highly optimised use of location information supporting process integration and service delivery, using innovative solutions (AI, use of unstructured data etc.) <p>Tick only one box for each sector.</p>
<p>Q6.2.1</p>	<p>For each of the 6 selected sectors, please identify at least one digital public service using location data to the degree declared and provide the name, a brief description and a reference. The service should be a specific service, such as land registration, journey planning, notification of public transport arrival times, finding a parking space, waste collection, solar energy incentives.</p>	<p>For each of the six sectors selected in Q6.2, the respondent should provide at least an example of digital public service using location data to the degree declared.</p> <p>For each service, the following information should be supplied:</p> <ol style="list-style-type: none"> a) the name; b) a brief description including the sector and the public administration responsible for the service;

	<p>The description should also include the sector and the public administration responsible for the service. Please try to provide at least one example of smart city innovation.</p>	<p>c) a valid link with direct access to the service or to a web page with further information for accessing the service.</p> <p>The respondent is recommended to provide at least one example of digital public service enabling smart city innovation.</p>
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Recommendation 7

<p>Q7.1</p>	<p>To what extent is the SDI used in delivering digital public services across government (in different sectors and levels of government)? 1) <input type="checkbox"/> In some cases 2) <input type="checkbox"/> In many cases 3) <input type="checkbox"/> In most / all cases 4) <input type="checkbox"/> The SDI is not used at all 5) <input type="checkbox"/> Don't know</p>	<p>The question refers to the use of a standardised framework for location data / SDI in delivering cross-government digital public services.</p> <p>The definition of the terms 'location data framework' and 'SDI', used in the question, is included in the glossary (chapter 4)".</p> <p>Tick one of the options.</p>
<p>Q7.1.1</p>	<p>To what extent are INSPIRE conformant datasets and services used in digital public services? <input type="checkbox"/> In some cases <input type="checkbox"/> In most or all cases <input type="checkbox"/> Not at all or very little</p>	<p>INSPIRE represents one of the frameworks to be used for location data in delivering digital public services.</p> <p>The question allows the respondent to indicate the extent of usage of INSPIRE conformant datasets and services in digital public services.</p> <p>Tick one of the options.</p>
<p>Q7.1.2</p>	<p>Please provide some examples of digital public services reusing data from the SDI, highlighting, where relevant, the role played by INSPIRE?</p>	<p>This second level question may be answered if one option from 3-5 is ticked in Q7.1.</p> <p>The respondent may supply examples of digital public services reusing data from the SDI and highlight, if relevant, the role of INSPIRE.</p>
<p>Q7.2</p>	<p>Is the country actively involved in delivering cross-border digital public services using their spatial data infrastructure (SDI)? 1) <input type="checkbox"/> Yes, in some cross border digital public services 2) <input type="checkbox"/> Yes, in many cross border digital public services 3) <input type="checkbox"/> No 4) <input type="checkbox"/> Don't know</p>	<p>The question refers to the delivery of cross-border digital public services using spatial data infrastructure (SDI).</p> <p>The respondent is required to tick the option that best summarises the involvement of the country in delivering cross-border services.</p>
<p>Q7.2.1</p>	<p>To what extent are INSPIRE conformant datasets and services from the country used in cross-border digital public services? <input type="checkbox"/> In some cases <input type="checkbox"/> In most or all cases <input type="checkbox"/> Not at all or very little</p>	<p>This second level question may be answered if one of the options from 1-2 is ticked in Q7.2.</p> <p>Similar to Q7.1.1, the question allows the respondent to indicate what is the extent of usage of INSPIRE conformant datasets and services in delivering cross-border services.</p> <p>Tick one of the options.</p>
<p>Q7.2.2</p>	<p>If YES, please provide some examples of cross-border initiatives reusing reusing harmonised location data, highlighting, where relevant, the role played by INSPIRE</p>	<p>This second level question may be answered if 1-2 is ticked in Q7.2.</p> <p>The respondent may provide examples of cross-border digital public services delivered using harmonised location data, by providing a brief description and/or a valid reference/link for each example.</p>
<p>Q7.3</p>	<p>Please specify the main SDI approach used for delivery of key digital public services in the sectors selected in 6.2. Agriculture: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach Business: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p>	<p>For the six sectors selected in the question Q6.2, the respondent is required to declare the main SDI approach used for delivery digital public services in that sector by ticking the relevant option between:</p> <ul style="list-style-type: none"> • Application specific spatial data • Sector SDI

	<p>Civil registry: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Crime: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Defence: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Disaster Management and Civil Protection: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Education: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Energy: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Environment: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Health: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Marine: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Property and land administration: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Regional and urban development: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Tourism and culture: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Transport: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p> <p>Work and retirement: <input type="checkbox"/> Application specific spatial data <input type="checkbox"/> Sector SDI <input type="checkbox"/> National SDI <input type="checkbox"/> Hybrid approach</p>	<ul style="list-style-type: none"> • National SDI - Hybrid approach <p>Tick only one box for each sector.</p> <p>The definition of the term 'location data framework', used in the question, is included in the glossary (chapter 4).</p>
<p>Q7.3.1</p>	<p>Please name the main framework(s) used for each sector</p>	<p>For each sector selected in the question 6.2, the respondent may provide further information (namely the name) on the main frameworks used.</p>
<p>Q7.3.2</p>	<p>For each selected sector, please confirm the extent to which INSPIRE conformant datasets and services are used for the location data. Tick only one box for each sector.</p> <p>Agriculture: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Business: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Civil registry: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Crime and Civil Protection: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Defence: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Disaster Management and Civil Protection: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Education: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Energy: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Environment: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Health: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Marine: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Property and land administration: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Regional and urban development: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p>	<p>For each sector selected in the question 6.2, the respondent is required to provide information on the use of INSPIRE datasets and services, by ticking one of the options:</p> <ul style="list-style-type: none"> - not at all or very little; - in some cases; - in most or all cases. <p>Tick only one box for each sector.</p>

