

FORMAZIONE AGID – FORMEZ SULLA TRANSIZIONE DIGITALE DELLA PA

**Progetto Informazione e formazione per la transizione digitale della PA
nell'ambito del progetto «Italia Login – la casa del cittadino»**

(A valere sul PON Governance e Capacità Istituzionale 2014-2020)

Dati aperti e dati territoriali: lo stato dell'arte in Italia

La strategia europea per i dati e l'open data maturity report 2021

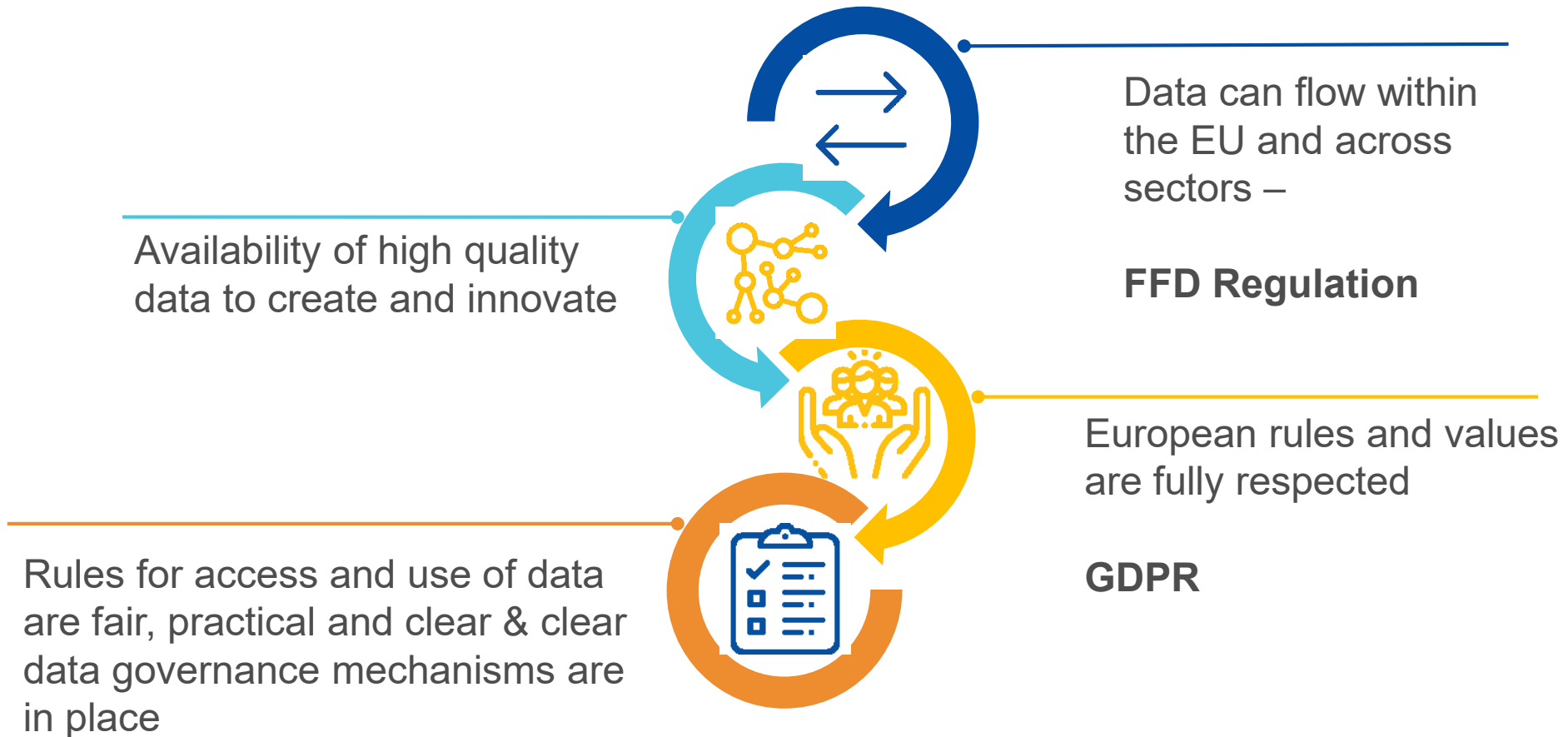
20 gennaio 2022

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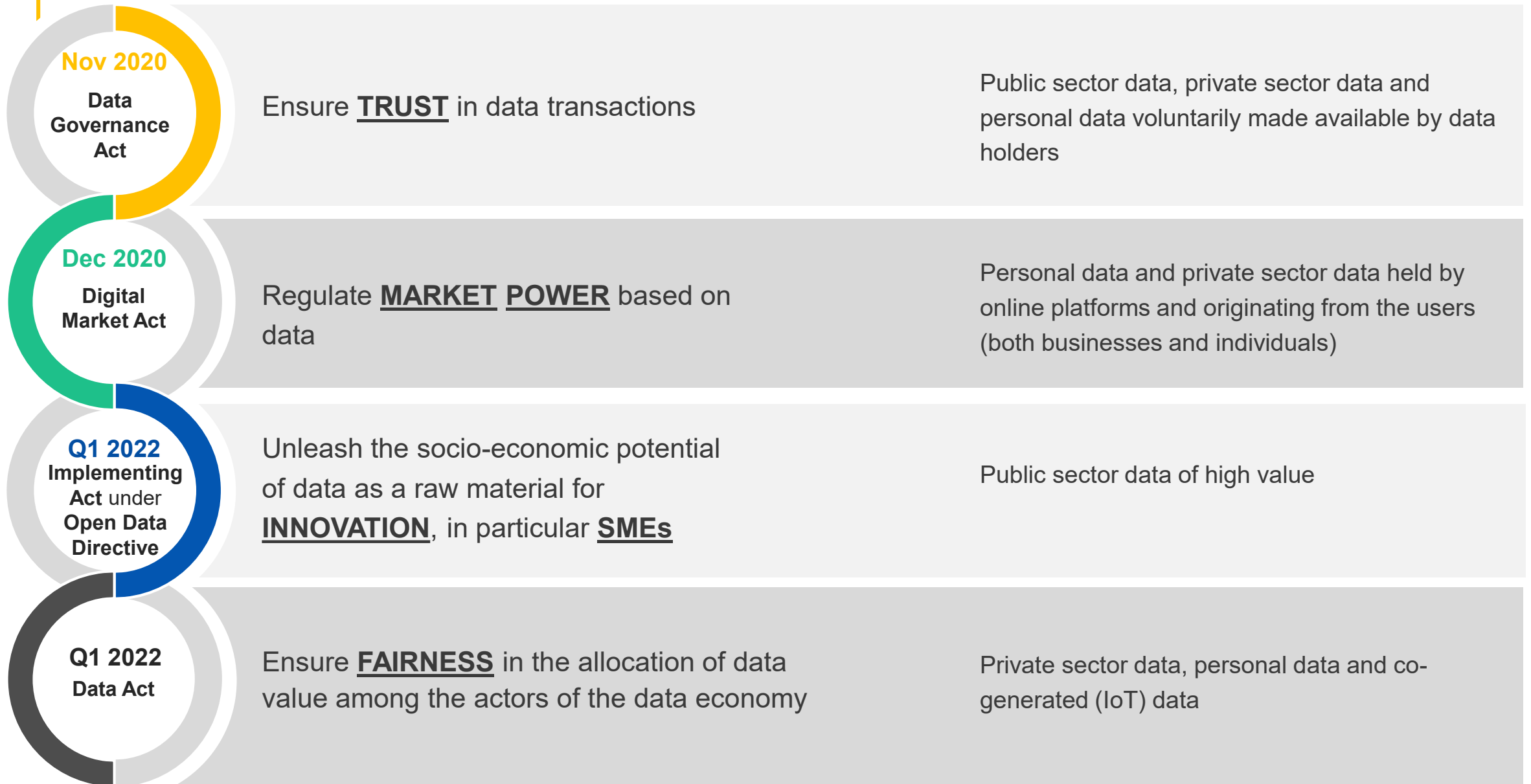
European Strategy for Data

A common European data space, a single market for data



Benefitting from the second wave of industrial data

European Strategy for Data: 4 key instruments



Data Governance Act - Overview

The Data Governance Act (DGA) aims primarily to increase trust in the sharing of the data among companies. It will also enhance the availability of data from the public sector and of personal information for the public good.

- **DGA will create a mechanism to enable the safe reuse of certain categories of public-sector data that are subject to the rights of others (trade secrets, personal data and data related to intellectual property rights), by making sure that public-sector bodies allowing this type of reuse are technically equipped to safeguard privacy and confidentiality.**
- DGA will create a framework to foster data intermediation services through which companies will be able to share their data without fear of its being misused or of losing their competitive advantage while ensuring that data subjects' rights under GDPR are protected.
- Data altruism: entities seeking to collect data for objectives of general interest (such as medical projects) will be able to request to be listed in a national register of recognised data altruism organisations.
- European Data Innovation Board: a new structure will be created to advise and assist the Commission in enhancing the interoperability of data intermediation services and issuing guidelines on how to facilitate the development of data spaces.

Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on European data governance (Data Governance Act) - COM/2020/767 final

State of play: on 30 November 2021, the Council and the European Parliament reached a provisional agreement on the legal text, without introducing substantial modifications to the Commission's proposal.



Data Act – objectives (*work in progress*)

The key objective of the Data Act is to maximise the value of the data in the economy by ensuring that a wider range of stakeholders gain control over their data and that more data is available for innovative use, while preserving incentives to invest in data generation.

- The Act will shift the current status quo away from the manufacturers of connected objects who retain a near-exclusive control over the data collected by such objects, towards the users of such objects. This also includes consumers.
- It will lay down horizontal rules for data access across sectors (non-discrimination, fair pricing, etc.), that could be complemented by sectoral legislation where necessary (e.g. in case of legislation on car data - with regard to data formats, cybersecurity or technical access requirements)..
- It will also ensure that in exceptional situations, such as the current epidemiological crisis, the public sector is allowed to access and use data held by companies.

State of play: The public consultation was closed in September. The Impact Assessment will be submitted to the Commission IA Board this week (6-10 December). The Commission internal consultations on the legal text are ongoing and the adoption of the proposal is expected in February 2022.

Open Data directive (2019/1024 of 20/6/2019)

Implementing Act : list of high value datasets

Geospatial

*Earth observation
and environment*

Meteorological

Statistics

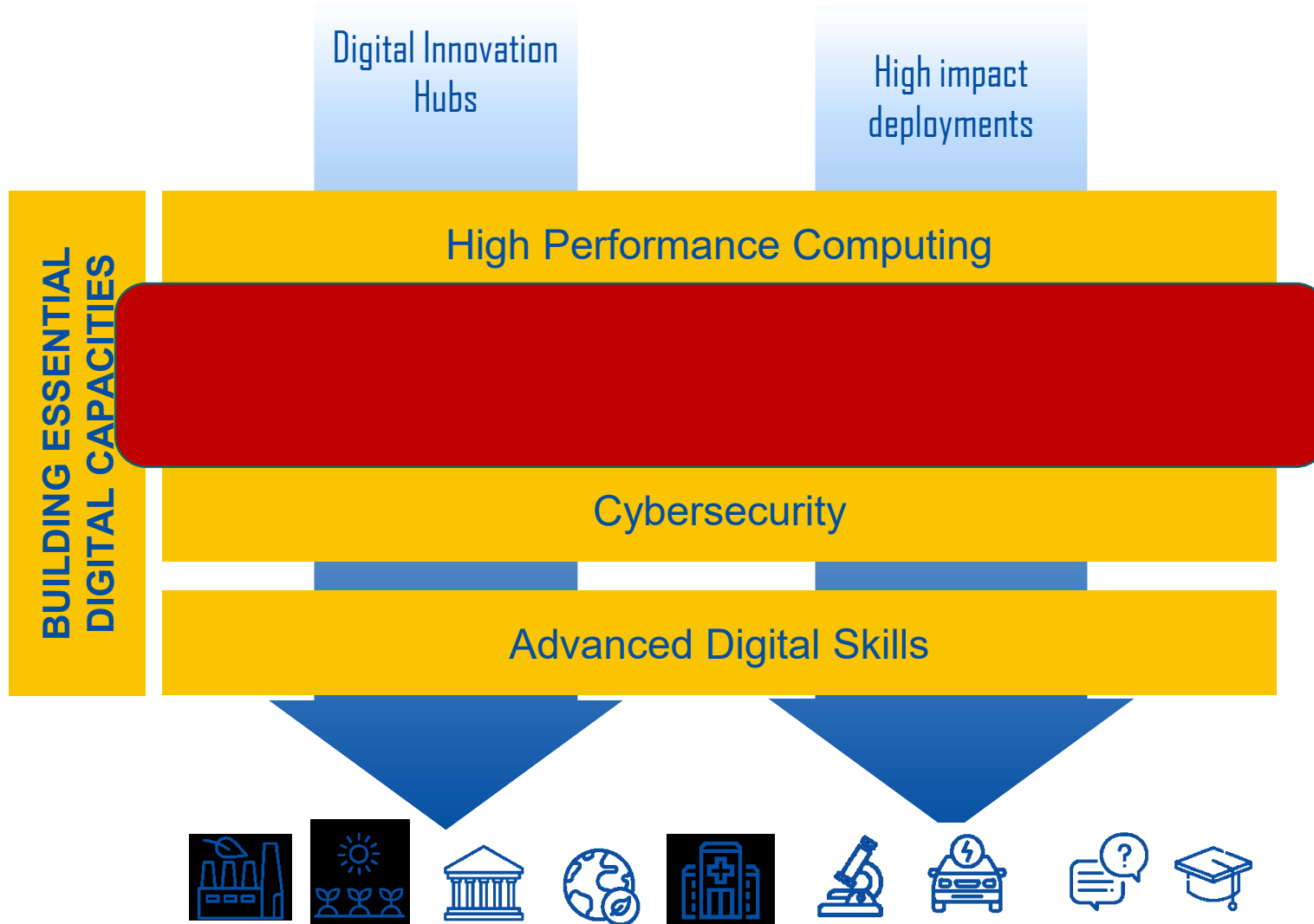
*Companies and
company ownership*

Mobility

- Datasets listed in the implementing act to be made available:
 - for free
 - in machine-readable formats
 - via APIs and (where relevant) as bulk downloads
- [Impact Assessment](#) positive opinion
- Expected adoption: Q1-2/2022

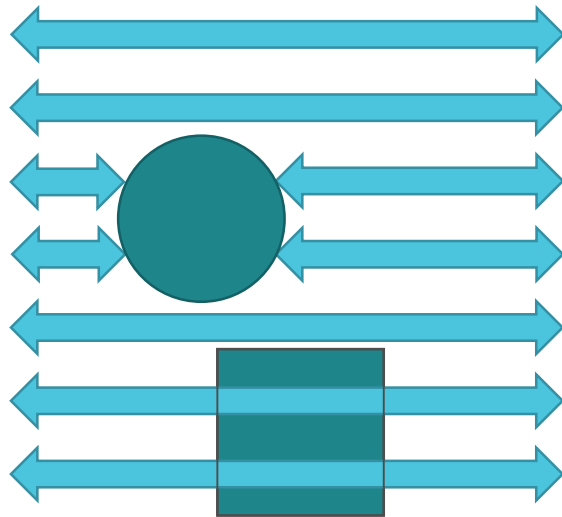
Digital Europe Programme: the structure

ACCELERATING THE BEST USE OF DIGITAL TECHNOLOGIES



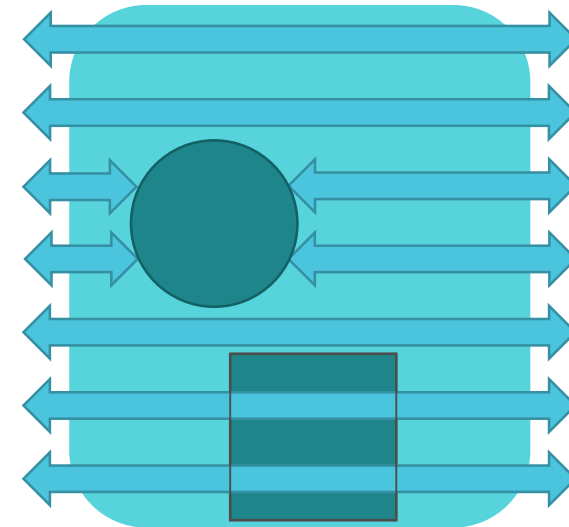
Data sharing models

Current situation



- One to one sector-specific data sharing based on contractual agreements.
- Data sharing infrastructures
 - with centralized data hosting,
 - and/or data marketplaces to enable discovery and reduce transaction costs where data is not held in a central repository.

Data space



An ecosystem where links are created between data space participants. Federated data is stored in a distributed manner with tools to enable discovery, access, and analysis across industries, companies, and public entities.

Key characteristics of a data space

- A secure and privacy-preserving IT infrastructure to pool, access, process, use and share data.
- A data governance mechanism, comprising a set of rules of legislative, administrative and contractual nature that determine the rights to access, process, use and share data in a trustful and transparent manner.
- Data holders are in control of who can have access to their data, for which purpose and under which conditions it can be used.
- Presence of vast amounts of data that are made available on a voluntary basis and can be reused against remuneration or for free, depending on the data holder's decision.
- Participation by an open number of organisations/individuals.

Are data spaces the same as data lakes?



A data lake is a repository that allows to store structured and unstructured data at any scale. You can store your data as-is, without having to first structure the data, and run different types of analytics—from dashboards and visualizations to big data processing, real-time analytics, and machine learning to guide better decisions.

If you have access to the data lake, you have access to all the data contained in it.

Data Spaces are more like fish markets



A data space can be defined as a federated data ecosystem based on shared policies and rules. The users of such data spaces are enabled to access data in a secure, transparent, trusted, easy and unified fashion.

Data holders are in control of who can have access to their data, for which purpose and under which conditions it can be used.

