

# Analytical Report n13



**Analytical Report 13: Open Data best practices in Europe's Top Performers:  
Ireland, Spain and France**  
Best practices towards a successful open data driven transformation

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## Executive Summary

Open data has been on the agenda of national decision-makers across Europe for the past few years. While some countries have timely acknowledged the potential of open data and the need for action in this field, others are still debating the economic and societal value that open data can have. Luckily, the number of open ‘agnostics’ seems to have decrease in the past two years.

More and more European countries are interested in learning from Europe’s trend-setting countries and transferring best practices to their national contexts. At the same time, in Europe’s trendsetting countries a shift can be observed towards more sophistication: from the mere publication of open data to high-quality data publication and real-time access to dynamic data; from the transposition of the Public Sector Information Directive<sup>1</sup> in the form of national open data policies to ambitious open data strategies and inclusive governance structures; from developing national portals that act as a mere repository for metadata records to launching advanced national ‘gateways’ to data sets and open data knowledge.

The present analytical report captures these developments in Europe’s most mature open data countries. With overall scores of 88% in Ireland, 87% in Spain and 83% in France, the three European countries were the top-ranking countries in the 2018 pan-European Open Data Maturity Assessment. The three countries will hence represent the focus of this report.

The report serves as a compact guide to a set of best practices identified in these three EU Member States. It describes the common success factors that enabled the successful open data transformation in the three national contexts. The report targets national policy makers and portal managers in particular and aims to provide a checklist for further measures that could be considered at national level.

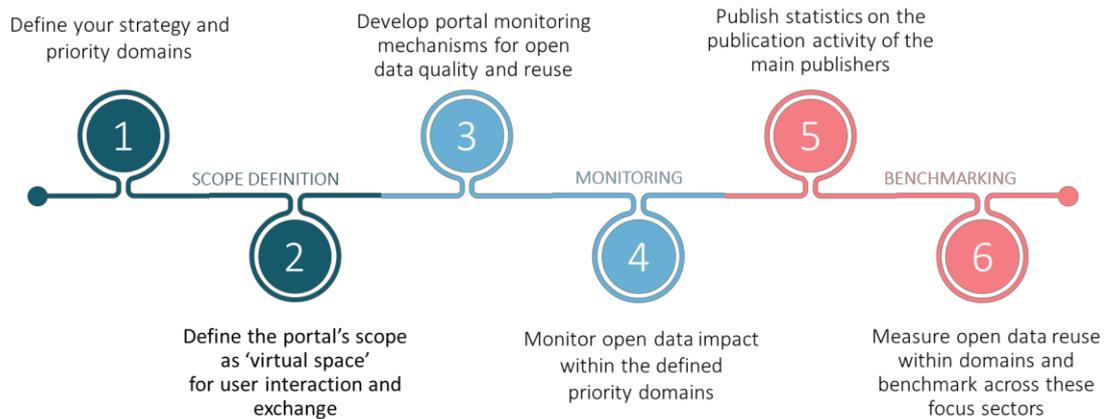
The report’s findings can be summarised in an easy-to-use framework to enable success: DEFINE – MONITOR – BENCHMARK.

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<sup>1</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003L0098&from=en>; <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02003L0098-20130717&from=EN>

# 3 Steps to Success

## DEFINE – MONITOR – BENCHMARK



*Figure 1 A framework to open data success: define – monitor – benchmark*

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## 1 Introduction

The present report offers an overview of the open data best practices in Europe's top three performers – Ireland, Spain and France – and highlights the common denominators that have contributed to a successful open data transformation in each national context.

The report aligns its analysis to the four assessment dimensions of the 2018 Pan-European Open Data landscaping exercise: Policy, Portal, Impact and Open Data Quality<sup>2</sup>. The report's focus on these common elements does not imply that only these identified factors can help drive a sustainable open data development at country level. Assessing the applicability, adapting and transferring this set of common success factors identified in the three top performers to each national context, in line with the local specificities, can lead to a successful open data transformation.

The current report focuses on four elements, as depicted below:

## Mastering your open data transformation

### Key success factors

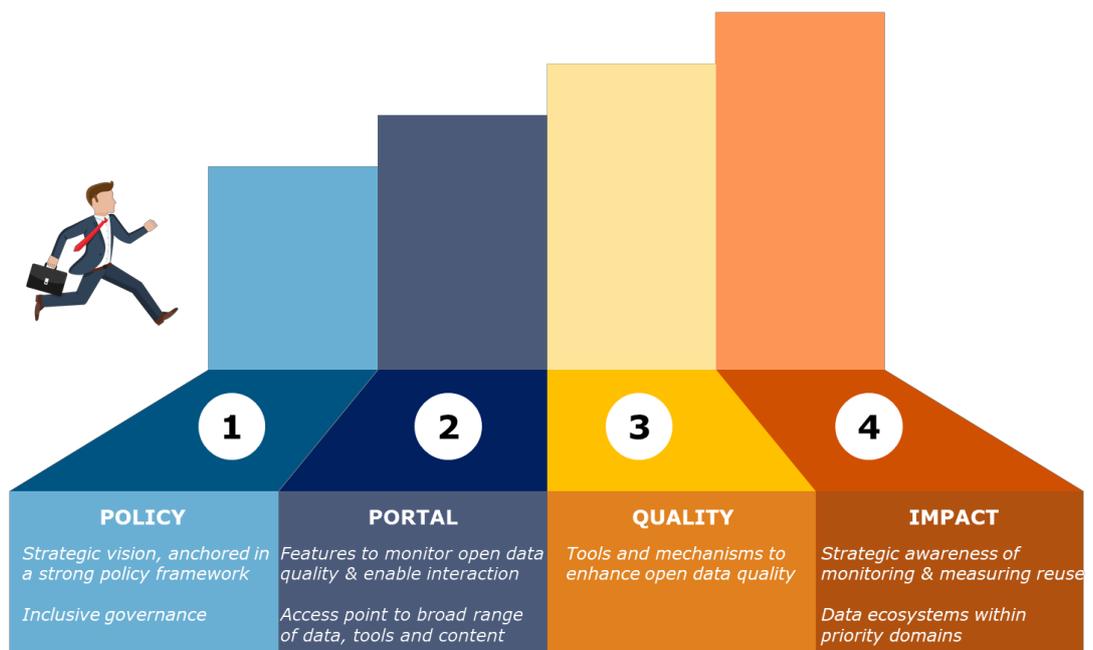


Figure 2 Enablers for a success open data transformation

<sup>2</sup> For more details on the four assessment dimensions as well as the detailed results please refer to the 2018 landscaping documentation on the European Data Portal, in the designated section on [Open Data Maturity](#).