	<p>Tourism and culture: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Transport: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p> <p>Work and retirement: <input type="checkbox"/> not at all or very little <input type="checkbox"/> in some cases <input type="checkbox"/> in most or all cases</p>	
Q7.4	<p>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?</p> <p>1) <input type="checkbox"/> occasionally</p> <p>2) <input type="checkbox"/> a number of good examples</p> <p>3) <input type="checkbox"/> a significant number of good examples</p> <p>4) <input type="checkbox"/> very extensively</p> <p>5) <input type="checkbox"/> not at all</p> <p>6) <input type="checkbox"/> don't know</p>	<p>The question requires the respondent to declare to what extent the SDI is used for delivering applications, products and services.</p> <p>Tick one of the options.</p> <p>The definition of the term 'SDI', used in the question, is included in the glossary (chapter 4).</p>
Q7.4.1	<p>Please provide one or more examples of use of the public sector SDI by external organisations</p>	<p>This second level question may be answered if 3-6 is ticked in Q7.4.</p> <p>The respondent may supply examples the use of the public sector SDI by private sector or other external organisations by providing a brief description and/or a valid reference/link for each example.</p>

Recommendation 8

Q8.1	<p>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)?</p> <p>1) <input type="checkbox"/> Limited use in specific initiatives</p> <p>2) <input type="checkbox"/> In several cases</p> <p>3) <input type="checkbox"/> In most cases / extensively</p> <p>4) <input type="checkbox"/> In every case as part of a government-wide policy for all new digital service development</p> <p>5) <input type="checkbox"/> Never</p> <p>6) <input type="checkbox"/> Don't know</p>	<p>Tick one of the options.</p> <p>The question covers a broad range of public sector organisations. Choose the most common situation. If necessary, consult a selection of organisations to gain a consensus. A survey on this and other questions may help, particularly if the selection of organisations may be too wide in order for it to be sufficiently representative and their contact persons could not be consulted directly.</p> <p>A definition of the term 'open and collaborative methodology' is provided in the glossary (chapter 4).</p>
Q8.1.1	<p>At what level of government is the collaborative approach applied? Tick all that apply</p> <p><input type="checkbox"/> Local</p> <p><input type="checkbox"/> Sub National</p> <p><input type="checkbox"/> National</p>	<p>This second level question requires the respondent to detail at what level (local, sub-national, national) or a combination of those levels an open and collaborative methodology is applied to design and improve location enabled digital public services.</p> <p>The question can be answered if one option 1-4 is ticked in Q8.1.</p>
Q8.2	<p>When developing or delivering location-based digital public services, in what ways are external parties involved? This includes the private sector, NGOs and citizens. Please <u>tick all</u> that apply.</p> <p>1) <input type="checkbox"/> Services are contracted to the private sector or NGOs under public sector accountability</p> <p>2) <input type="checkbox"/> Public authorities scale back their role relying on models such as public / private partnerships</p> <p>3) <input type="checkbox"/> Public authorities collect data through a particular process or service and make the data openly available for external parties to develop their own products and services</p> <p>4) <input type="checkbox"/> Public authorities use location data from external parties (e.g. businesses, citizens, NGOs) in their digital public services;</p> <p>5) <input type="checkbox"/> Government encourages 'civic hacking' to develop new ideas, technologies or methodologies to help solve civic problems and</p>	<p>The question refers to the involvement of external parties in the delivery of location-based public services.</p> <p>Multiple options may be ticked.</p> <p>The respondent may also indicate other ways not listed by ticking the option 'Other' and providing the details in the free text field that appears.</p> <p>The question covers a broad range of public sector organisations. Choose the most common approach. If necessary, consult a selection of organisations to gain a consensus. A survey on this and other questions may help, particularly if the selection of organisations may be too wide in order for it to be sufficiently representative and their contact persons could not be consulted directly.</p>

	<p>improve the lives of citizens 6) <input type="checkbox"/> Other. Please specify 7) <input type="checkbox"/> None 8) <input type="checkbox"/> Don't know</p>	
Q8.2.1	<p>Please provide one or two examples to illustrate collaboration with external parties and how location data is involved.</p>	<p>This second level question may be answered if at least one option from 1-6 is ticked in Q8.2. The respondent may include examples on how external parties collaborate for the delivery of location-based public services, by providing a brief description and a reference/link, if any, for each example.</p>

Recommendation 9

Q9.1	<p>What actions are implemented for the integration of location and statistical information in the production of location-based statistics? Please <u>tick all</u> that apply.</p> <p><input type="checkbox"/> Accurate and up-to-date knowledge base of where their citizens and businesses are located; <input type="checkbox"/> A common location reference framework for statistics to enable timely, accurate and efficient production of location-based statistics <input type="checkbox"/> Use of INSPIRE to support the location reference framework for statistics; <input type="checkbox"/> Collection of census data based on the location reference framework for statistics <input type="checkbox"/> Location-based statistics are updated dynamically to give an up-to-date snapshot on which to make decisions <input type="checkbox"/> The spatio-temporal dimension of statistics is captured in a format that enables it to be used readily in a tool for geostatistical analysis <input type="checkbox"/> Relevant private sector data are included in the statistical information infrastructure <input type="checkbox"/> The location intelligence infrastructure is continuously upgraded to meet growing and evolving needs based on a regular quality assessment of whether the infrastructure is fit for purpose <input type="checkbox"/> Contribution to European projects aiming at establishing a data and production infrastructure for location-based statistics (e.g. GEOSTAT); <input type="checkbox"/> Other. Please specify <input type="checkbox"/> None <input type="checkbox"/> Don't know</p>	<p>The question requires the respondent to provide information about the integration of location and statistical data.</p> <p>Multiple options may be ticked.</p> <p>The respondent may also indicate other actions not listed by ticking the option 'Other' and providing the details in the free text field that appears. The owners of the information needed for replying may be:</p> <ul style="list-style-type: none"> a) the national statistical institutes; b) other national authorities responsible in each Member State for the development, production and dissemination of statistics; c) any joint body/organisation responsible for the integration of location and statistical information. <p>Respondents should contact these organisations to collect the information, if it is not directly available.</p>
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Focus Area: Standardisation and Reuse

