Separate Volume ③

Glossary

Page	Term	Definition
2	Smart City	• A Smart City is an area that, ① based on the Three Basic Philosophies and the Five Basic Principles listed below (Concept) and ② by providing services to support each one of residents using new technologies, such as ICT, and various public and private data, and by enhancing management in various fields (e.g. planning, development, management / operation) (Means), ③ solves challenges faced by cities and regions, and continues to create new value (Action), as a ④ sustainable city / region where Society 5.0 is realized ahead of the others (State) Three Basic Philosophies Being resident-(user-)centric; being vision- / challenge-focused; attaching importance to collaboration among sectors / cities Five Basic Principles Ensuring fairness and inclusiveness; privacy protection; ensuring interoperability, openness and transparency; ensuring security and resiliency; ensuring operational and financial sustainability
7	Society 5.0	• A human-centered society (Society) that balances economic advancement with the resolution of social problems by a system that highly integrates cyberspace (i.e. virtual) and physical space (i.e. real) • A new form of society to follow the hunting society (Society 1.0), agricultural society (Society 2.0), industrial society (Society 3.0) and information society (Society 4.0). It was first proposed in the 5th Science and Technology Basic Plan as a future society that Japan should aspire to.
7	Trust	• The act of ensuring data reliability by preventing data tampering or email spoofing in order to allow for the free, safe, and secure distribution of data in cyberspace.
7	DX (Digital transformation)	• Positive changes in all aspects of people's lives as a result of application of information and communication technology (ICT) • While it has long been suggested that ICT makes people's lives better, digital transformation involves transformation of business models in industries.

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7	SDGs (Sustainable Development Goals)	• Sustainable Development Goals (SDGs) are international goals set out in the 2030 Agenda for Sustainable Development which was adopted at the September 2015 UN summit. Running from 2016 to 2030, the SDGs replace the Millennium Development Goals (MDGs), which were developed in 2001 • The SDGs are a set of 17 goals with 169 targets, with the aim to create a sustainable world and the pledge to 'leave no one behind'
7, 9	IT (Information Technology) ICT (Information and Communications Technology)	• IT refers to information technology, and ICT, information and communications technology. While the two have similar meanings, IT is information technologies such as computers, whereas ICT includes communications technologies, such as the Internet, in addition to information technologies.
8	Data platform (Data linkage platforms etc.)	• Data platform is a general term for IT systems that facilitate the introduction of various services to be realized through Smart City, by integrating functions that communities intending to realize Smart City commonly use to realize Smart City • The functionality requirements, stated in the Smart City Reference Architecture, can broadly be divided into the three characters: ① interoperability (be linked), ② data distribution (flow) and ③ expandability (sustainable). • Originating from the fact that the birth of OS enabled computers of different types to use the same software, a data linkage platform etc. is figuratively called 'City OS' in Japan. However, unlike computers, cities themselves function without (City) OS, and therefore, it is more accurate to consider it 'the node of a network that links data and services of different cities.'

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8	Workation	• 'Workation' is a term that combines 'work' and 'vacation', coined in the West to mean working, often using a computer, while on an extended trip
8	AI (Artificial intelligence)	• AI is a broad concept that include programs that mimic the human thought process, or information processing / technology that is perceived as being intelligent by human standards • One subfield of AI is machine learning, which allows computer and other systems to learn in a similar way how humans do; a type of machine learning that uses neural networks with multiple layers is called deep learning
8	Smart local	• In order to correct the overconcentration in Tokyo and resolve regional disparities, it is critical to revitalize regional cities and communities as a place for people to live as well as a cradle for innovation, by leveraging digital technologies. From this perspective, the concept of smart local involves the smartification of life services, including mobility, medical care and welfare, as well as creation of remote work environments, such as workation, aligning with the status of the region, through collaboration between cities, and by capitalizing on the regional resources.
10	Well-Being	• Well-being is a concept that represents a state of being physically, mentally and socially well, having individual rights guaranteed and being empowered to pursuit self-fulfillment. In the OECD's Better Life Index, well-being is measured using a total of 11 topics, which reflect what the OECD identified as essential to well-being in terms of material living conditions (housing, income and jobs) and quality of life (community, education, environment, governance, health, life satisfaction, safety and work-life balance).