In the 2018 assessment, the top three performers recorded the following results:

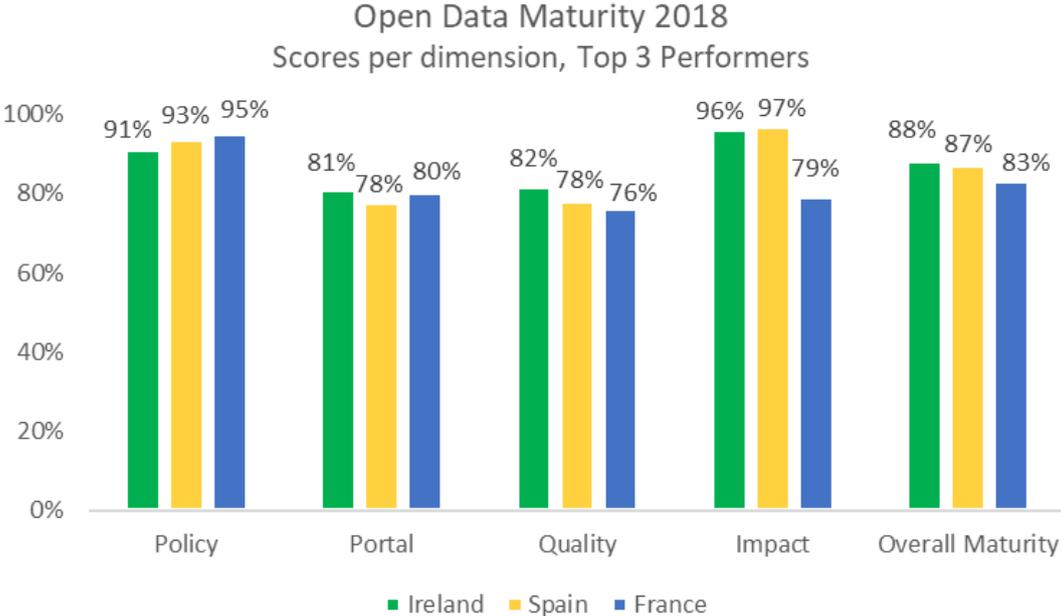


Figure 3 Maturity scores per dimension – Europe’s top 3 performers

## 2 Open Data Policy

In 2018, the following scores were recorded by the top three performers on the dimension ‘Policy’:

	Policy	Policy framework	Coordination at national level	Licencing norms
France	95%	100%	91%	97%
Ireland	91%	94%	89%	93%
Spain	93%	100%	89%	97%

### 2.1 Key differentiators

When analysing the performance on the dimension open data policy, the following elements were identified as common success factors in Ireland, Spain and France:

- A strategic vision around open data, grounded in a comprehensive policy framework
- An inclusive open data governance structure

*These elements appear to have fuelled the top performers’ successful transformation and helped them frog-leap their progress, compared to other European countries.*

#### 2.1.1 A strategic vision around open data

All three top performers set up a comprehensive policy framework, that provides a comprehensive vision for open data and guidance for the implementation of this vision.



In France, several legislative texts set the framework for the publication and sharing of open data. The national policy *Politique d'ouverture et de partage des données publiques*<sup>3</sup> was adopted in 2015 and acts as driver for “democratic vitality, economic innovation and modernisation of public service delivery”. In addition to this, a Digital Republic Act<sup>4</sup> was passed in 2016 that includes open data as one of its cornerstones.<sup>5</sup> The Act triggered a large opening of data of economic, social and environmental interest. It also extended open data obligations to cities and local government of more than 3,500 inhabitants, to foster more data publication at local level. The legislation provides for better access to public data and aims to encourage the creation of new digital services for citizens and businesses. It also ensures that public bodies can now access the data collected by other administrations free of charge – if this is relevant to their public mission. The legislation also sets out the “open by default” principle as mandatory for every public body.

An interesting element of the national French open data policy is the definition of reference databases and criteria by which data can be assessed as reference data. These databases contain data which is considered essential for the French economy and society. This reference data must be provided and distributed with a commitment to a guaranteed service level from behalf of the data holder. In addition to this, France also detailed its national strategy for open data and open government in its National Action Plan (NAP) 2018-2020<sup>6</sup>. The NAP was developed through public consultations and collaboratively drafted by administrations, companies and citizens. The Plan contains commitments concerning transparency, integrity, and accountability of political and economic life, opening digital resources and innovation, citizen participation, open government for global services, development, environment and science, opening high jurisdictions and independent administrative authorities’ data.



Spain has developed its own open data vision under the name ‘Aporta’<sup>7</sup> (“Contribute” in Spanish), which began in 2009 as part of a collaboration framework between the Ministry of Economy and Commerce, together with the Public Agency Red.es, and the Ministry of Territorial Policy and Civil Service. The Aporta Initiative foresees actions along seven strategic pillars: 1) Dissemination and awareness; 2) A public information catalogue that enables access to available public sector information; 3) Sectoral statistics; 4) Training and assistance; 5) Public private partnerships; 6) International cooperation; and 7) Indicators and reports.

To enable a better coordination between the actions, policies and ministries, two specific coordinated documents were drafted. The first one is the “Digital Transformation Plan for the General Administration and Public Agencies 2015-2020”. The plan foresees actions for the publication of information for citizens and businesses and fostering of its re-use. The second document is the “Digital Plan” comprised in the Digital Agenda for Spain, the Government’s strategy to develop the digital economy and society. This Digital Agenda for Spain<sup>8</sup> published in February 2013 aims to simplify the conditions for re-using public sector information through several measures, including the promotion of good practices across all public bodies, and developing user guides and homogeneous licences for the re-use of PSI.

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<sup>3</sup> Available under <https://www.legifrance.gouv.fr/eli/loi/2016/10/7/ECFI1524250L/jo/texte>

<sup>4</sup> Loi n° 2016-1321 du 7 octobre 2016 pour une République numérique, available under: <https://www.legifrance.gouv.fr/eli/loi/2016/10/7/ECFI1524250L/jo/texte>

<sup>5</sup> <http://www.gouvernement.fr/partage/4492-strategie-numerique-du-gouvernement>

<sup>6</sup> <https://www.etalab.gouv.fr/wp-content/uploads/2018/04/PlanOGP-FR-2018-2020-VF-FR.pdf>

<sup>7</sup> <http://datos.gob.es/en/about-aporta-initiative>

<sup>8</sup> <http://www.agendadigital.gob.es/digital-agenda/Documents/digital-agenda-for-spain.pdf>

Furthermore, and as great best practice on how to overcome complex federal structures, Spain also developed a framework that enables the coordination of different government levels in the implementation of open data, as well as the development and implementation of local open data initiatives. The efforts have paid off when observing the impressive number of open data initiatives – over 294 initiatives currently existing across the country<sup>9</sup>.