Recommendation 10

Q10.1	<p>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?</p> <p><input type="checkbox"/> There is no commonly used architectural approach for location data and services <input type="checkbox"/> There is a policy for a common location architecture but it is not (yet) widely adopted <input type="checkbox"/> The common location architecture approach fits within a broader national ICT architectural framework <input type="checkbox"/> The common location architecture approach fits within a broader national ICT architectural framework based on the EIF / EIRA. <input type="checkbox"/> The EIF / EIRA based architectural approach</p>	<p>The question requires the respondent to provide information about the architecture for location data and services within a broader cross-government ICT and data architecture approach.</p> <p>The respondent should tick the option that best summarises the situation in term of common architectural approach in the country.</p> <p>The definition of the term 'SDI' used in the question is included in the glossary (chapter 4)</p>
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	is widely adopted in the design and development of location-based digital public services	
Q10.2	<p>Please describe the approach (if any) to discover, explore and incorporate new technological features or emerging technologies</p> <p><input type="checkbox"/> No awareness on or interest in new technological developments</p> <p><input type="checkbox"/> More ad-hoc approach to monitoring new developments, with very little testing</p> <p><input type="checkbox"/> Well-organised approach to monitoring, testing and upscaling of new technological developments</p>	<p>The question refers to the approach adopted to discover, explore and incorporate new technological features or emerging technologies.</p> <p>Tick one of the options.</p> <p>The question covers a broad range of public sector organisations. Choose the most common approach. If necessary, consult a selection of organisations to gain a consensus. A survey on this and other questions may help, particularly if the selection of organisations may be too wide in order for it to be sufficiently representative and their contact persons could not be consulted directly.</p>
Q10.3	<p>Please describe the status of development of APIs for SDI / INSPIRE:</p> <p>1) <input type="checkbox"/> Use of APIs for location datasets is in the planning and testing phase</p> <p>2) <input type="checkbox"/> At least one location data API has been developed, documented and is accessible</p> <p>3) <input type="checkbox"/> A series of location data APIs have been developed, documented and are accessible</p> <p>4) <input type="checkbox"/> APIs are available for all high value location datasets as part of a national strategy</p> <p>5) <input type="checkbox"/> APIs are available for all high value public sector datasets including location datasets as part of a national strategy</p> <p>6) <input type="checkbox"/> APIs are not used to access location datasets</p> <p>7) <input type="checkbox"/> Don't know</p>	<p>The question refers to the development of APIs (Application Programme Interfaces) for INSPIRE and SDI datasets.</p> <p>Tick one of the options.</p> <p>Sources of information required for replying may be API marketplaces, i.e. aggregator sites in which API providers can publish APIs that provide access to their services, data or applications; or developers online forums.</p> <p>The respondent may additionally mention some examples of APIs developed, by providing a brief description and a relevant reference/link in the free text field at the end of the Focus Area.</p> <p>The definition of the terms 'high value datasets' and 'API', used in the text of the question, is provided in the glossary (chapter 4).</p>
Q10.3.1	<p>Which of the following core "high value" location datasets can be accessed using APIs?:</p> <p><input type="checkbox"/> Addresses</p> <p><input type="checkbox"/> Administrative units</p> <p><input type="checkbox"/> Air quality</p> <p><input type="checkbox"/> Buildings</p> <p><input type="checkbox"/> Cadastral parcels</p> <p><input type="checkbox"/> Elevation</p> <p><input type="checkbox"/> Geographical names</p> <p><input type="checkbox"/> Health statistics (illness and cause of death)</p> <p><input type="checkbox"/> Hydrography</p> <p><input type="checkbox"/> Land cover</p> <p><input type="checkbox"/> Land use</p> <p><input type="checkbox"/> Population distribution and demography</p> <p><input type="checkbox"/> Protected sites</p> <p><input type="checkbox"/> Statistical units</p> <p><input type="checkbox"/> Transport networks</p> <p><input type="checkbox"/> Transport timetables</p> <p><input type="checkbox"/> Water quality</p> <p><input type="checkbox"/> Weather observations</p> <p><input type="checkbox"/> Other (please specify)</p>	<p>This second level question may be answered if one of the options from 1 to 5 is ticked in Q10.3.</p> <p>The respondent is required to select which core high value datasets, among those listed, are accessible through APIs.</p> <p>Multiple options may be ticked.</p> <p>The respondent may also indicate other high value datasets not listed by ticking the option 'Other' and providing the details in the free text field that appears.</p> <p>The definition of the terms 'high value datasets' and 'API', used in the text of the question, is provided in the glossary (chapter 4).</p>
Q10.3.2	<p>Where there are APIs for location datasets, what steps are commonly taken to stimulate take-up and ensure they are as useful as possible? Tick all that apply:</p> <p><input type="checkbox"/> User communities consulted in development / enhancement of APIs</p> <p><input type="checkbox"/> APIs based on recognised standards (e.g. OGC API - Features, OGC SensorThings API)</p> <p><input type="checkbox"/> APIs documented in open specifications (e.g. through OpenAPI specifications)</p> <p><input type="checkbox"/> API design best practices used (e.g. REST APIs)</p> <p><input type="checkbox"/> APIs provide access to updates of both static (slow moving) and dynamic (fast moving) data</p>	<p>This second level question may be answered if one of the options from 1 to 5 is ticked in Q10.3.</p> <p>Multiple options may be ticked.</p> <p>The definition of the term 'API', used in the text of the question, is provided in the glossary (chapter 4).</p>