From a technical perspective, a data space can be seen as a data integration concept which does not require common database schemas and physical data integration, but is rather based on distributed data stores and integration on an “as needed” basis.

Common European data spaces



Health



Industrial &
Manufacturing



Agriculture



Finance



Mobility



Green Deal



Energy



Public
Administration



Skills

High Value
Datasets
from
public
sector

- Driven by stakeholders
- Rich pool of data of varying degree of openness
- Sectoral data governance (contracts, licenses, access rights, usage rights)
- Technical tools for data pooling and sharing

Data Spaces Support Centre

- Coordinating the development of data spaces
- Assuring common standards and interoperability

Technical infrastructure for data spaces



Edge & cloud
Services

Smart
Middleware
solutions

Marketplace

High-Performance
Computing

AI on demand
platform

AI Testing and
Experimentation
Facilities

Data Spaces in DIGITAL



Green Deal



Smart communities



Agriculture



Mobility



Health - Genomics



Health Cancer Images



Skills



Manufacturing



Public Procurements



Security data space for innovation



Financial



Tourism



Language



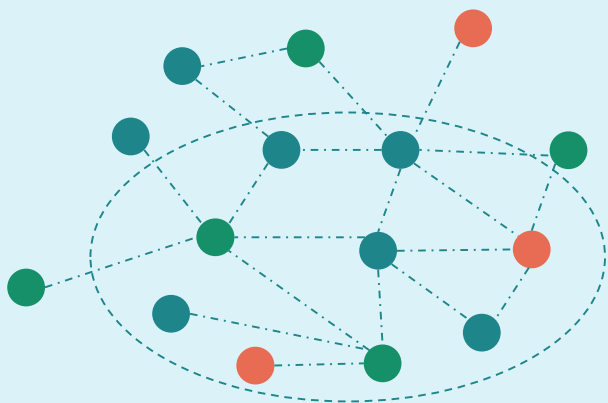
Cultural Heritage



Media

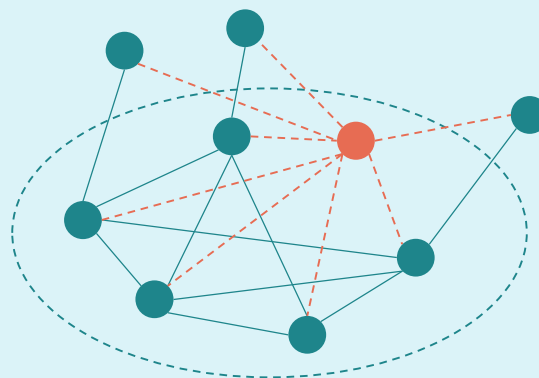
DIGITAL approach for the deployment of sectoral data spaces

I Establishing a stakeholders network



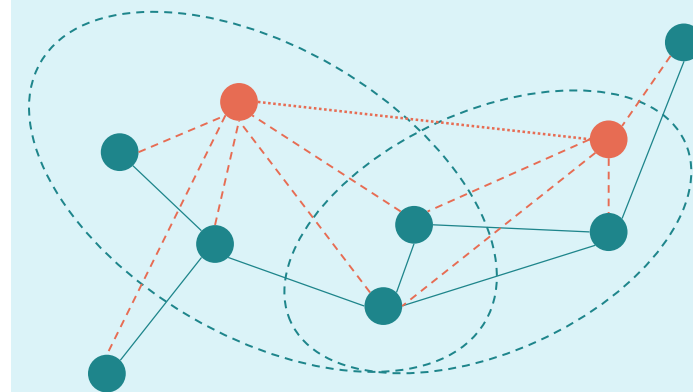
Coordination Support Action

II Support the creation of initial data infrastructures



Grants

III Federation of projects in large data spaces



Grants

- Roles:
- Participant (Data Provider | Data User);
 - Data intermediary.
 - Technology provider.

Main synergies in the context of the capacity building for data and data ecosystem

| | CEF Digital – Work Programme 2021-2023 | Digital Europe – Work Programme 2021-2022 | Recovery & Resilience Facility (decided by Member States) |
|--|--|--|--|
| Making sense of Data | | <ul style="list-style-type: none"> - National HPC Competence Centres - AI on demand platform - Deployment Demonstrators for industrial/sectorial HPC tools, codes & software environment - Testing and Experimentation Facilities for Manufacturing, Health, Agri-food, smart cities and communities - EDIHs supporting SMEs and public sector for AI | <ul style="list-style-type: none"> - Building up AI testing and experimentation capacities, and AI digital innovation hubs. |
| Supporting Data Ecosystems | | <ul style="list-style-type: none"> - Deployment of <u>data spaces</u> for the Green deal, Mobility, Manufacturing, Agriculture, Cultural Heritage, Health, Media, Public administration, Public Procurement, Law enforcement, Finance. - <u>Data spaces Support Centre</u> - <u>Open data Platform and making accessible High Value Datasets held by public sector</u> | <ul style="list-style-type: none"> - Stimulate the deployment of data infrastructure for the creation of data spaces, including the adoption of common standards, interoperability and governance mechanisms. |
| 80% of European data processing at the edge | <ul style="list-style-type: none"> - Studies to interconnect cloud backbone networks - 5G coverage along transport corridors - 5G for smart communities | <ul style="list-style-type: none"> - Cloud-to-edge-based services, built over the smart middleware platform - Testing and Experimentation Facilities on Edge AI | <ul style="list-style-type: none"> - Stimulate the emergence and deployment of federated European cloud to edge services and platforms, leveraging existing initiatives |
| A sovereign cloud stack | <ul style="list-style-type: none"> - European DNS resolver | | |
| A European vendor-neutral multi-cloud management solution | | <ul style="list-style-type: none"> - Smart middleware platform, including a sovereign EU multi-cloud solution | |
| (Interconnected) data processing capacities across Europe | <ul style="list-style-type: none"> - Cross-border interconnection of cloud and edge capacities - Terabit connectivity for High Performance Computing | <ul style="list-style-type: none"> - A federated marketplace for cloud-to-edge-based services, AI, etc. - Federation of HPC resources - Acquisition of Supercomputers | <ul style="list-style-type: none"> - Next generation cloud to edge data centres. |

Support Centre for Data Sharing

The screenshot displays the website's interface. At the top, the logo and name 'Support Centre for Data Sharing' are on the left, and '(EN) English' and 'Log in' are on the right. A navigation bar below contains links for HOME, ABOUT US, DATA SHARING, PRACTICE EXAMPLES, NEWS & EVENTS, FORUM, and SUPPORT, along with a search bar. The main content area features a 'News' section with a featured article titled 'Share your input for the Data Act!' and a 'NEWS' section with three items: 'Mekong River Commission urges more data sharing', 'UN Data Science Official Statistics webinar', and 'Smart Cities Data Catalogue Specific'. Below these are 'EVENTS' including 'B2G data sharing cities: series of 5 workshops' and 'i4Trust Virtual Networking Event'. A large orange overlay menu is positioned on the right, listing categories like 'DATA SHARING PRACTICE EXAMPLES', 'WHAT IS DATA SHARING?', 'TECHNICAL ASPECTS', 'LEGAL ASPECTS', 'API TRAINING MODULE', 'WIDGETS AND TOOLS', 'SECURE DATA SHARING', 'DATA SHARING FAQ', and 'RECOMMENDED CONTRACT TERMS'. At the bottom, there is a 'TWEETS BY @EU_DATASHARING' section and the European Commission logo.

Support Centre for Data Sharing (EN) English Log in

HOME ABOUT US DATA SHARING PRACTICE EXAMPLES NEWS & EVENTS FORUM SUPPORT Search

News

Share your input for the Data Act!

Help shape the Data Act in the European Commission's public consultation. [Read more](#)

NEWS

01.07.2021 Mekong River Commission urges more data sharing

29.06.2021 UN Data Science Official Statistics webinar

24.06.2021 Smart Cities Data Catalogue Specific

EVENTS

07.07.2021 B2G data sharing cities: series of 5 workshops

15.07.2021 i4Trust Virtual Networking Event

DATA SHARING PRACTICE EXAMPLES

- WHAT IS DATA SHARING?
- TECHNICAL ASPECTS
- LEGAL ASPECTS
- API TRAINING MODULE
- WIDGETS AND TOOLS
- SECURE DATA SHARING
- DATA SHARING FAQ
- RECOMMENDED CONTRACT TERMS

TWEETS BY @EU_DATASHARING

EU Support Centre For Data Sharing @EU_DataSharing Popular #datasharing use cases

European Commission

(geo)portals

INSPIRE GEOPORTAL
Enhancing access to European spatial data

European Commission > INSPIRE > Geoportal

Home | Priority Data Sets Viewer | Thematic Viewer | Harvesting status | Find out more about

Environmental Domains

Explore Member States' priority data sets grouped by the following Environmental Domains or individual data sets.