 *Ireland* set out its vision on open data in the National Open Data Strategy for 2017-2022<sup>10</sup>. The two core objectives of the strategy are i) publishing high value government data in open format, and making it publicly available and freely reusable, and ii) engaging with a broad community of stakeholders to promote open data's social and economic benefits. The strategy sets actions that aim at i) broadening the range of public bodies actively engaged in the Open Data initiative; ii) broadening the scope of the Initiative and improving the quality, quantity and range of data sets available on the Portal data.gov.ie; iii) engaging more actively with stakeholders and encouraging the re-use of open data; iv) supporting and encouraging various groups of open data users; v) providing a framework to support and train public bodies in their open data activities; vi) evaluating the impact and benefits of the Initiative; and vii) ensuring that effective governance structures are in place to implement the strategy. The necessary actions to achieve the objectives of the Strategy are set out in an *Implementation Plan*<sup>11</sup> which specifies the responsible body for each action and a timeframe for implementation.

The strategy envisages that all public bodies provide a list on their website of all published information relevant to their respective organisation – which is a requirement under Section 8 of the Irish Freedom of Information Act<sup>12</sup>. In addition to the open data strategy, Ireland also published a *Technical Framework*<sup>13</sup>, to assist data holders with their open data publication process. The framework provides a clear set of requirements in terms of standards for publication to ensure that data is published in a consistent, persistent and truly open way, and hence enable discoverability, accessibility, interoperability and re-use of published data. The Technical Framework comprises five key components: 1) Open Data Licensing; 2) Formats; 3) Metadata; 4) Standards and 5) Unique Resource Identifiers. Additionally, Ireland also published a Guide for Public Bodies on the Re Use of PSI Directive<sup>14</sup>.

### 2.1.2 Inclusive open data governance

In terms of the governance of open data, all three countries show a broader understanding of the spectrum of and need for engagement with different stakeholders to facilitate an inclusive and participatory process.

 In *France*, a task-force docked in the Prime Minister's office was set up – Etalab. Etalab is responsible for promoting open data among ministries and assisting them with their data publication process. The taskforce also coordinates with the association of local authorities, Open Data France, which was mandated by the State Secretary on Digital to prepare the opening of local governments' data. The programme runs under the "Open Data Locale"<sup>15</sup> initiative and is financially supported by

<sup>9</sup> <https://datos.gob.es/en/iniciativas>

<sup>10</sup> <http://www.per.gov.ie/wp-content/uploads/Final-Strategy-online-version.pdf>

<sup>11</sup> [https://data.gov.ie/sites/default/files/files/Final%20Strategy%20online%20version\(1\).pdf](https://data.gov.ie/sites/default/files/files/Final%20Strategy%20online%20version(1).pdf), pages 20-26

<sup>12</sup> <http://www.per.gov.ie/en/foi-publication-scheme/>

<sup>13</sup> <https://data.gov.ie/technical-framework>

<sup>14</sup> [https://data.gov.ie/sites/default/files/files/PSI%20guidance%20for%20PBs%20May%202017\(1\).pdf](https://data.gov.ie/sites/default/files/files/PSI%20guidance%20for%20PBs%20May%202017(1).pdf)

<sup>15</sup> <http://opendatalocale.net/>

Etalab. Open Data France has published various guidelines for local authorities to help them open up their data, such as a list of standardised data sets that should be prioritised for opening (“Socle commun des données locales”<sup>16</sup>), guides for implementation including a step-by-step approach for smaller local public bodies, and a series of educational resources, including a serious game<sup>17</sup> (“Les explorateurs des données territoriales”<sup>18</sup>).

 In *Spain*, an Open Governance Forum was set up in February 2018 with the objective of institutionalising the collaboration between public administrations and civil society in matters related to transparency, participation and accountability<sup>19</sup>. In April 2018, the four city councils of A Coruña, Madrid, Santiago de Compostela and Zaragoza joined forces to develop a collaborative, interoperable and open government platform. The general goal of the project is the development and implementation of an open government policy in the four participating cities based on three action plans: 1) Open data, 2) Citizen participation and 3) Transparency. A transversal axis based on the development of open government services in a collaborative and interoperable way was constituted among the four municipalities.<sup>20</sup>

 In *Ireland*, the governance structure for open data consists of two main bodies, the “Public Bodies Working Group on Open Data” set up as early as 2014 and an Open Data Governance Board established to provide strategic leadership and governance of open data. It is tasked with designing measures to improve the capacity and capability of public bodies in implementing open data and considering opportunities to maximise the value of public sector data and information for long-term economic, social and democratic benefits. The Public Bodies Working Group consists of representatives from 30 public sector bodies and meets quarterly.

### 3 Open Data Portal

In terms of their portal maturity, all three countries managed to score high in 1018, as shown below:

	Portal	Features	Usage	Data provision	Sustainability
France	80%	88%	96%	63%	71%
Ireland	81%	80%	83%	88%	71%
Spain	77%	74%	92%	78%	71%

<sup>16</sup> <https://scdl.opendatafrance.net/docs/>

<sup>17</sup> A serious game or applied game is a game usually designed to serve higher purposes other than pure entertainment. Serious games take place as a simulation of a real-life situation, with « learning by doing » elements based on the live interactions and decisions that are made in the given ‘game’ scenario. The added pedagogical value is complemented by game elements such as fun and competition.

<sup>18</sup> <http://opendatalocale.net/jeu-serieux-les-explorateurs-des-donnees-territoriales/>

<sup>19</sup> <http://www.boe.es/buscar/act.php?id=BOE-A-2018-2327>; [http://transparencia.gob.es/transparencia/transparencia\\_Home/index/Gobierno-abierto/ForoGA.html](http://transparencia.gob.es/transparencia/transparencia_Home/index/Gobierno-abierto/ForoGA.html)

<sup>20</sup> <http://datos.gob.es/en/noticia/collaborative-interoperable-and-open-government-platform>

### 3.1 Key differentiators

The analysis shows a very good understanding within the national open data teams of the scope and mission of the national open data portal. This understanding goes beyond the image of the portal as being a mere repository for metadata records. The three national portals are developing towards virtual spaces for knowledge development, exchange and interaction on open data.

The following two commonalities were observed in the case of the three national portals:

- Advanced features that foster access to data, and enable interaction between users
- Access to data, tools and editorial content to cater to a broad audience comprising publishers, re-users from all sectors and the broader interested public

#### 3.1.1 Advanced features to monitor open data quality and enable user interaction

The French open data portal<sup>21</sup> shows a high maturity level in 2018, with its advanced functionalities that enable the interaction between publishers and re-users. Portal visitors have the possibility to provide feedback to each data set, and most importantly to easily contribute data and/or use cases to the portal, through the ‘Contribute’ function. The latter element highlights the advanced understanding of the portal managers of what a modern portal should entail and a broader approach to the definition of portal contributors limited to public sector bodies.

Particularly worth highlighting in the French example is the possibility for anyone to create a user profile on the portal, follow other users (public organisations or private persons), view statistics on the registered organisations’ portal activity<sup>22</sup>, such as volume of data sets published, use cases developed based on that data etc. Figure 4 below shows an example of such user profile pages.