	<input type="checkbox"/> APIs are discoverable in both public sector catalogues/portals and external catalogues (alongside non-public sector APIs) <input type="checkbox"/> APIs have published service level agreements which support required use (e.g. availability, data quality, timeliness, response times) <input type="checkbox"/> APIs have simple standard licences which specify their use <input type="checkbox"/> API impact, usage and performance metrics help in ensuring API services meet user needs <input type="checkbox"/> Don't know	
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Recommendation 11

Q11.1	<p>Please describe the reuse status of generic ICT solutions in the SDI. Tick all that apply:</p> <p>1) <input type="checkbox"/> There is little or no re-use of generic ICT solutions in the SDI</p> <p>2) <input type="checkbox"/> The possibility for re-using generic ICT solutions in the SDI is planned or has been studied</p> <p>3) <input type="checkbox"/> Reuse of national generic ICT solutions is made in the SDI</p> <p>4) <input type="checkbox"/> Reuse of generic ICT solutions from other national or international catalogues is made in the SDI</p> <p>5) <input type="checkbox"/> One or more of the ISA² solutions have been implemented</p>	<p>The question requires to provide information about the reuse of ICT solutions in the SDI. Generic ICT solutions are re-usable ICT solutions or components that are applicable in multiple situations (e.g. Re3gistry, GeoDCAT-AP from ISA2)</p> <p>Multiple options may be ticked.</p> <p>Online catalogues of re-usable technical solutions may help the respondent to identify what solutions are available, and whether those solutions are reused or not in the country. One of those catalogues is that one maintained by the European Commission on Joinup. This includes solutions that facilitate geo-location integration and implementation of the INSPIRE Directive.</p>
Q11.1.1	<p>Please give examples of ICT solutions reused (with links):</p> <ul style="list-style-type: none"> - National - Other countries / international - ISA² 	<p>This second level question may be answered if one of the options from 3 to 5 is ticked in Q11.1.</p> <p>The respondent is required to provide further information on the reuse of ICT solutions, by supplying a brief description and references/links of examples of that reuse and specifying if the reuse refers to national, international/other countries or ISA² solutions.</p>
Q11.2	<p>What registers of location information are implemented? Please <u>tick all</u> that apply.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Addresses <input type="checkbox"/> Geographical names <input type="checkbox"/> Administrative units <input type="checkbox"/> Cadastral parcels <input type="checkbox"/> Buildings <input type="checkbox"/> Hydrography <input type="checkbox"/> Transport networks <input type="checkbox"/> Glossary <input type="checkbox"/> Code lists <input type="checkbox"/> Other. Please specify <input type="checkbox"/> None <input type="checkbox"/> Don't know 	<p>The question requires the respondent to provide information about the registers of location information implemented in the country.</p> <p>Multiple options may be ticked.</p> <p>The respondent may also indicate other registers not listed by ticking the option 'Other' and providing the details (name and a brief description) in the free text field that appears.</p>
Q11.2.1	<p>Please provide a reference / link for each register implemented.</p>	<p>The respondent is required to provide a relevant reference/link for each register implemented and selected in the answer to Q11.2.</p>

Recommendation 12

Q12.1	<p>What type of geospatial domain standards are used in your country? Tick all that apply.</p> <ul style="list-style-type: none"> <input type="checkbox"/> International Standards (like ISOTC211, OGC, IHO, GDF) <input type="checkbox"/> Adaptations of International Standards (e.g. INSPIRE) <input type="checkbox"/> Stand alone domestic standards <input type="checkbox"/> Any other standards (please specify) <input type="checkbox"/> None <input type="checkbox"/> Don't know 	<p>The question refers to the use of geospatial domain standards.</p> <p>Multiple options may be ticked.</p> <p>The respondent may also indicate other types of standards not listed by ticking the option 'Other' and providing the details (name and a brief description) in the free text field that appears.</p>
Q12.1.1	<p>For each option ticked in Q12.1, please supply more information on standards used providing</p>	<p>This second level question may be answered if at least one of the options other than 'None / Don't know' is ticked in Q12.1.</p>

	the following details, if applicable: name, sector(s), reference, a short description.	For each type of standards indicated in Q12.1, the respondent is required to provide further information detailing the name of the standard, the reference sector(s), a valid link and a brief description.
Q12.2	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? Tick the option closest to the national approach: 1) <input type="checkbox"/> Ad hoc specifications and tools are used for metadata in different situations 2) <input type="checkbox"/> There is a standardised approach for combining spatial and non-spatial metadata 3) <input type="checkbox"/> None 4) <input type="checkbox"/> Don't know	This question refers to the standardised metadata specifications and tools used to foster and enhance the discoverability of data, both spatial and non-spatial, also combining both. The respondent should tick the option that best summarises the national approach, from 1) ad hoc specifications and tools are used for metadata in different situations 2) standardised approach for combining spatial and non-spatial metadata 3) none 4) none Tick one of the options.
Q12.2.1	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?: <input type="checkbox"/> Don't know <input type="checkbox"/> National specifications and tools <input type="checkbox"/> International/European specifications (e.g. GeoDCAT-AP) and tools (e.g. GeoDCAT-AP API) <input type="checkbox"/> Adaptations and/or extensions of International/European specifications and tools <input type="checkbox"/> Any other specifications and tools (please specify)	The question requires the respondent to declare what specifications and tools are used to a significant degree to combine spatial with non-spatial metadata in national implementations This second level question may be answered if one of the options other than 'Don't know' is ticked in Q12.2. Multiple options may be ticked. The GeoDCAT-AP definition is provided in the glossary (chapter 4)
Q12.2.2	Please provide a reference/link to the GeoDCAT-AP implementations or reuse.	This second level question may be answered if at least one of the options other than 'Don't know' is ticked in Q12.2.1. The respondent may provide a relevant reference/link of the GeoDCAT-AP implementations or reuse.