Domains | Thematic Grouping | List of data sets

- Air**
Covers ambient air quality and cleaner air for Europe ...
Individual Data sets: 112 | 45 | 35
- Nature**
Covers conservation of natural habitats and wild fauna and flora, wild birds...
Individual Data sets: 312 | 212 | 190
- Water**
Covers the Water Framework Directives, Urban waste water, bathing water...
Individual Data sets: 868 | 524 | 436
- Noise**
Covers ambient noise quality and noise for Europe...
Individual Data sets: 402 | 244 | 210
- Waste**
Covers the landfill of waste, waste from extractive industries, soil...
Individual Data sets: 26 | 11 | 12
- Industrial emissions**
Covers industrial emissions...
Individual Data sets: 89 | 41 | 36
- Industrial accidents**
Covers industrial accidents...
Individual Data sets: 26 | 20

data.europa.eu

English (en) | Search site content

Data | Studies | Training | News | Contact

data.europa.eu

The official portal for European data

82 Catalogues | 36 Countries | 1 220 893 Datasets

Search datasets

- Agriculture, Fisheries, Forestry & Foods
- Economy & Finance
- Education, Culture & Jobs
- Energy
- Environment
- Government & Public Sector
- Health
- International issues
- Justice, Legal System & Public Safety
- Population & Society
- Regions & Cities
- Science & Technology
- Transport

DATA CATALOGUES | ALL DATASETS | EU INSTITUTIONS DATASETS

Open data news

- Learn about AI solutions in the European public sector**
07/09/2021
A new dataset provided by the Joint Research Centre (JRC)
[Read more...](#)
- Discover the Open Buildings dataset!**
02/09/2021
A Google AI initiative to guide humanitarian efforts
[Read more...](#)

Studies

- Sustainability of (Open) Data Portal Infrastructures reports pt. 6**
14/04/2021
- Finding open data in 2021: Data.europa.eu**
17/03/2021
- Analytical Report: 19: Understanding supply and demand on the European Data Portal**
24/02/2021
- Report 19: Understanding data supply and demand on the European Data Portal**

Each year, data.europa.eu performs an assessment to benchmark open data performance across Europe

What?

- Annual assessment of the state of open data in European countries (EU27, EFTA countries, UK, and Eastern Partnership countries, Candidates)

Why?

- Create insights in the state of open data and challenge countries to improve

How?

- By filling out a **questionnaire** on the **four dimensions of open data maturity** by the national open data teams



Each of the four Open Data Maturity dimensions consists of several sub-dimensions

Policy



- Policy framework
- Governance
- Implementation

Impact



- Strategic awareness
- Political impact
- Social impact
- Environmental impact
- Economic impact

Portal



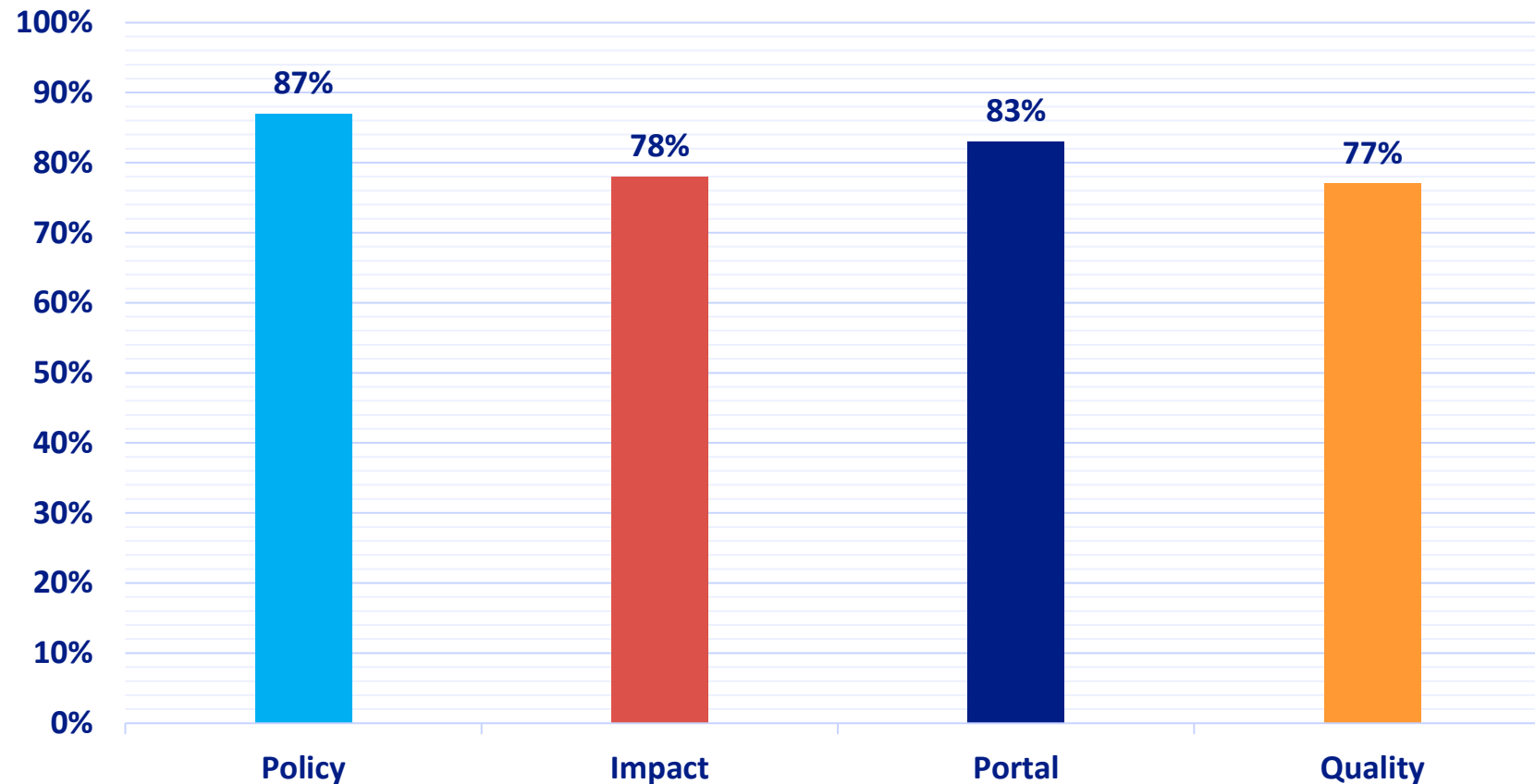
- Portal features
- Portal usage
- Data provision
- Sustainability

Quality

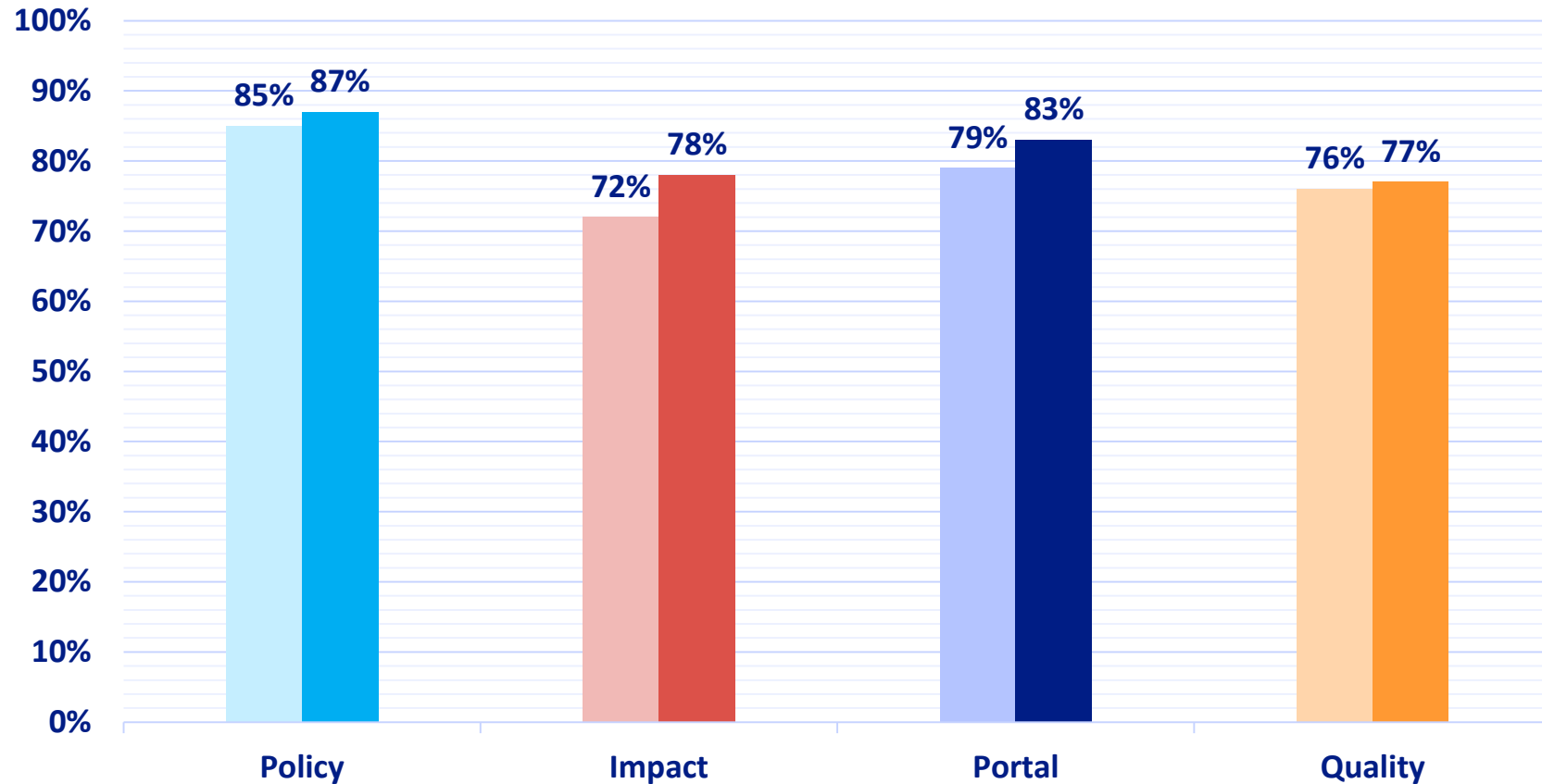


- Monitoring and measures
- Currency and completeness
- DCAT-AP Compliance
- Deployment quality

