

ELISE action
Webinar Series

*Location
interoperability state
of play
Results of a Europe-wide
maturity assessment*

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European Location Interoperability Solutions for e-
Government

*Enabling Digital Government through
Geospatial and Location Intelligence*



What is ELISE?



WHAT?

ELISE stands for **E**uropean **L**ocation **I**nteroperability **S**olutions for e-Government. It is one of the more than 50 actions in the European Interoperability Programme ISA2

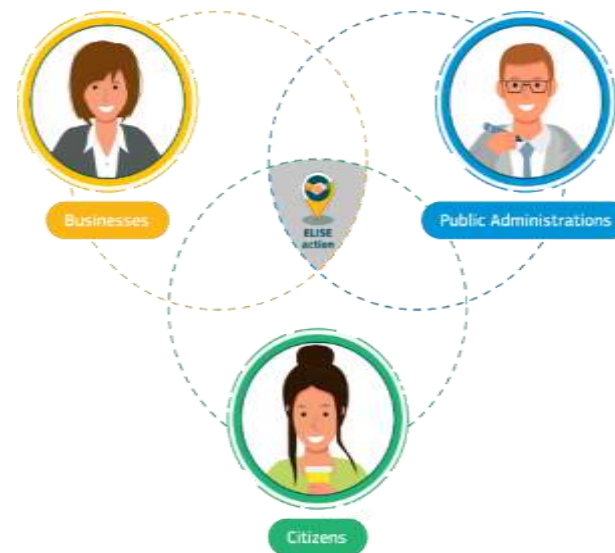
Location-enabled
Digital Government
Transformation

WHAT FOR?

To support Digital Government Transformation by making the best use of location data and technologies in an interoperable manner

FOR WHOM?

For all: citizens, businesses and public administrations



A BIT OF HISTORY...

2004

IDABC: Interoperable Delivery of European eGovernment Services

2010

ISA: Interoperability solutions for public administrations

Actions:

- EULF
- ARE3NA

2016

ISA²: Interoperability Solutions for European Public Administrations, Businesses and Citizens

ELISE

2021

DIGITAL: Digital Europe Programme

ELISE builds upon the outcomes of the former ISA actions EULF and ARE3NA. It is the only action of the ISA² Programme, aiming to improve Digital Government through Location Interoperability.

ELISE action objectives



ELISE action



Policy support

Supporting different policy initiatives at European and national levels



Interoperable frameworks and solutions

Providing reusable interoperable cross-border and cross-sector frameworks and solutions for public administrations, business and citizens



Emerging trends and technologies

Discovering how emerging trends and technologies enable more effective use of location data for policy and digital public services



Building a Knowledge base

Building a Geo-Knowledge base to inform and train stakeholders and promote the adoption of good practices and innovations in location data

ELISE outputs and topics



STUDIES



APPLICATIONS



FRAMEWORKS AND SOLUTIONS



GEO KNOWLEDGE
BASE SERVICE

Evolution of Spatial Data
Infrastructures

Support of data ecosystems

Technologies for location
-enabled innovation

Collaboration models

Spatial skills for Digital
Government Transformation

Location data privacy

Improving access to spatial
datasets

Supporting cross-border
and cross-sector data sharing

Location intelligence for policy
and digital public services

Supporting innovation, growth
and Return of Investment

Managing data quality

Supporting the creation of
common EU public services



Our speakers

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Sector

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The views expressed are purely those of the authors and may not in any circumstances be regarded as stating an official position of the European Commission.



What we will cover today



1. EULF Blueprint and LIFO



2. LIFO analytical model



3. LIFO 2020 results



4. LIFO resources



5. How to use LIFO



6. Q&A

1

EULF Blueprint and LIFO

EULF Blueprint – What is it?



A **European ‘location interoperability framework’** with **guidance** for the **exchange** and **use** of location information in government policy and digital public services, allied closely to the interoperability principles and scope of the **EIF**



 **5 FOCUS AREAS**

 **19 RECOMMENDATIONS**

 **6 ROLES**

 **2 RELATED FRAMEWORKS**

 **49 BEST PRACTICES**

Online and downloadable versions

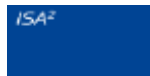
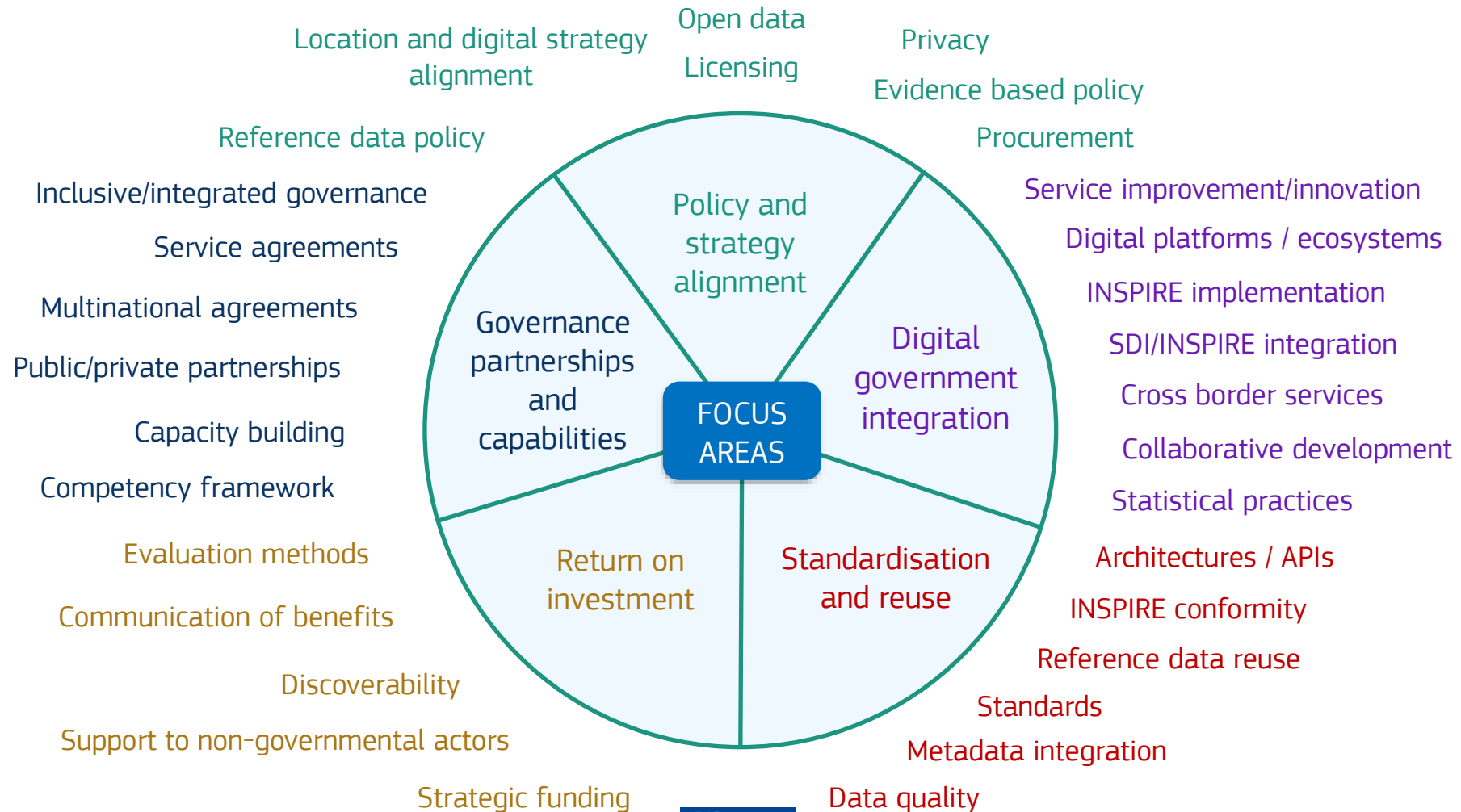
[European Union Location Framework \(EULF\) Blueprint | Joinup](#)



Adoption monitored through the LIFO

[Location Interoperability Framework Observatory \(LIFO\) | Joinup](#)

EULF Blueprint and LIFO topics



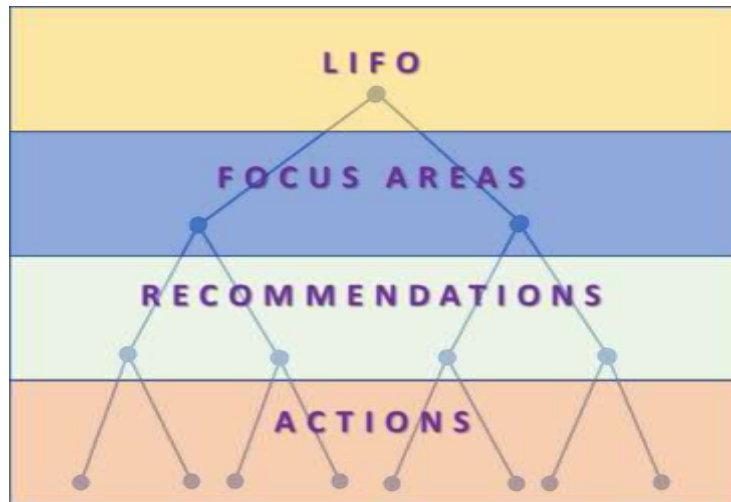
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LIFO analytical model

The LIFO analytical model 1/2



LIFO monitors adoption of the EULF Blueprint recommendations



A “balanced scorecard” approach

Level	No.	Scoring method
LIFO	1	Average of the 5 Focus area indexes
Focus area	5	Average of scores for all recommendations associated with a focus area
Recommendation	19	Average of normalised scores for all indicators associated with a recommendation
Action	48	Scores calculated using different scoring methods, converted to standard normalised scores in range 0-1.

The LIFO analytical model 2/2



Indicator types

- **Primary indicators**, specifically created for LIFO and measured through direct questions to the panel of LIFO contact points
- **Secondary indicators**, taken from external sources and relating to principles relevant to the scope of LIFO

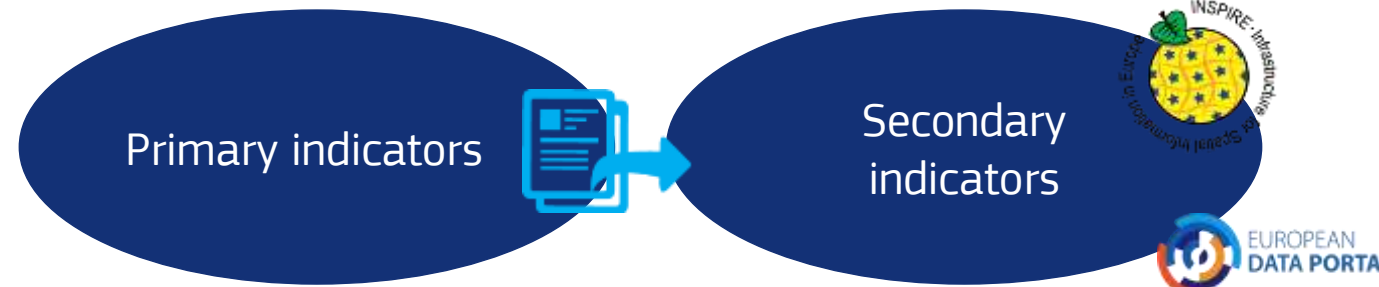
Examples

Datasets and means of access relating to the Open Data Directive

GDPR readiness

Standards applied

Use of INSPIRE datasets



Examples

Datasets and means of access under the INSPIRE Directive

Policies on reuse of public sector information by the private sector (from the EDP)

Data collection for primary indicators

- Organised as an online **questionnaire**, where respondents are asked to provide information in the form of a reply to a closed question (open questions are used only to provide additional information to clarify the indicator). For example:

Indicator

Use of location-based analysis for evidence-based policy making



Question

Is location-based evidence and analysis used to help in developing relevant policies and monitoring outcomes?