Recommendation 13

Q13.1	What actions are typically implemented to assure quality of location data in your country? Tick all that apply. DESIGN <input type="checkbox"/> Development and application of a framework for analysis of data quality <input type="checkbox"/> Linking of data quality standards to data standards <input type="checkbox"/> Inclusion of the different dimensions of data quality in the standards, such as timeliness, accuracy, completeness, integrity, consistency, compliance to specifications / standards / legislation <input type="checkbox"/> Inclusion of multilingualism in the data quality standards; MEASUREMENT <input type="checkbox"/> Measurement of conformance of data to quality parameters set out in the data policy on an agreed frequency <input type="checkbox"/> Data quality dashboards for critical information such as authentic data; <input type="checkbox"/> Ex-post evaluation of existing data quality issues <input type="checkbox"/> Assessment of the current business value in terms of the existing data quality level <input type="checkbox"/> Other. Please specify <input type="checkbox"/> Don't know	The question refers to the actions implemented, to assure the quality of location data both ex-ante (i.e. in the design stage) and ex-post (i.e. through evaluations). The respondent may tick multiple options for both design and measurement. Further actions not listed may be added by ticking the option 'Other' and providing the details in the free text field that appears. Implementation approaches may vary across the range of public sector organisations. Choose those that are most common. If necessary, consult a selection of organisations to gain a consensus. A survey on this and other questions may help, particularly if the selection of organisations may be too wide in order for it to be sufficiently representative and their contact persons could not be consulted directly.
Q13.1.1	What data quality standard is applied to location data? Tick all that apply.	The question refers to the use of a recognised data quality standard.

	<p><input type="checkbox"/> ISO 19157 - Geographic information — Data quality</p> <p><input type="checkbox"/> (W3C) Data Quality Vocabulary (DQV)</p> <p><input type="checkbox"/> ISO/IEC 25012 Software engineering — Software product Quality Requirements and Evaluation (SQuaRE) — Data quality model</p> <p><input type="checkbox"/> Other. Please specify.</p> <p><input type="checkbox"/> None</p> <p><input type="checkbox"/> Don't know</p>	<p>Multiple options may be ticked.</p> <p>The respondent may also indicate other standards not listed by ticking the option 'Other' and providing the details (name and a brief description) in the free text field that appears.</p>
Q13.2	<p>What type of actions relating to location data quality governance are put in place in your country?</p> <p>1) <input type="checkbox"/> Alignment of data quality improvement roadmap with the information governance vision and strategy;</p> <p>2) <input type="checkbox"/> Well-defined data quality responsibilities;</p> <p>3) <input type="checkbox"/> Existence of a cross-unit or cross-organisation special interest group for data quality;</p> <p>4) <input type="checkbox"/> Definition of a data quality review process;</p> <p>5) <input type="checkbox"/> Creation of a regular data quality bulletin to enhance the improvement and a better data quality management;</p> <p>6) <input type="checkbox"/> Collection of feedback from users to report problems and help improve data quality;</p> <p>7) <input type="checkbox"/> Use of artificial intelligence (AI) and machine learning techniques to make suggestions for improving data quality;</p> <p>8) <input type="checkbox"/> Other. specify</p> <p><input type="checkbox"/> None</p> <p><input type="checkbox"/> Don't know</p>	<p>The question refers to location data quality governance.</p> <p>Multiple options may be ticked.</p> <p>The respondent may also indicate other actions not listed by ticking the option 'Other' and providing the details in the free text field that appears.</p> <p>Data governance approaches may vary across the range of public sector organisations. Choose those that are most common. If necessary, consult a selection of organisations to identify the different approaches. A survey on this and other questions may help, particularly if the selection of organisations may be too wide in order for it to be sufficiently representative and their contact persons could not be consulted directly.</p>
Q13.2.1	<p>Where feedback is obtained from users, what approach is taken? Tick all that apply:</p> <p><input type="checkbox"/> Licences for location datasets typically request feedback on problems and changes made to improve quality (e.g. CC-BY 4.0)</p> <p><input type="checkbox"/> A collaborative platform allows stakeholders to provide feedback and collaborate to improve the SDI</p> <p><input type="checkbox"/> A community/discussion forum is used to collect feedback from users and stakeholders</p> <p><input type="checkbox"/> A feedback mechanism is embedded in the SDI data portals or catalogues of services</p> <p><input type="checkbox"/> Traffic and usage statistics are used to improve the SDI</p> <p><input type="checkbox"/> Other. Please specify.</p> <p><input type="checkbox"/> Don't know</p>	<p>If the option 6 is ticked in Q13.2, the respondent may provide further information by ticking all relevant options about the initiatives on collection of feedback included in the list.</p> <p>Multiple options may be ticked.</p> <p>The respondent may also indicate other initiatives not listed by ticking the option 'Other' and providing the details in the free text field that appears.</p>

