

## Enhancing Access to and Sharing of Data in the Age of Artificial Intelligence

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### Key messages

- AI developers and users face a pressing shortage of quality data. The [OECD Recommendation on Enhancing Access to and Sharing of Data](#) (the Recommendation) helps countries address this challenge, along with issues related to data collection and sharing, by setting out general principles and policy guidance to maximise the benefits of data access and sharing while protecting individuals' and organisations' rights.
- Certain AI models can be considered a complex form of data as they encapsulate recorded information. For the sake of policy coherence, general data governance principles, as set out in the Recommendation, should apply consistently to both those specific AI models and the data used to train AI systems. On this point, the Recommendation also provides guidance on enhancing access to and sharing of these AI models, while safeguarding the rights of individuals and organisations.
- In particular, data and AI models should be as open as possible to maximise their benefits and as closed as necessary to protect legitimate public and private interests, such as national security, privacy, and intellectual property rights. Some countries are exploring privacy enhancing technologies (PETs) or trusted data intermediaries (TDIs) to protect confidentiality and privacy while ensuring the sharing of data and AI models.
- Trustworthy AI requires quality data to be findable, accessible, interoperable and reusable ("FAIR" data). Considering the trend of publishing AI models as open source with varying degrees of openness, the FAIR principles should also apply to open-source AI models ("FAIR" AI models). Governments are promoting "FAIR" data by creating dedicated data repositories, often as part of their open government or open science agenda. The relevance of repositories and similar measures for FAIR AI models would require further assessment.
- The Recommendation has helped countries adopt whole-of-government data strategies. They aim to build trust in the data ecosystem, stimulate investment and encourage access to and sharing of data, and foster effective and responsible access, sharing and use of data across sectors, with citizens involvement. While gradually expanding to cover data for AI, these strategies have so far rarely extended to the sharing of AI models. This critical policy gap will need to be filled to harness the full potential of AI and data-driven innovation.

## What's the issue?

**Enhancing access to and sharing of data (EASD) facilitates collaboration and fosters data-driven scientific discovery and innovations, including artificial intelligence (AI), across the private and public sectors.** In particular, EASD can help to:

- Resolve societal challenges including environmental issues and global emergencies (including natural disasters and pandemics);
- Boost sustainable growth and enhance social welfare and well-being;
- Improve evidence-based policy making as well as public service design and delivery;
- Increase transparency, accountability, and trust across society; and
- Empower users of digital goods and services, including enterprises, workers, citizens and consumers.

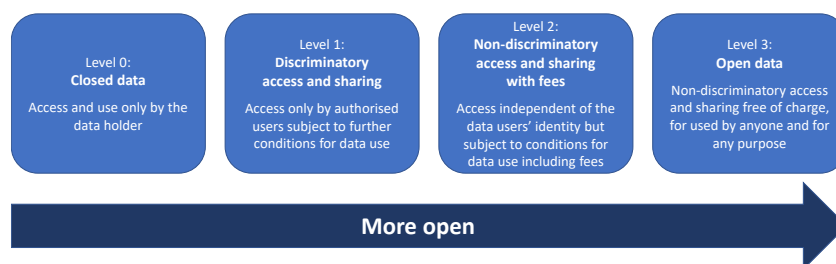
**The OECD Recommendation on EASD sets out general principles and policy guidance on how to maximise the benefits of enhancing data access and sharing arrangements while protecting individuals' and organisations' rights** and taking into account other legitimate interests and objectives (OECD, 2021<sup>[1]</sup>). Adopted by the OECD Council on 6 October 2021, the Recommendation is the first internationally agreed upon set of principles on how to maximise the cross-sectoral benefits of all types of public and private sector data.

**The Recommendation takes a comprehensive and dynamic perspective on data, including certain AI models.** It defines data as “recorded information in structured or unstructured formats, including text, images, sound, and video”. In the context of machine learning and AI, this includes both data used to train AI systems (AI input) and AI models, which encode information from AI input into their model during the training process. Additionally, the Recommendation outlines a comprehensive data value cycle, encompassing stages from data creation and collection through to enrichment, processing, and analysis, and eventually deletion. This dynamic perspective on data underscores the vital role of access to complementary resources, such as other digital resources (e.g. algorithms, software and computing) and human resources (e.g. skills) (OECD, 2025<sup>[2]</sup>; 2020<sup>[3]</sup>; 2019<sup>[4]</sup>).