3

LIFO 2020 results

Participating countries

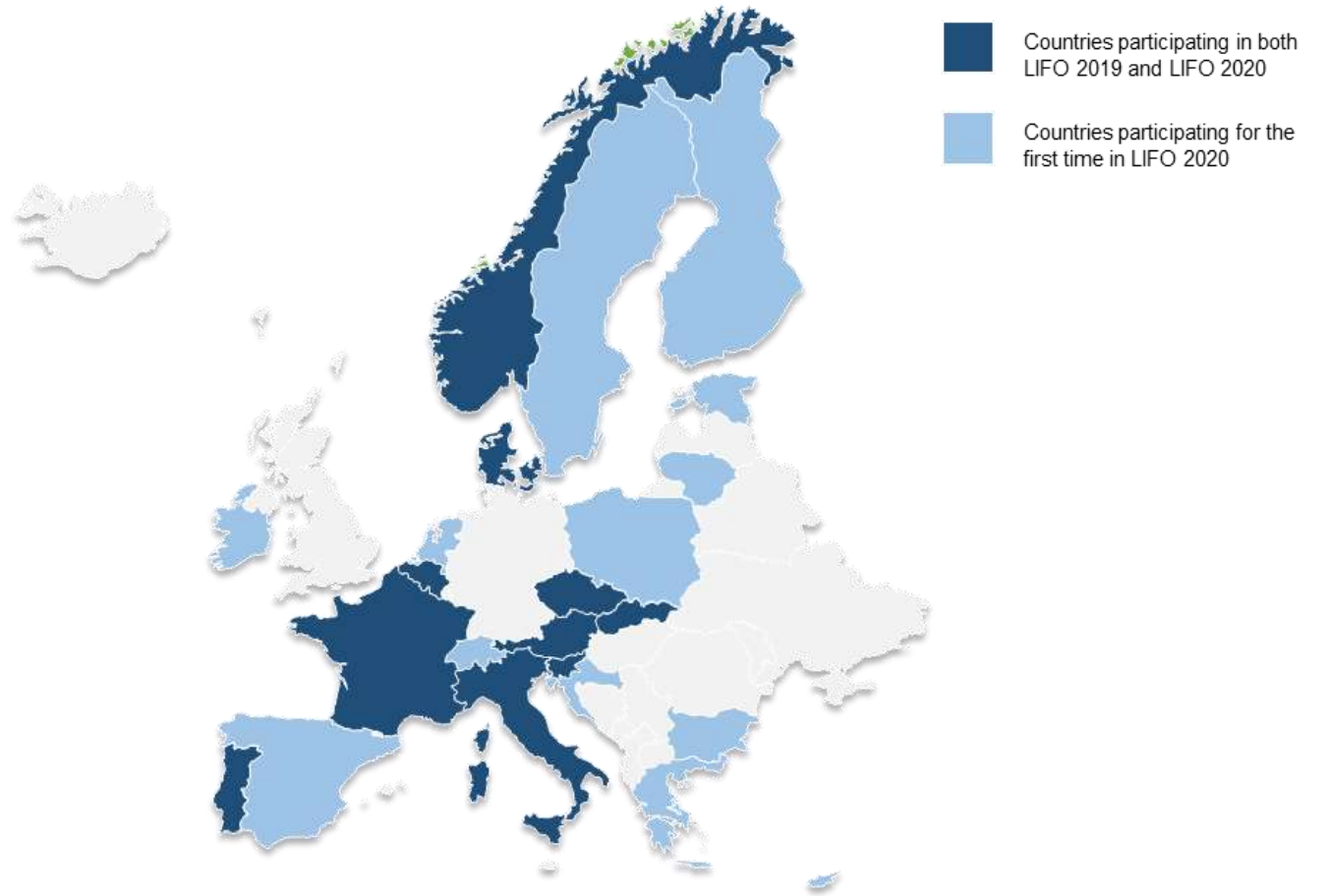


10 countries participated in **2019**

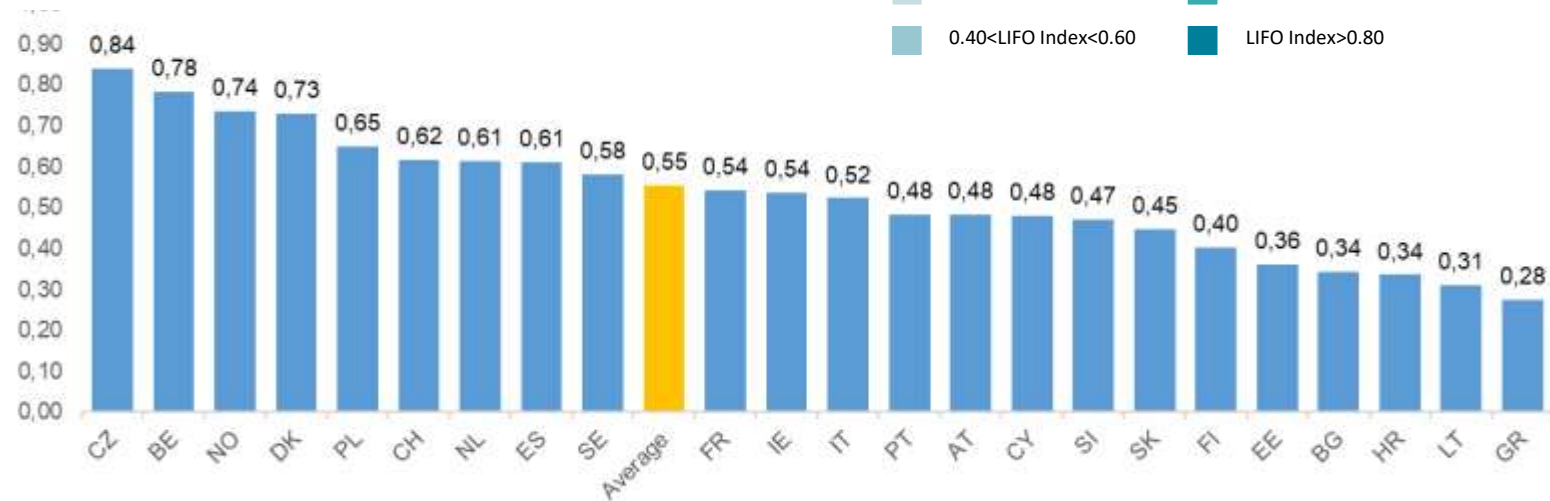
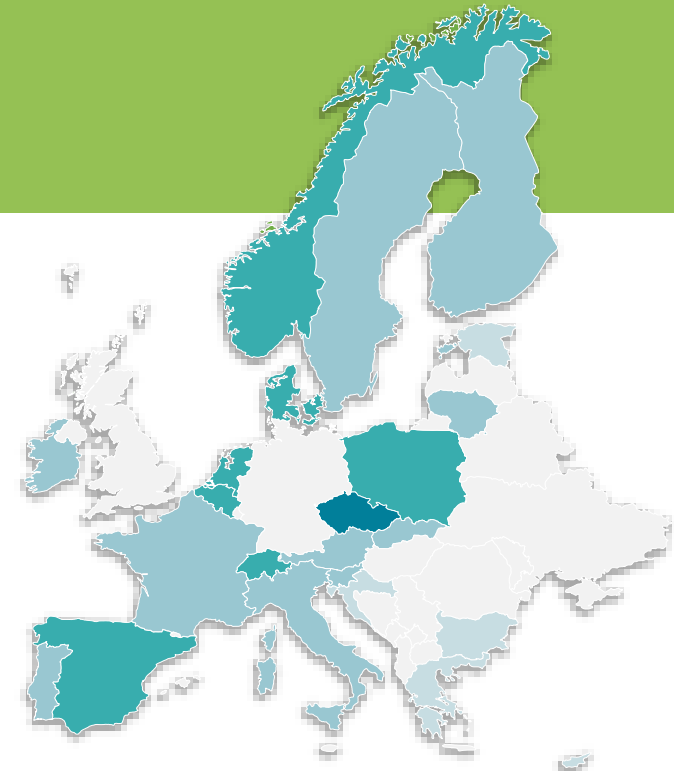
23 countries participated in **2020**

In addition to Austria, Belgium, Czech Republic, Denmark, France, Italy, Norway, Portugal, Slovakia and Slovenia...

new participants were: Bulgaria, Croatia, Cyprus, Estonia, Finland, Greece, Ireland, Lithuania, Netherlands, Poland Spain, Sweden and Switzerland



LIFO results summary



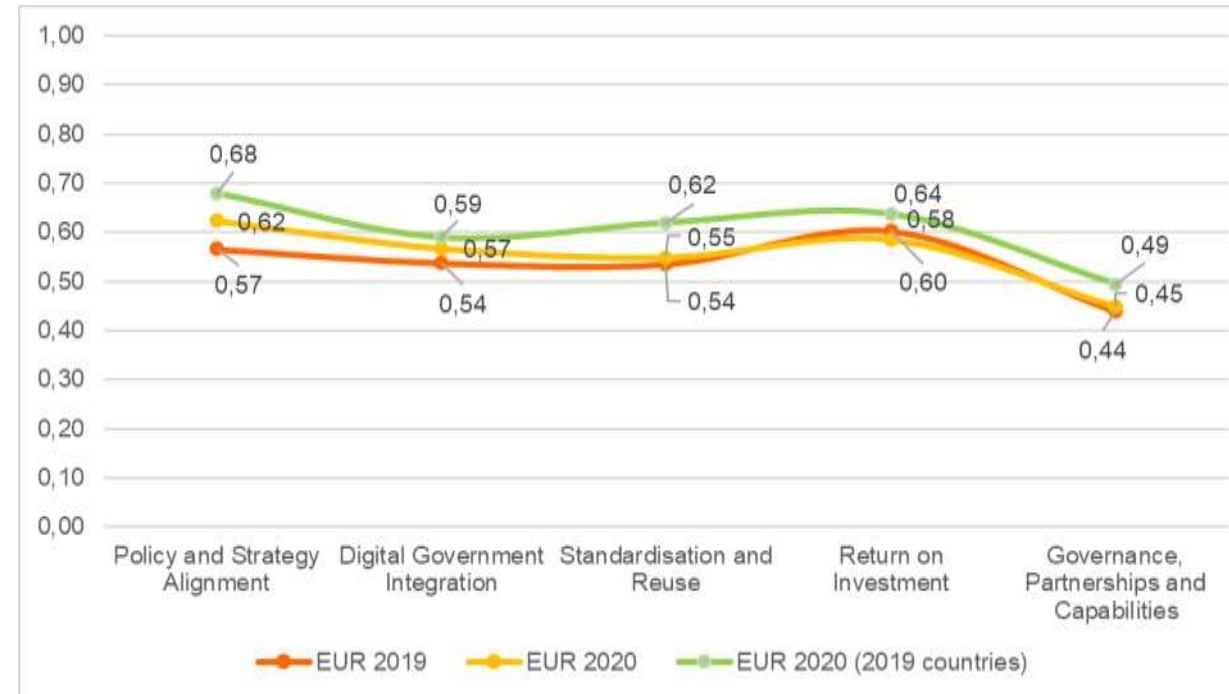
- Average good level of location interoperability maturity: the **LIFO index** for the 23 countries is **0.55**
- the **Policy and Strategy Alignment** focus area has the **highest score** of 0.62, followed by **Return on Investment** (0.58), **Digital Government Integration** (0.57) and **Standardisation and Reuse** (0.55); the **Governance, Partnerships and Capabilities** focus area stands apart with the lowest score (0.45)
- **Four outliers** (Czech Republic, Belgium, Norway and Denmark) with excellent scores in all focus areas, and five more countries (Poland, Switzerland, The Netherlands, Spain, France and Sweden) positioned above the average
- **All countries have offered some examples of best practices** in one or more focus areas

LIFO results summary – 2019 vs 2020



For the countries that participated **both in LIFO 2019 and LIFO 2020**, the EU average LIFO index has **increased from 0.54 to 0.60**. This can be attributed to the positive variations in the following focus areas:

- **Policy and Strategy Alignment** – increased by 0.11
 - Improvements under *Recommendation 3*: organisations **fully prepared for the GDPR** in more than half of the countries
 - Improvements under *Recommendation 5*: **documents for public sector procurements of location data** specifically referring to INSPIRE Directive or other relevant standards
- **Standardisation and Reuse** – increased by 0.08
 - significant progress in the **compliance of datasets and network services** to the relevant **INSPIRE implementing regulations** and to the good scores the new indicators on the **use of metadata to facilitate joint discovery of spatial and non-spatial data** (*Recommendation 12*)
- **Governance, Partnerships and Capabilities** – increased by 0.06
 - more frequent resort to **public-private partnerships** (*Recommendation 18*)
 - adoption of a more structured approach to **training and awareness-raising** (*Recommendation 19*)



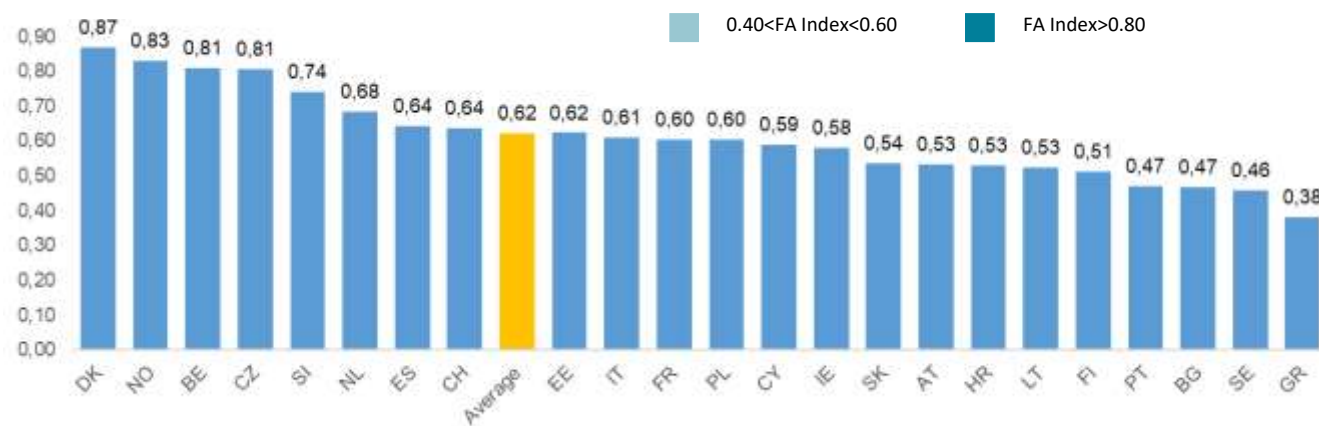
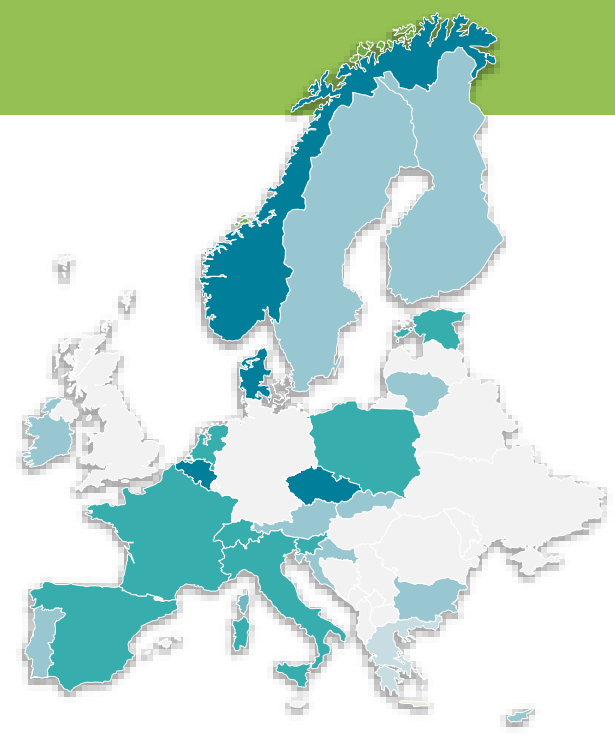
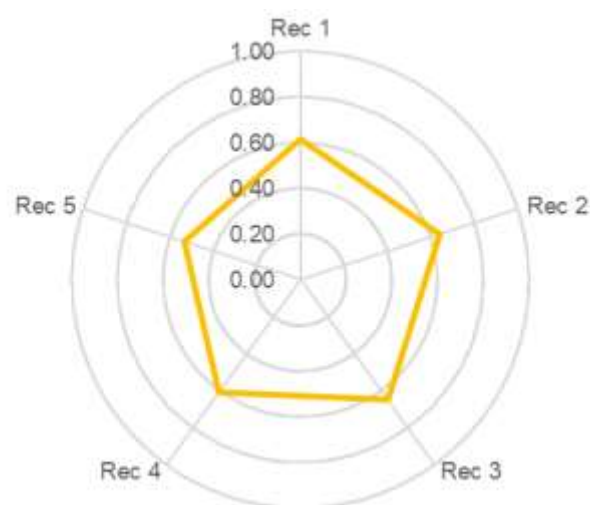
Focus Area *Policy and Strategy* *Alignment* – 2020 results



This is the **focus area with the highest average maturity**, which acknowledges the **attention paid to the strategic dimension of location interoperability**:

- **Good general level of alignment between location and digital government strategies**; several countries however **do not have a specific location strategy** (*Rec. 1*)
- **Location data frequently** (but not universally) **open and available free of charge**; attribution of data sources generally required (*Rec. 2*)
- Most controllers/processors of public sector location data are **fully GDPR-prepared** (*Rec. 3*)
- **Location-based evidence and analysis** is quite often used to help in developing relevant policies and monitoring their outcomes (*Rec. 4*)
- **Public procurement of location data and related services** refer to relevant standards but only very rarely to a standards-based architecture (*Rec. 5*).