Focus Area: Return on Investment

Recommendation 14

Q14.1	<p>What of the following elements are evaluated to assess the efficiency and effectiveness of location-based services in your country?</p> <p>1) <input type="checkbox"/> Return on investment</p> <p>2) <input type="checkbox"/> Total cost of ownership</p> <p>3) <input type="checkbox"/> Reusability</p> <p>4) <input type="checkbox"/> Adaptability</p> <p>5) <input type="checkbox"/> Risks</p> <p>6) <input type="checkbox"/> Availability</p> <p>7) <input type="checkbox"/> Responsiveness</p> <p>8) <input type="checkbox"/> Reduction in administrative burden</p> <p>9) <input type="checkbox"/> Simplification of administrative processes</p> <p>10) <input type="checkbox"/> Increased participation</p> <p>11) <input type="checkbox"/> Enhanced business opportunities</p> <p>12) <input type="checkbox"/> User satisfaction</p> <p>13) <input type="checkbox"/> User-centricity</p> <p>14) <input type="checkbox"/> Other - Please specify:</p>	<p>The question refers to the regular performance monitoring of location-enabled digital public services.</p> <p>Multiple options may be ticked.</p> <p>The respondent may also indicate other elements not listed by ticking the option 'Other' and providing the details in the free text field that appears.</p> <p>Approaches may vary across the range of public sector organisations. If necessary, consult a selection of organisations. A survey on this and other questions may help, particularly if the selection of organisations may be too wide in order for it to be sufficiently representative and their contact persons could not be consulted directly..</p>
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	15) <input type="checkbox"/> None 16) <input type="checkbox"/> Don't know	
Q14.1.1	Are the measurements in Q14.1 implemented: <input type="checkbox"/> At a project or service level <input type="checkbox"/> At an organisational level <input type="checkbox"/> At an SDI / national level <input type="checkbox"/> A combination of the above	This second level question may be answered if at least one option from 1- 14is ticked in Q14.1. Tick one of the options. If the information needed for replying to Q14.1 are collected by various organisations, then the overall answer for this question could relate to the most common approach applied.
Q14.2	What actions are implemented for impact-based improvement in location-enabled processes and services in your country? <input type="checkbox"/> Identification and monitoring of the benefits of location information <input type="checkbox"/> Regular monitoring of “upstream” (i.e. production and dissemination) and “downstream” (i.e. use) aspects of location data and services <input type="checkbox"/> Use of the monitoring information to fund improvements in particular location data or services and to prioritise investment across the governmental portfolio <input type="checkbox"/> Use of a common maturity assessment method or other comparative approach to benchmark performance with other MS <input type="checkbox"/> Other. Please specify <input type="checkbox"/> None <input type="checkbox"/> Don't know	The question refers to the approach to impact-based improvement. Multiple options may be ticked. The respondent may also indicate other actions not listed by ticking the option 'Other' and providing the details in the free text field that appears. Actions may vary across the range of public sector organisations. If necessary, consult a selection of organisations to identify them. A survey on this and other questions may help, particularly if the selection of organisations may be too wide in order for it to be sufficiently representative and their contact persons could not be consulted directly.

Recommendation 15

Q15.1	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? 1) <input type="checkbox"/> No communication done 2) <input type="checkbox"/> Some basic communication done 3) <input type="checkbox"/> Frequent thorough and convincing communication is done 4) <input type="checkbox"/> Regular thorough and convincing communication is done	The respondent is required to tick the option that best summarises the situation in terms of existence of a systematic approach, to the communication of availability and benefits of location data and location-enabled digital public services. Tick one of the options.
Q15.1.1	Please provide examples of benefits evidence and communications, e.g. project or service examples, SDI / strategy level examples	This second level question may be answered if options 2-4 is ticked in Q15.1. The respondent may provide information about examples of benefits evidence and communications through a brief description and/or a relevant reference/link.

Recommendation 16

Q16.1	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? Please <u>tick all</u> that apply. <input type="checkbox"/> National data portal (such as Open Data portal) merging location data and non-location data <input type="checkbox"/> National discovery (geo)portal integrating INSPIRE and non-INSPIRE data <input type="checkbox"/> Geoportals harvested by the European Data Portal (e.g. INSPIRE Geoportals) <input type="checkbox"/> Thematic portals complementing general search facilities with “specialist” search <input type="checkbox"/> Websites with exposition of data	Multiple options may be ticked.
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	<input type="checkbox"/> Availability of spatial data sets on web search engines <input type="checkbox"/> Other. Please specify <input type="checkbox"/> None <input type="checkbox"/> Don't know	
Q16.1.1	Please provide at least a reference/link for each measure ticked.	Other measures not listed may be added by ticking the option 'Other' (see Q16.1) and providing the details in the free text field that appears.
Q16.2	<p>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?</p> <input type="checkbox"/> Open data policy <input type="checkbox"/> Promoting access to open data through hackathons <input type="checkbox"/> Testbeds for trial use of public sector data <input type="checkbox"/> 'Innovation labs' or 'Innovation hubs' <input type="checkbox"/> Government sponsorship of 'innovation' pilot projects, potentially with grants / funding <input type="checkbox"/> Including non-government actors in the governance framework for public sector data; <input type="checkbox"/> Adding data and services from non-governmental actors to the public sector (spatial) data infrastructure; <input type="checkbox"/> Establishing digital platforms through which a community of data providers, consumers and partners is actively engaged in the sharing, enhancing and using of location data and value is created for all partners in the ecosystem; <input type="checkbox"/> Collecting requirements of businesses, research institutions and other (potential) users for consideration in further development of INSPIRE/SDI; <input type="checkbox"/> Collecting best practice examples of how private companies, citizens, academic institutions and other users make use of INSPIRE/SDI data and services; <input type="checkbox"/> Training in necessary skills to exploit the SDI; <input type="checkbox"/> Making public sector experts available to advise on / participate in the external use of data in the SDI <input type="checkbox"/> Other - please specify <input type="checkbox"/> Don't know	<p>Multiple options may be ticked.</p> <p>Other actions not listed may be added by ticking the option 'Other' and providing the details in the free text field that appears.</p> <p>As the implementation of the actions listed may be put in place by various organisations at different levels, information needed for replying should be collected by individual organisations e.g. through a survey. Based on that information, the overall answer could relate to the most common actions implemented.</p>
Q16.2.1	Please provide some examples (including link/references) of the actions implemented.	For each action selected in Q16.2, the respondent may supply at least one example by providing a valid relevant reference/link.
Q16.3	<p>Is there a strategic approach to funding public sector location reference data to make access at point of use cost effective?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know	<p>The question refers to a strategic approach to funding public sector location reference data.</p> <p>Tick one of the options.</p> <p>Also describe briefly the funding approach and how it is organised, providing where applicable a link for any further information</p>
Focus Area: Governance, Partnerships and Capabilities		
Recommendation 17		
Q17.1	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?	<p>The question refers to the involvement of relevant communities and stakeholders in decision making on the role of location information in Digital Government.</p> <p>The respondent is invited to tick the option that best summarises the situation in terms of stakeholder inclusion.</p>

