

LeglOn-IDS Dictionary of Terms

This document describes the retrieved concepts from ISO standards, fostering the reuse (FAIR) of the ontology. The dictionary employs the general ISO database of terms, and one specific ISO, as follows:

- General
 - Online Browsing Platform (OBP): <https://www.iso.org/obp/ui>
- Specific
 - ISO/DIS 17442-1 Legal Entity Identifier (LEI) – Part 1: Assignment: <https://www.iso.org/obp/ui#iso:std:iso:17442:-1:ed-1:v1:en>
 - ISO/DIS 17442-2 Legal Entity Identifier (LEI) – Part 2: Application in Digital Certificates: <https://www.iso.org/obp/ui#iso:std:iso:17442:-2:ed-1:v1:en>
 - ISO/DIS 17442-3 Legal Entity Identifier (LEI) – Part 3: Verifiable LEIs: <https://www.iso.org/obp/ui#iso:std:iso:17442:-3:dis:ed-1:v1:en>
 - Legal Entity Identifier (LEI) – Part 4: Application in Digital Certificates:

For the terms not available in ISO standards, we provide a formal definition from authors, retrieved from the performed Systematic Literature Review. Finally, it has been observed the availability of synonyms in ISO terms for a few appearances, also following provided.

Color Mapping

ISO Definitions – Black.

Authors Definition/Literature Reference – Red.

Equivalent Concepts provided by ISO – Orange.

Dictionary

Action

1. series of insertions, deletions or retrievals of a collection of sentences in an information base or conceptual schema that changes them into a collection of sentences or that makes them known
2. an elementary action or a get action
3. something done or performed by a party or anyone acting on her behalf
4. a semantically identifiable behavior of an object or group of objects, for example, a soccer player kicking ball
5. an operation on an Asset (Iannella et al., 2018).

Asset

1. plant, machinery, property, buildings, vehicles, ships, aircraft, conveyances and other items of infrastructure or plant and related systems that have a distinct and quantifiable business function or service
2. anything that has value to an individual, an organization or a government
3. manifestation, i.e. physical or digital embodiment of an Expression
4. anything that has value to a stakeholder
5. an asset that exists only in digital form or which is the digital representation of another asset
6. a resource or a collection of resources that are the subject of a Rule (Iannella et al., 2018)
7. may be personal or non-personal data (Iannella et al., 2018).

Non-Personal-Data

1. class of data objects that does not contain personally identifiable information
2. data objects that were originally personally identifiable information and were later made anonymous are non-personal data
3. any digital element unable in any form to identify or relate to a natural person, e.g., machine sensor data (Duisberb, 2022).

Personal-Data

1. information relating to an identified or identifiable natural person
2. details of the personal or material circumstances of an identified or identifiable natural person
3. any information relating to an identified or identifiable natural person
4. information that relates to an identified or identifiable human being
5. any information relating to an identified or identifiable natural person; an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, on online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person (Duisberb, 2022).

Coherence

assessment between the two compared legislations (Adapted from European Commission, 2017).

Competition Law

the traditional tools of merger control have been expanded over the last few years, in order to capture and regulate scenarios where the market impact is less influenced by the mere size of the merging companies, but rather to also address situations where the focus of the contemplated transaction is on a data-rich target company with limited economic size considered by the traditional parameter (Otto et al., 2019).

Compliance

1. fulfillment of specified requirements
2. meeting or exceeding all applicable requirements of a standard or other published set of requirements
3. conformance to rules, such as those defined by law, a regulation, a standard, or a policy
4. continual fulfillment to internal and external requirements, rules, and regulations
5. any participant in an IDS-based data exchange must be aware and ensure to take the appropriate measures to act in compliance with applicable laws, in particular with mandatory rules of data protection law (GDPR) and rules of competition law (Griffo et al., 2021).

Contract Negotiation

1. (negotiation) the process and activities to resolving disputes through consultations between involved parties
2. when contracting parties interact for achieving mutual agreement (Griffo et al., 2021).