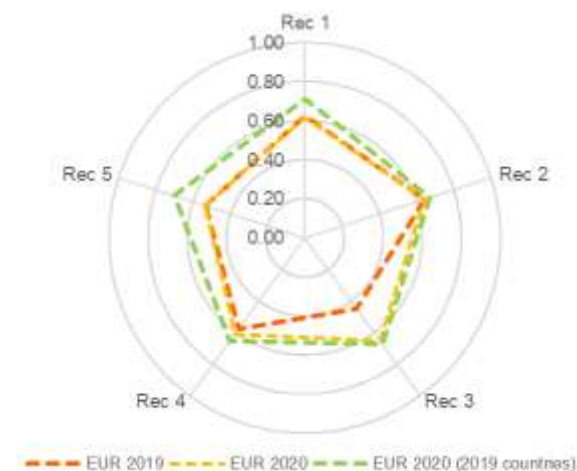
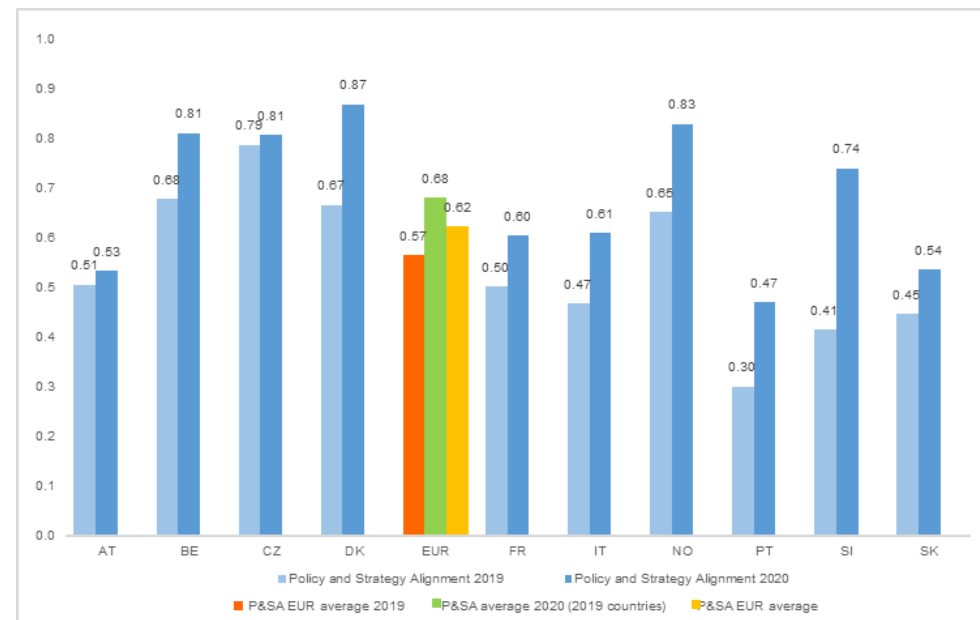
European Commission



Focus Area *Policy and Strategy Alignment* – 2019 vs 2020 results



- Significant increase in the score under *Recommendation 3*: Most organisations controlling and processing public sector location data now **fully prepared for the GDPR** in almost all countries
- Significant increase in the score related to *Recommendation 5*: documents for public sector procurements of location data and services now specifically refer to the **applicable parts of the INSPIRE Directive or other relevant standards** in almost all countries
- Increase in the score under *Recommendation 4*: **location-based evidence and analysis** now used to help in developing relevant policies and monitoring outcomes in most relevant policy topics in half of the countries
- Improved performance under *Recommendation 1*: **significant degree of alignment** reached between location information strategies and e-government strategies in more than a half of the countries
- No change with regard to *Recommendation 2*

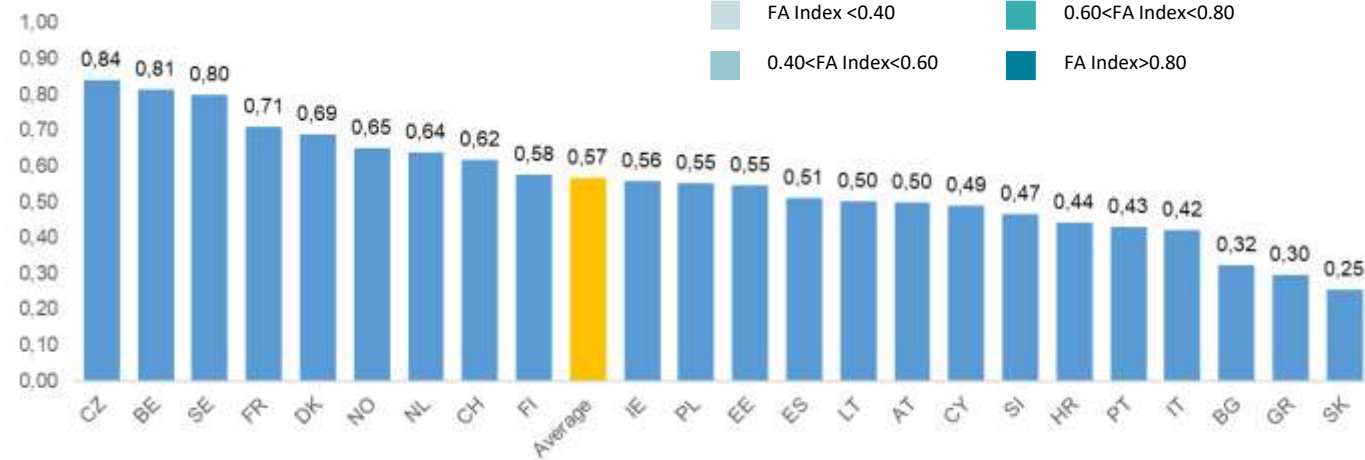
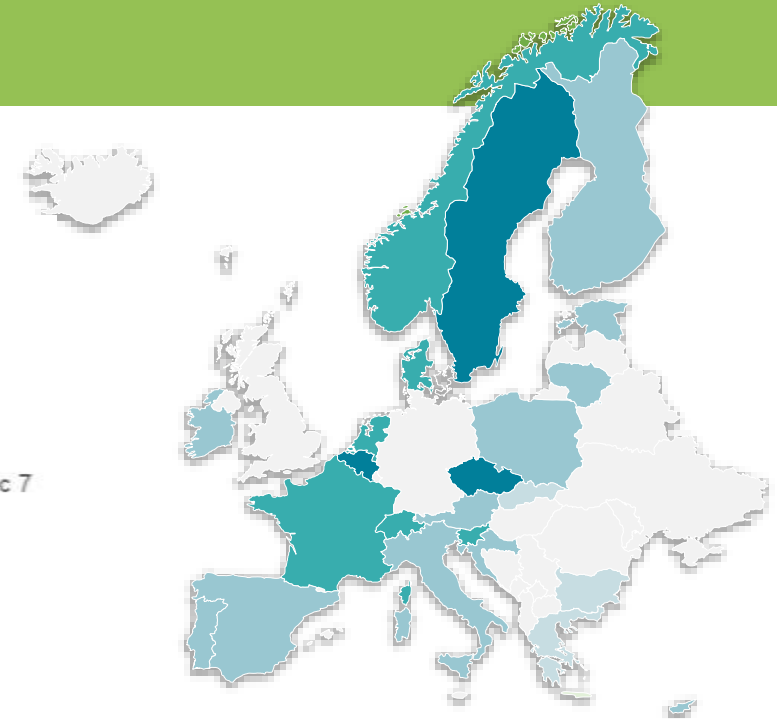
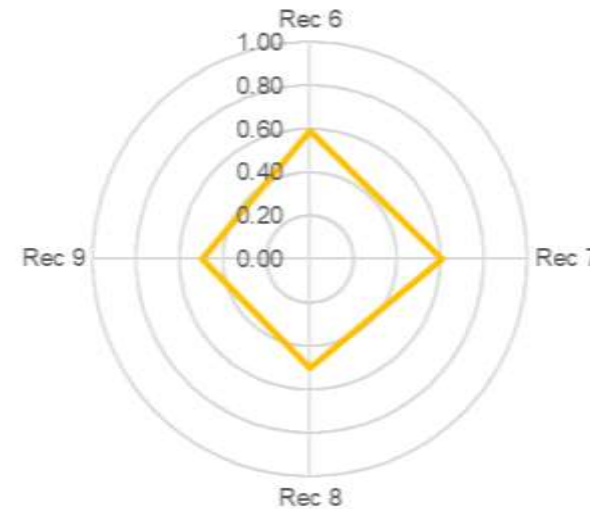


Focus Area *Digital Government Integration* – 2020 results



Extensive usage is made of location data and solutions but, in general, without a real breakthrough approach:

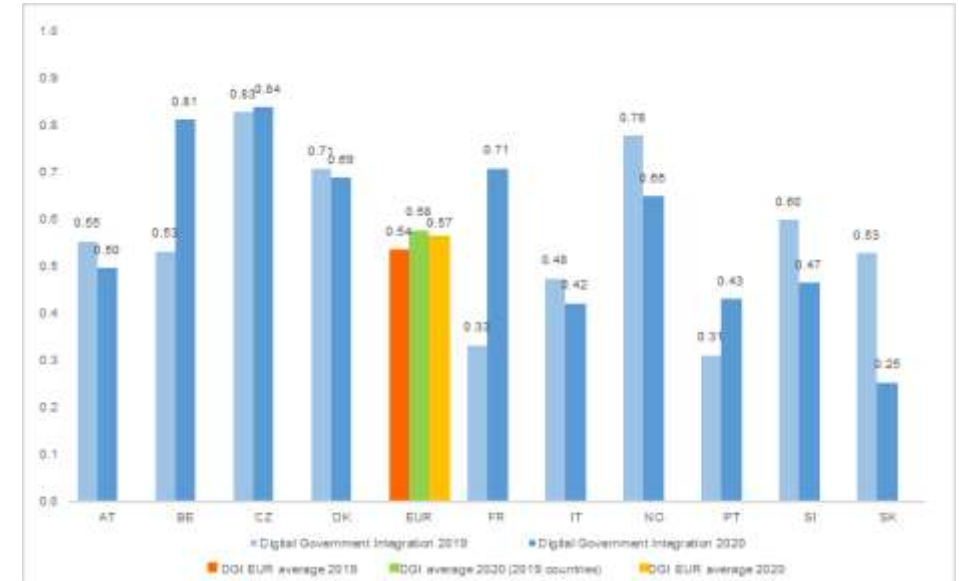
- Most countries make rather **basic or, in some cases, even sub-optimal use of location information** for developing and delivering digital public services (*Recommendation 6*).
- **Public sector SDI is used by the private sector and other organisations** for the delivery of innovative applications and services, but the practice is extensively applied in only a minority of countries. **INSPIRE** is a **reference SDI for cross-border services**, rarely for national ones (*Recommendation 7*).
- **Open and collaborative methodologies are not used extensively** for the design and improvement of location-enabled digital public services (*Recommendation 8*).
- **Integration of location and statistical information is not yet mature** in producing location-based statistics (*Recommendation 9*).