	<p>1) <input type="checkbox"/> No or very little joint decision making on SDI in Digital Transformation</p> <p>2) <input type="checkbox"/> Some joint decision making on SDI in Digital Transformation, but not all stakeholders involved</p> <p>3) <input type="checkbox"/> Strong joint decision making on SDI in Digital Transformation, with involvement of all stakeholders and communities.</p>	<p>Tick one of the options.</p>
Q17.1.1	<p>Please supply more information on the initiatives adopted for the involvement of stakeholders and communities, also providing references/links.</p>	<p>This second level question may be answered if options 2-3 are ticked in Q17.1.</p> <p>The respondent may provide further details on the involvement of stakeholders and communities in decision making on the role of location information in Digital Government, including relevant references/links.</p>
Q17.2	<p>To what extent do organisations responsible for SDI and Digital Government coordination deal jointly with 'governance of the SDI in the context of Digital Government'</p> <p>1) <input type="checkbox"/> No or very weak joint leadership and coordination on policies and actions related to the role of the SDI in Digital Government</p> <p>2) <input type="checkbox"/> Some joint leadership and coordination on actions and policies related to the role of the SDI in Digital Government</p> <p>3) <input type="checkbox"/> Strongly integrated joint leadership and coordination on actions and policies related to the role of the SDI in Digital Government, with cross-fertilisation of membership on governance bodies</p> <p>4) <input type="checkbox"/> Strong leadership and coordination on actions and policies related to the role of the SDI in Digital Government, through a single combined governance group with, potentially, sub-groups for particular subject areas (e.g. particular SDI, ICT or digital public service matters)</p>	<p>The question is about the integrated governance of location information processes at all levels of government.</p> <p>Tick one of the options.</p>
Q17.2.1	<p>Please supply more information on the organisations (also naming them) leading and coordinating the implementation of location information / SDI and Digital Government.</p>	<p>This second level question may be answered if options 2-4 are ticked in Q17.2.</p> <p>The respondent may provide further details on the governance of the SDI in the context of Digital Government, including the name of the organisations leading and coordinating the implementation of location information / SDI and Digital Government, a brief description of the governance processes and possible relevant references/links.</p>

Recommendation 18

Q18.1	<p>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?</p> <p>1) <input type="checkbox"/> A limited number of services / examples</p> <p>2) <input type="checkbox"/> A large number of services / examples</p> <p>3) <input type="checkbox"/> None exist</p> <p>4) <input type="checkbox"/> Don't know</p>	<p>Tick one of the options.</p> <p>As formal agreements may be established by various organisations at different levels, information on different cases should be collected e.g. through selected contacts or a survey.</p>
Q18.1.1	<p>Please share a link to any relevant example(s)</p>	<p>This second level question may be answered in case formal agreements exist between public authorities in the country to finance, build and operate location data services or digital public services using location data.</p> <p>The respondent is recommended to share a link for each relevant example of formal agreements established.</p>
Q18.2	<p>To what extent do formal agreements exist with public authorities in other countries to finance,</p>	<p>Tick one of the options.</p>

	<p>build and operate cross-border location data services or digital public services using location data?</p> <p>1) <input type="checkbox"/> A limited number of services / examples</p> <p>2) <input type="checkbox"/> A large number of services / examples</p> <p>3) <input type="checkbox"/> None exist</p> <p>4) <input type="checkbox"/> Don't know</p>	<p>As in question Q18.2, formal agreements may be established by various organisations at different levels, information on different cases should be collected e.g. through selected contacts or a survey.</p>
Q18.2.1	<p>Please share a link to any relevant example (s)</p>	<p>This second level question may be answered in case 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.</p> <p>The respondent is recommended to share a link for each relevant example of formal agreements established.</p>
Q18.3	<p>To what extent do public-private partnerships exist to finance, build and operate location data services or digital public services using location data?</p> <p>1) <input type="checkbox"/> A limited number of services / examples</p> <p>2) <input type="checkbox"/> A large number of services / examples</p> <p>3) <input type="checkbox"/> None exist</p> <p>4) <input type="checkbox"/> Don't know</p>	<p>The respondent should tick only one option.</p> <p>As public-private partnerships may be established by various organisations at different levels, information on different cases should be collected e.g. through selected contacts or a survey.</p>
Q18.3.1	<p>Please share a link to any relevant example</p>	<p>This second level question may be answered in case public private partnerships exist to finance, build and operate location data services or digital public services using location data.</p> <p>The respondent is recommended to share a link to any relevant example of formal agreements established.</p>

Recommendation 19

Q19.1	<p>To what extent is there a strategic approach to skills and training for innovative geospatial solutions?</p> <p><input type="checkbox"/> Some training or awareness raising on geospatial skills undertaken by organisations to meet specific needs but not as part of a recognised or accredited competency framework</p> <p><input type="checkbox"/> Training and awareness raising on geospatial skills undertaken by some organisations as part of a recognised geospatial competency framework or within a public sector ICT or data competency framework</p> <p><input type="checkbox"/> A high degree of adoption of the geospatial competency framework either through recognition of its value or national law / regulation</p> <p><input type="checkbox"/> No or very little training or awareness raising on geospatial skills</p> <p><input type="checkbox"/> Don't know</p>	<p>The question refers to the strategic approach to skills and training for innovative geospatial solutions.</p> <p>Tick one of the options.</p>
Q19.2	<p>What type of initiatives are organised to raise awareness and develop geospatial skills? Please tick all that apply</p> <p><input type="checkbox"/> A public sector location information / GI champion</p> <p><input type="checkbox"/> Location information / GI champions in individual organisations where location information plays a significant role</p> <p><input type="checkbox"/> Spatial literacy awareness raising for non-specialists, e.g. policy makers, legal advisers, project managers</p> <p><input type="checkbox"/> Training for specialists, e.g. developers, data analysts</p> <p><input type="checkbox"/> Spatial literacy / GI elements in Digital Innovation Hubs</p> <p><input type="checkbox"/> Special interest group for knowledge sharing within the geospatial community</p> <p><input type="checkbox"/> Public or cross-government events specialising in location information / GI topics</p>	<p>Multiple options may be ticked.</p> <p>The respondent may also indicate other initiatives not listed by ticking the option 'Other' and providing the details in the free text field that appears.</p> <p>Furthermore, the respondent is recommended to provide additional details, such as a brief description and a relevant reference/link for each initiative ticked, in the free text field at the end of the Focus Area.</p> <p>The definition of the term 'GI champion', used in the question, is provided in the glossary (chapter 4).</p>