Contractual Party

(Interested Party) person or group concerned with or affected by the safety and environmental performance of the facility, including workers and subcontractors at the facility or at other works used by the facility, and the public at large/individual or group concerned with or affected by the environmental performance of a product system, or by the results of the life cycle assessment.

(Agent) person or legal entity (organization) involved in one or more Activities dealing with the processing of Digital Items or Components

Service Customer

1. a component that consumes or uses a Service provided by another component. A component may be a provider of some Services and a consumer of others 2. participant that utilizes at least one service 3. is the role played by agents when they become members of the target customer community, and, consequently, have claims for the fulfillment of the commitments established by the agent playing the role of service provider (Griffo et al., 2021).

Service Provider

1. a component that offers a Service to another by means of one of its Provided Service Interfaces 2. an organization that contracts to provide one or more service instances to a customer 3. is the role played by agents (e.g., physical agents such as persons, and social agents such as organizations) when these agents commit themselves to a target customer community by a set of offering commitments (Griffo et al., 2021).

Data Protection Law

refers to a specific law, or set of laws, regarding the usage, processing, and storage of personal and non-personal data, e.g., GDPR (Adapted from Otto et al., 2019).

Data Protection Need

refers to the requirement to ensure that the handling and processing of personal data comply with data protection laws and regulations in both legislations (Adapted from European Commission, 2017).

Governing Law

1. refers to the set (composed of the data protection law and competition law) of laws that regard a specific country (Adapted from Duisberg) 2. it is referred to as the legislation that enables the instantiation of a contract in IDS (Adapted from Otto et al., 2019).

Interoperability Barrier

1. incompatibility between entities within the enterprise that obstructs the exchange of information and other entities, the utilization of services or the common understanding of exchanged items 2. sectoral or geographical restrictions in the use and storage of data, different and vague data license models, over-restrictive obligations to use specific digital technologies or delivery modes to provide public services, contradictory requirements for the same or similar business processes, outdated security and data protection needs, etc. (European Commission, 2017).

Contradictory Requirement

ambiguous or subjective representations for the same or similar business process (European Commission, 2017).

Data License Model

different and vague data license models (European Commission, 2017).

Outdated Security

when in comparison, one side of the law is stated as outdated, adopting a commonsense comparison (Adapted from European Commission, 2017).

Over Restrictive Obligation

the result of an unbalanced comparison regarding the obligations in a specific set of policies – law (Adapted from European Commission, 2017).

Restriction

1. situation where the service does not meet the availability conditions specified in the service agreement 2. formal or informal obligation to refrain from doing something 3. a type definition whose declarations or facets are in a one-to-one relation with those of another specified type definition, but which restricts the possibilities of the type it corresponds to 4. sectoral or geographical restrictions in the use and storage of data (European Commission, 2017).

IDS Core Participant

Core Participants are involved and required every time data is exchanged in the International Data Spaces. Roles assigned to this category are Data Owner, Data Provider, Data Consumer, Data User, and App Provider. The role of a Core Participant can be assumed by any organization that owns, wants to provide, and/or wants to consume or use data (Otto et al., 2019).

App Provider

app Providers develop Data Apps to be used in the International Data Spaces (Otto et al., 2019).

Data Owner

1. designated curator for the community infrastructure data related to a city service 2. organization that is in the position to obtain, create, and have significant control over the content, access and distribution of data 3. person having responsibility and authority for the data 4. a legal entity or natural person creating data and/or executing control over it (Otto et al., 2019).

Data Provider

1. organization which produces data or reference metadata 2. individual or organization that is a source of data 3. individual or organization that is a source of data 4. the Data Provider makes data available for exchange between a Data Owner and a Data Consumer (Otto et al., 2019).

Data Consumer

1. to read data and then process it to the extent that lexical or coding boundaries are discovered 2. individual or organization that uses data as a starting point 3. the Data Consumer receives data from a Data Provider. From a business process modeling perspective, the Data Consumer is the mirror entity of the Data Provider (Otto et al., 2019).

