Reader's guide

This reader's guide presents a glossary of key terms related to digital transformation. This glossary is not exhaustive but is intended to provide definitions for the terms that appear commonly throughout this report.

GLOSSARY OF KEY TERMS IN DIGITAL TRANSFORMATION

- **1G, 2G, 3G, 4G and 5G** refer to the five generations of wireless networks. 5G represents the latest and fastest generation of wireless technology, including download speeds of 20 gigabits per second (Gbps), 10 Gbps upload speeds, and latency of one millisecond (ms). This represents download speeds 200 times faster, upload speeds 100 times faster and one-tenth the latency of 4G Long Term Evolution (LTE) networks (OECD, 2019[1]).
- **Agile governance regulation** refers to holistic, open, inclusive, adaptive and co-ordinated governance models to enhance systemic resilience by enabling nimble, technology-neutral and adaptive regulation that upholds fundamental rights, democratic values and the rule of law (OECD, 2021[2]).
- **Application programming interface (API)** refers to tools that enable a program to communicate with another program or operating system, and that help software developers create their own applications (Oxford Dictionary, 2019[3]).
- **Artificial intelligence (AI)** is the ability of machines and systems to acquire and apply knowledge, including by performing a broad variety of cognitive tasks (OECD, 2019[4]).
- **Big data** refers to data characterised by high volume, velocity and variety (OECD, 2019[4]).
- **Blockchain** technology enables applications to authenticate ownership and carry out secure transactions for a variety of asset types (OECD, 2019[4]).
- **Broadband** refers to internet connection with capabilities higher than 256 kbit/s (OECD, 2021[5])
- **Connectivity** refers to connection to the Internet or other communication networks (ITU, 2001[6]).
- **Cross-border data flow** refers to the movement or transfer of information between servers across country borders (BSA, 2017[7]).
- **Data portability** is the ability (sometimes described as a right) of a natural or legal person to request that a data holder transfer data concerning that person to the person or a specific third party in a structured, commonly used and machine-readable format on an ad-hoc or continuous basis (OECD, 2021[8]).
- **Digital economy** incorporates all economic activity reliant on or significantly enhanced by using digital means including technologies, infrastructure, services and data (OECD, 2020[9]).
- **Digitalisation** is the use of digital technologies and data that results in new or changes to existing activities (OECD, 2019[4]).

- **Digital public goods** refer to open-source software, data, artificial intelligence models, standards and content that adhere to privacy and other applicable international and domestic laws, standards and best practices, and do no harm (UNSG, 2020[10]).
- **Digital public infrastructure** refers to digital solutions that enable basic functions essential for public and private service delivery, i.e. collaboration, commerce and governance. (Shivkumar and Nordhaug, 2021[11]).
- **Digital stack** refers to interoperable platforms or layers that work together and across government ministries to enable joint digital responses, initiatives and services (Gates, 2021[12]).
- **Digital transformation** refers to the economic and societal effects of digitisation and digitalisation (OECD, 2019[4]).
- **Digitisation** is the conversion of analogue data and processes into a machine-readable format (OECD, 2019[4]).
- **Disinformation** is verifiably false or misleading information created, presented and disseminated for economic gain or to intentionally deceive the public (European Commission, n.d.[13]).
- **Fourth Industrial Revolution** refers to the use of digital technologies that enable new and more efficient processes in industrial production, and which in some cases yield new goods and services. The associated technologies are many, from developments in machine learning and data science, which permit increasingly autonomous and intelligent systems, to low-cost sensors that underpin the Internet of Things, to new control devices that make second-generation industrial robotics possible (OECD, 2017[14]).
- **Frequency spectrum assignment** refers to the process of determining the use of a given block of frequencies (ITU, n.d.[15]).
- **Gig economy or gig work** describes when two-sided digital platforms match workers on one side of the market to customers (final consumers or businesses) on the other side on a per-service ("gig") basis (OECD, n.d.[16]).
- **Hard infrastructure** is physical infrastructure to support businesses such as mobile and fixed connectivity, power, water, roads, physical plants, equipment and other elements (ITU, 2018[17]).
- **ICT4D** refers to the use of information and communications technologies for economic and social development, humanitarian response or promotion of human rights (ITU, 2018[17]).
- **Internet of Things** enables new business models, applications and services based on data collected from devices and objects, including those that sense and interface with the physical world (OECD, 2019[4]).
- **Interoperability** refers to the ability of different digital services to work together and communicate with one another (OECD, 2021[8]).
- **Machine learning** refers to when machines make decisions based on probability functions derived from past experiences (OECD, 2019[4]).
- **Misinformation** is verifiably false information that is spread without the intention to mislead, and often shared because the user believes it to be true (European Commission, n.d.[13]).
- **Mobile apps** are add-on software for handheld devices, such as smartphones and personal digital assistants (PDAs) (ITU, 2009[18]).
- **Mobile wireless access** refers to wireless access applications in which the location of the end-user termination is mobile (ITU, 2001[6]).
- **Open source** provides access to knowledge without the need to pay for the knowledge itself, although there may be marginal fees for access (OECD, n.d.[19]).

- **Personal data** is any information that relates to an identified or identifiable living individual (European Commission, n.d.[20]).
- **Platform economies** use digital technologies to broker labour on a per-task basis (OECD, n.d.[16]).
- **Radio spectrum** is the part of the electromagnetic spectrum with frequencies from 30 Hz to 300 GHz. Electromagnetic waves in this frequency range, called radio waves, are used in modern technology, particularly in telecommunication. Commonly known technologies that use radio spectrum are wireless broadband cellular phones (e.g. based on the 4th or 5th generation technology standard) and WiFi systems (European Commission, n.d.[21]).
- **Regulatory sandbox** refers to a regulatory approach that allows live, time-bound testing of innovations under a regulator's oversight, typically summarized in writing and published. Regulatory sandboxes let novel financial products, technologies and business models be tested under a set of rules, supervision requirements and appropriate safeguards (UNSGSA, 2020[22]).
- **Soft infrastructure** describes programs and resources in an innovation ecosystem that provide mentorship, skills, experience and other knowledge resources to support innovative businesses (ITU, 2018[17]).
- **Universal access** refers to reasonable telecommunication access for all. It includes universal service for those who can afford individual telephone service and widespread provision of public telephones within a reasonable distance of others (ITU, 2007[23]).
- **Wired (fixed line)** refers to a physical line connecting the subscriber to the telephone exchange. Typically, fixed-line networks refer to telephone networks, distinct from mobile networks (ITU, n.d.[24]).

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