**The Recommendation promotes a differentiated approach to data access and sharing that leverages the “data openness continuum”** (Figure 1). This continuum covers a wide range of access and sharing arrangements with variable degrees of openness that can be adjusted through technical, organisational and legal means so that data, as well as certain AI models, can be **as open as possible to maximise the risk-adjusted benefits and as closed as necessary to protect legitimate public and private interests**. These various levels of openness include:

- **Level 1: conditioned access and sharing arrangements** where data access and sharing are based on discriminatory arrangements, for instance if it is limited to authorised users with conditions for data use including e.g. the purposes for data use and requirements on data access control mechanisms.
- **Level 2: non-discriminatory data access and sharing arrangements**, where data can be accessed and shared for fees, but “based on terms that are independent of the data users' identities”.
- **Level 3: open data (arrangements)** as the expansive form of data openness, which are “non-discriminatory data access and sharing arrangements, where data is machine readable and can be accessed and shared, free of charge, and used by anyone for any purpose subject, at most, to requirements that preserve integrity, provenance, attribution, and openness”.

Figure 1. The degrees of data openness



Source: OECD (2025<sup>[2]</sup>), "Enhancing Access to and Sharing of Data in the Age of Artificial Intelligence: Companion Document to the OECD Recommendation on Enhancing Access and Sharing of Data", [https://one.oecd.org/document/COM/DSTI/CDEP/STP/GOV/PGC\(2024\)1/FINAL/en/pdf](https://one.oecd.org/document/COM/DSTI/CDEP/STP/GOV/PGC(2024)1/FINAL/en/pdf).

**Most countries rely on their national privacy and data protection frameworks for the protection of individual rights related to data access and sharing, with technical and organisational approaches being considered to complement these frameworks.** These include most prominently **privacy enhancing technologies (PETs)**, which increasingly play a crucial role in enabling collaborative development and sharing of data (as well as AI models) without compromising privacy and the confidentiality of sensitive information. For example, PETs such as multi-party computation (MPC), federated learning or synthetic data enable the confidential collection of input or test data, while others such as trusted execution environments (TEEs) can enable the confidential processing of input data and the sharing of AI models (OECD, 2023<sup>[5]</sup>).

**Governments are actively promoting the findability, accessibility, interoperability and reusability of data ("FAIR" data) and data quality as they become increasingly critical with the rise of AI including generative AI.** This trend is particularly noticeable in the public sector, the health sector and in the context of scientific research, where there is a growing demand for machine-readable interoperable metadata. Policy measures in this context include establishing dedicated data platforms and repositories to validate, combine, and/or release public sector, health and/or research data. (OECD, 2022<sup>[6]</sup>) Some countries are creating new institutions focused on FAIR data or expanding the roles of existing ones like national statistical offices to serve as trusted data intermediaries (TDIs). The trend of releasing AI models as 'open source' (OECD, forthcoming<sup>[7]</sup>), with varying degrees of openness, also prompts questions about ensuring the findability, accessibility, interoperability, and reusability of both data and AI models.

**The Recommendation provides the foundation for a strategic whole-of-government approach,** focusing in particular on how to: **reinforce trust** across the data ecosystem, **stimulate investments** in data, and **incentivise data access and sharing**, and **foster effective and responsible data access, sharing and use** across society. The Recommendation is not intended to address questions of *whether* or *when* to regulate access to data (including data of public interest) although it does call on Adherents to "seek to maximise the benefits of measures for enhancing data access and sharing." The Companion Document to the Recommendation "Enhancing Access to and Sharing of Data in the Age of Artificial Intelligence" (OECD, 2025<sup>[2]</sup>), however, provides examples of policy initiatives that can help identify the conditions under which governments have regulated access to and sharing of data.