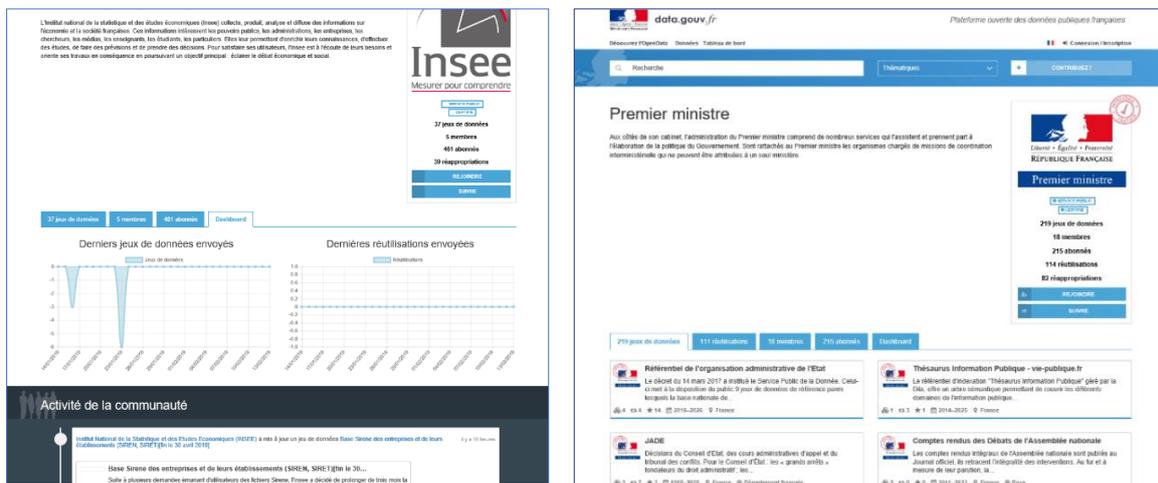


Figure 4 User Profile Page – French open data portal

Additionally, the French open data portal also provides a Dashboard<sup>23</sup> with statistics on its key performance indexes – e.g. volume of data sets and use cases published (left side, Figure 5) and the recent activities in the community (right side, Figure 5).

<sup>21</sup> <https://www.data.gouv.fr/fr/>

<sup>22</sup> Available under <https://www.data.gouv.fr/fr/organizations/>

<sup>23</sup> Available under <https://www.data.gouv.fr/fr/dashboard/>

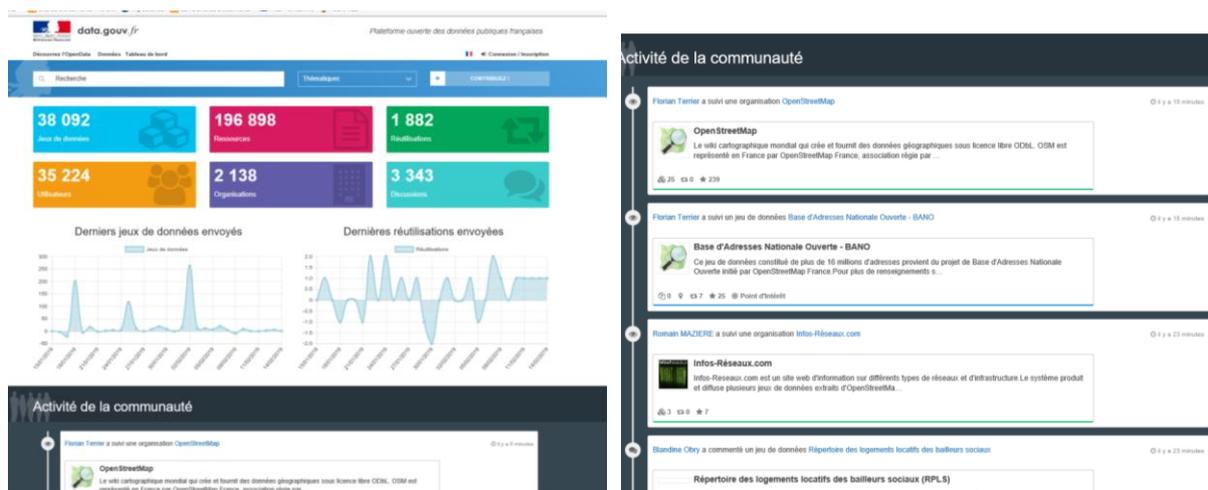


Figure 5 Activity Dashboard – French open data portal

Data.gov.fr also enables users to directly contact data providers, follow data sets of interest, integrate and/or share the data sets or check the errors that were recorded for the given data sets. (Figure 6).

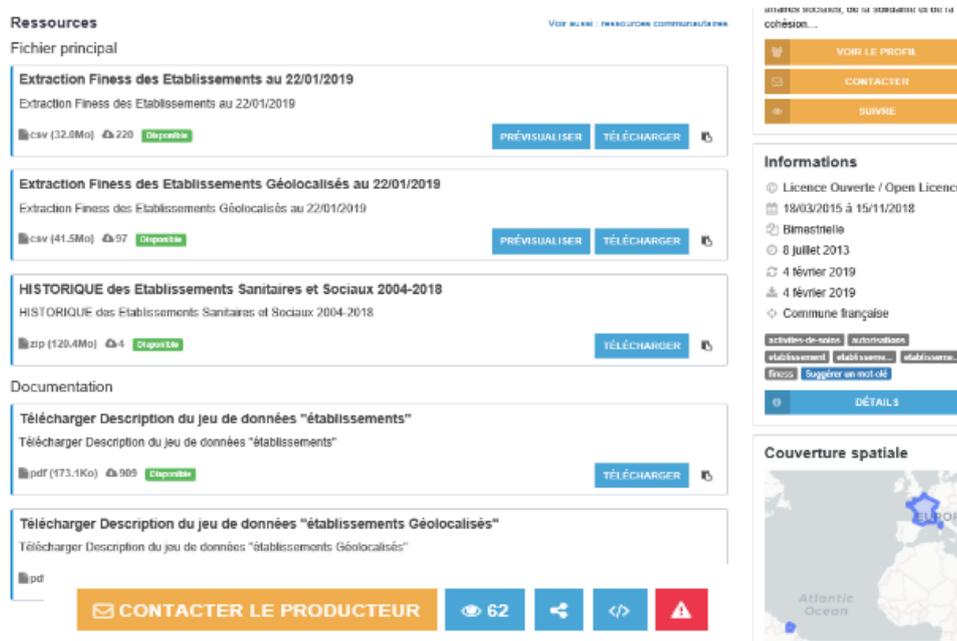


Figure 6 Features at dataset level – French open data portal

Advanced features to enable better open data publication, discoverability, access and reuse are also provided by the open data portal of Ireland. Data.gov.ie enables users to view the data set's history, consult use cases based on the data set, see the data set's rating in terms of its openness, as shown below.