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13	Demand side Supply side	• In the context of Smart City, the supply side refers to the providers of Smart City services while the demand side refers to those who receive such services.
14	Digital literacy	• The ability to use ICT to find, understand, evaluate, create and communicate digital information, requiring both cognitive and technical skills
14	Personalization	• An approach to offer optimal information / services tailored to the attributes and purchase and behavioral histories, rather than providing all customers with the same services and content
14	Resiliency	• Toughness. It is the 'ability to overcome' risk or crisis, and requires to ① avoid fatal damage (fatal damage prevention), ② minimize damage (damage minimization) and ③ achieve swift recovery (recovery rapidity)
14	Personal data	• Personal data represents a wide scope of information that includes personal information (as defined in the Act on the Protection of Personal Information, i.e. 'information about a living individual which can identify the specific individual by name, date of birth or other description contained in such information') as well as information that are not clearly recognized as personal information but may be associated with an individual
18	Consortium	• A group made up of two or more organizations (companies, local governments etc.) that undertake business activities together to achieve a common objective (consortium)
18	Governance	• The process of 'establishing policies and rules to govern an organization, and ensuring that they are disseminated and implemented across the board within the organization'. It may also mean administration, control and management
20	Area management	• An urban development or community management initiative for a specified geographic district, where the private sector plays a leading active role.

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20	Corporation operating Smart City	• A corporation (e.g. joint stock company, corporate juridical person) that is specifically set up under the driving entity to operate Smart City
20	Community development organization	• An organization consisting of stakeholders in a specific district, including an area management corporation and a Town Management Organization (TMO), and engaging in activities to revitalize, and improve the quality of, the district
23	Architect	• The term 'architect' refers to a person who designs and supervises the construction of a building. In IT, the term typically refers to an engineer who is responsible for an overall design of a large-scale system or product. In the context of Smart City, it refers to a person, or the title of such a person, who is responsible for an overall design of a Smart City project, by setting a local agenda, developing plans and tapping into advanced technologies
25	CIO (Chief Information Officer) CDO (Chief Digital Officer)	• CIO and CDO stand for chief information officer and chief digital officer, respectively. According to the Japanese Government's CIO portal, the roles of a CIO are to 'overview the use of IT within a corporate group and transform the structures of its operations and information system (IS) as well as the functions and roles of the IT departments group-wide, thereby contributing to "overall optimization" of the company .' Likewise, the CIO portal defines the mission of a chief innovation officer and a chief intelligence officer as being 'corporate-wide business transformation' and 'creation of business strategies informed by information', respectively. In implementation in businesses, however, these missions are in some cases assumed by a CDO rather than CIO. • In the context of Smart City, there are cases where a local government appoints a chief officer responsible for the oversight of digitization of administration • CDO may also refer to chief data officer.

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26	Super City	• A type of Smart City, the concept of which was presented by the Cabinet Office in 2018. This is an initiative launched under the National Strategic Special Zone Act, aiming at creating future society, which is to come into being around 2030, ahead of time, through participation of residents and from residents' perspectives. Key features of Super City are: ① cutting-edge services being provided across multiple areas of people's lives; ② cross-disciplinary data connection; and ③ drastic regulatory reforms. The first call for application for the National Strategic Special Zones designation was issued in December 2020.
30	Supplier	• An English term that refers to a person or organization from which another makes purchase or receives a supply or delivery of something. A supplier sells equipment, materials, parts, raw materials, services, etc. that are required for business operation, project, or a product • In the context of Smart City, a supplier refers to an entity that provides Smart City-related services
30	Living lab	• Practicing of open innovation in a real-life setting. • Specifically, it refers to a series of activities, in which services or products are created through co-creation processes and repeated cycles of implementation and evaluation by users and providers as a form of experiment in their living environment, with the aim of finding solutions to complex social issues.
33	API (Application Programming Interface)	• Specifications for connection to call functions and managed data from other services and applications to use them in a certain service or application.
33	Silo information system	• This refers to a system that exists in isolation without being connected to other applications or services. A silo is a structure used for the storage of animal feeds etc., tall and straight in shape with no windows so that anyone inside one cannot see outside. • When there are separate silo information systems, it may not be possible to ensure data or application compatibility, potentially causing vendor lock-ins or cross-layer issues.

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36	IoT (Internet of Things)	• 'Internet of things'. The concept describes how a variety of physical objects such as cars, home appliances, robots and facilities are connected to the Internet and exchange information, which turns such objects into data and automates the objects in turn, creating new added value.
36	GIS (Geographic Information System)	• GIS (geographic information system) is defined as an 'information system that comprehensively processes geospatial information, recorded in electromagnetic form, on a digital map with computers to enable geographic understanding and analyses of geospatial information'. It refers to information systems technologies that allow data containing various pieces of positional information to be handled on computerized maps
36	Open data website	• An open data website is a website that catalogs public data for users to view and cross-search for free. Data is available in a machine-readable format, and secondary use, either for profit or nonprofit purposes, is allowed.
37	IT vendor	• A company that proposes or develops computer or networks systems and provides consulting services
37	Agile	• 'Agile' is an English word that means 'nimble' or 'quick-moving'. It refers to a software development approach to respond to any change to specification requirements etc. in a prompt and flexible manner. In the agile approach, developers assume that there will be changes to the specifications or designs, and repeat the process of adjustments and validations along the way
41	Vendor lock-in	• Vendor lock-in is a situation where a computer system is built in a manner that relies heavily on one manufacturer's products, systems or services, making it difficult for its users to switch to those by another company