In 2021, the EU27 Member States have an average Open Data Maturity score of 81%

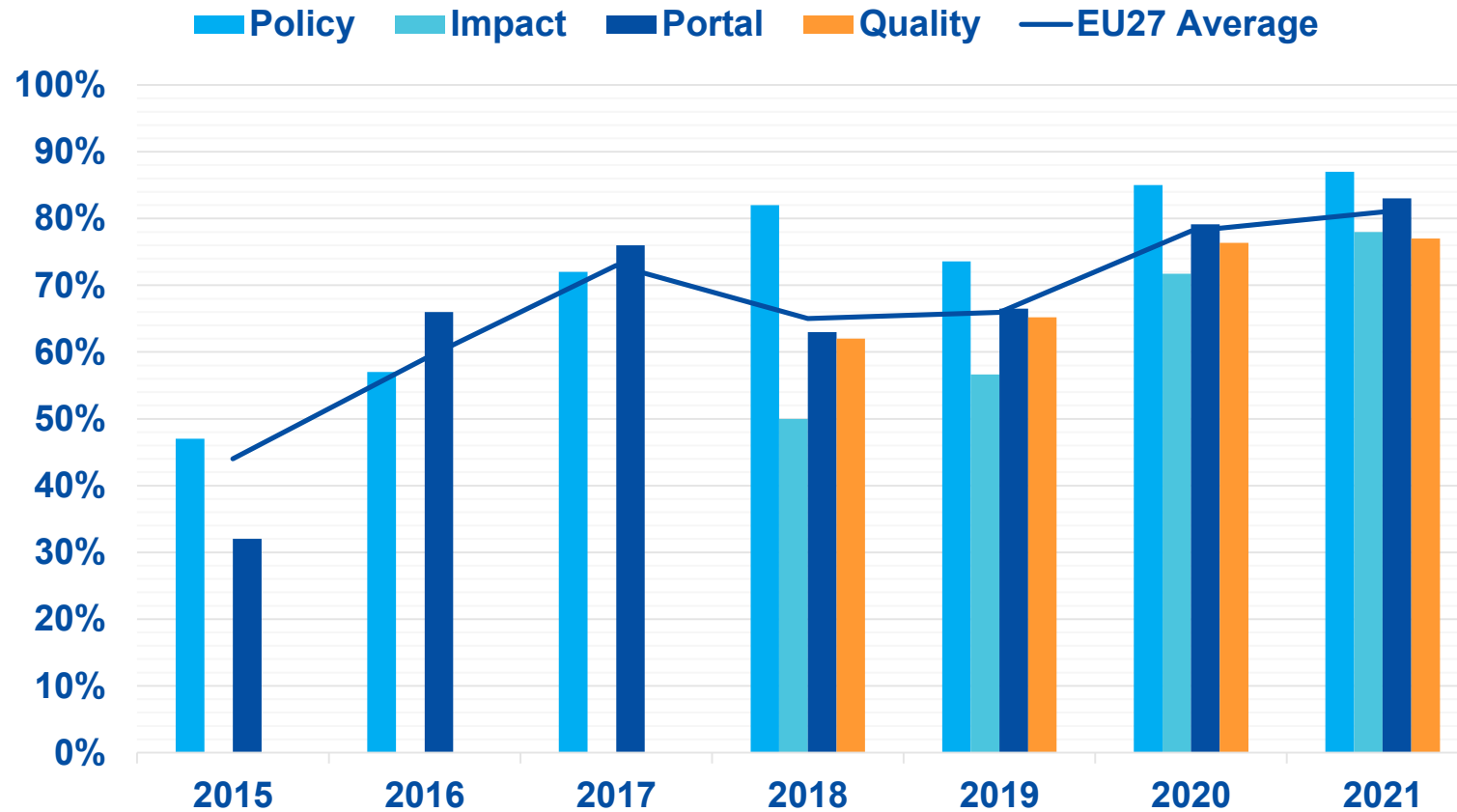


Compared to 2020, each of the dimensions have increased in score, with the highest increase found in impact

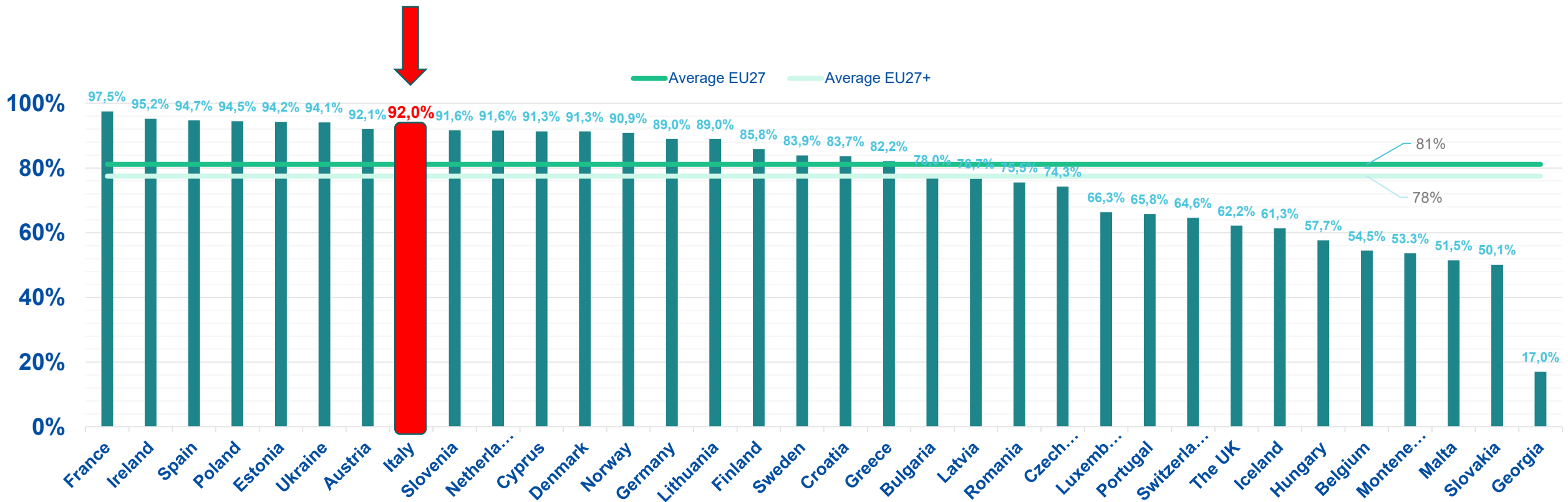


- Compared to 2020, the maturity score increased from 78% to 81% in 2021
- The highest increase is found in the impact dimension (6 %-points)

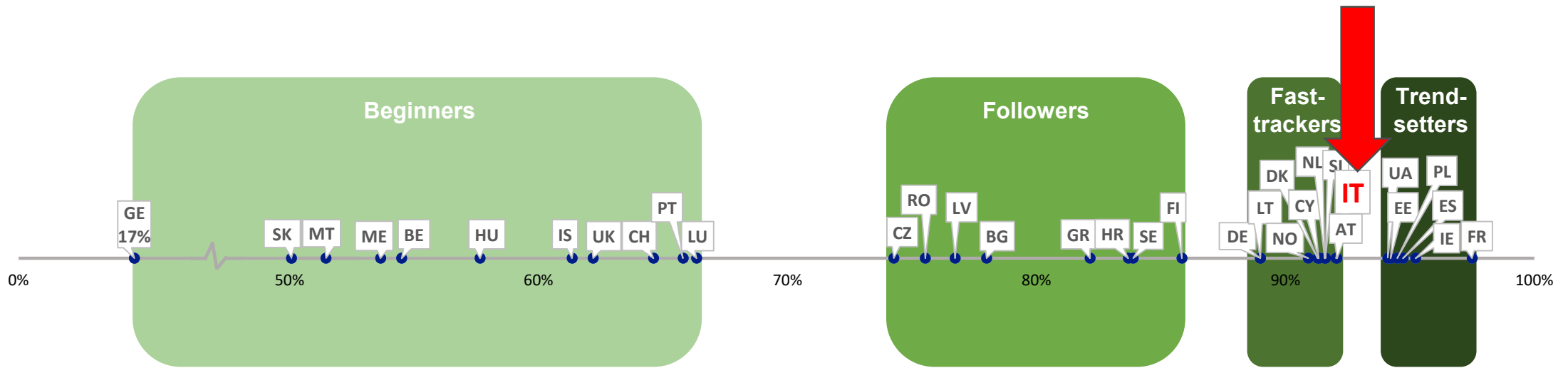
The progress over the years is flattening after a substantial leap in 2020