Data User

1. party that is authorized to perform processing of data under the legal control of a data holder 2. Person involved in the application and interpretation of measured results to judge material or system performance 3. is the legal entity that has the legal right to use the data of a Data Owner as specified by the usage policy (Otto et al., 2019).

Interoperability Check

screening existing legislation to identify interoperability barriers (European Commission, 2017).

Legal Availability

the result of the interoperability checks between the compared governing laws. It is the amount of dynamization a governing law (referring to the adopted by a contract in IDS) may undergo within its negotiation – possible negotiation (Adapted from European Commission, 2017).

Legal Moment

describes the joint description from the concept of *legal positions*, which may be divided into those that rise from norms of conduct and those that arise from norms of power. And the concept

of a *moment* from a UFO perspective, which complies with an existentially dependent entity from its bearer. Hence, a legal moment may be defined as a legal position that is existentially dependent on its bearer. Legal moments are related to each other by a correlation and are essential and inseparable parts of a legal relator (Adapted from Griffo et al., 2021).

Legal Entitlement

1. the provenance of a positive inquisition (Adapted from SCO) 2. legal positions that imply some advantage (Griffo et al., 2021).

Immunity

1. degree to which a product or system is resistant to attack 2. ability of a device, equipment or system to perform without degradation in the presence of an electromagnetic disturbance 3. the converse position of a disability (Griffo et al., 2018).

Power

1. the time rate of doing work 2. the exercise of a power is an institutional action, which gives liberty and the ability to act to a power holder (Griffo et al., 2021).

Right

1. ability of performing one or more functions over IP entities as a consequence of ownership or permissions 2. ability of a user to perform an operation in the multimedia value chain 3. privilege or benefit granted by a software entitlement 4. a right in this precise or 'narrow' sense is a legal position in which one may demand from another the performance of a certain conduct (Griffo et al., 2018).

Legal Burden / Lack

1. (Burden) a deontic token encapsulating the statement of an obligation on the active enterprise object holding it, thereby modifying the urgency of the active enterprise object in performing associated conditional actions within its behavior 2. the provenance of a negative inquisition (Adapted from SCO) 3. Legal positions that imply some legal burden or lack of entitlement (Griffo et al., 2021).

Disability

1. any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being 2. a subject a has, in the face of subject b, no power to create, change, or extinguish a legal position X for subject b by means of institutional actions (Griffo et al., 2018).

No Right

lack of right and may be specialized into no right to an action or no right to an omission (Griffo et al., 2021).

Subjection

if a has power against subject b, b is in a subjection position towards a (subjection is also called liability) (Griffo et al., 2021).

Policy

1. set of legal, political, organizational, functional and technical obligations for communication and cooperation 2. set of rules related to a particular purpose 3. greed intentions and direction for performing a service as formally expressed by the technical management board 4. set of rules related to a particular purpose 2. a group of one or more Rules (Iannella et al., 2018).

Policy Negotiation

1. (negotiation) the process and activities to resolving disputes through consultations between involved parties 2. once the concept of *service contract* is a non-empty set of policies, the process of negotiation those specific policies is a mandatory step, and consists on analyzing and resolving disputes between the contractual parties (Adapted from Griffo et al., 2021).

Processing Purpose

1. high-level objective of performing the process and the likely outcomes of effective implementation of the process 2. type of relationship between the data provider and data consumer, i.e., (1) whether the data consumer processes data as a new controller for its own purposes or (2) whether it is processing personal data together with the data controller for jointly defined purposes (i.e., acting as joint controllers) (Duisberb, 2022).

Own Purpose

characterizes a scenario in which the data consumer processes data as a new controller, for its own purpose (Duisberb, 2022).

Joint controller

characterizes a scenario in which the data consumer processes data together with the data controller (data owner-service provider), for jointly defined purposes (Duisberb, 2022).