## Real-time Passenger Information (RTPI) for Dublin Bus, Bus Eireann, Luas and Irish rail

**FEATURED**

Published by: **National Transport Authority**

Licensed under: **Creative Commons Attribution 4.0**

Theme: **Transport**

Views: **16528**

Openness rating: ★★★★★

Dataset Actions

- View dataset history
- View showcases with this dataset

Figure 7 Data set openness rating – Irish open data portal

An innovative feature of the Irish portal is the possibility to upload additional resources to data sets (as seen in Figure 8). By using the ‘data resources’ function, data providers can upload additional documentation to a data set and provide re-users with additional context for the published data. Through the data resource preview function, users can view the content of this documentation<sup>24</sup>.

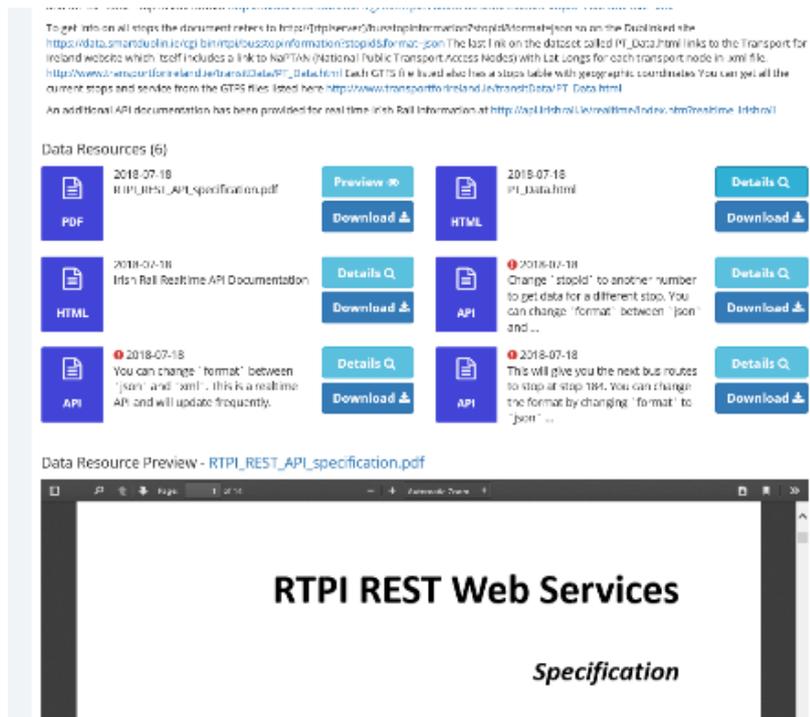


Figure 8 Additional features at data set level – Irish open data portal

Furthermore, the ‘Statistics’ Page<sup>25</sup> of data.gov.ie also provides information on the most viewed datasets, most downloaded resources, the top keywords, as well as on the key website and usage metrics (visitors, sessions, page views).

A good practice here is also the monitoring of the level of compliance with the Technical framework for open data publication. The tool shows information of the compliance with the open licence specifications, the format for dataset publication (in line with the 5-star open data model), the type of

<sup>24</sup> Example available under <https://data.gov.ie/data-set/real-time-passenger-information-rtpi-for-dublin-bus-bus-eireann-luas-and-irish-rail>

<sup>25</sup> <https://data.gov.ie/stats>

standard used for the publication of the dataset and the compliance level with the metadata schema DCAT-AP v1.1. *Figure 9* shows this monitoring feature on data.gov.ie.

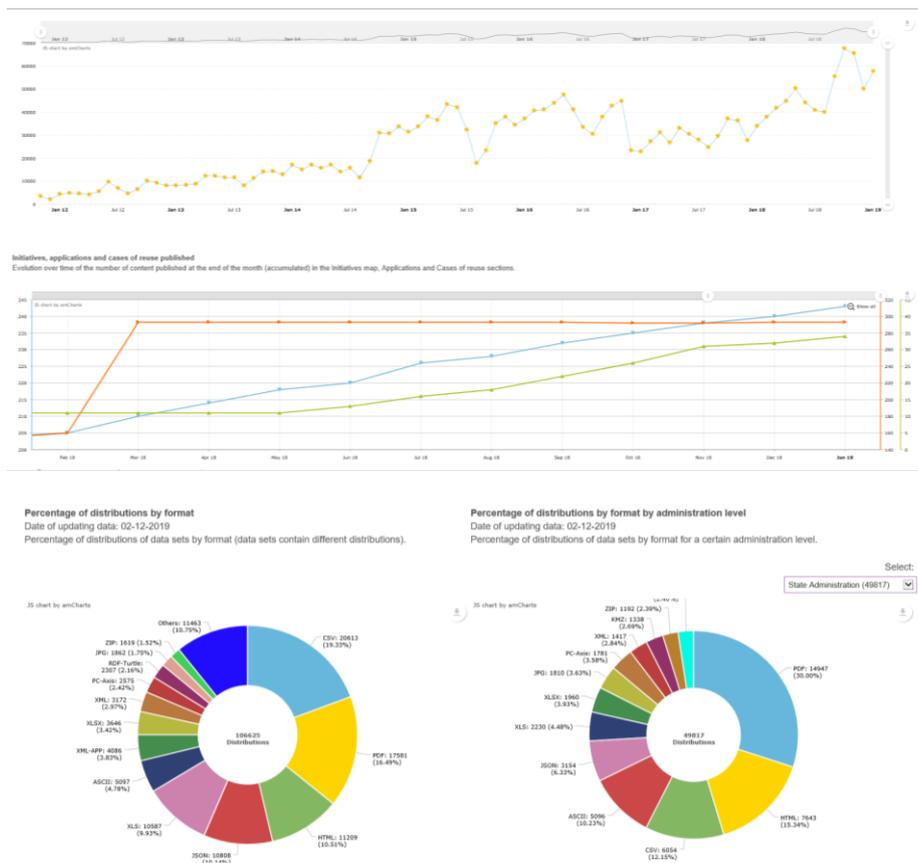
Compliance with Technical Framework

Metric	Nov 2018	Dec 2018	Jan 2019	Feb 2019	Mar 2019
<b>Datasets Under Open Licence</b>	8753	8698	8789	8884	8933
<b>Datasets Formats</b>	8859 datasets scored, from which: 106 None 72 ★ 31 ★★ 8646 ★★★ 0 ★★★★ 4 ★★★★★	8803 datasets scored, from which: 105 None 55 ★ 31 ★★ 8608 ★★★ 0 ★★★★ 4 ★★★★★	8894 datasets scored, from which: 105 None 55 ★ 31 ★★ 8699 ★★★ 0 ★★★★ 4 ★★★★★	8991 datasets scored, from which: 107 None 52 ★ 31 ★★ 8797 ★★★ 0 ★★★★ 4 ★★★★★	9040 datasets scored, from which: 107 None 77 ★ 31 ★★ 8821 ★★★ 0 ★★★★ 4 ★★★★★
<b>Metadata Schema for Open Data</b>	All datasets are compliant with DCAT-AP v1.1.				
<b>Standards For Open Data</b>	3079 dataset(s) indicate usage of INSPIRE, DATEXII, etc.	3004 dataset(s) indicate usage of INSPIRE, DATEXII, etc.	3112 dataset(s) indicate usage of INSPIRE, DATEXII, etc.	3216 dataset(s) indicate usage of INSPIRE, DATEXII, etc.	3523 dataset(s) indicate usage of INSPIRE, DATEXII, etc.
<b>URI Usage</b>	N/A	N/A	N/A	N/A	N/A

*Figure 9* Monitoring tool for compliance – Irish open data portal



The Spanish portal *datos.gob.es* also includes a Dashboard<sup>26</sup> (*Figure 10*) for statistics on the number of visitors per month, number of published reuse cases, evolution of the data catalogues, main publishers, distribution of publication formats, distributions per category.