Italy is ranked at the 8th place in 2021, well above the EU average



Clear clusters are shown, with the scores of the trend-setters and fast-trackers concentrated at the higher end of the spectrum

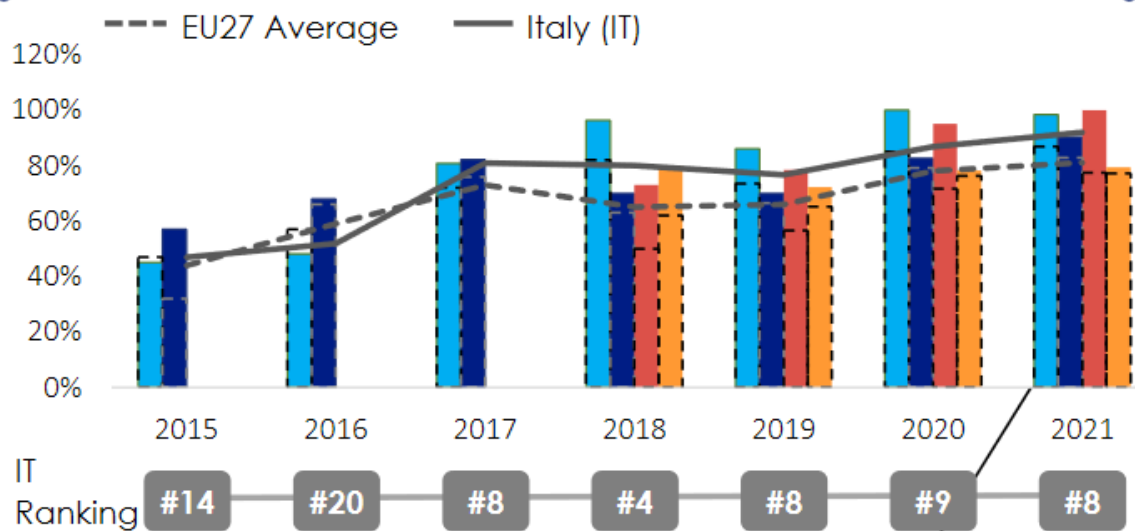


State-of-Play on open data - 2021

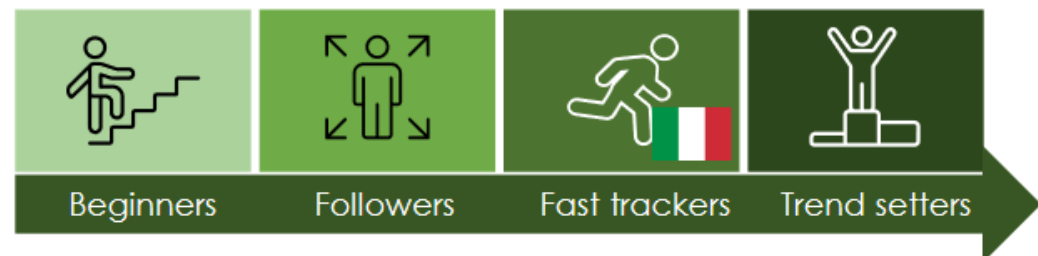
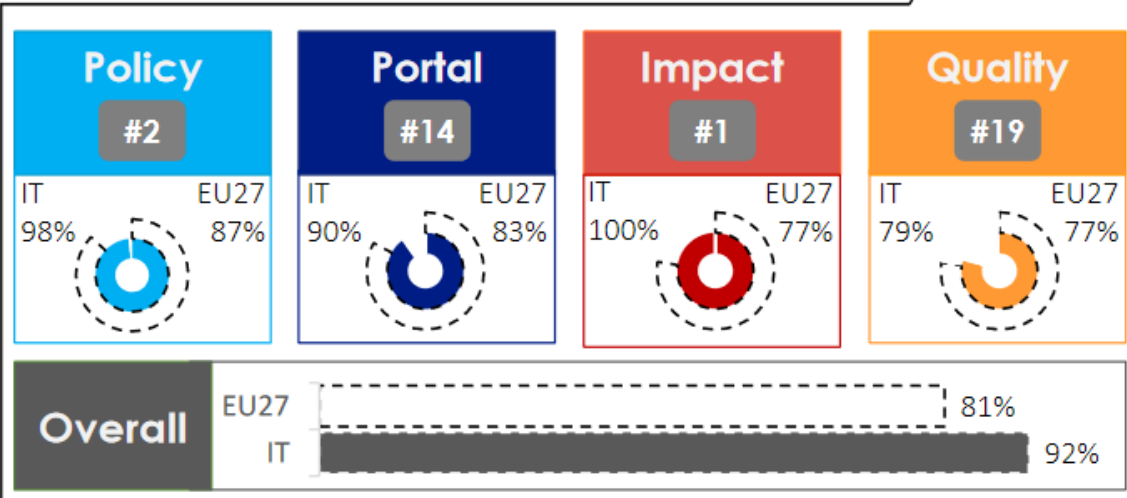
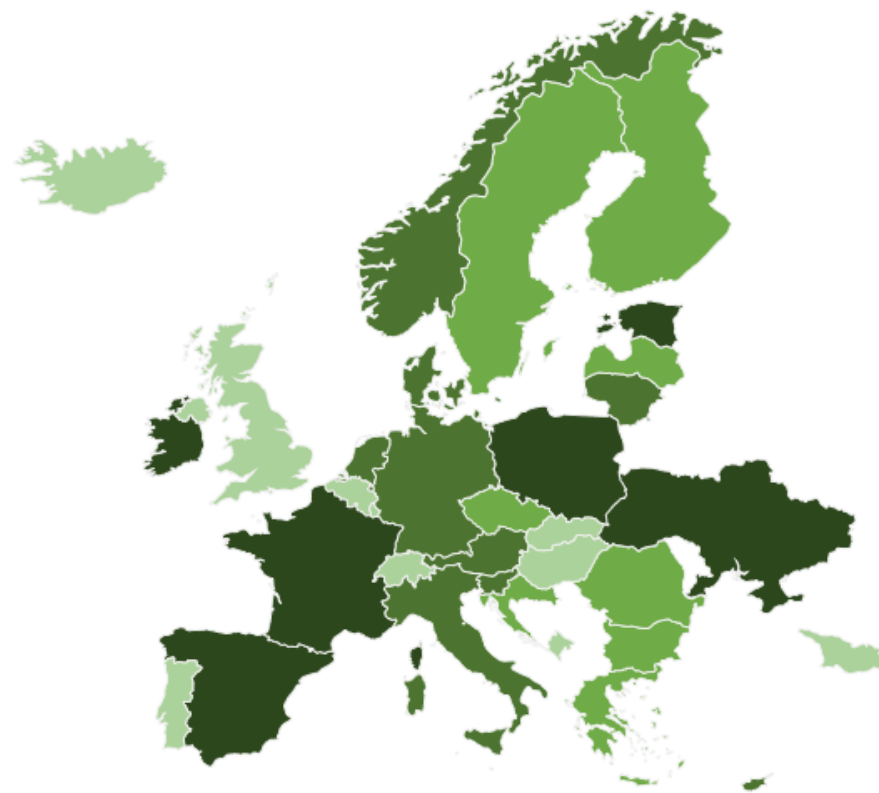
Italy