**Some countries implement national or sectoral data strategies in line with their whole-of-government ambitions, increasingly in complementarity with their national AI strategies.** The assessment of country examples suggests that sectoral data strategies, and in particular public sector data and health data strategies are most frequent. The establishment of inter-ministerial bodies and working groups that coordinate policy measures is often used as means to enable a whole-of-government approach without the need to implement a national data strategy. Regulatory sandboxes are increasingly being considered to enable technology-neutral and agile legal and regulatory environments. While gradually expanding to cover data for AI, these approaches have so far rarely extended to the sharing of AI models.

## Why is enhancing access to and sharing of data important?

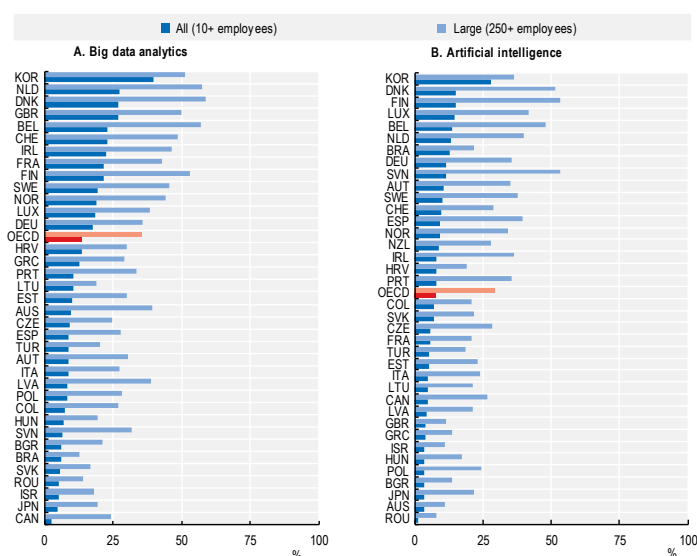
OECD studies indicate that enhancing access to and sharing of both public and private-sector data can help unlock significant social and economic benefits, potentially contributing between 1% and 2.5% of GDP. Many of these benefits are based on the fact that data created in one domain and sector can provide further value when applied in another domain or sector (OECD, 2019<sup>[8]</sup>). A clear illustration is provided by open government data, where data sets used originally for administrative purposes are re-used by various actors including entrepreneurs, academics, scientists, journalists, civil society representatives, to create services unforeseen when the data were originally created.

However, many countries have yet to realise these benefits due to challenges such as lack of trust, and conflicting interests of different stakeholders. These existing challenges may also pose significant barriers to the development and adoption of trustworthy AI, particularly as AI developers are increasingly in desperate need of sufficient high-quality data. For instance, developers of generative AI models are increasingly facing data scarcity, despite extensive and increasingly controversial web scraping practices to obtain data. These challenges extend to the access to and sharing of certain (“open source”) AI models, further exacerbating barriers to the collaborative efforts needed to advance the adoption of trustworthy AI effectively and sustainably (OECD, 2025<sup>[2]</sup>; OECD, forthcoming<sup>[7]</sup>).

Furthermore, data-dependent technologies are spreading slowly, impacting productivity growth unevenly across OECD countries. Although digital technology adoption in firms has increased, labour productivity growth has decelerated since 2005 and has not yet rebounded, partly due to this uneven diffusion (OECD, 2024<sup>[9]</sup>). Empirical studies suggests that rising market concentration, decreased business dynamism, and growing disparities in productivity are linked to an increase in intangible capital like software and data (OECD, 2022<sup>[10]</sup>). This goes hand in hand with a low and disparate adoption of big data analytics and AI between small- and medium-sized enterprises (SMEs) and larger firms (Figure 2). Only about 14% of enterprises used big data analytics in 2022, and just 8% AI in 2023 (compared to 35% and 29% of large firms respectively) (OECD, 2024<sup>[9]</sup>).

