Data spaces are where sovereign data exchange happens
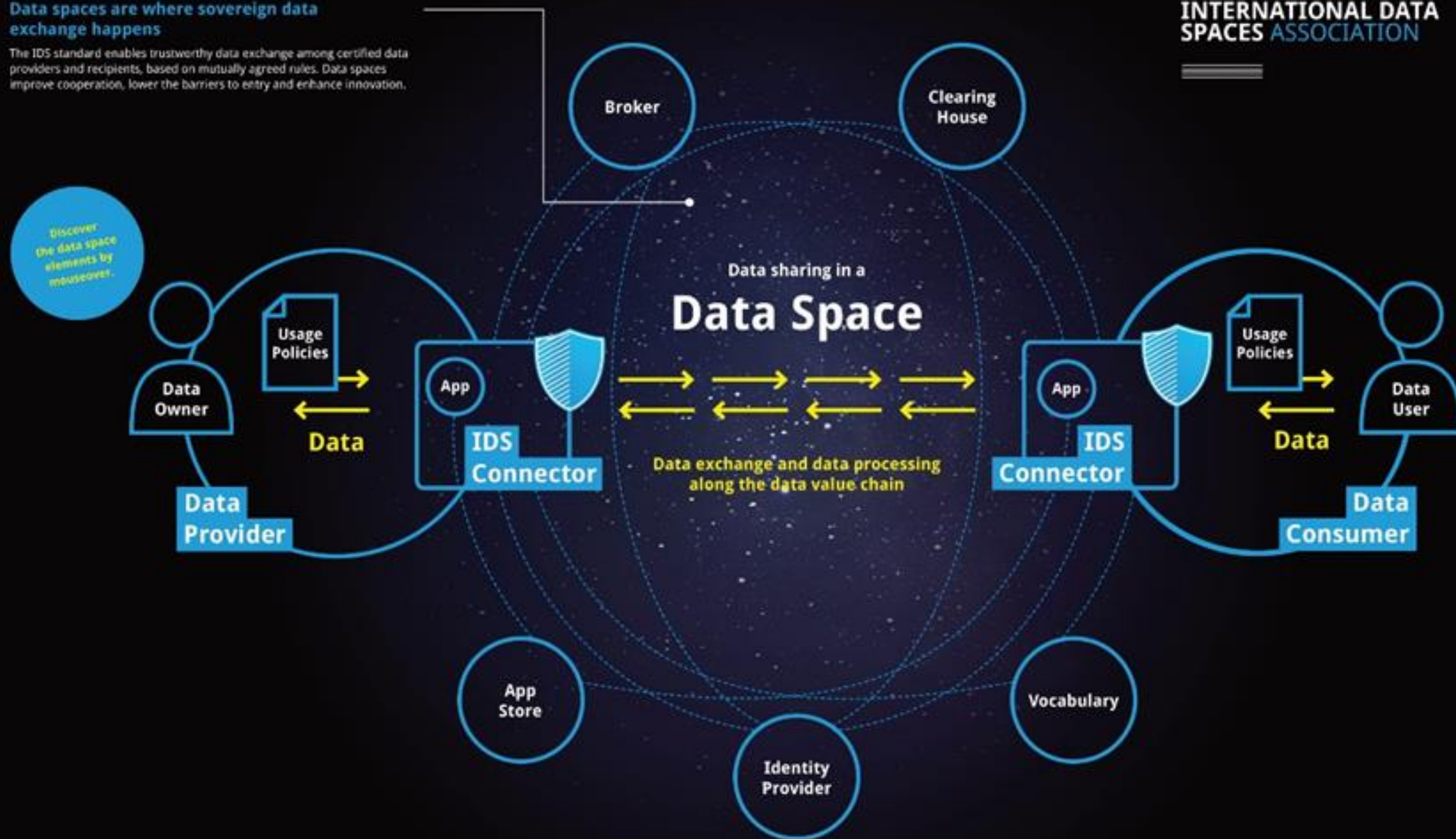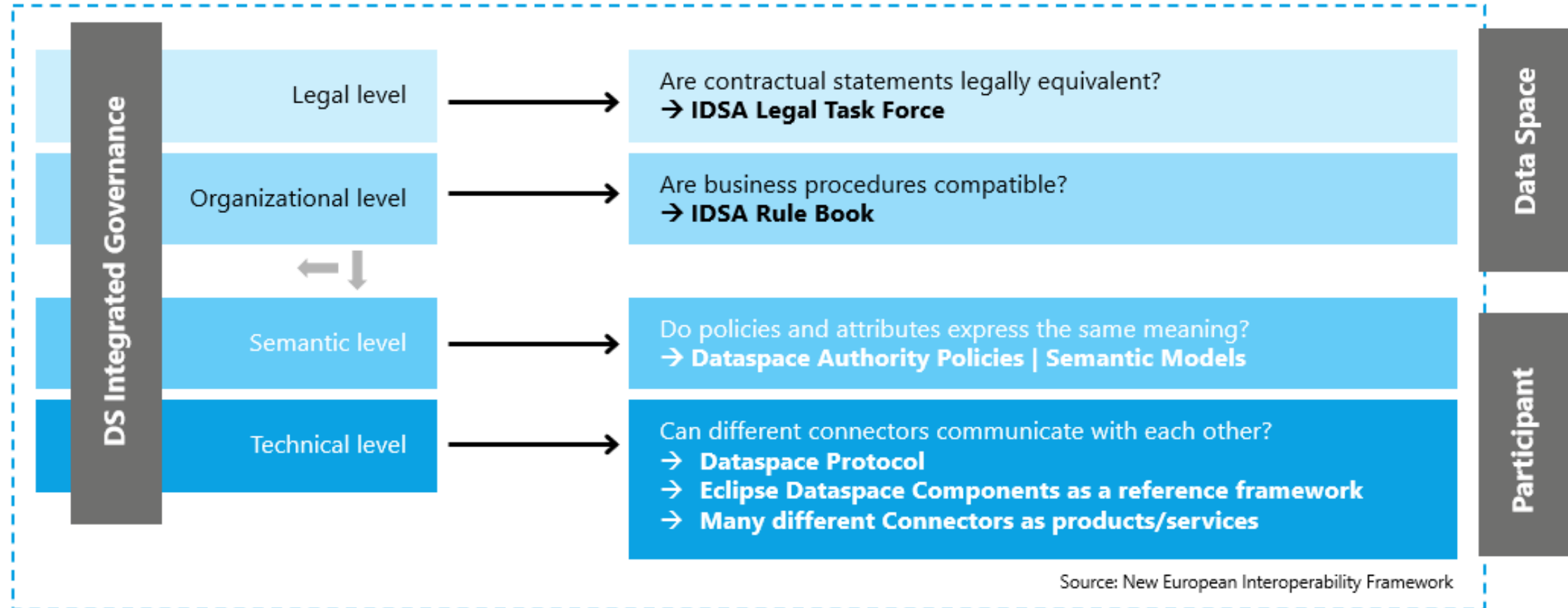
The IDS standard enables trustworthy data exchange among certified data providers and recipients, based on mutually agreed rules. Data spaces improve cooperation, lower the barriers to entry and enhance innovation.

