Open Data Maturity

Recommendations

2025
Open Data Maturity Report

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European Commission
Directorate-General for Communications Networks, Content and Technology
Unit G.1 – Data Policy and Innovation
Email: CNECT-G1@ec.europa.eu

European Data Portal
Email: info@data.europa.eu

Authors – Capgemini Invent
Martin Page PhD
Arman Behrooz
Ben Yasin Presse

Last updated: December 2025

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Luxembourg: Publications Office of the European Union, 2025

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ISBN 978-92-78-45057-1 doi:10.2830/4959723 OA-01-25-150-EN-N

Publications Office of the European Union

Maturity-based clustering and recommendations

In this consolidated recommendations document, the participating countries are grouped into four clusters based on their overall maturity scores. Clustering countries by their level of open data maturity (ODM) helps to identify affinities. Countries in the same cluster can discuss strategies to overcome shared challenges. Moreover, countries in less mature clusters can learn from those in more mature clusters. Clustering also enables more focused recommendations to be formulated for each group of countries.

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Clustering

To group the countries into clusters, the overall maturity scores were plotted from lowest to highest. Groups were demarcated where observable gaps in the ordered scores were identified. From the lowest to the highest performing, the four clusters are **beginners**, **followers**, **fast-trackers** and **trendsetters**. The clusters are visualised in Figure 1.

The distribution of composite maturity scores is skewed towards higher scores. The clusters are as follows.

- **Trendsetters (94–100 %).** Czechia (CZ), Estonia (EE), Portugal (PT), Cyprus (CY), Slovakia (SK), Spain (ES), Italy (IT), Ireland (IE), Ukraine (UA), Poland (PL), Lithuania (LT) and France (FR).
- **Fast-trackers (87–93 %).** Luxembourg (LU), Serbia (RS), Germany (DE), Austria (AT), Slovenia (SI), Norway (NO), Denmark (DK) and Latvia (LV).
- **Followers (73–83 %).** Croatia (HR), Romania (RO), Belgium (BE), Sweden (SE), Finland (FI), Hungary (HU), the Netherlands (NL) and Switzerland (CH).
- **Beginners (15–69 %).** Bosnia and Herzegovina (BA), North Macedonia (MK), Iceland (IS), Montenegro (ME), Greece (EL), Bulgaria (BG), Malta (MT) and Albania (AL).