MATURITY LEVEL RATING



OVERALL MATURITY LEVEL SEGMENTATION

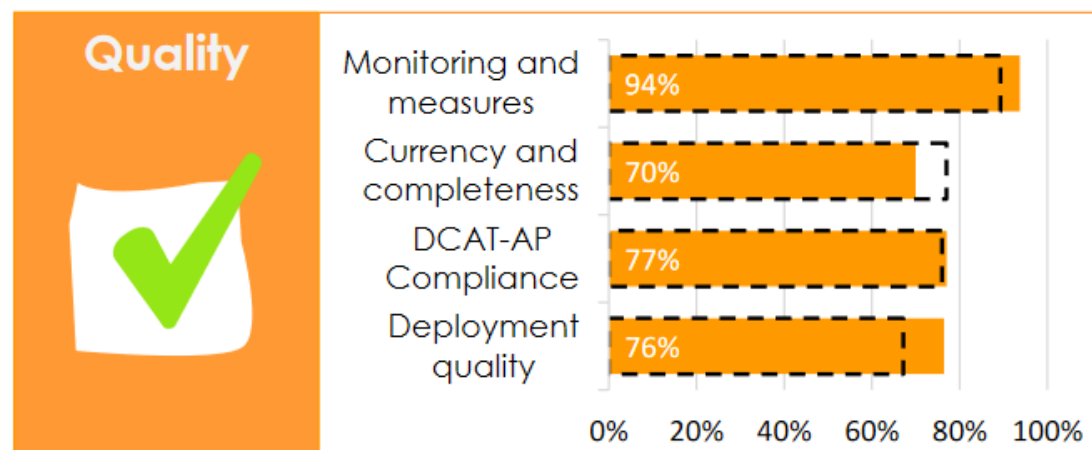
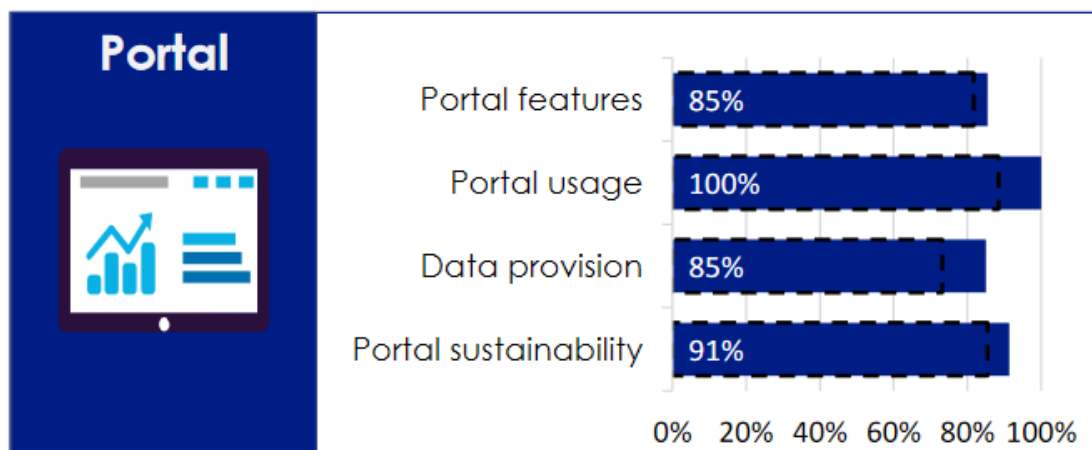
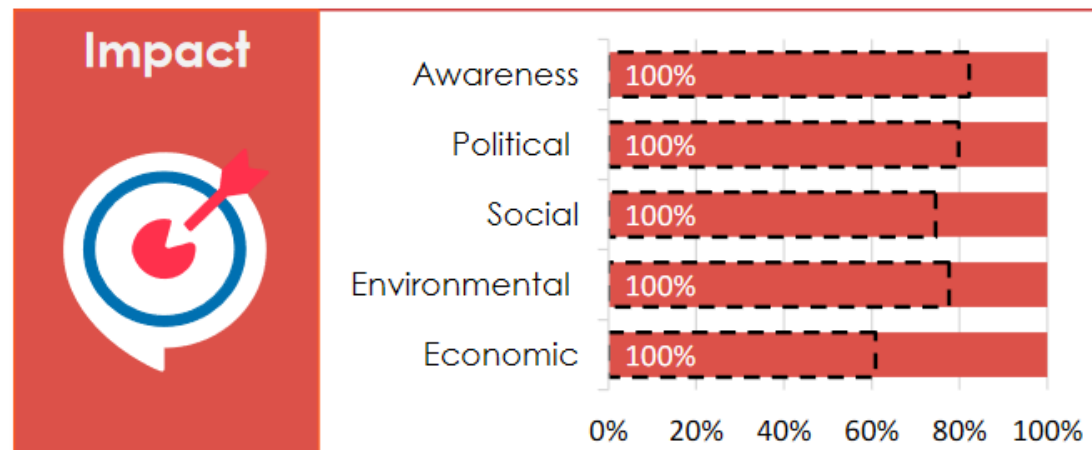
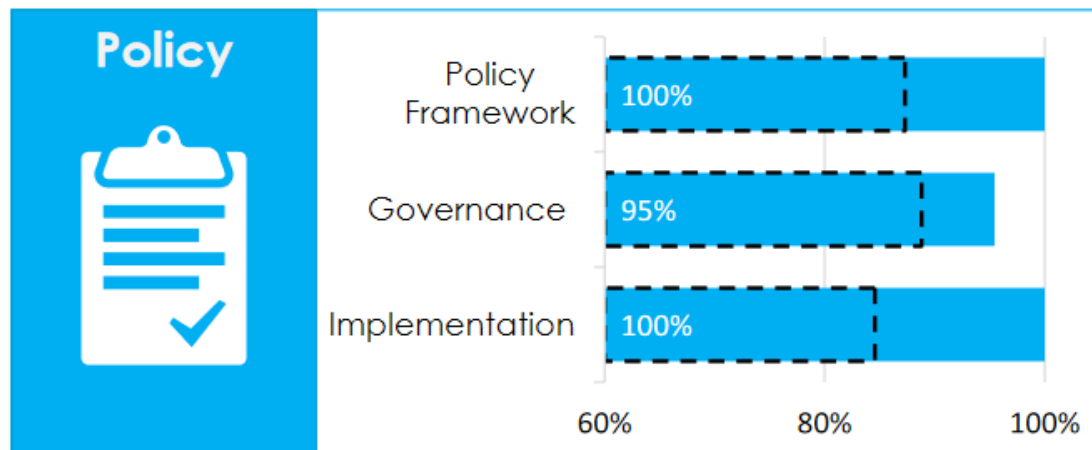


State-of-Play on open data - 2021

Italy



DIMENSION PERFORMANCE



| 221 | | Dimension 2: Open Data Impact | |
|-----|---|--|--|
| 222 | <p>Assessing the impact of open data is still generally considered a new field, with no consensus, for example, on the definition, or methodologies to measure impact. Nonetheless there are several elements that are considered essential to demonstrating impact, first and foremost monitoring mechanisms, but also proxies of impact – such as the degree of re-use of published open data. The impact dimension in this questionnaire captures these elements. The re-use examples of each section (political, social, environmental, economic) help infer a degree of open data impact in the respective field. The countries are encouraged to provide, whenever possible, new examples of re-use for each section. This will also provide a good indication for the EDP and the questionnaire respondents themselves of an increase in reuse of data from certain domains compared to previous year(s). Please note that the scoring will also take the diversity in examples vs previous year(s) into account.</p> <p>Please note that although the impact dimension sets a strong focus on open data re-use cases, the European Data Portal does not consider the availability of re-use examples as a direct evidence of impact.</p> <p>Please fill out all the questions by selecting the answer option by marking it with an "x" in the boxes. If applicable, please provide additional information in the grey text box containing "Please fill your answer here".</p> | | |
| 223 | Question | Answer options | |
| 224 | 2.1. Strategic awareness | | |
| 225 | 30 | At the national level, do you see interest in understanding the level of re-use of your country's open data? | <input type="checkbox"/> yes, there is a strong focus <input type="checkbox"/> yes, but the focus is limited <input type="checkbox"/> no, no focus |
| 226 | | o If yes, what activities / efforts have you observed within public bodies that support your observation? | |
| 227 | | Please fill your answer here. | |
| 228 | 31 | At the national level, are there any processes running to estimate the level of re-use of your country's open data (such as monitoring, surveys, web analytics or catalogues of apps that use the data)? | <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> I don't know |
| 229 | | o If yes, please briefly describe these processes and provide the URLs to support the answer. | |
| 230 | | Please fill your answer here. | |
| 231 | 32 | Are there incentives or obligations in place for public bodies or civil servants at all levels of government to estimate the level of re-use of their own open data? | <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> I don't know |
| 232 | | o If yes, please briefly describe these activities and provide the URLs to support the answer. | |
| 233 | | Please fill your answer here. | |
| 234 | 33 | Has your government specified what "impact of open data" means (e.g., in a strategy document)? | <input type="checkbox"/> yes <input type="checkbox"/> no |
| 235 | | o If yes, how do you define the impact of open data in your country? Please provide a URL to a public document describing it. | |
| 236 | | Please fill your answer here. | |
| 237 | 34 | Do you have a methodology in place to estimate the impact of open data in your country? | <input type="checkbox"/> yes <input type="checkbox"/> no |
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| A | B | C | D | |
|-----|---------------------------------------|--|---|--|
| 338 | 129 | Do you conduct activities to promote and familiarise data providers with ways to ensure higher quality data (such as promoting the model referenced in the previous question)? | <input checked="" type="checkbox"/> yes <input type="checkbox"/> no | |
| 339 | | o If yes, please briefly describe. | | |
| 340 | | <p>"AGID promotes the implementation and the use of the standard ISO 25012 on data quality, ISO 25024 on data quality measurement, and UNI-TS 11725 ""Guidelines for measuring data quality. Increasing the quality of data is a specific goal of the ICT 2020 - 2022 Three Year Plan [https://www.agid.gov.it/it/agenzia/piano-triennale].</p> <p>In addition, AGID has adopted a specific act aimed at improving data quality. [https://www.agid.gov.it/sites/default/files/repository_files/circolari/dt_cs_n.68_-_2013dig-regole_tecniche_basi_dati_critiche_art_2bis_dl_179-2012_sito.pdf]</p> <p>and the measurement of the data quality [https://www.agid.gov.it/sites/default/files/repository_files/documenti_indirizzo/iso_25024_agid_misurazione_della_qualita_dei_dati.pdf]"</p> | | |
| 341 | | | | |
| 342 | | | | |
| 343 | 130a | What percentage of datasets is made available under a standard open licence or an explicit custom open licence, in any data format including text documents? | <input checked="" type="checkbox"/> >90% <input type="checkbox"/> 71-90% <input type="checkbox"/> 51-70% <input type="checkbox"/> 31-50% <input type="checkbox"/> 10-30% <input type="checkbox"/> <10% | |
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| 350 | 130b | Of the percentage indicated in the previous question (Question 28), what percentage of datasets is made available under a standard open licence or an explicit custom open licence, in a structured data format? | <input type="checkbox"/> >90% <input checked="" type="checkbox"/> 71-90% <input type="checkbox"/> 51-70% <input type="checkbox"/> 31-50% <input type="checkbox"/> 10-30% <input type="checkbox"/> <10% | |
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| 357 | 130c | Of the percentage indicated in the previous question (Question 30), which part is also in an open and machine-readable format? | <input checked="" type="checkbox"/> >90% <input type="checkbox"/> 71-90% <input type="checkbox"/> 51-70% <input type="checkbox"/> 31-50% <input type="checkbox"/> 10-30% <input type="checkbox"/> <10% | |
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| 364 | 130d | Of the percentage indicated in the previous question (Question 31), what percentage of datasets also consistently use Uniform Resource Identifiers? | <input type="checkbox"/> >90% <input type="checkbox"/> 71-90% <input checked="" type="checkbox"/> 51-70% <input type="checkbox"/> 31-50% <input type="checkbox"/> 10-30% <input type="checkbox"/> <10% | |
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| 371 | 130e | Of the percentage indicated in the previous question (Question 32), what percentage of datasets also links to other renowned sources to provide additional context for the users, e.g. in a linked data fashion? | <input type="checkbox"/> >90% <input type="checkbox"/> 71-90% <input type="checkbox"/> 51-70% <input type="checkbox"/> 31-50% <input type="checkbox"/> 10-30% <input checked="" type="checkbox"/> <10% | |
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| 379 | End of Dimension 4: Open Data Quality | | | |