Focus Area *Digital Government Integration* – 2019 vs 2020 results



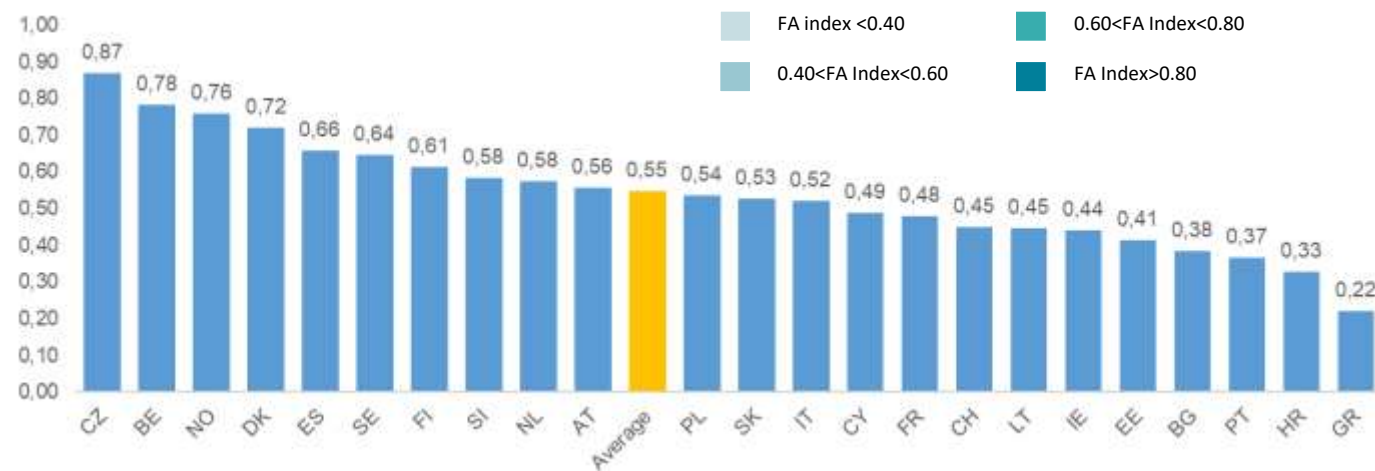
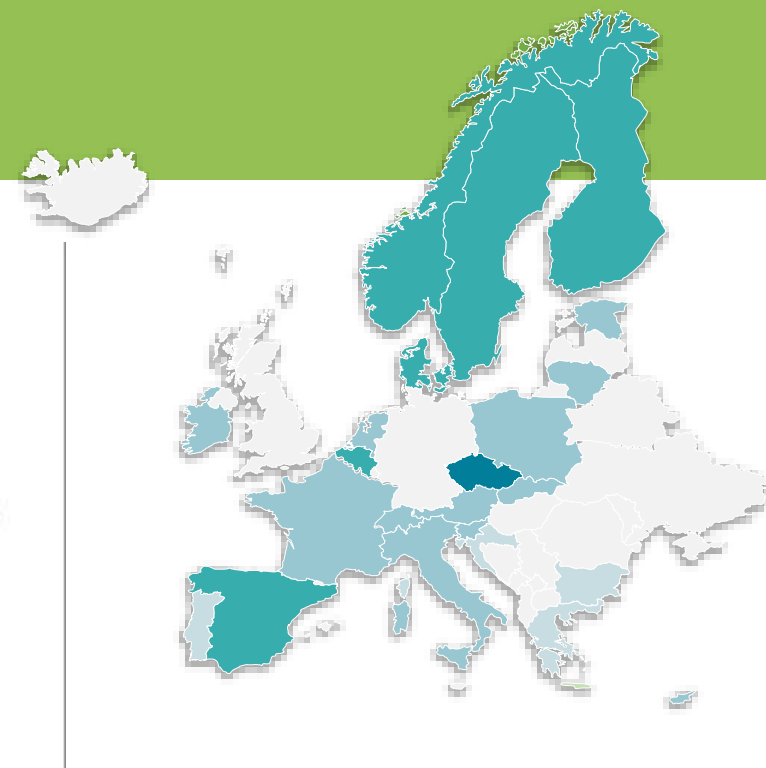
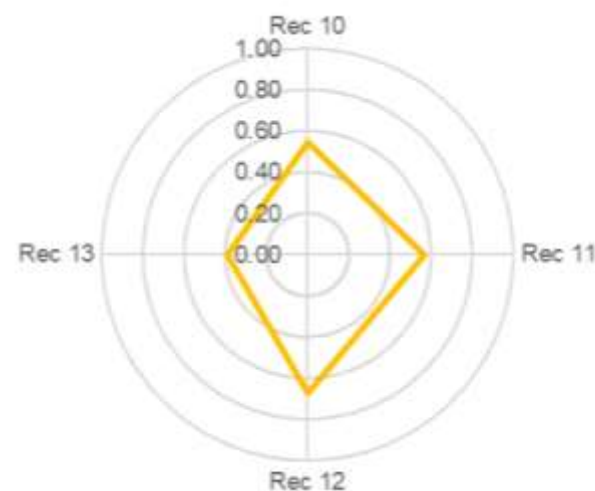
- Average of the ten countries that have participated in 2019 and 2020 only slightly increased, but with significant positive (Belgium, France, and Portugal), and negative (Norway, Slovenia and Slovakia) deviations
- Average score of all 23 countries aligned with average of the 10 original countries
- Marginal improvement under *Recommendation 9*: slight extension of the range of **actions undertaken to fully exploit the integration of location and statistical information** in producing location-based statistics in half of the countries
- Marginal improvement under *Recommendation 6*, partly linked to the change in the questions and scales related to the **simplification and modernisation of digital government services and processes**
- Lower score related to *Recommendation 8*., mostly linked to the change of scale of the indicator on to the **adoption of an open and collaborative methodology to design and improve location-enabled digital public services**
- European average unchanged with regard to *Recommendation 7*



Focus Area *Standardisation and Reuse* – 2020 results

Reuse of authentic data, data services and relevant technical solutions is well established and a good array of geospatial domain standards is applied:

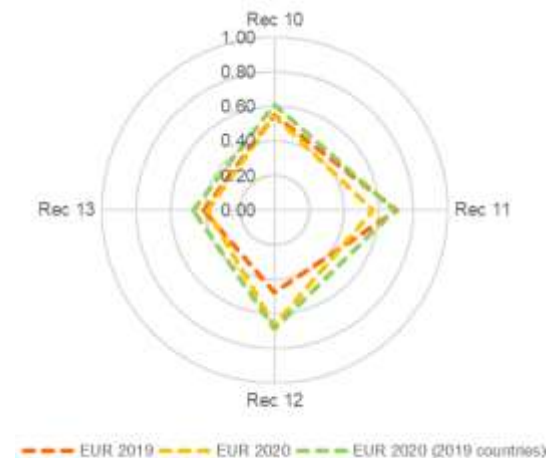
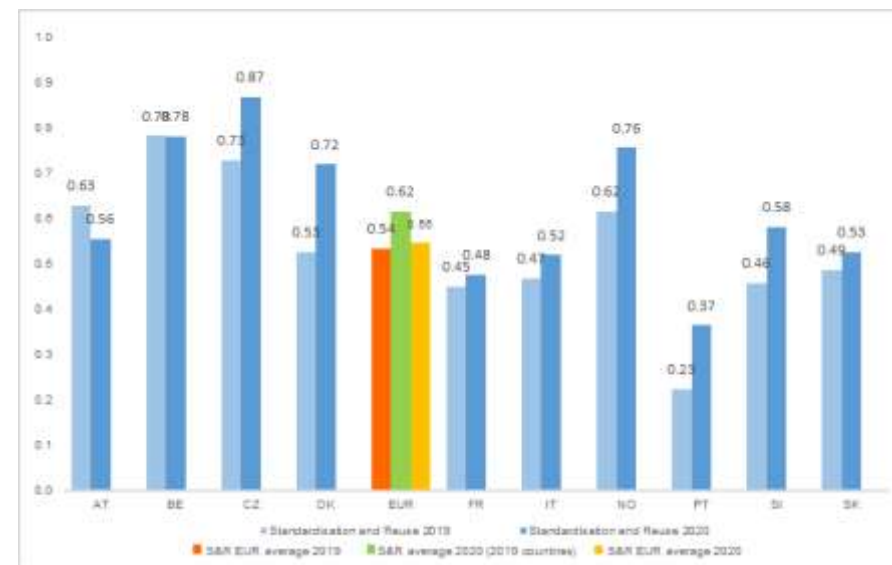
- **Architecture for location data and services in the SDI** fitting within a national ICT architectural framework implemented in almost half of the countries (*Recommendation 10*)
- **Mostly ad-hoc approach for monitoring new technological developments** in the geospatial domain (*Recommendation 10*)
- **Reuse practices** of existing authentic data, data services and relevant technical solutions adopted in more than half of the countries. **Several registries** of location information implemented (*Recommendation 11*)
- Several **geospatial domain standards** adopted in almost all countries. **High level of alignment of spatial data modelling and sharing** with European standards in almost half of the countries (*Recommendation 12*)
- Only **a limited range of initiatives adopted in most countries to manage and improve location data quality** (*Recommendation 13*)



Focus Area *Standardisation and Reuse* – 2019 vs 2020 results



- **Progress in almost all countries participating in both years**, particularly in CZ, DK, NO
- Positive trend related to *Recommendation 12*: **higher conformity of spatial data sets** with Regulation (EU) No. 1089-2010 and of **network services** with Regulation (EC) No. 976-2009. positive results also on two additional questions on **use of metadata to facilitate discoverability of spatial data**
- European average stable under *Recommendation 10* and *Recommendation 13*
- Slightly lower score related to *Recommendation 11*, due to the recalibration of an indicator on the establishment of location information registries

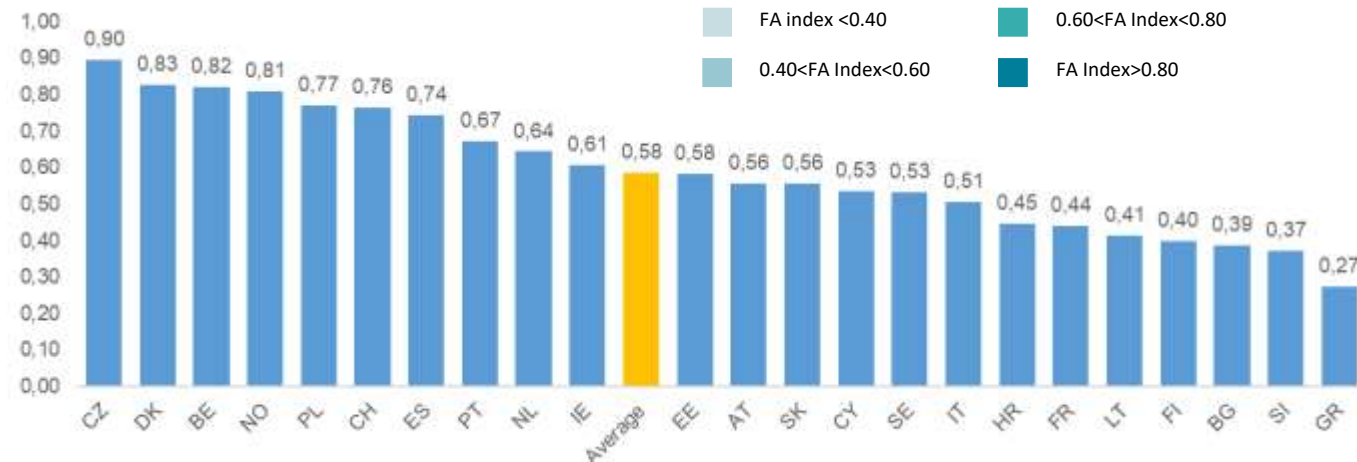
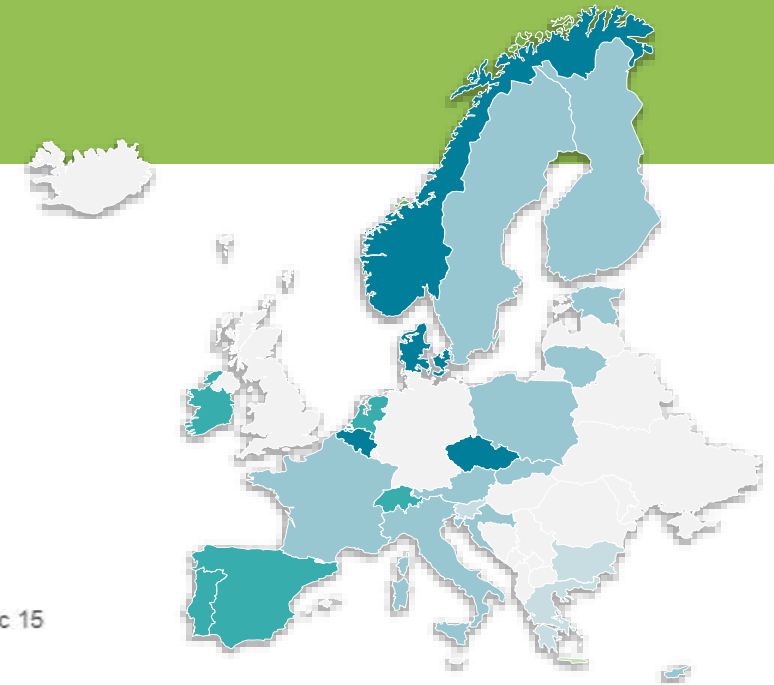
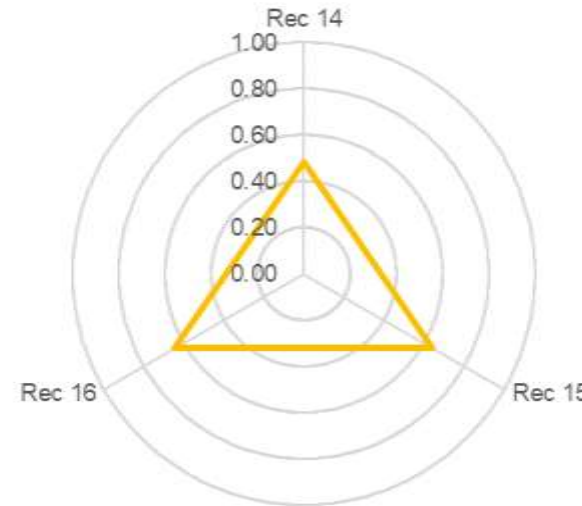


Focus Area *Return on Investment* – 2020 results



This area presents the **second highest maturity**, thanks to the **communication of availability and benefits of location information** and to the **actions taken to facilitate the reuse of public location data by non-governmental actors**:

- Frequent **systematic approach to communicate** the availability and benefits of location data (*Recommendation 15*)
- A number of **interconnected portals and websites** facilitate the search and reuse of location data. Some countries have implemented or planned an array of actions to actively **support private, non-profit and academic players** in the development of new products and e-services using public location data (*Recommendation 16*)
- On the negative side, there is scarce **consistency in the approach** to the **performance and benefits monitoring** of location information (*Recommendation 14*)

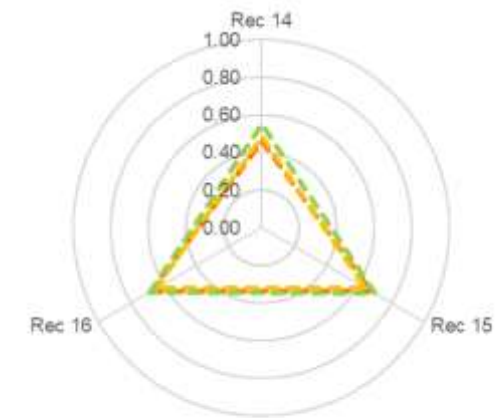
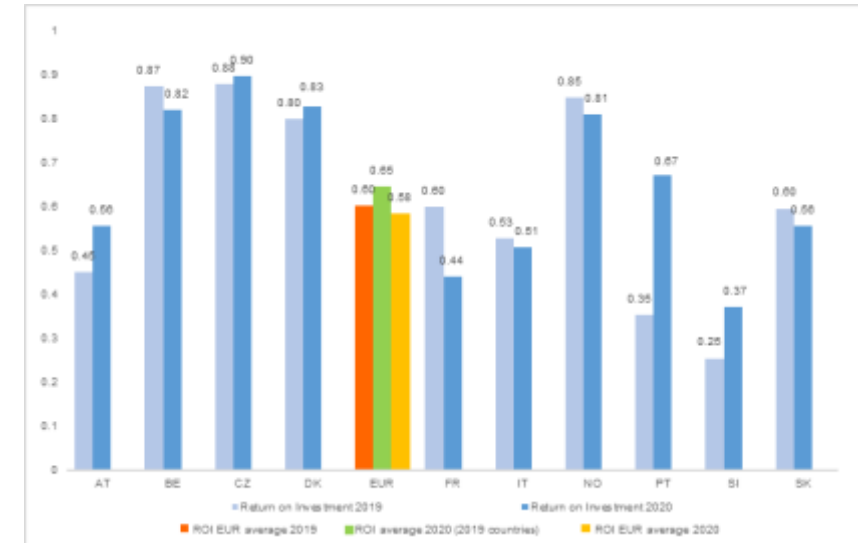