INTERNATIONAL DATA SPACES ASSOCIATION

Broker

Clearing House

Discover the data space elements by mouseover.

Data Owner

Usage Policies

Data

Data Provider

App

IDS Connector

Data sharing in a

Data Space

Data exchange and data processing along the data value chain

App

IDS Connector

Usage Policies

Data

Data User

Data Consumer

App Store

Identity Provider

Vocabulary

Layered model for interoperability

DS Integrated Governance	Legal level	→	Are contractual statements legally equivalent? → **IDSA Legal Task Force**	Data Space
	Organizational level	→	Are business procedures compatible? → **IDSA Rule Book**	
	Semantic level	→	Do policies and attributes express the same meaning? → **Dataspace Authority Policies | Semantic Models**	Participant
	Technical level	→	Can different connectors communicate with each other? → **Dataspace Protocol** → **Eclipse Dataspace Components as a reference framework** → **Many different Connectors as products/services**	

Source: New European Interoperability Framework

Interoperability on International Scale

Aligning different perspectives

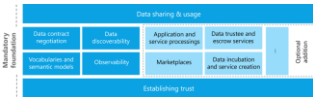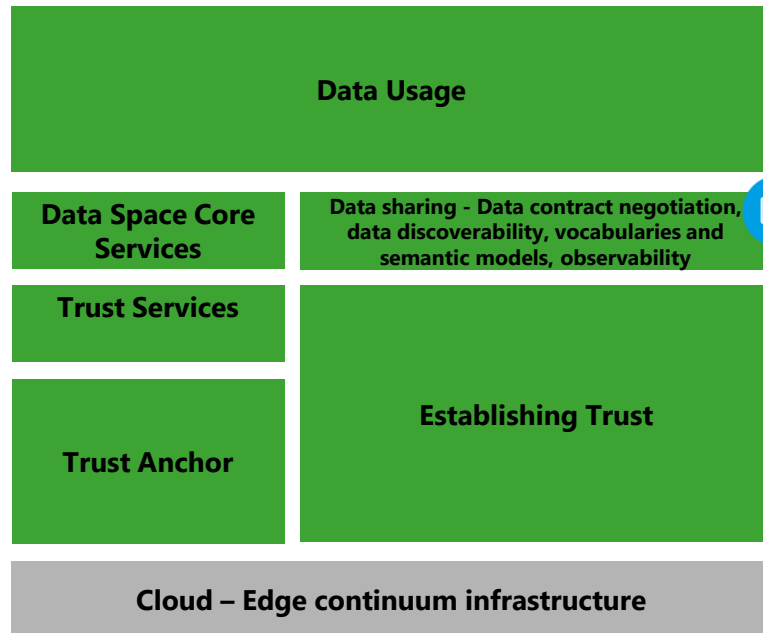| Legal Perspective	Data Free Flow with Trust	Data Spaces view, IDSA Rulebook		Concrete Implementations (examples, non-exhaustive)	
Private Trust Private Rules	**Trust Application Service**	**Data Usage**		Offerings from data space participants creating value, applications	
	Trust Data Distribution	**Data Space Core Services**	Data sharing - Data contract negotiation, data discoverability, vocabularies and semantic models, observability	CADDE, EDC, etc.	Catena-X, MDS, DATA-EX, Base Camp, etc.
		Trust Services		SIMPL, GXDCH, iSHARE Framework, etc.	
Public Trust Law	**Trust Service Infrastructure**	**Trust Anchor**	**Establishing Trust**	CA for eSeals, eIDAS, X.509, DID, etc.	

Cloud – Edge continuum infrastructure

Interoperability on International Scale

Data sharing between different data spaces (x-domains, x-countries)

Data Space 1

According the usage policies and checking the trust framework, the data space connector decides: ***data exchange yes or no***

Data Space 2

Data Usage

Data Space Core Services

Data sharing - Data contract negotiation, data discoverability, vocabularies and semantic models, observability

Trust Services

Trust Anchor

Establishing Trust

Cloud – Edge continuum infrastructure

Dataspace Protocol

Decentralized Claims Protocol

International Mutual Recognition of trust anchors

Security, hardware trust

Usage policies

Data Usage

Data Space Core Services

Data sharing - Data contract negotiation, data discoverability, vocabularies and semantic models, observability

Trust Services

Credentials

Digital Identity

Trust Anchor

Establishing Trust

Cloud – Edge continuum infrastructure