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42	PoC (Proof of Concept) PoB (Proof of Business)	• A PoC is a process of validating whether or not a new technology, theory, principle, method, idea etc. will be feasible and produce the intended effects or efficacy • Once the core value of a service to be provided to customers has been identified in a PoC, a PoB follows to work out how to make the service profitable as business, and explore how to make it a customer experience worth paying for, building on the core value
45	Greenfield	• Greenfield refers to a new site development, where a vacant site, such as a landfill or former factory site, is turned into a new residential development. • Redevelopment of an existing residential site, on the other hand, is called 'brownfield'.
49	Ecosystem	• An 'ecological system' of business, in which a number of constituents such as businesses and customers work together through division of labor and collaboration, forming a relationship of co-existence and co-prosperity
50	Smart City reference architecture	• A common framework that serves as reference for those intending to create a smart city, in order to see what elements are required to create a smart city, and how individual elements are related to one another as well as to factors outside the smart city
51	PIA (Privacy Impact Assessment)	• An assessment of the privacy impact. The act of predicting the possibility of individual privacy and other rights / interests being invaded as well as the consequences of such invasion, analyzing the risk of such invasion and ensuring that measures have been taken to mitigate such risk.
56	Opt-in	• In general terms, opt-in is the act of giving permission, such as one given by a user to receiving certain information or to the use of information that concerns them • In the context of Smart City, it refers to a practice in which users are presented with what data is to be collected / utilized, for what purposes and by whom, and their consent is obtained before such data may be collected / utilized • Contrary to opt-in, the practice in which users are regarded as having given their consent to their personal information being provided to third parties unless they explicitly object is called opt-out.

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57	LPWA (Low Power Wide Area)	• A type of wireless telecommunication system designed to cover a wider area with lower power consumption and at lower cost compared to conventional systems • While the data rate ranges from kbps to several hundred kbps, which is slower than in cellular networks, LPWA saves energy as it can run for years or even decades on regular batteries, and has a wide operating range of a few kilometers and up to tens of kilometers
61	Starting small	• An approach to launching a new business in which the business is kept small at first with limited lineup of functionalities and services, then scaled up over time as demand grows
62	Crowdfunding	• Crowdfunding is a coined term that merges the words 'crowd' and 'funding'. It is the practice of 'raising funds through small contributions from a large number of people using the Internet'
62	PFS (Pay for Success) SIB (Social Impact Bond)	• PFS is a scheme, in which national or local governments outsource administrative services to private companies. In the scheme, performance indicators are set corresponding to administrative issues to be solved, and payments, etc. are linked to the improvement status of the performance indicators. • SIB is a type of PFS project for which the private companies raises capital from fund providers, who are to be repaid based on the payments made by the government for the project. • PFS and SIB are characterized by the system in which the public sector evaluates the outcome produced by the services that private companies have performed / delivered (i.e. the level of improvement made in solving the given social issue) using an objective set of indicators and makes payments based on it

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62	Corporate hometown tax	• The scheme under which a corporate tax filers who make donations to national government-approved regional revitalization projects is entitled to take a deduction from the corporate tax
64	BID (Business Improvement District)	• While there is no clear definition, a BID generally refers to a geographically defined, and often inner city, area that is maintained / managed, developed, and promoted using fees collected from the real estate owners and businesses • BIDs have their origin back to Canada in the 1970s, and have spread to the US, the UK and many other countries. There are some 2,000 BIDs globally. Using overseas BID schemes as models, Japan has launched the regional revitalization area management user's fee program, under the Local Revitalization Act which was revised in 2018.
70	Civic tech	• An abbreviation for civic technology • It refers to an initiative or approach in which citizens work to solve challenges faced by their community with the use of technology
78	Mashup	• Development of new content or service by combining different pieces of information and content from more than one source
80	Big data	• Large volumes of data that has become available as a result of ever-advancing digitalization, increasingly more advanced communications networks, and development in IoT thanks to smaller and cheaper IoT devices such as smartphones and sensors; big data includes location information and behavioral histories gathered on smartphones, information concerning Internet and television viewing / consumption behaviors, and vast amounts of data gathered on ever smaller devices such as sensors
85	Active broker	• The term is derived from the function to broker data access (i.e. data brokering) in a data platform. The operator of a data platform may be called a broker. • An active broker refers to a data platform operator that is actively engaging in data brokering.