Focus Area *Return on Investment* – 2019 vs 2020 results



Increase of the average index for the 10 countries participating in both years, especially due to increases for AT, PT and SI thanks to a more mature approach to monitoring of location information benefits:

- Practices under *Recommendation 14* (more extensive **methods and scope of performance monitoring**, extended array of **actions for impact-based improvement in location-enabled processes**) have seen some improvement. This has not however raised the recommendation index significantly, which remains the lowest in this focus area. The additional participating countries have not contributed to raising the average for the whole group of 23 countries
- *Recommendation 15*: slight increase of the index for the 10 countries participating in both years thanks to the **more mature communication approach** implemented by Austria, Portugal and Slovenia; progress offset by the new participating countries
- *Recommendation 16*: slight increase due to **additional measures to make the process of searching for and accessing location data** easier for stakeholder implemented in more than half of the countries – progress offset by the new participating countries on the 23-countries average

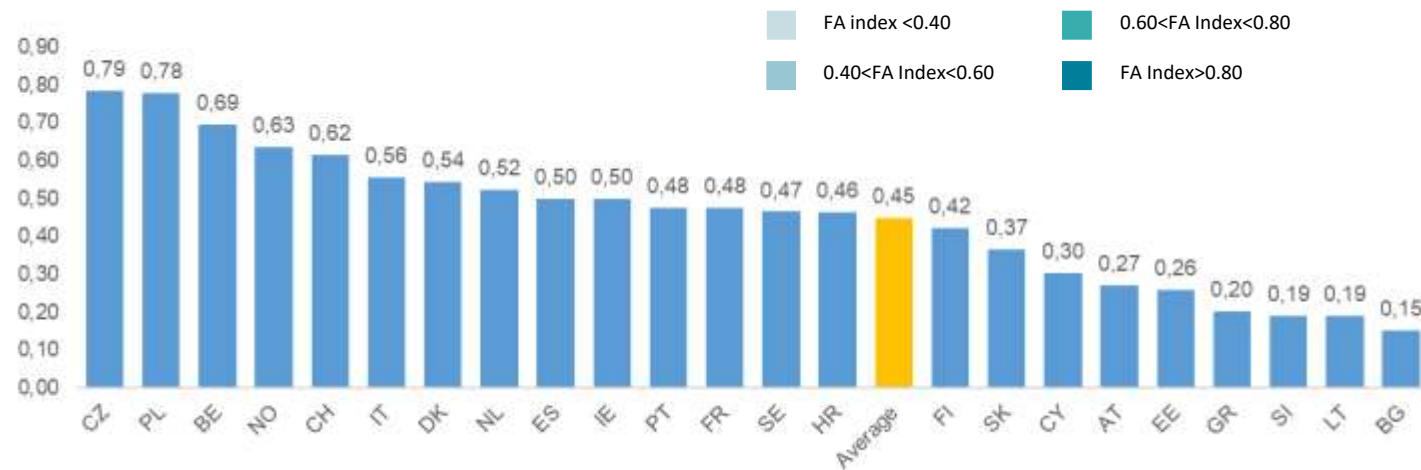
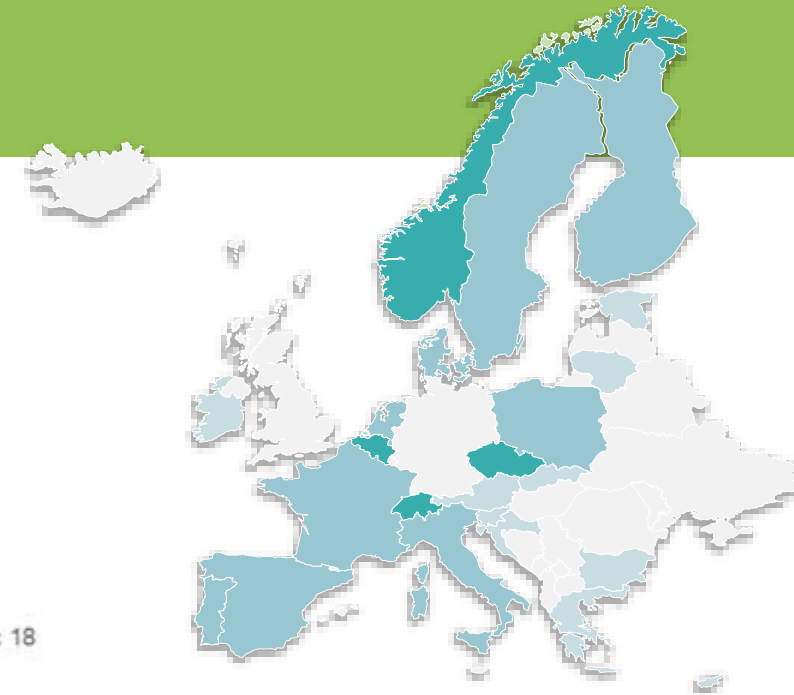
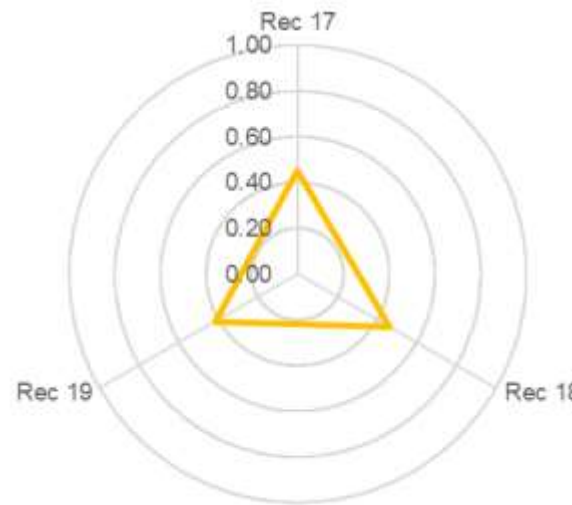


Focus Area Governance, Partnerships & Capabilities – 2020 results



Area with the **lowest maturity**, reflecting the **limited number of partnerships established to ensure the successful development and exploitation of SDIs** and the **unstructured approach to raise awareness and develop geospatial skills**

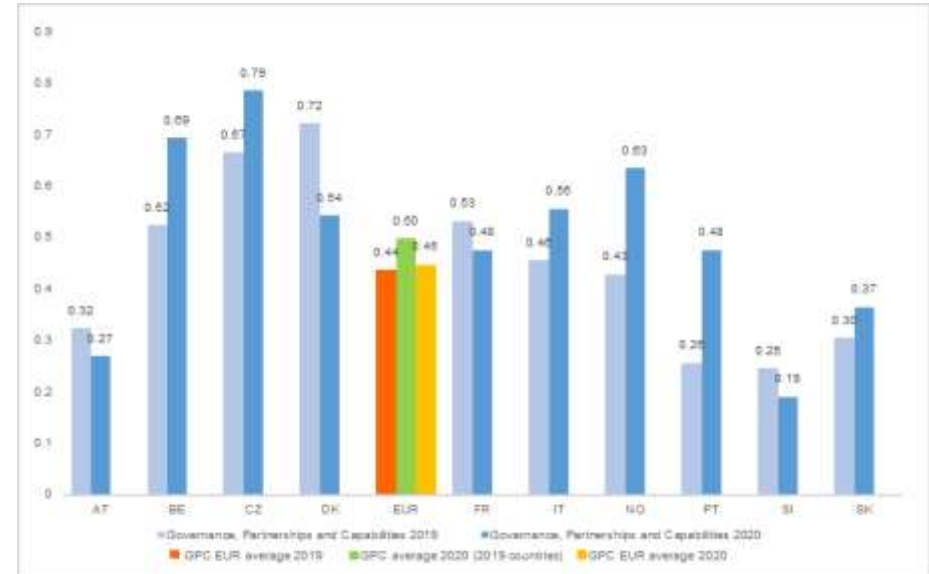
- Good processes for the **governance of location information** that however do not effectively involve all relevant stakeholders (*Recommendation 17*)
- Frequent **agreements between public authorities** to provide public services using location data: still **few cases** exist between **public and private** partners or with **public administrations of other countries** (*Recommendation 18*)
- Many organisations undertake some **training activities** but **not under a strategic approach** and/or as part of a recognised geospatial competency framework (*Recommendation 19*)



Focus Area Governance, Partnerships & Capabilities – 2019 vs 2020 results



- Lower score under *Recommendation 17*: recalibration of the indicator on the joint governance of the organisations in charge of the SDI and of eGovernment; the new participating countries are positioned on average below the 2019 index;
- Adoption of a **more extensive approach to training and awareness-raising** (*Recommendation 19*)
- More frequent resort, although still limited, to **public-private partnerships** (*Recommendation 18*)



Some examples of best practices



Hinderpremie

It is a geospatial-based solution that supports the process for granting compensations to small businesses that are seriously hampered by ongoing roadworks.



The compensation is allocated through an automated procedure taking into account all roadworks that have to be registered in an official platform and the associated validated addresses.



RÚIAN

The Register of Territorial Identification, Addresses and Real Estates is an integral part of the whole system of public administration base registries.



The main benefit of the system of basic registers is the creation of a set of reference data, which are binding for the performance of agendas in public administration.



PELL

PELL offers a digital platform to evaluate the performance of public lightning infrastructures through the harmonised collection of georeferenced identity data in each municipality. PELL supports the modernisation of public lightning management and enables optimal exploitation of public lighting infrastructures (e.g. use them to install additional value added services – WiFi hotspots, cameras...).



Oskari

Oskari is an open source framework for easily building multipurpose web mapping applications based on distributed SDIs such as INSPIRE.



Oskari offers an easy-to-use wizard for creating embedded maps. It is ready to connect to INSPIRE data services or other data sources with standard OGC APIs. It is used extensively in Finland and abroad.



Study on the value of Addresses Web API

The Danish Addresses Web API (DAWA) offers access to data and functionalities for Denmark's Authoritative Addresses. DAWA's address data value relies on the assessment of efficiency gains (DKK 950 million /year) using existing literature cases, data on actual use of DAWA and on savings in a sample of organisations. The analysis has been accompanied by a sensitivity assessment to evaluate its trustworthiness.



Norway Digital

Norway digital is a collaboration framework between organisations and bodies that are responsible for providing location information and / or major users of such information. Norway digital is regulated by common technical and administrative obligations based on the Geodata Act and common agreed requirements.



4

LIFO resources

LIFO Joinup solution



All LIFO resources in one place:

- [2019 and 2020 country factsheets](#)
- [2019 and 2020 European State of Play](#)
- [Interactive Dashboards](#)
- [Analytical Model](#)
- [Case studies](#)

Ready for **consultation** and **reuse**

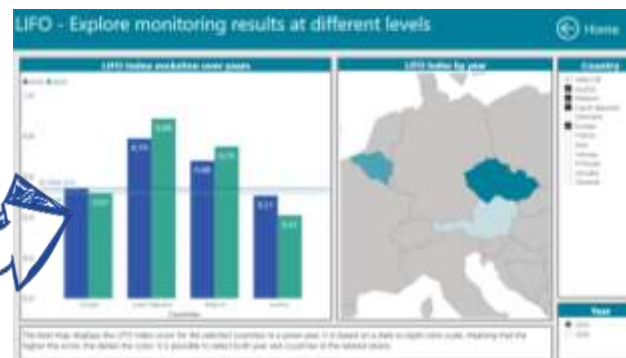
The screenshot shows the homepage of the LIFO - Location Interoperability Framework Observatory. At the top, there is a dark blue header with the title "LIFO - Location Interoperability Framework Observatory" in white. Below the title, there is a white box containing the text "ELISE - European Location Interoperability Solutions for e-Government" and "Topic: eGovernment, Geospatial". To the right of this box is a blue button that says "YOU'RE A MEMBER". Below the header, there is a light gray section with the title "About LIFO - Location Interoperability Framework Observatory" and a "Translate" button. The main content area is white and features the heading "Accessing LIFO information". Below this heading, there is a paragraph of text: "Select one of the buttons below to access the various LIFO outputs. You can examine individual LIFO country factsheets or the LIFO European State of Play for a selected year, explore the LIFO results at different levels of granularity for selected countries and years in the LIFO Interactive Dashboards, read about the LIFO Analytical Model used in the assessment, and see how participants have used the LIFO results in practice (LIFO Use Cases)." Below the text, there are five teal buttons arranged in two rows: "LIFO Country Factsheets", "LIFO European State of Play", "LIFO Interactive Dashboards" in the first row; and "LIFO Analytical Model", "LIFO Use Cases" in the second row.

LIFO resources at a glance



Country factsheets

European state of play



Interactive dashboards



EULF
Blueprint



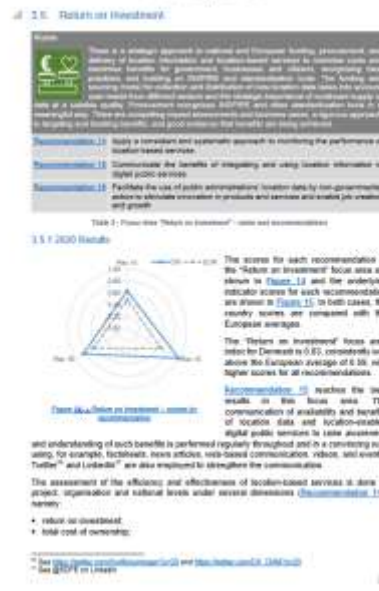
LIFO Country factsheets



23 Country factsheets

The following table summarizes the main strengths and weaknesses of Denmark across the five focus areas:

Focus Area	Strengths	Weaknesses
Policy and Strategy Alignment	<ul style="list-style-type: none"> Full and consistent alignment between digital and location policies Full preparation in terms of compliance with GDPR in location data Significant exploitation of location-based evidence and analysis to support relevant topics 	<ul style="list-style-type: none"> Location data needs to be available through different licensing arrangements from different data providers
Digital Government Integration	<ul style="list-style-type: none"> Significant number of key digital public services that use location information as an integral feature in performing the service Public sector SOI used very extensively by the private sector and other organisations for the delivery of new and innovative applications, products and services Several actions implemented for the integration of location and statistical information in the production of location-based evidence 	<ul style="list-style-type: none"> Collaborative models for the development and delivery of location-based digital public services are not adopted at local or sub-national level, and do not rely significantly on public-private partnerships or other funding



Best Practice 102: Public-private partnership for the development and release of the Hydrological elevation model

Process owners: Danish Nature Agency, Board of the Ministry of the Environment and Food

Short description: The hydrological elevation model, made available free of charge by the Danish Nature Agency, can be used to calculate where the water flows in the event of a inundation and storm surge. Among other things, the model will help municipalities with climate adaptation plans. The development and release of the model is an example of successful partnership between the public and private sector. Spøttrup & Partners, the association of Danish insurance companies and pension funds, has contributed DKK 1 million to develop the model. In view of the common interest in helping to limit water damage, their pioneering and high insurance premiums for insurance claims add too high competitiveness for the insurance companies.