Dimension 4: Open Data Quality

1. Currency and completeness

- | | |
|-----|---|
| 1.1 | ▪ A pre-defined approach is in place to ensure metadata is up to date. |
| 1.2 | ▪ Harvesters are programmed to ensure that changes at the source are reflected with the least amount of delay on the national portal. |
| 1.3 | ▪ The portal provides access to a vast range of data, both historical and current. |

2. Monitoring and measures

- | | |
|-----|--|
| 2.1 | ▪ Mechanisms are in place to monitor the quality of the metadata. ▪ Information on the quality of the metadata is available to the broader public. |
| 2.2 | ▪ Guidelines and/or tools are available to assist publishers in choosing the right type of licence for their data. ▪ The compliance level in terms of correct licencing information is monitored. |
| 2.3 | ▪ Measures are in place to assist publishers in publishing in high-quality metadata / data. |

3. DCAT-AP Compliance

- | | |
|-----|--|
| 3.1 | ▪ Guidelines and materials to help publishers in ensuring compliance with DCAT-AP are linked on the national portal. |
| 3.2 | ▪ Compliance with the DCAT-AP standard in terms of mandatory, recommended and optional classes is monitored. The compliance level is monitored. |
| 3.3 | ▪ Monitoring activities of the percentage of accessible distributions (availability of AccessURL and DownloadURL) are in place. The compliance level is monitored. |

4. Deployment quality and linked data

- | | |
|-----|--|
| 4.1 | ▪ A model (such as the 5-star open data model or similar) is used to assess the quality of data deployment. ▪ Activities to familiarise publishers with this model and linked data are conducted. |
| 4.2 | ▪ The percentage of published open data that complies with the requirements of the 1, 2, 3, 4 and 5-stars deployment levels is known. ▪ The improvements in terms of quality of open data deployment are monitored. |

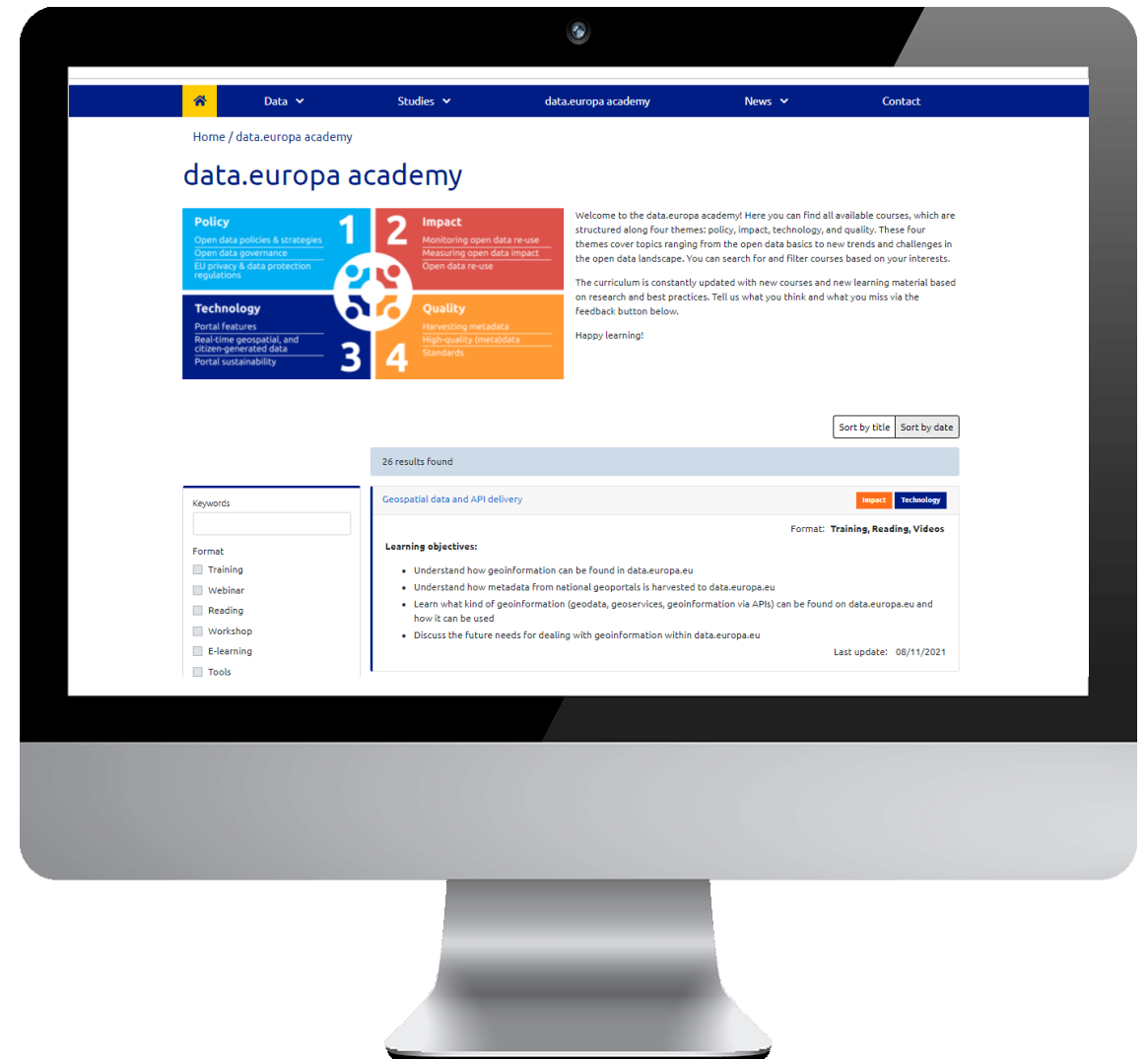
| Dimension | Key metrics | Scoring | Weight |
|-------------------|------------------------------------|-------------|-------------|
| Open Data Policy | | 650 | 25% |
| | Policy framework | 220 | |
| | Governance of open data | 220 | |
| | Open data implementation | 210 | |
| Open Data Impact | | 650 | 25% |
| | Strategic awareness | 140 | |
| | Political impact | 130 | |
| | Social impact | 120 | |
| | Environmental impact | 150 | |
| Open Data Portal | | 650 | 25% |
| | Portal features | 240 | |
| | Portal usage | 150 | |
| | Data provision | 110 | |
| | Portal sustainability | 150 | |
| Open Data Quality | | 650 | 25% |
| | Currency and completeness | 150 | |
| | Monitoring and measures | 150 | |
| | DCAT-AP compliance | 180 | |
| | Deployment quality and linked data | 170 | |
| Total | | 2600 | 100% |

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www.agid.gov.it

EU Data Strategy:

https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-data-strategy_en

EU Data Portal:

<https://data.europa.eu/en>