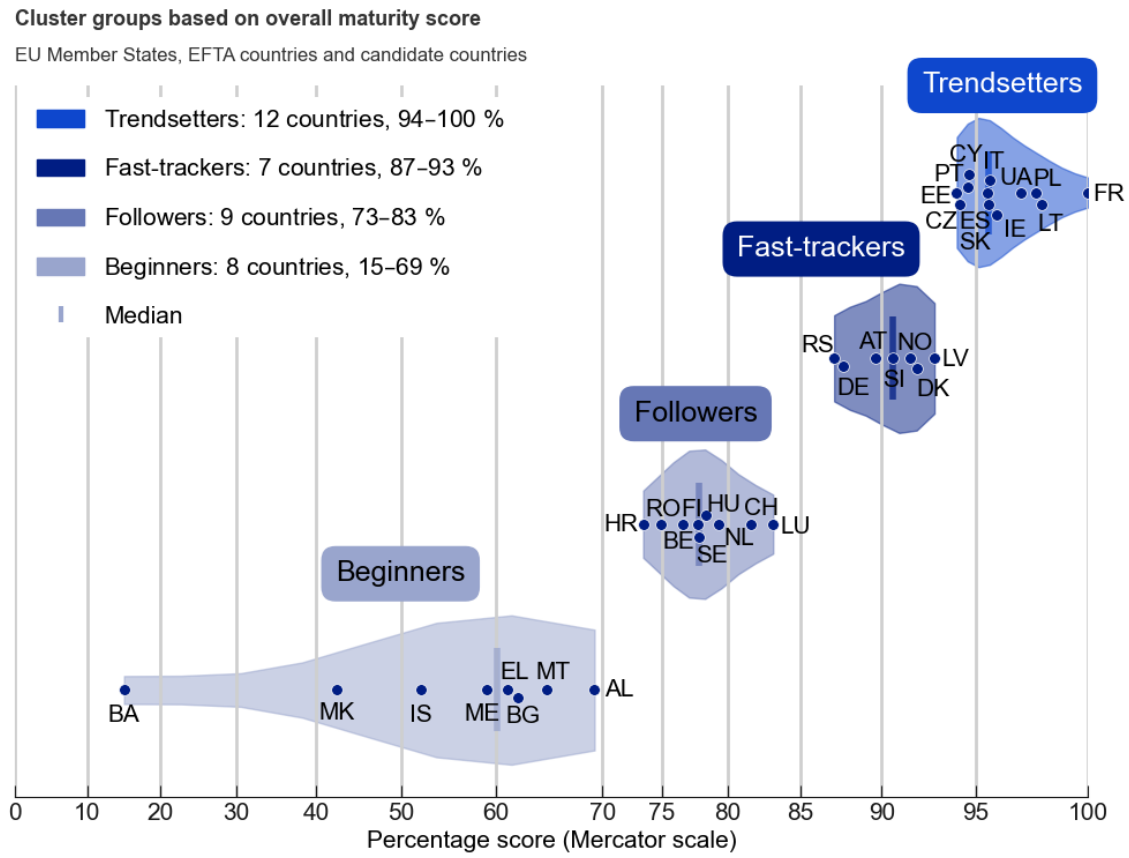

Figure 1: Four-group clustering of participating countries based on overall maturity score.

Recommendations

Countries can use the following general advice to improve on the four dimensions of the ODM methodology. The ODM dimensions that each recommendation corresponds to are colour-coded as follows.

Policy Portal Quality Impact

Trendsetters

Strengthen open data ecosystems, prioritise high-value datasets and ensure metadata quality

Cluster characteristics

A country in this cluster typically has an advanced open data policy in place, reflecting technical and policy developments at the EU level, including on high-value datasets (HVDs). There is substantial coordination of open data activities at all levels of government. In general, the national portal provides a wide range of features, including advanced search and annotations of HVDs. The portal caters to the needs of advanced users and publishers.

The quality of metadata accompanying open data in the country is very high, with various initiatives in place to ensure the publication of high-quality metadata and compliance with the data catalogue vocabulary application profile (DCAT-AP).

Open data is taken up and reused for various purposes, creating impact in several domains. Activities to measure reuse are conducted, with methodologies in place to assess the impact in different domains. Few or no limitations on publication or reuse are observable.

Policy	
	• Enhance and consolidate the open data ecosystems you support by developing thematic communities of providers and reusers. Continue to prioritise HVDs within the six specified categories, in line with the requirements. • Steer the network of open data officers to enable data-driven policymaking at their level of government, delegating and decentralising monitoring activities. Maintain the connection between the national strategy and objectives and the needs of agencies and local authorities, with these needs expected to gain prominence over time. • Work with training institutions to provide advanced open data courses and training, and tailor training curricula to cover more advanced topics. Such training can include guidance on compliance with open data laws and education on data literacy. Make such courses formally recognised and provide certification upon successful completion.

Portal	• Invest in the portal so that you can use new workflows and tools that enable a better understanding of your users' profiles and needs while preserving their privacy. Ensure that the portal supports community contributions, including user-submitted datasets, reuse cases and blog content. • Evaluate options for extending the open data portal such that it serves as a public register of data altruism organisations, or advise your government on which approach would best support new initiatives in this area. Although the ODM assessment focuses on the Open Data Directive (Directive (EU) 2019/1024), open data portals can be leveraged in efforts to implement other items of EU legislation, such as the Data Governance Act (Regulation (EU) 2022/868). For example, open data portals can serve as registers for protected data held by the public sector. • Continue improving search functionality: ensure that improvements in metadata quality translate into better discoverability of datasets, and leverage new tools such as those powered by AI to improve search functionality with the existing quality of metadata. • After establishing an effective system for annotating and filtering HVDs on the portal, focus on maintaining this system and regularly monitoring dataset usage. • Reach out to and cooperate with other countries to develop solutions to common challenges, including basic, reusable elements such as open-source software that your platforms share (e.g. portal extensions).
Quality	• Lead by example in improving data and metadata quality by applying domain-specific standards to harmonise datasets and ensuring that HVDs fully comply with both metadata and data requirements. Apply the same approach to other datasets of significant value to maximise interoperability, discoverability and reusability. • Continue to improve the quality of data and its metadata by boosting the use of tools on your portal (e.g. for metadata validation). Explore the use of tools powered by artificial intelligence to improve metadata quality. Enable automated notifications to publishers to alert them to issues. • Provide tools to convert data into alternative formats, possibly replacing non-machine-readable, proprietary formats.
Impact	• Collaborate with the European Data Portal and other national data teams to implement an impact assessment framework for open data. The European Data Portal is currently developing, in collaboration with countries, an impact assessment framework and accompanying toolkit that countries can implement and adapt to their national context. • In addition, start developing country-specific metrics to measure impact in domains that align with national priorities. Operationalise monitoring metrics and evaluating impact. Rely on a mix of methods (e.g. ex ante and ex post analyses, structured/semi-structured interviews, use cases, log analyses from the national portal) to gain a variety of insights. Improve your methods iteratively over time. • Prioritise the understanding of HVD reuse cases and their potential positive impact on society. As part of these efforts, publish and promote successful reuse cases on the portal and regularly interact with data providers and users to better understand their needs and explore potential applications of these datasets. Leverage the momentum created by showcasing the results to rally stronger political support.