- **overall summary** with LIFO Index score, scores for each focus area, main **strengths and weaknesses**
- **detailed analysis** per focus area, recommendations and underlying indicators
- **2019-2020 comparisons** for countries participating in both years
- Country **best practices** relevant for specific recommendations

LIFO European State of Play



European state of play

- **overall summary** with LIFO Index score, scores for each focus area, main Europe-wide **strengths and weaknesses**
- **detailed analysis** per focus area, recommendations and underlying indicators
- **2019-2020 comparisons** with averages of full group of countries and subset of countries participating in both years
- Selection of country **best practices** relevant for specific recommendations

3. Location Interoperability State of Play

2.4 Overview

LIFO follows the structure of the ELDP Blueprint and its five focus areas. The overall 2020 results and a comparison with the previous year are provided below. The following sub-sections give more details in the different focus areas, again providing the 2020 results and making comparisons with the previous year.

3.1.1 2020 Results

The key messages from LIFO 2020 data collection are:

- The overall LIFO score for the 23 countries is 5.886, which confirms an average good level of maturity for the participants.
- The Policy and Strategy Alignment focus area has the highest score of 6.53, followed by "Mobility as a Service" (5.98), "Digital Government Integration" (5.37) and "Digital Government Integration" (5.35); the "Governance, Participation and Capabilities" focus area stands apart with the lowest score (3.95).
- A group of four countries (Czech Republic, Belgium, Norway and Denmark) have reported excellent scores in all focus areas. Six more countries (Ireland, Switzerland, Netherlands, Spain, France and Austria) are positioned above the average; the remaining countries score more than half of the total, have more or less significant scope for improvement, even with the diverse levels of maturity across all focus areas, and in each of them regularly, all countries have offered some examples of best practices in one or more focus areas.

Figure 1 displays the indexes for each of the five focus areas (represented as the average of the focus area indexes for all 23 countries in 2020). These indexes represent the maturity level of location interoperability implementation in the respective focus areas, measured against the target state expressed in the ELDP Blueprint.

Figure 1 - Overall European State of Play Index Implementation

3.2 Policy and Strategy Alignment

Under the Plan-do-Check-Act model, the good results obtained relative to the attention paid to the sustainability of investments in the SDI. The advantages of existing location information are assessed, and the use of public sector location information is facilitated in several ways. Initiatives assessing the efficiency and effectiveness of location-enabled digital services should be scaled fully, considered to guide the necessary investments.

Finally, the Governance, Participation and Capabilities focus area is the weakest of the five. Capacity building and Awareness-raising are still based on a limited catalogue of rather traditional options. Participation with cross-sector organisations and with the private sector are rare, although less so more frequently adopted with other public organisations within the participating countries. Organisations repeatedly coordinating the SDI and digital government in each country collaboratively is a noticeable effort in the decision making on the role of the SDI in digital government, but other relevant stakeholders are involved only to a limited extent.

The average LIFO index, at 6.55, is higher than the median that stands at 6.50. This indicates the prevalence of outliers in the upper end of the scale, as mentioned above and displayed in Table 3. Leading within this cluster of four nations with the highest LIFO scores (Czech Republic, Belgium, Norway and Denmark), the remaining countries form a more heterogeneous cluster, apart from an almost ubiquitous state of Norway.

The following table summarises the main strengths and weaknesses of European practices across the five focus areas. These are drawn from the strengths and weaknesses appearing most frequently in the participating countries.

Focus Area	Strengths	Weaknesses
Policy and Strategy Alignment	<ul style="list-style-type: none"> • Overall, there is a good level of alignment between location and digital government strategies (not where a location strategy exists and where it is integrated within the digital strategy). • The practice of issuing core location data making them available for free is frequent. • Very good level of awareness of all organisations on potential location data policy issues. 	<ul style="list-style-type: none"> • Public assessments of location data and services (not for specific reference to relevant standards including specific provisions of the SDI/SDG directive where applicable).
Digital Government Integration	<ul style="list-style-type: none"> • The national SDI is used to a good extent in delivering digital public services across government (in different sectors and levels of government), often in combination with other specific SDI. • Some countries adopt a rigorous approach to service integration, and take up opportunities for new business or delivery models. 	<ul style="list-style-type: none"> • Location information is not yet extensively and regularly used in an innovative way for the development and delivery of digital public services. • The integration between location and real location information in datasets is generally not yet implemented in a comprehensive way.

3.2 Policy and Strategy Alignment

Table 3 displays the indexes for each of the five focus areas (represented as the average of the focus area indexes for all 23 countries in 2020). These indexes represent the maturity level of location interoperability implementation in the respective focus areas, measured against the target state expressed in the ELDP Blueprint.

Figure 3 - Policy and Strategy Alignment Index Implementation

The results in this focus area indicate that:

- The level of alignment between location and digital government strategies (not where a location strategy exists and where it is integrated within the digital strategy) is generally good, several countries however do not have a specific location strategy.
- The practice of opening core location datasets making them available for free is frequent but not universal. In general, attention of data sources is required.
- All organisations are well prepared on potential location data policy issues with regard to the GDPR.

3.2 Policy and Strategy Alignment

Table 3 displays the indexes for each of the five focus areas (represented as the average of the focus area indexes for all 23 countries in 2020). These indexes represent the maturity level of location interoperability implementation in the respective focus areas, measured against the target state expressed in the ELDP Blueprint.

Figure 3 - Policy and Strategy Alignment Index Implementation

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Figure 3 - Policy and Strategy Alignment Index Implementation

LIFO Interactive Dashboards



What are they?

A set of interactive tools enabling users to navigate through a series of charts displaying the level of implementation of the EULF Blueprint in participating countries at four different levels of aggregation::

- LIFO Index
- Focus Areas
- Recommendations
- Indicators

What are users able to do?

The LIFO Interactive dashboards enable users to identify strengths and areas of improvement, compare the status of different countries and find out more about the related EULF Blueprint guidance.

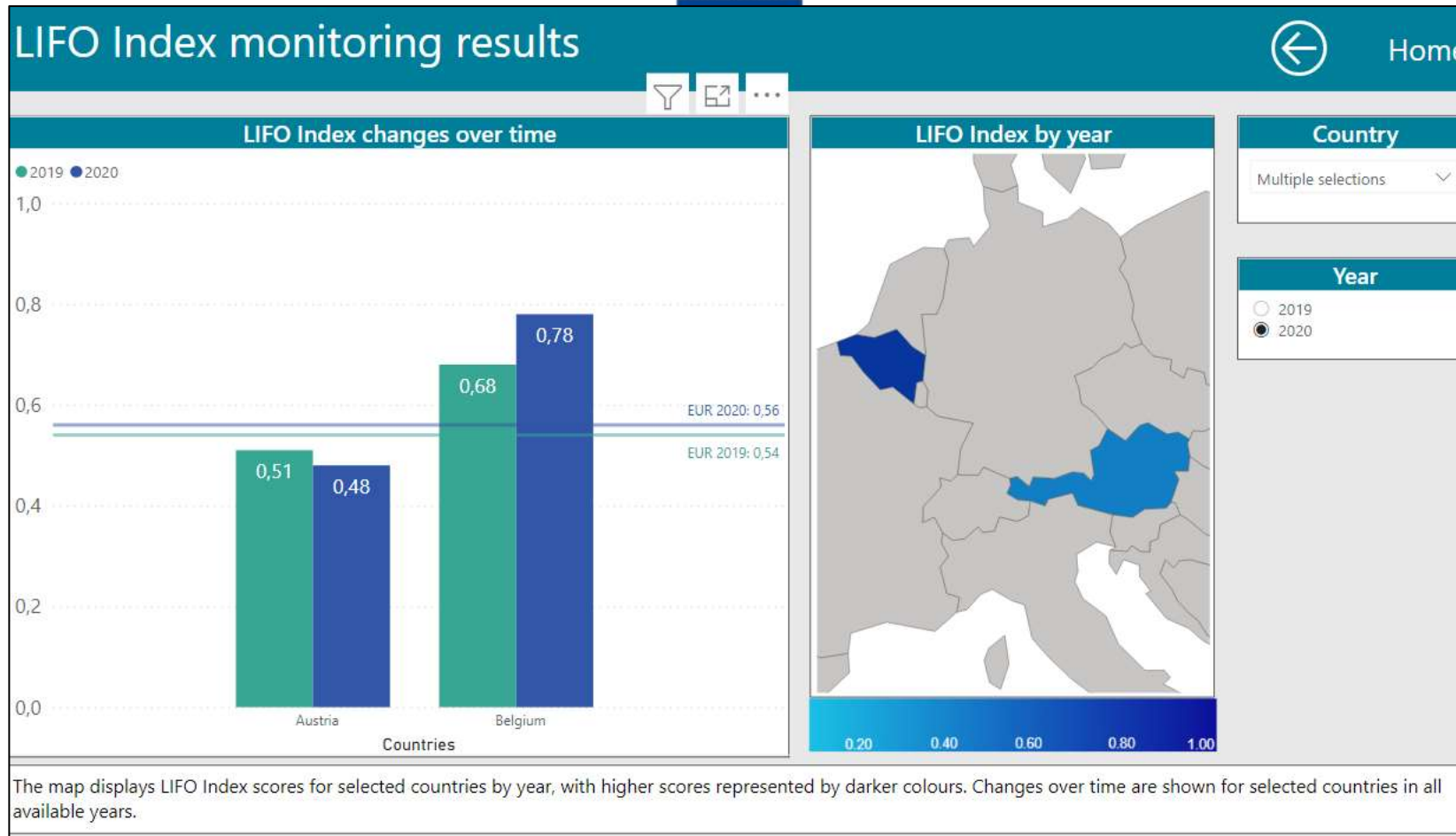


Dashboards are available at:

[LIFO Interactive Dashboards](#)

LIFO Interactive Dashboards

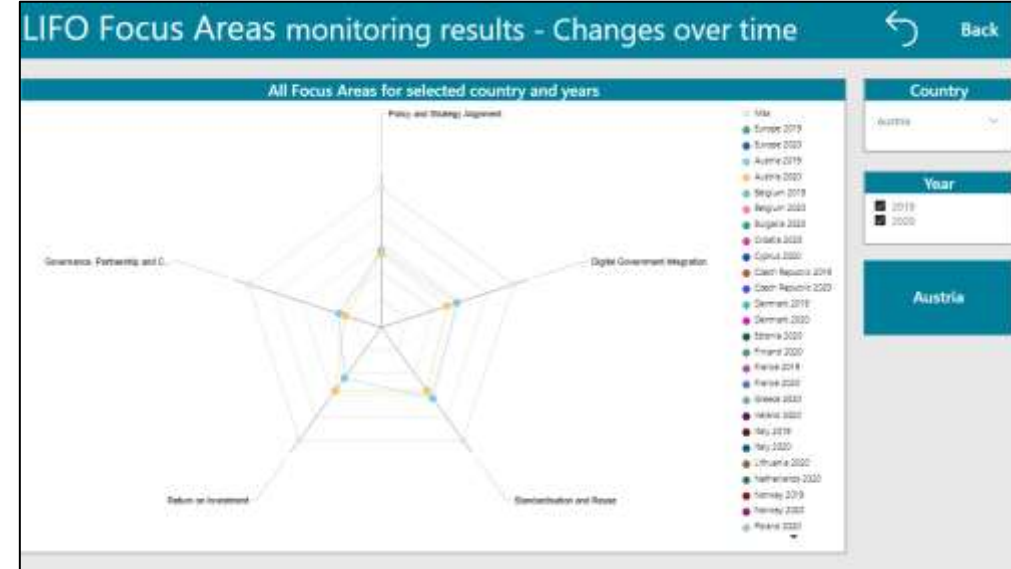
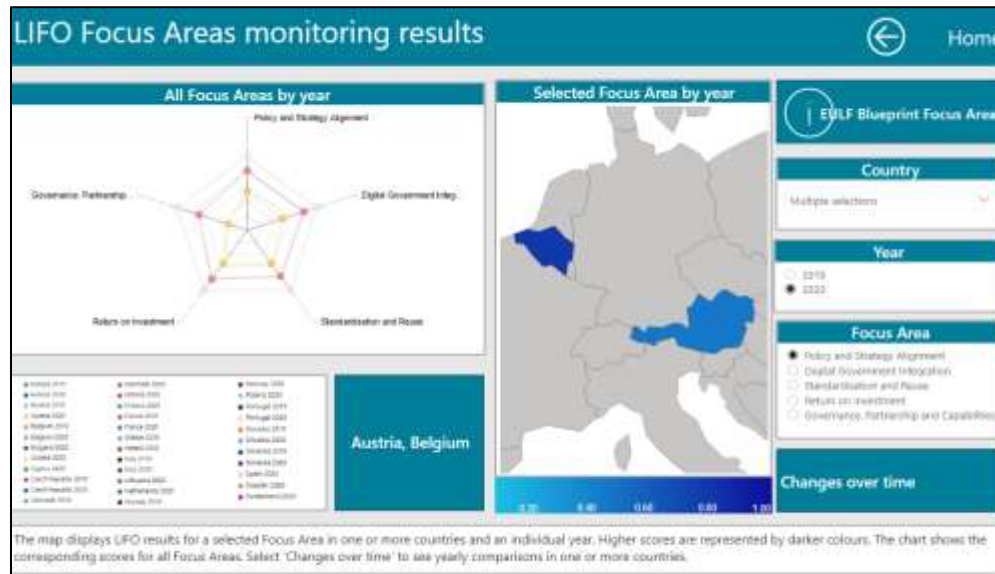
LIFO Index