*Figure 10* Quality dashboard – Spanish open data portal

<sup>26</sup> <https://datos.gob.es/en/dashboard>

Another distinctive element seen on Spanish open data portal is the variety of machine-readable formats in which data is made available. The focus on making data available in different formats highlights the emphasis that the Aporta Initiative puts on the reuse of open data. Additionally, the Spanish portal’s motto – as shown in its logo – invites users to re-use the public sector information (Reutiliza la información pública!) – an invitation that goes beyond the mere exploration of the portal’s content. The Spanish portal team appears to have timely understood that high-quality data publication is the key element to foster reuse. The extensive evidence of the yearly assessment of the infomediary sector in Spain<sup>27</sup> provide further evidence to this focus.

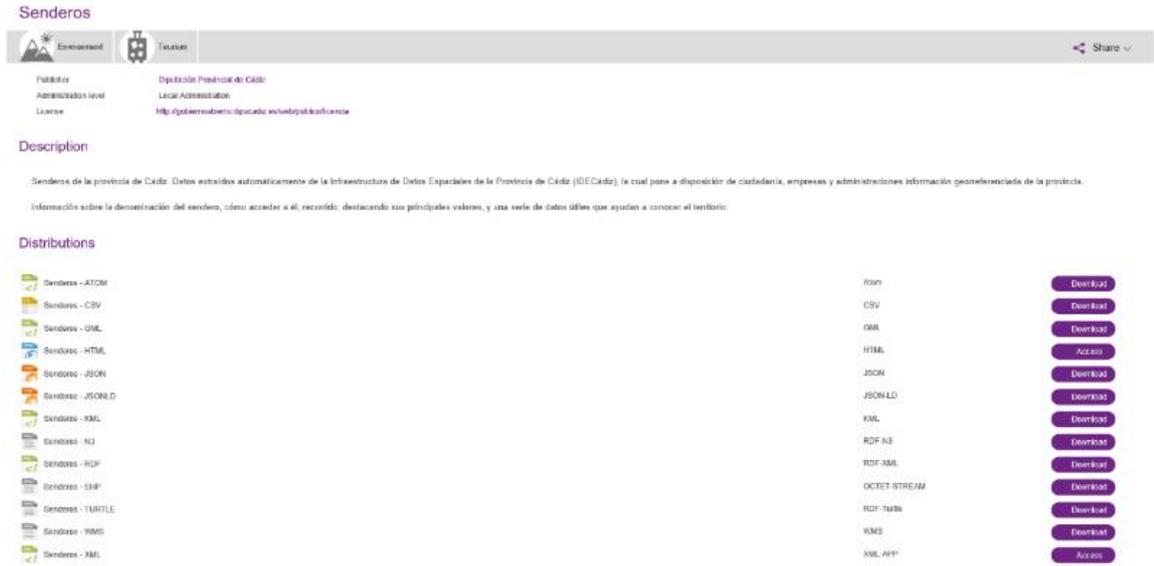


Figure 11 Data publication formats – Spanish open data portal

3.1.2 The portal as main point of access to data, tools and editorial content

Enabling access to all open data published across the country is one of key functions that a national open data portal should fulfil. A second function should be the provision of materials and editorial content on relevant open data topics. The materials should target a broad audience – from data publisher and data reusers to the broader general public. This broader understanding of the portal being a gateway to data as well as main reference point for information on open data were identified as a common denominator for the three best practice portals. With regards to the former – exhaustivity, the three portals have increased their harvesting efforts in the past two years and now provide access to the majority of available sources at regional, local or public body level. In France and Ireland over 90% of open data sources are harvested by the national portal, whereas in Spain the percentage ranges between 76% and 90%. With regards to the latter – documentation, the three portals also provide access to a vast array of editorial content for interested citizens, data publishers and data re-users.

 The French portal *data.gouv.fr* provides additional information in the form of FAQs for each of its target groups (citizens, data publishers, data re-users, developers, integrators – as seen in *Figure 12*) and is complemented in terms of data related editorial content by its blog section<sup>28</sup>.

<sup>27</sup> The 2018 report is available here: <http://www.asedie.es/assets/asedie-sector-infomediary-report-2018.pdf>  
<sup>28</sup> <https://www.etalab.gouv.fr/>



Figure 12 FAQ for different portal users – French open data portal

The Irish national portal *data.gov.ie* provides an Open Data Audit Tool<sup>29</sup> to support public bodies who want to start publishing Open Data but are unsure which data sets are suitable for publication. As the User Guide for the Open Data Audit Tool states<sup>30</sup>, the Open Data Audit Tool is an internal tool that enables public bodies to list and describe all data sets that exist within their organisation, so that together with management and/or the Open Data Officer, data sets can be reviewed and those that are suitable for publication as Open Data are selected and approved. These data sets can then be published directly on national portal.

A vast amount of editorial content can be found on the Spanish portal as well. As part of seven pillars of the APORTA Initiative, the creation and dissemination of editorial content and other documentation is seen as one of the main tasks of the national portal team. This is a good practice that can be followed by other portal teams that understand themselves as having an exclusively technical focus and role. The Spanish portal's 'Current news' section<sup>31</sup> provides separate sections for open data events, activities, news and newsletters from the fields, as well as a series of expert interviews.

## 4 Open Data Impact

In terms of their open data impact maturity, all three top performers scored well, as shown below:

	Impact	Strategic awareness	Political	Social	Environmental	Economic
France	79%	88%	89%	100%	100%	39%
Ireland	96%	80%	100%	100%	100%	100%
Spain	97%	74%	100%	100%	100%	100%

### 4.1 Key differentiators

When looking at the aspects that the three top performers have in common - that contributed to the good performance on the impact dimension in 2018 – the following two elements stand out:

-  Strategic awareness around fostering, monitoring and measuring open data reuse

<sup>29</sup> <http://audit.data.gov.ie/>

<sup>30</sup> <http://audit.data.gov.ie/Guide.for.Open.Data.Audit.Tool3.pdf>

<sup>31</sup> News Section on <https://datos.gob.es/en>

-  Focus on developing data ecosystems in thematic domains, consisting of practitioners from both the publishing and reuse side

#### 4.1.1 Strategic awareness around fostering, monitoring and measuring reuse

Overall all three countries provided very good examples to demonstrate the reuse of open data on each of the sectoral dimensions assessed by the European Data Portal maturity landscaping: political, social, environmental as well as studies that focus on assessing the economic impact of open data<sup>32</sup>. What particularly stands out is the strategic awareness that the national levels are showing with regards to monitoring the increase in quality of data publication and the reuse of open data by the public and private sectors.