Fast-trackers

Build strong open data networks and drive impactful reuse

Cluster characteristics

A country in this cluster typically shows a good level of maturity in all dimensions. Overall, the country demonstrates that it undertakes activities to boost data publication, with a strategic approach to increasing the quality of published metadata and increasing compliance with quality standards such as DCAT-AP and common licenses.

The national portal provides a good level of functionalities that cover the needs of basic and advanced users and there are processes in place for continuous improvement.

Substantial efforts are made to monitor the impact of open data. However, some issues in data publication or creating impact can still be observed, although measures are in place to tackle them.

Policy	• Assist in the development of open data initiatives at the local and regional levels and seek to achieve better coordination with local and regional open data teams. • Activate the network of open data officers and enable them to set up monitoring activities within their organisation (e.g. by developing plans for data publication and monitoring practices). Track progress against these plans and assist open data officers in alleviating barriers to data publication identified in their organisations. • Ensure that existing open data courses and training materials are promoted and used. Cooperate with training organisations to develop new course offerings tailored to the needs of your national, regional and local administrations. Make such courses formally recognised and provide certification upon successful completion. Ensure that financial resources are allocated at all administrative levels to enable more civil servants to benefit from training. • Focus on organising activities that better target the delivery of sustainable solutions. Move beyond creativity-stimulating competition formats (e.g. hackathons) to formats that provide opportunities for the medium- to long-term engagement of businesses. Ensure funding and political sponsorship (e.g. by having an organisation serve as a patron) for the winning ideas.
Portal	• Monitor portal usage and seek to understand user profiles to guide improvements. Add features that support interaction between publishers and reusers. • Enhance the national portal's promotion of HVDs by adding advanced filtering options, allowing users to navigate and explore datasets across the six HVD categories. • Strengthen support for real-time data publication by identifying key data holders and addressing technical or resource barriers. Promote the publication of data beyond the minimum requirements specified by law.
Quality	• Enforce minimum standards on the quality of data by using analytics tools to monitor data publication – for both metadata (compliance with DCAT-AP) and data (publication formats). • Develop validation processes for your national portal and report back to data providers. Act on the findings and provide tailored assistance to publishers to increase the quality of publication of both metadata and data. • Explore the use of tools powered by artificial intelligence to improve metadata quality and automate the detection of issues.

Impact	• Promote and follow up on the performance of products and services built on open data. Consider highlighting the developers of these reuse cases. • Focus resources on a relevant field or sector to demonstrate impact and use the specifications on HVDs for prioritisation. Set up thematic work groups in these areas. Increase your knowledge on the publication and reuse of data in the domain you have chosen to focus on and start thinking about a definition of impact in this field that can be operationalised through metrics. • Create a framework for knowledge exchange and enable the development of a community of practice made up of providers and reusers.

Followers

Establish open data foundations and aim for higher quality

Cluster characteristics

A country in this cluster typically has an open data policy in place that is supported by implemented measures. In general, there is coordination on these activities. The portal has standard features and also some features that cater to the needs of more advanced users.

Some activities are conducted to boost the publication of high-quality metadata from different providers; however, often, a systematic approach to ensuring high publication quality across the board is lacking.

Limited activities are performed to monitor reuse and measure the impact of open data. Several limitations in terms of data publication and reuse still exist.