- Structured training programmes to obtain accreditation under a competency framework
- INSPIRE training modules
- Online self-learning tools
- a national standard extending the standard on European e-Competence Framework 3.0 (EN 16234-1);
- a standard referred to national ICT framework;
- national guidelines on digital skills;
- Other, please specify
- None
- Don't know

4. FAQ

This section collects the most frequently asked question by the participating countries during the data collection stage. The section will be updated by the completion of the data collection phase.

5. Glossary

Table 2 (below) is a glossary listing significant definitions, referenced to the main question(s) to which they apply. This glossary is more extensive than the one published in the online survey as it includes additional terms for which respondents in the LIFO Wave 1 have requested clarification.

Table 3 - LIFO Glossary

Term	Definition	Used in
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.	Q10.3
Authentic data	Data that provides an accurate representation of reality with quality parameters that are fit for the intended purposes.	Q11
Authoritative data ⁵	Data from officially regarded sources. For location, such sources represent public registries such as cadastre, roads etc.	Q1.2
Core location dataset ⁶ / High value datasets	<p>pen 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'.</p> <p>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.</p>	Q2.2 Q10.3
Core reference data ⁷	<p>Data presenting the following features:</p> <ul style="list-style-type: none"> • Limited content, only few themes, only basic attribute information → "Core" • Simplified data model • Easy to use • Harmonised at International boundaries 	Q16.3

⁵ Reference link: <https://joinup.ec.europa.eu/collection/european-union-location-framework-eulf/document/definitions>

⁶ Reference link: <https://joinup.ec.europa.eu/collection/european-union-location-framework-eulf/document/recommendation-1>

⁷ Reference link: https://un-ggim-europe.org/wp-content/uploads/2019/04/06_CRD_BKG.pdf

Term	Definition	Used in
Digital government strategy ⁸	Strategy to design and foster the application of information and communication technologies (ICTs) to improve public services and to increase citizen participation in democratic government.	Q1.1
ESPD ⁹	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	Q5.1.2
Evidence-based policy making ¹⁰	The development of public policy which is informed by objective evidence, e.g. through data related to the content of the policy.	Q4.1
GeoDCAT-AP specification ¹¹	GeoDCAT-AP is an extension of DCAT-AP (“DCAT application profile for European data portals”) for describing geospatial datasets, dataset series and services. DCAT-AP is a specification based on W3C’s Data Catalogue vocabulary (DCAT) for describing metadata of public sector datasets in Europe.	Q12.1
Geographical Information (GI) Champion ¹²	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.	Q19.2
High Value dataset	Datasets with 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	Q2.1.1

⁸ Reference link: [http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/565890/EPRS_IDA\(2015\)565890_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/IDAN/2015/565890/EPRS_IDA(2015)565890_EN.pdf)

⁹ Reference link: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R0007>

¹⁰ Reference link: <https://joinup.ec.europa.eu/collection/european-union-location-framework-eulf/document/definitions>

¹¹ Reference link: <https://joinup.ec.europa.eu/solution/geodcat-application-profile-data-portals-europe>

¹² Reference link: <https://joinup.ec.europa.eu/collection/european-union-location-framework-eulf/document/recommendation-19>

Term	Definition	Used in
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.	Q6.1 Q6.2
Location data framework ¹³	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	Q7.1 Q7.2 Q7.3
Location information strategy ¹⁴	Strategy to integrate location information activities within digital government, in order to realise the objectives of digital government and define requirements and actions for a better understanding and wider use of location information. Key actions for realising these benefits are improving the access to location information, establishing core reference data, optimising use of location information in digital public services, and providing society with the skills and knowledge necessary for handling location information.	Q1.1
Open and collaborative methodology ¹⁵	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.	Q8.1
Open licence ¹⁶	An open licence is a way for the copyright holder (creator or other rightholder) 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.	Q2.1
Sector legislation ¹⁷	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).	Q1.2

¹³ Reference link: <https://www.gov.uk/government/publications/unlocking-the-power-of-locationthe-uks-geospatial-strategy/unlocking-the-power-of-location-the-uks-geospatial-strategy-2020-to-2025>

¹⁴ Reference link: https://lifo.libis.be/primo-explore/fulldisplay?docid=LIRIAS414897&context=L&vid=Lirias&search_scope=Lirias&tab=default_tab&lang=en_US&fromSitemap=1

¹⁵ Reference link: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1096442


¹⁶ Reference link: https://ec.europa.eu/programmes/erasmus-plus/programme-guide/part-c/important-contractual-provisions/open-licence-intellectual-property-rights_en

¹⁷ Reference link: <https://inspire.ec.europa.eu/call-facilitators-%E2%80%93-thematic-clusters/50>

Term	Definition	Used in
Spatial Data Infrastructure (SDI) ¹⁸	<p>In general terms, an 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).</p> <p>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’. Policies, access networks and data handling facilities, standards, and human resources necessary for the effective collection, management, access, delivery and utilization of spatial data for a specific jurisdiction or community. For example, INSPIRE is an initiative to build a European SDI beyond national boundaries.</p>	Q7.1

¹⁸ Reference link: <https://www.isprs.org/proceedings/XXXVI/4-W6/papers/125-130AliMansourian-A037.pdf>

Annex: EULF Blueprint

Title	Annex
EULF Blueprint 2020	 EULF Blueprint 2020.pdf