 In *Ireland*, a Progress Report is published on a quarterly basis. The progress in terms of both quality and quantity of metadata is disseminated via the portal's Statistics Page. Ireland is currently planning actions to monitor the reuse of the open government data by the public sector and to develop ways in which public bodies could report on this reuse, so that it can be systematically monitored. Ireland is also currently working on a "Data Sharing and Governance" legislation to encourage data sharing between public service organisations, in compliance with the General Data Protection Regulation. Moreover, Ireland supports an annual Open Data Engagement Fund to promote reuse of open data available via the national portal. The showcases supported by the Engagement Fund are increasingly showing a more innovative use of the data. The portal team is also running several seminars and events to promote re-use, as well as training modules to raise awareness of the benefits of open data. Along the same lines of strategic awareness, Ireland also introduced an action item in the national Open Data Strategy, to encourage the development of metrics that allow to measure the benefits derived by open data re-use. The actions will also focus on measuring the benefits for the public sector, in terms of efficiency and effectiveness of service delivery.

 Similar actions were taken in *Spain* under the Aporta Initiative. In 2017, the Aporta Challenge<sup>33</sup> was held that focused on the value of data for the Government and fostering of open data prototypes to improve government efficiency. The same year the Aporta Awards<sup>34</sup> were held which recognised the positive effects generated by the publication of government data and its use by private entities. The goal of the actions under the Aporta Framework is to encourage the direct reuse of public open data to improve public sector performance and service delivery.

 In *France*, it was the adoption of the Digital Republic Act that showed first positive effects on the reuse of open data. With the introduction of the Act, an increase in the number of downloads and re-use cases was recorded on the national portal. The implementation of the Act also provided

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<sup>32</sup> Efforts made in Ireland through the Open Data Engagement Fund <https://www.per.gov.ie/en/launch-of-open-data-engagement-fund-20172018/>; In Spain, the open data value for the infomediary sector: <http://www.asedie.es/assets/asedie-sector-infomediary-report-2018.pdf>; <http://datos.gob.es/es/documentacion/informe-el-valor-de-los-datos-abiertos-para-la-administracion>; In France, related to the impact of open data on the public sector: <http://www.assemblee-nationale.fr/14/projets/pl3318-ei.asp> <http://www.modernisation.gouv.fr/laction-publique-se-transforme/en-ouvrant-les-donnees-publiques/remise-du-rapport-trojette-sur-louverture-des-donnees-publiques> <https://agd.data.gouv.fr/2018/04/10/rapport-2016-1017-de-ladministrateur-general-des-donnees-la-donnee-comme-infra-structure-essentielle/>

<sup>33</sup> <http://datos.gob.es/en/noticia/all-challenge-aporta2017>

<sup>34</sup> <http://datos.gob.es/en/desafio-aporta> and <http://datos.gob.es/en/premios-aporta>

impulses for public administrations to re-use the published open government data for their own public service activities. In particular the legislative measures concerning data circulation within the public sector enabled public bodies to access and reuse the data collected by other administrations, free of charge. Furthermore, France has also adopted a series of strategic measures that enable – in the long run – the identification of areas in which open data has had a proven impact. A first step in this direction is the fostering of open data reuse in certain thematical fields such as transport, energy and geo-spatial. The Etalab team organised a series of events with open government data re-users from these fields, to identify new data to open and to enable commitments from behalf of public bodies to provide access to this data. A second step towards demonstrating open data impact is the programme that has been launched by the French think-tank FING<sup>35</sup> and financially supported by Etalab with the aim to project and analyse the Impact of Open Data in 2025<sup>36</sup>.

Another noteworthy action initiated in France was the launch of an Observatory on Open Data at Local Level, which aims to monitor the number of local administrations involved in open data policies, the evolution of data sets published in the field, identify the different platforms involved in publishing open data sets. The observatory is also tracking the use of data through concrete re-use cases and traffic on the portal, as well as identifying the way in which the local levels are using (open) data.

#### 4.1.2 Focus on developing data ecosystems within the defined priority domains

In terms of the second common denominator – development of data ecosystems within priority domains, all three top performers showcase a good understanding of the need to prioritise domains of interest and foster data publication and reuse within these domains with targeted measures.

 In *Ireland*, the monitoring of open data reuse and impact is done under the umbrella of the Public Bodies Working Group – one of the structures in charge of open data governance in Ireland. A series of events aimed at discussing the reuse of open data in sectoral domains -- running under the name “Open Data Impact Series” was launched towards this end. The series aim to monitor the impact of open data in the different thematical sectors and to support the publication of high-quality open data in these fields, bringing together stakeholders from the respective thematical areas. The challenges of working with data from these fields are addressed and several reuse cases presented. The first Open Data Impact Seminar ‘Creating Business Opportunities with Open Data’ was held in September 2017<sup>37</sup>, with a second Open Data Impact Seminar ‘Driving Open Transport Data’ organised in March 2018<sup>38</sup>. The third impact seminar focusing on environmental data<sup>39</sup> will be held in April 2019.

 In *France*, so-called ‘verticalities’ – areas of sectoral focus bringing open data publishers and re-users together – were created. They aim to promote the development of communities of practice and expertise-exchange around data from a specific domain. Currently, three such domains exist focusing on enterprise<sup>40</sup>, transport<sup>41</sup>, and geodata<sup>42</sup> with a new area to be piloted around public procurement

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<sup>35</sup> FING is a non-profit organisation based in Paris. Created in 2000, FING’s mission is to enable businesses, public sector institutions and local communities to anticipate changes inspired by technology and its uses, open up their innovation processes and enable digital transformation. More under <http://fing.org>

<sup>36</sup> <http://fing.org/campagne-Open-Data-Impact>

<sup>37</sup> [https://data.gov.ie/blog/opendataimpactseriesession1-creatingbusinessopportunitiesusingopendata-26thsept2017\\_](https://data.gov.ie/blog/opendataimpactseriesession1-creatingbusinessopportunitiesusingopendata-26thsept2017_)

<sup>38</sup> <https://data.gov.ie/blog/open-data-impact-series-11-driving-open-transport-data>

<sup>39</sup> <https://data.gov.ie/blog/open-data-impact-series-3-how-open-data-can-help-the-environment>

<sup>40</sup> [enterprise.data.gouv.fr/en/](http://enterprise.data.gouv.fr/en/)

<sup>41</sup> [transport.data.gouv.fr/en/](http://transport.data.gouv.fr/en/)

<sup>42</sup> [geo.data.gouv.fr/en/](http://geo.data.gouv.fr/en/)

data. The exchange between open data publishers and reusers within these communities of practice have positively contributed to enhancing the quality of data publication and fostering a better *demand-driven* publication of open data.