Policy	• Update the national strategy on open data to reflect technical and policy developments at the EU level, including on HVDs (Commission Implementing Regulation (EU) 2023/138) and the latest versions of the DCAT-AP such as release 3.0 of the main profile and its specific extensions such as DCAT-AP for HVDs and StatDCAT-AP, for statistical datasets. • Set up a governance structure that accounts for the characteristics of your country. Engage potential reuse groups (e.g. data-gathering companies, research institutions, non-governmental organisations) in open data governance in your country. This will enable co-ownership around a common vision and buy-in for the actions of each sector. • Develop a yearly plan for online activities (e.g. events, conferences) to promote open data. Focus on formats that encourage publication and reuse by both the public and private sectors. Experiment with formats that both leverage creativity (e.g. hackathons) and enable the development of business opportunities for medium- to long-term engagements (e.g. data challenges). • Encourage the network of open data liaison officers to set up data publication plans and monitor progress against these plans. Enable the open data officers to exchange knowledge and experiences between public sector bodies and with the broader network of reusers. Deepen the understanding within the network of open data officers of the benefits of open data reuse by the public sector. • Ensure that existing open data courses and training materials are leveraged, and cooperate with public administrations and training organisations to develop open data training curricula for national, regional and local administrations. Enable such courses to be formally recognised and provide certification upon completion. Ensure that financial resources are allocated at all administrative levels to training activities for civil servants working with data. • Enable meetings and engagement between reusers and publishers. Develop a deeper understanding of the demand side of open data and work with data providers to prioritise data publication in line with this demand.
Portal	• Regularly update the portal to reflect user needs. Include features such as dataset-level feedback, login areas, SPARQL access and APIs. • Use editorial tools like tags and labels to highlight HVDs and enable filtering. Create a dedicated section for HVDs with updates and explanations. • Promote reuse cases more prominently, ideally on the home page, and encourage the community to share their examples. • Analyse portal usage to better understand user behaviour and improve engagement. • Identify data holders who are not publishing and work to address barriers. Support the publication of real-time data.
Quality	• Provide training and online materials focusing on metadata and data quality. Promote the DCAT-AP standard and the use of its controlled vocabularies and existing guidelines to foster compliance. • Create an understanding of the importance of publishing data in machine-readable, non-proprietary formats and of the licensing of data. • Develop knowledge around existing open-source tools for cleaning up data, specifically the use of validators for metadata compliance.
Impact	• Start collecting examples of how open data is being reused, even informally, to build internal awareness and momentum. • Use basic analytics tools: leverage portal statistics (e.g. downloads, views) to begin tracking usage patterns and identify high-interest datasets. • Conduct short interviews or surveys with known data users to understand their needs and the value they derive from open data.

Beginners

Build momentum for open data progress

Cluster characteristics

A country in this cluster is typically at an early stage of maturity in the four dimensions (or has yet to develop at the same pace as the countries in the higher-performing clusters). In general, fair progress towards an open data policy has been made, but this still needs to be supported by more robust implementing measures.

The open data portal has limited features or a limited number of datasets. No or very limited activities are performed to monitor the reuse and impact of open data.

More action is needed to enable high-quality data publication, and limited efforts are directed towards ensuring the adoption of DCAT-AP standards. Clear limitations exist regarding open data publication, with only a few reuse examples.

Policy	• Develop a national strategy for open data and align it with broader strategies at the national level (e.g. digital strategies and strategies for the modernisation of the public sector). Ensure the development of legal frameworks and ethical guidelines to govern the use of open data and generally safeguard sensitive and personal information. • Rally support for the open data programme and political leadership within the top level of government. Showcase international research around the value of open data to emphasise the economic benefits of data exploitation. Use HVDs as a focal point. • Establish a national-level team in charge of open data to ensure coordination of activities within the country and set up roadshows to increase understanding of the team's scope and activities among primary public administrations. Include all levels of government in this process. • Organise a series of open data events at the national level and focus on engaging both data publishers and reusers in your country. Prioritise the promotion of reuse cases and best practices for data publication during such events. • Set up relevant communication channels and assign contact people for data publication within public administrations (e.g. open data liaison officers). Maintain an active dialogue with data officers and enable regular exchanges of knowledge among them, focusing on efficient online channels and face-to-face meetings. • Identify the primary data holders in the country and understand their main concerns and their perceived barriers to data publication. Take the first steps towards overcoming these barriers and unlocking the publication of data. • Organise workshops and awareness-raising sessions with the primary data holders. Use materials already developed in other countries and at the European level for content and as a source of inspiration.

Portal	• Develop a national open data strategy that includes clear provisions for portal development, management and funding. Use action plans to establish responsibilities and ensure follow-through. • Ensure that the portal supports basic functionality for publishing and discovering datasets. Look to European best practices when selecting technology and features. • Integrate feedback channels into the portal and ensure that they are easy to use. Be mindful of privacy when implementing analytics tools. • Create dedicated sections for news and reuse stories to raise awareness and showcase value. • Begin promoting HVDs by adding a section that explains their significance and gradually labelling relevant datasets to increase their visibility and encourage reuse on the portal.
Quality	• Start by applying established standards and reusing existing guidelines and approaches from the European level. • Promote the use of DCAT-AP for metadata and standard licences such as CC BY for data. • Learn from European best practices, for example those collected in the ODM assessment, and reach out to colleagues in other countries, especially when setting out to create such guidelines.
Impact	• Organise short sessions or presentations to explain why measuring reuse and impact matters, using simple examples from other countries. • Begin collecting simple usage data from the national portal (e.g. number of datasets published, views) to establish a baseline. • Reach out to universities or civic tech groups to identify potential collaborators who can help uncover early reuse cases or provide guidance.

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