- Evolution of the LIFO Index **over time** (bar chart)
- Comparison between countries on the performance of the LIFO Index in a **given year** (heat map)

LIFO Interactive Dashboards

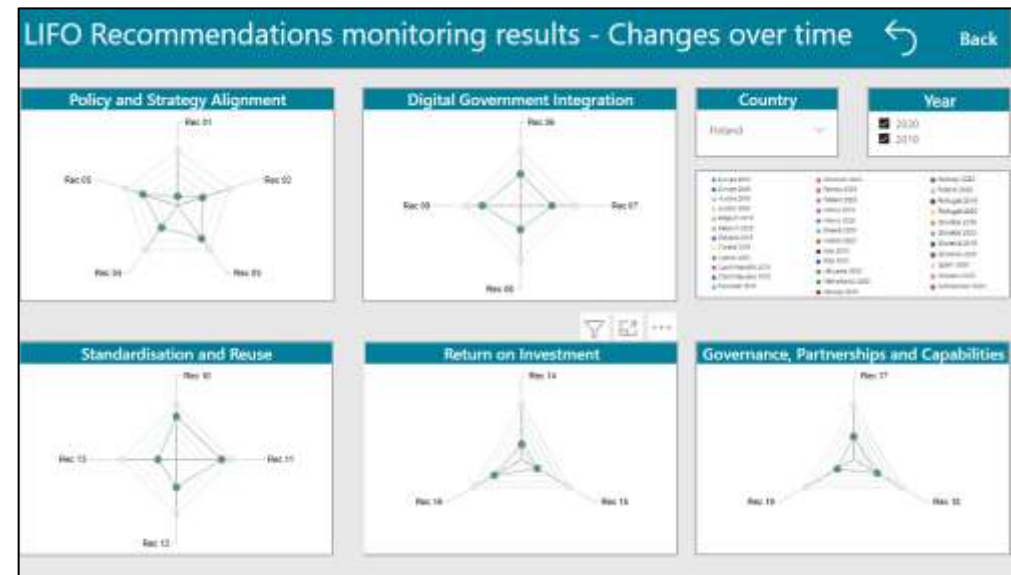
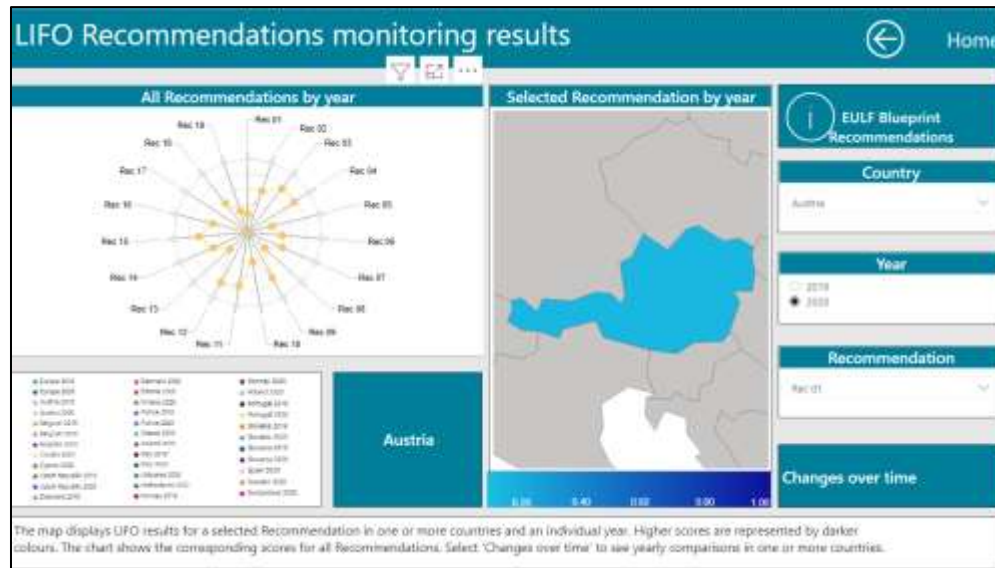
Focus area Indexes



- Comparison between countries on the performance of **all** Focus Area Indexes in a **given year** (spider chart)
- Comparison between countries on the performance of a **single** Focus Area Index in a **given year** (heat map)
- Performance of a **single** country under **all** focus area indexes **over time** (spider chart)

LIFO Interactive Dashboards

Recommendation Indexes



- Comparison between countries on the performance of **all** Recommendation Indexes in a **given year** (spider chart)
- Comparison between countries on the performance of a **single** Recommendation Index in a **given year** (heat map)
- Performance of a **single** country under **all** Recommendations Indexes, clustered by their respective Focus Areas, **over time** (spider chart)

LIFO Interactive Dashboards Indicators

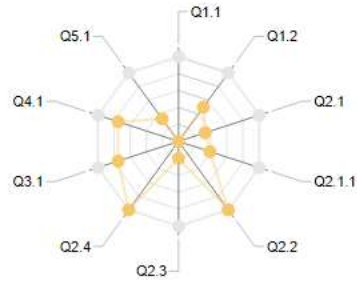


LIFO Indicators monitoring results

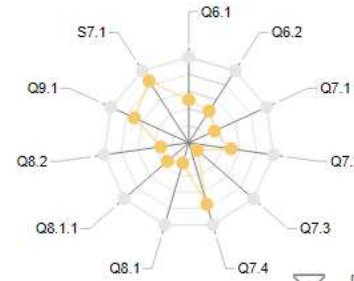


Home

Policy and Strategy Alignment



Digital Government Integration



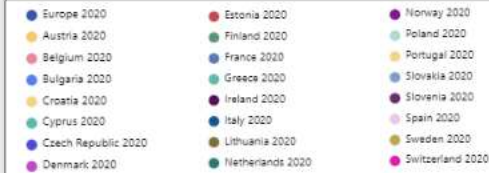
Country

Austria



Indicators

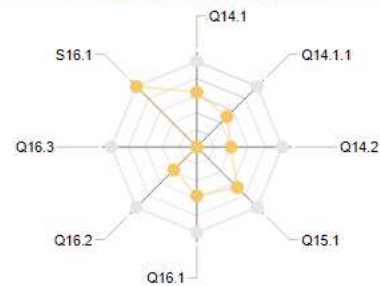
Indicators 2019



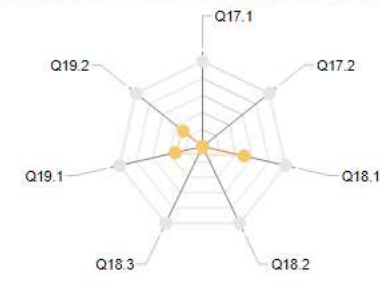
Standardisation and Reuse



Return on Investment



Governance, Partnerships and Capabilities



Indicators displayed refer to 2020. It is not possible to make a consistent comparison between 2019 and 2020 because some indicators have varied between the two years. In the dashboards, only 2020 data is provided. Select 'Indicators 2019' to see indicators refer to 2019' with 'Indicators displayed are for 2020. Note: It is not possible to make a fully consistent comparison between 2019 and 2020 because some indicators have varied between the two years.

- Comparison between countries on the performance of **all** indicators, clustered by Focus Area, in a **given year** (spider chart)

LIFO Interactive Dashboards walk-through



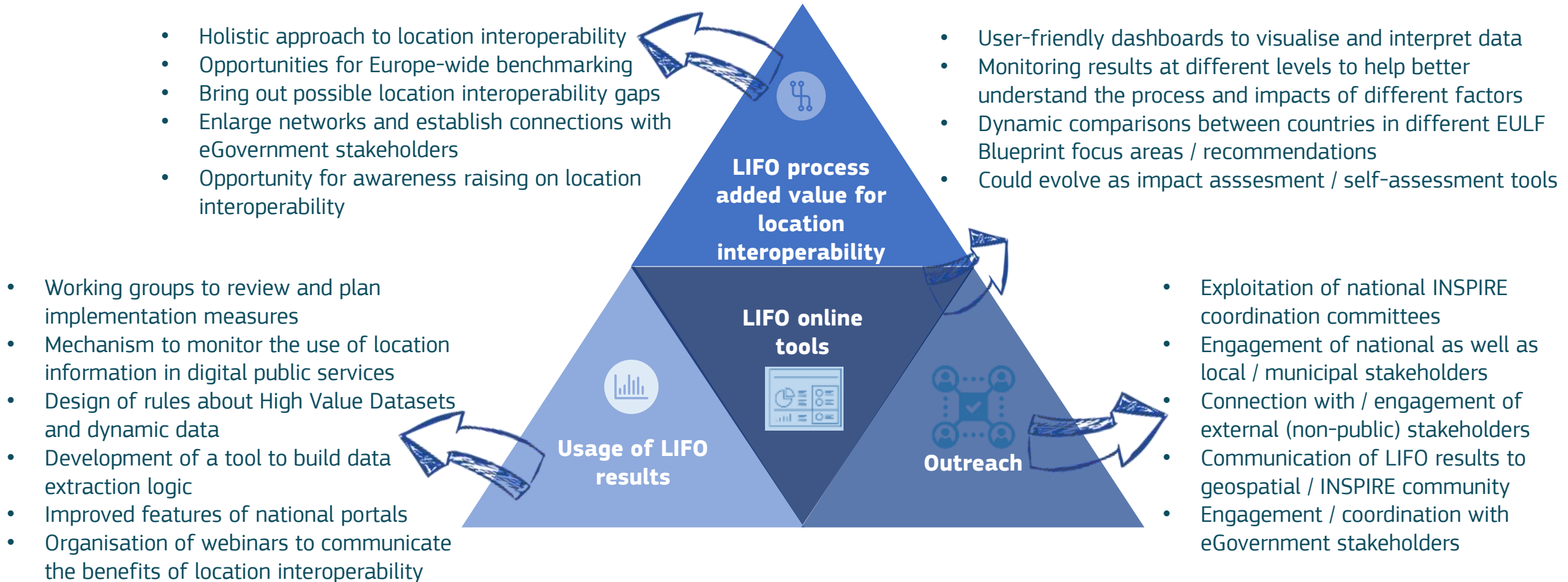
Let's have a quick walk-through!



Case studies



Assessment in **four dimensions** based on interviews with representatives of four countries: Czech Republic, Italy, Norway, Slovenia'



5

How to use LIFO

How to use LIFO



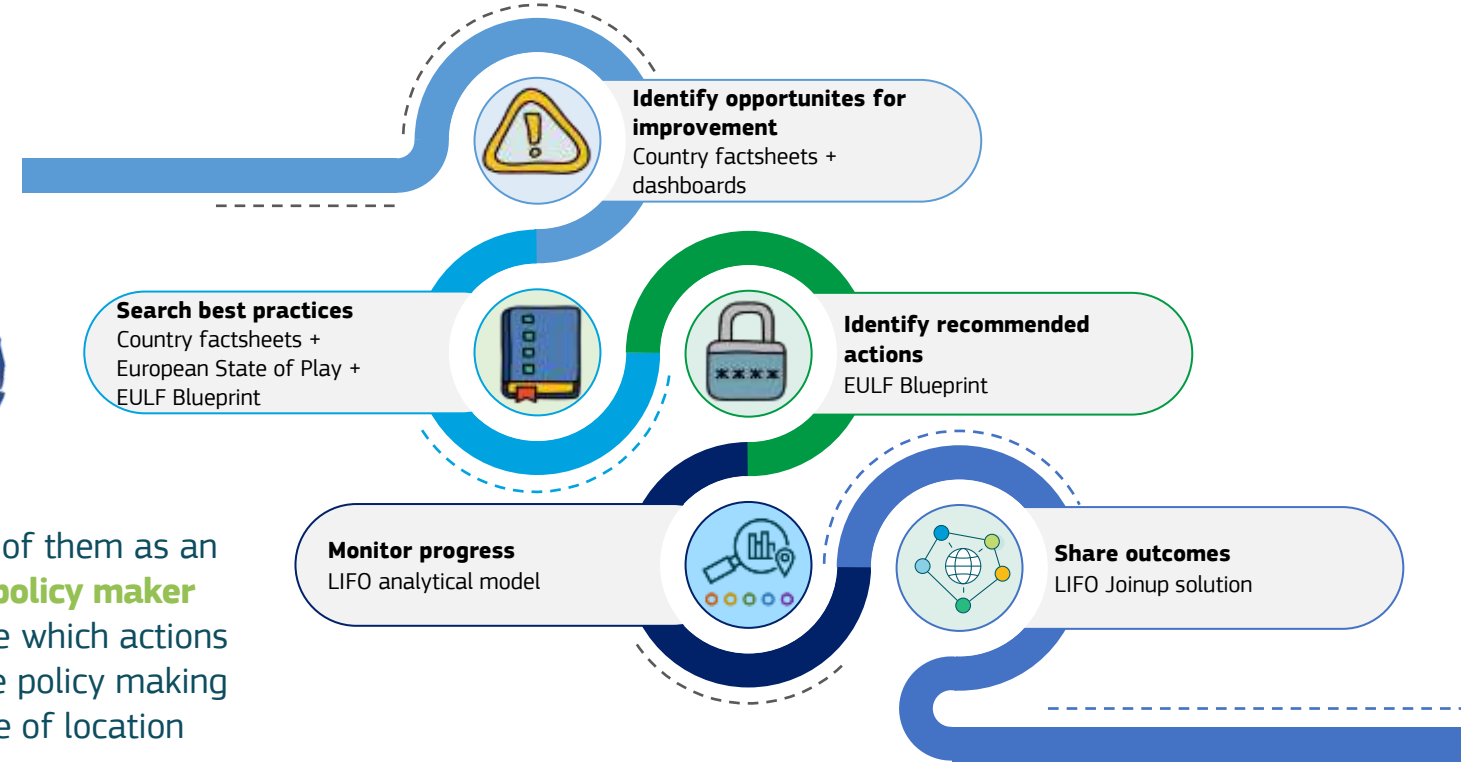
Role-based views of EULF Blueprint can be leveraged to better exploit LIFO resources



... users in each of those roles can build their own **user journey** to exploit LIFO resources together with the LIFO Blueprint...



... let's follow one of them as an example: Lucy, a **policy maker** wanting to explore which actions to take to improve policy making through better use of location information



How to use LIFO

Identify opportunities for improvement



...look at the country results on the **factsheet** and the **dashboards** and identify **areas for improvement** in relevant focus areas, recommendations and indicators

3.2. Policy and Strategy Alignment

Vision

There is an aligned and coordinated policy and strategic approach across Europe for the use of location information that enables more efficient and effective integration of cross-sector and cross-border location-based applications, reducing costs and increasing social and economic benefit. Public sector location policies promote accessibility and interoperability. There are simple and consistent approaches to licensing, progressive open data policies that balance the needs of data users and suppliers, and authentic registers in which 'location' has a prominent role.