Rule

1. principle guiding the behavior of some aspect of a form 2. an element that holds check references and may also hold remediation information 3. resource that implements autonomous decision logic according to a condition-action pattern 4. accepted principle or instruction that states the organization's expectations on what is required to be done, what is allowed or not allowed 5. a rule can be expressed as an obligation, an authorization, a permission or a prohibition

6. an abstract concept that represents the common characteristics of Permissions, Prohibitions, and Duties (Iannella et al., 2018).

Duty

1. obligation or expectation to perform a specific action when certain circumstances occur 2. the obligation to exercise an agreed Action (Iannella et al., 2018).

Permission

1. deontic expression allowing one of the parties to execute an action 2. set of rules which describe what a user or group of users may access or control within an AIM system 3. granted capability to perform an action 4. the ability to exercise an Action over an Asset (Iannella et al., 2018).

Prohibition

1. deontic expression binding one of the parties not to execute an action 2. prescription that a particular behavior shall not occur 3. prescription that a particular behavior must not occur 4. the inability to exercise an Action over an Asset (Iannella et al., 2018).

Service Contract

1. terms, conditions, and interaction rules that interacting service consumers and service providers agree to (directly or indirectly) 2. a service contract is binding on all participants in the interaction, including the service itself and the element that provides it for the particular interaction in question 3. service interface with constraints and policies 4. a service contract is an arrangement between two or more parties whose purpose is to produce juridical effects, i.e., to create, extinguish, modify, transfer, or maintain legal positions (Griffo et al., 2021).

Type of Contract

arrangements that data licensing transactions can follow. In simplified terms, the key distinctions that any data provider must consider are around the nature of the transaction, i.e., whether he/she intends to grant (1) perpetual or temporary, (2) exclusive or non-exclusive, and (3) royalty-free or paid-up usage rights—and in which combination of each of these aspects (Duisberb, 2022).

Data As a Service

1. delivery of appropriately configured virtual storage and related data services over a network, based on a request for a given service level 2. implies temporary (exclusive or non-exclusive) usage rights in data (comparable to a rental model) (Duisberb, 2022).

Data Purchase

implies perpetual (exclusive or non-exclusive) usage rights against a one-time remuneration (Duisberb, 2022).

Usage Right

a non-empty set of policies especially describing data usage capabilities (Adapted from Duisberb, 2022).

Usage Consent

1. (consent) voluntary agreement with what is being done or proposed 2. any freely given specific and informed indication of his wishes by which the data subject signifies his agreement to personal data relating to him being processed 4. form of authorization, provided by the individual 5. refers to the consent on compliance with the contractual agreement (Adapted from Otto et al., 2019).

References

ODRL Vocabulary & Expression 2.2. Renato Iannella; Michael Steidl; Stuart Myles; Víctor Rodríguez-Doncel. W3C. 15 February 2018. W3C Recommendation. URL: <https://www.w3.org/TR/odrl-vocab/>.

European Commission, Directorate-General for Digital Services, New European interoperability framework – Promoting seamless services and data flows for European public administrations, Publications Office, 2017, <https://data.europa.eu/doi/10.2799/78681>

Duisberg A. Legal Aspects of IDS: Data Sovereignty—What Does It Imply? In: Otto B, ten Hompel M, Wrobel S, editors. Designing Data Spaces : The Ecosystem Approach to Competitive Advantage. Cham: Springer International Publishing; 2022. p. 61-90. Available from: https://doi.org/10.1007/978-3-030-93975-5_5.

Griffo C, Guizzardi G, Almeida J. Conceptual Modeling of Legal Relations; 2018.

Griffo C, Almeida JPA, Guizzardi G, Nardi JC. Service contract modeling in Enterprise Architecture: An ontology-based approach. Information Systems. 2021 Nov;101:101454. Available from: <https://www.sciencedirect.com/science/article/pii/S030643791930506X>.

Otto B, Steinbuß S, Teuscher A, Lohmann S. Reference architecture model—International data spaces (Version 3.0); 2019. International Data Spaces Association. URL: <https://internationaldataspaces.org/offers/reference-architecture/>.