**Figure 2. Adoption of big data analytics and AI remains low**

Adoption rates of big data analytics and AI by enterprises with ten employees or more in the business sector (excluding financial services), 2023 (or most recent)



Source: OECD (2024<sup>[9]</sup>), *OECD Digital Economy Outlook 2024 (Volume 1): Embracing the Technology Frontier*, OECD Publishing, Paris, <https://doi.org/10.1787/a1689dc5-en>. StatLink: <https://stat.link/1foqhi>

## What can policymakers do to implement the OECD Recommendation on EASD in the age of AI?

- Empower and pro-actively engage all relevant stakeholders alongside broader efforts to increase the trustworthiness of the data ecosystem.
- Adopt a strategic whole-of-government approach to ensure that data access and sharing arrangements effectively and efficiently meet specific societal, policy, and legal objectives that are in the public interest.
- Maximise the benefits of data access and sharing, while protecting individuals' and organisations' rights and taking into account other legitimate interests and objectives.
- Encourage market-based approaches by fostering competitive markets for data and promoting, where appropriate, self- or co-regulation mechanisms.
- Promote conditions for the development and adoption of sustainable business models and markets for data access and sharing.
- Promote appropriate incentive mechanisms.
- Further improve conditions for cross-border data access and sharing with trust.
- Foster the findability, accessibility, interoperability, and reusability of data ("FAIR data") across organisations, including within and across the public and private sectors.
- Enhance the capacity of all stakeholders to use data more effectively and responsibly.

## References

- OECD (2025), *Enhancing Access to and Sharing of Data in the Age of Artificial Intelligence: Companion Document to the OECD Recommendation on Enhancing Access to and Sharing of Data*, [https://one.oecd.org/document/COM/DSTI/CDEP/STP/GOV/PGC\(2024\)1/FINAL/en/pdf](https://one.oecd.org/document/COM/DSTI/CDEP/STP/GOV/PGC(2024)1/FINAL/en/pdf). [2]
- OECD (2024), *OECD Digital Economy Outlook 2024 (Volume 1)*, OECD, <https://doi.org/10.1787/A1689DC5-EN>. [9]
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- OECD (2022), *Going Digital Guide to Data Governance Policy Making*, OECD, <https://doi.org/10.1787/40D53904-EN>. [6]
- OECD (2021), *Recommendation of the Council on Enhancing Access to and Sharing of Data*, <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0463> (accessed on 6 March 2023). [1]
- OECD (2020), *Enhanced Access to Publicly Funded Data for Science, Technology and* [3]

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OECD (2019), *Enhancing Access to and Sharing of Data: Reconciling Risks and Benefits for Data Re-use across Societies*, OECD Publishing, Paris, <https://doi.org/10.1787/276aaca8-en>. [8]

OECD (2019), *The Path to Becoming a Data-Driven Public Sector*, OECD Publishing, <https://doi.org/10.1787/059814a7-en>. [4]

OECD (forthcoming), “Benefits and risks of open-sourcing advanced foundation models”, *OECD Artificial Intelligence Papers*, OECD Publishing, Paris. [7]

## Explore further

### Read the Recommendation and its Companion Document:

OECD Recommendation on Enhancing Access to and Sharing of Data, <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0463>

OECD (2025<sup>[2]</sup>), “Enhancing Access to and Sharing of Data in the Age of Artificial Intelligence: Companion Document to the OECD Recommendation on Enhancing Access and Sharing of Data”, [https://one.oecd.org/document/COM/DSTI/CDEP/STP/GOV/PGC\(2024\)1/FINAL/en/pdf](https://one.oecd.org/document/COM/DSTI/CDEP/STP/GOV/PGC(2024)1/FINAL/en/pdf)

### Related to:

OECD Recommendation for Enhanced Access and More Effective Use of Public Sector Information, <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0362>

OECD Recommendation concerning Access to Research Data from Public Funding, <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0347>

OECD Recommendation on Health Data Governance, <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0433>

OECD Recommendation on Digital Government Strategies, <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0406>

OECD Recommendation concerning Guidelines Governing the Protection of Privacy and Transborder Flows of Personal Data, <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0188>

OECD Recommendation on Artificial Intelligence, <https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449>

## Contact

Christian REIMSBACH-KOUNATZE (✉ [christian.reimsbach-kounatze@oecd.org](mailto:christian.reimsbach-kounatze@oecd.org))

Alain PAIC (✉ [alan.paic@oecd.org](mailto:alan.paic@oecd.org))

Jacob Arturo RIVERA PEREZ (✉ [jacobarturo.riveraperez@oecd.org](mailto:jacobarturo.riveraperez@oecd.org))

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