Recommendation 1 Connect location information and digital government strategies in all legal and policy instruments

Recommendation 2 Make location information policy integral to, and aligned with, wider data policy at all levels of government

Recommendation 3 Ensure all measures are in place, consistent with legal requirements, to protect personal privacy when processing location data

Recommendation 4 Make effective use of location-based analysis for evidence-based policy making

Recommendation 5 Use a standards-based approach in the procurement of location data and related services in line with broader ICT standards-based procurement

Table 2 - Focus Area "Policy and Strategy Alignment" - vision and recommendations

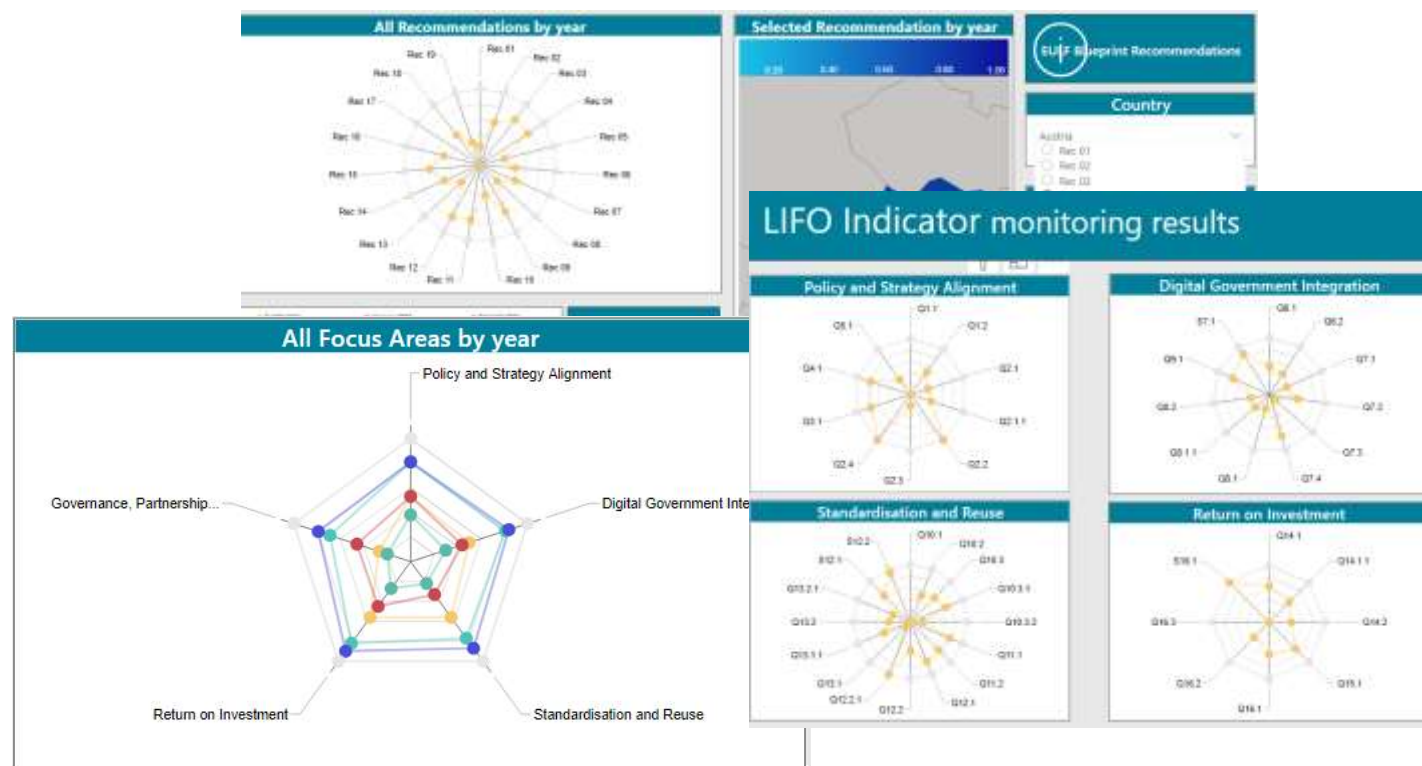
3.2.1 2020 Results



Figure 5 - Policy and Strategy Alignment - scores by recommendation

The scores for each recommendation in the "Policy and Strategy Alignment" focus area are shown in [Figure 5](#) and the underlying indicator scores for each recommendation are shown in [Figure 6](#). In both cases, the country scores are compared with the European averages.

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



How to use LIFO Search best practices



...look for applicable **best practices** from other countries in the **country factsheets**, the **European State of Play** and the **EULF Blueprint**...

Eleven countries report that most of their controllers and processors of public sector location data are fully aware of potential location data privacy¹⁹ issues and compliant with the GDPR under a location perspective (Recommendation 3). In Belgium and Denmark, all controllers and processors of location data are fully aware and compliant. Specific processes have been established to comply with the rights of data subjects. This practice has become a point of strength for the whole sample of participating countries due to the overall advanced implementation status of the GDPR since its entry into force in 2018.

KAMP
KAMP is a screening tool implemented in Denmark that, based on selected national data – cadastral – and projections, states the areas with possible climate impacts that may need to be tested at more closely. Areas feature urban areas, to directly read how many buildings and how many kilometers of road can potentially be affected by flooding and the activated building make the it underground.
<https://kamp.danport.dk/>

The use of location information for policymaking is a key asset and used in most or all domains and cases in 10 countries out of 23 (Recommendation 4). However, as mentioned before, this means that such use is not yet systematic. Some cases of a strong push towards using location data for better and more informed policy making are linked to the outbreak of the COVID-19 pandemic and to monitoring climate change impacts.

Only a minority of countries reported that the documents used for public sector procurements of location data and services make specific references to the applicable parts of the INSPIRE Directive, applicable national standards or to a standards-based architecture (Recommendation 5).

Furthermore, several countries make no use of INSPIRE or other relevant (geospatial) standards in tender specifications.
3.2.2 2019/2020 Comparison

Corona dashboard
Interactive dashboard which provides up-to-date information on location-based developments in coronavirus in the Netherlands. The information helps the government pick up early warning signs that the rate of infection is increasing, allowing them to act in time to stop the virus from spreading further.
<https://coronadashboard.nl/en/infected>

Annex I: EULF Best Practices

The EULF best practices are case studies and initiatives in different domains demonstrating the benefits of a consistent use and integration of location data and services in policy and digital public services. The table below lists the best practices and the recommendations they demonstrate. This is followed by a brief overview of each of the best practices. Some of the best practices are described further in factsheets available on the ISA website.

BEST PRACTICES			EULF BLUEPRINT RECOMMENDATIONS																		
			Policy and Strategy Alignment					Digital Government Integration				Standardisation and reuse				Return on Investment			Governance, Partnerships and Capabilities		
No	Name	Co	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
01	A digital platform for location data in Flanders	BE	X			X		X	X				X					X		X	
02	ID05 – cross border journey planner	CZ							X				X	X				X		X	
03	LoG-IN to the local economic knowledge base	+1		X	X								X	X				X			X
04	What's in Your Backyard for farmers	UK	X						X				X	X							
05	Radiological emergency response	DE				X						X	X								

How to use LIFO

Identify recommended actions



...use the LIFO model to carry out self-assessments at a specific level (e.g. organisation, locality, policy area) and plan improvement actions (*)...



How:

Analytical geo-reference data

- Use data for standard geographical areas (e.g. administrative and statistical units, post code areas, statistical grids, national parks) to support statistical and policy analysis
- Take account of the opportunities with INSPIRE for EU-wide analytical comparisons based on harmonised location-related data
- Ensure reference data semantics and standards are consistently applied, to support accurate and comprehensive assessments and help in clear decision making

Location based statistics and visualisation for policy

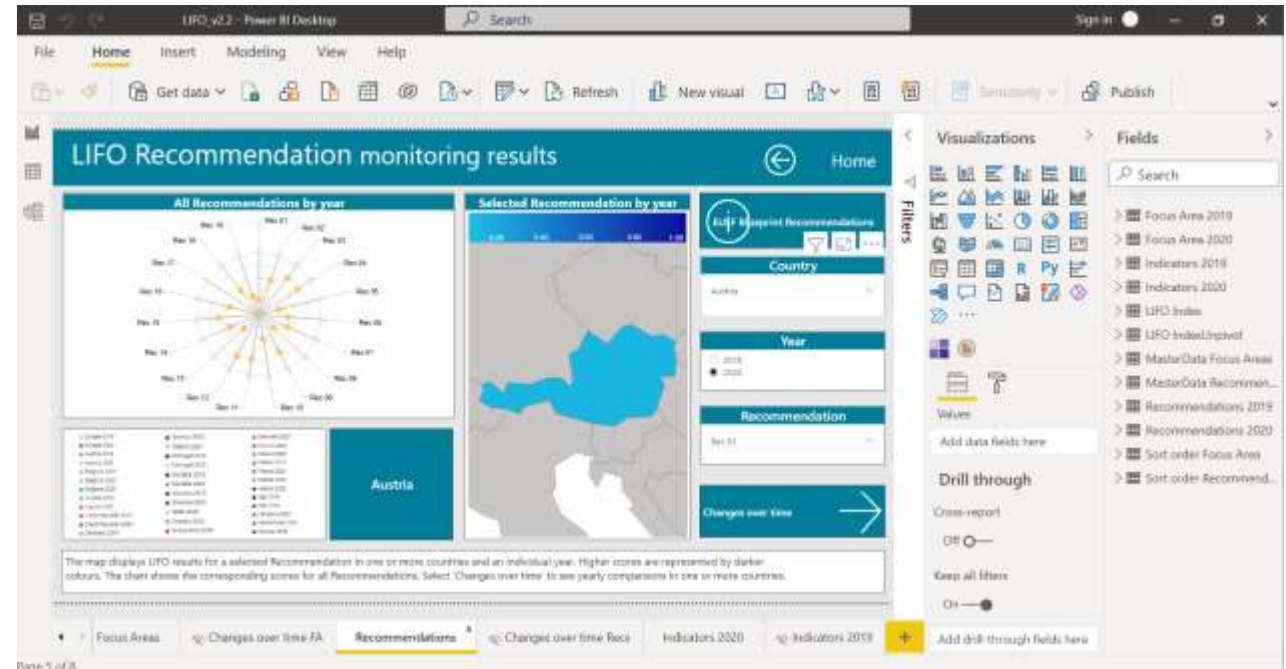
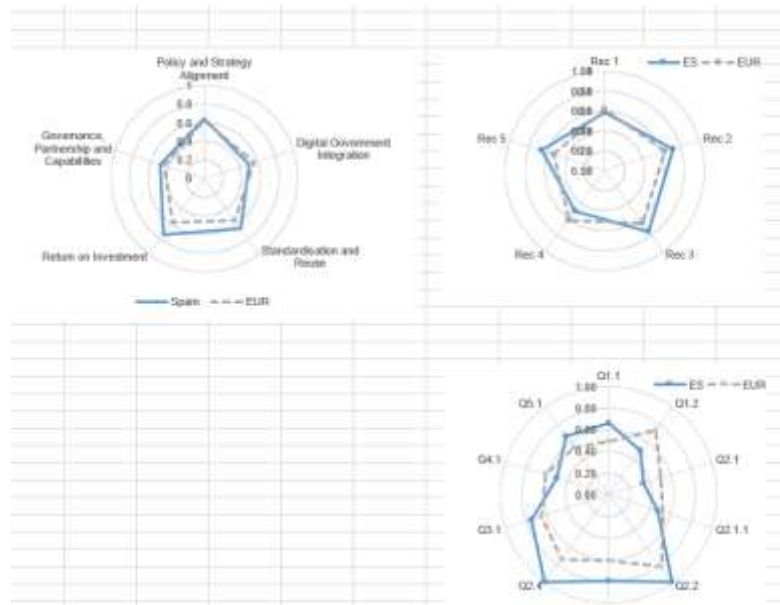
- Use location-based data and statistics as evidence to inform policymaking and monitor or evaluate policy outcomes. This location-based data may come from a variety of sources, such as sensors and mobile devices, or from mapping data/services (for example, geocoding)
- Take account of national / regional / local variations or variations by other geographic characteristics (e.g. urban/rural contexts, risk exposure to atmospheric pollution, noise and flooding in different locations, how a new road through an area can affect communities) to establish a balanced approach in policy formulation
- Use spatio-temporal analysis to highlight changes in policy indicators over time

(*) Possible future LIFO capability

How to use LIFO Monitor progress



...make interim and final measurements of progress by using the **LIFO analytical model** and / or the **dashboards** for self-assessment (*)



(*) Possible future LIFO development. The LIFO model is currently available as annex to the European State of Play report

How to use LIFO

Share outcomes



...share outcomes of the process, discuss approaches and ask for advice from the ELISE community in Joinup by opening a **discussion**

The screenshot shows the ELISE website interface. At the top, there is a dark blue header with the text "ELISE - European Location Interoperability Solutions for e-Government". Below the header, there are three boxes: "Last update about 7 hours ago", "125 Members 4 Solutions", and a blue button that says "YOU'RE A MEMBER". On the left side, there is a navigation menu with a hamburger icon and several links: "About", "About (new)", "Overview", "Why 'location'?", "ELISE by Objective areas", "Studies", "Frameworks and Solutions", "Applications", "Geo Knowledge Base Service", "ELISE by Outputs", "ELISE by Stakeholders", "Members", "Glossary", and "Site map". The main content area is titled "Add discussion" and contains a form with three main sections: "Title" with a text input field, "Content" with a rich text editor (WYSIWYG) and a "Source" button, and "Topic" with a dropdown menu. The dropdown menu is currently open, showing a list of topics: "Business and competition", "Defence", "Economics", and "Taxation". Each topic has a sub-list of related items. For example, "Business and competition" includes "Business and competition", "Defence", "Economics", "Banking and financial services", "EU finance", "Economic analysis", and "Taxation".

6 Q&A



Next ELISE Webinar

- **24/01/2022 at 14:00 CET**
 - **Emerging Approaches for Data-Driven Innovation in Europe**
 - **<https://joinup.ec.europa.eu/node/704912>**





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