In *Spain*, the focus was set on the reuse of open data to foster economic development, in particular with regards to the infomediary sector. This is anchored in the national Aporta initiative. The actions taken here seek to measure the qualitative (collecting successful case studies, disseminating successful experiences, exploring the business models associated with the reuse of data) and quantitative elements of open data impact. Towards this end, the national open data team has been conducting several yearly studies to measure the direct impact on the creation of infomediary companies, increasing sales of added-value services and products based on the information process and employment generated in this field.

## 5 Open Data Quality

In terms of the maturity on the quality dimension, all three top performers reached very good scores in 2018:

	Quality	Automation	Metadata & data currency	DCAT-AP Compliance
France	76%	80%	64%	86%
Ireland	82%	80%	71%	93%
Spain	78%	90%	62%	88%

### 5.1 Key differentiators

As the main differentiator in the open data quality section, the three countries show:

-  A systematic approach towards
  - i) ensuring discoverability and regular updating of open data stemming from local, regional and national sources and
  - ii) monitoring the quality of and fostering better open data publication in the country

This is provided by a mix of automated harvesting and manual editing of metadata records. The latter addresses the needs of smaller data publishers which do not have to provide an endpoint for the harvesting of their metadata by the national portal. Additionally, backend mechanisms (such as validators) as well as documentation (such as guidelines) were set up, respectively linked on the portal, to ensure that publishers received an adequate level of assistance in their publication process.

#### 5.1.1 Mechanisms to enable high-quality open data publication



In *Spain*, a practical Manual for improving open data quality<sup>43</sup> was compiled to assist data holders. Additionally, A Guide for publishing open data quickly and simply with CKAN<sup>44</sup> was published for data publishers that provide their metadata via a harvesting access point.



In *France*, every organisation that publishes data on *data.gouv.fr* has access to a FAQ<sup>45</sup> that defines how regularly data sets should be updated. Concerning the organisations producing the Data Public Service (the “reference data”), specific executive orders<sup>46</sup> were issued to ensure a mandatory updating task for the data holders that are responsible for these reference data bases<sup>47</sup>. The same decree defines a legal obligation for the providers of reference data to ensure this data is published in a machine-readable format. The collection of the metadata from the data provider’s platform should be implemented via automated harvesting. The French open data portal team has also provided a FAQ<sup>48</sup> for data publishers that defines the “update frequency” that should be respected. In addition to this, the French portal also provides a metadata quality checklist on the backend. The current checklist enables publishers to work on improving their metadata. The portal managers also ensure that resources and their links are checked regularly. The information is published on the national portal’s dashboard.



In *Ireland*, *data.gov.ie* currently harvests metadata automatically on a nightly basis from its data sources. Like the other two portals, the Irish portal offers smaller data holders the possibility to upload metadata manually. The portal managers also ensure that technical assistance is provided to publishers via written guidelines and handbooks. The published Open Data Technical Framework<sup>49</sup> describes in detail the recommended metadata schema for the publication of open data in Ireland, in line with the EU DCAT-AP standard. On the backend, the portal ensures that further assistance is provided to data publishers that upload metadata. When manually adding a data set, publishers are guided through the editing of metadata in clear plain language. For harvesters, metadata is carefully mapped so that it is comprehensible and compliant. At the same back-end, metadata is validated to ensure its DCAT-AP compliance. To provide additional support for publishers, the Irish portal also integrated the European Data Portal training modules<sup>50</sup>, hence ensuring the dissemination of EU-level developed content to national audiences. A great practice from Ireland is also cooperation with several public agencies to scale out legacy data sets that were harvested from a legacy system and replace them with up-to-date, machine-readable data sets, in line with the 3-stars level of the 5-star Open Data model<sup>51</sup>. As additional efforts to improve the quality of publication, the portal managing team is reaching out to publishers that publish data in non-machine-readable formats and assists them towards data publication in machine-readable, and ideally open formats. These efforts have led to a significant increase in the number of machine-readable data sets published in non-proprietary formats on the national Irish portal.

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<sup>43</sup> <http://datos.gob.es/en/documentacion/practical-manual-improve-open-data-quality>

<sup>44</sup> [http://datos.gob.es/en/documentacion/guia-para-publicar-datos-abiertos-de-manera-rapida-y-sencilla-con-ckan\\_](http://datos.gob.es/en/documentacion/guia-para-publicar-datos-abiertos-de-manera-rapida-y-sencilla-con-ckan_)

<sup>45</sup> <https://www.data.gouv.fr/fr/faq/producer/>

<sup>46</sup> <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000034194946&categorieLien=id>

<sup>47</sup> <https://www.data.gouv.fr/fr/reference>

<sup>48</sup> <https://www.data.gouv.fr/fr/faq/producer/>

<sup>49</sup> <https://data.gov.ie/pages/opendatatechnicalframework>

<sup>50</sup> <https://data.gov.ie/edpelearning/en/>

<sup>51</sup> <https://5stardata.info/en/>

## 6 Conclusions

With its analysis of the best practices in the three open data top performers, the current report has highlighted a series of common elements that have contributed to the three countries' success. Key differentiators were identified for each assessment area:

-  *Policy*: a strategic vision around open data, complemented by an inclusive participatory structure to help implement this vision at national, regional and local level
-  *Portal*: advanced technical infrastructures to enable access to available open data in the country and foster a virtual space for dialogue between publishers and reusers
-  *Impact*: developing a strategic awareness around the ultimate goal of open data -- deriving value for the economy and society and focus on data ecosystems in which open data publication, reuse and impact can be fostered.
-  *Quality*: implementing mechanisms to monitor open data publication and enable high-quality data and metadata publication

Undertaking timely and concerted efforts in these areas enabled France, Ireland and Spain to secure top positions in the European Open Data assessment, and more importantly, to foster a sustainable transformation in their country.

These key elements can be translated into a checklist by national policy makers and portal managers, to guide their next steps. As any best practice, each country needs to assess the transferability and applicability to their individual context and adopt a tailored approach that ensures that its specificities are accounted for. One-size cannot fit all.

While adopting similar actions on the dimensions 'portal' and 'quality' can trigger quick-wins in the short-term, the actions on the dimensions 'policy' and 'impact' should be understood as strategic measures that will first start showing results in the medium and long term. It is certainly not the exclusive focus on one of these dimensions that will be the key to success, but more the balanced mix of different actions that are tailored to a national context that will lead to sustainable open data transformation at national level.