



Engaging Content
Engaging People

GDPR Data Interoperability Model

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International reach: data about any EU citizen



Fines upto €20M or 4% of global turnover



Must Demonstrate compliance



Processing lawful only through Informed Consent

Right to:

Information “concise, transparent, intelligible and easily accessible”

Make a subject access request

Rectification

Erasure

Data portability

Restrict access

Object to processing

Be inform who receives data



Role of entities



Information flows



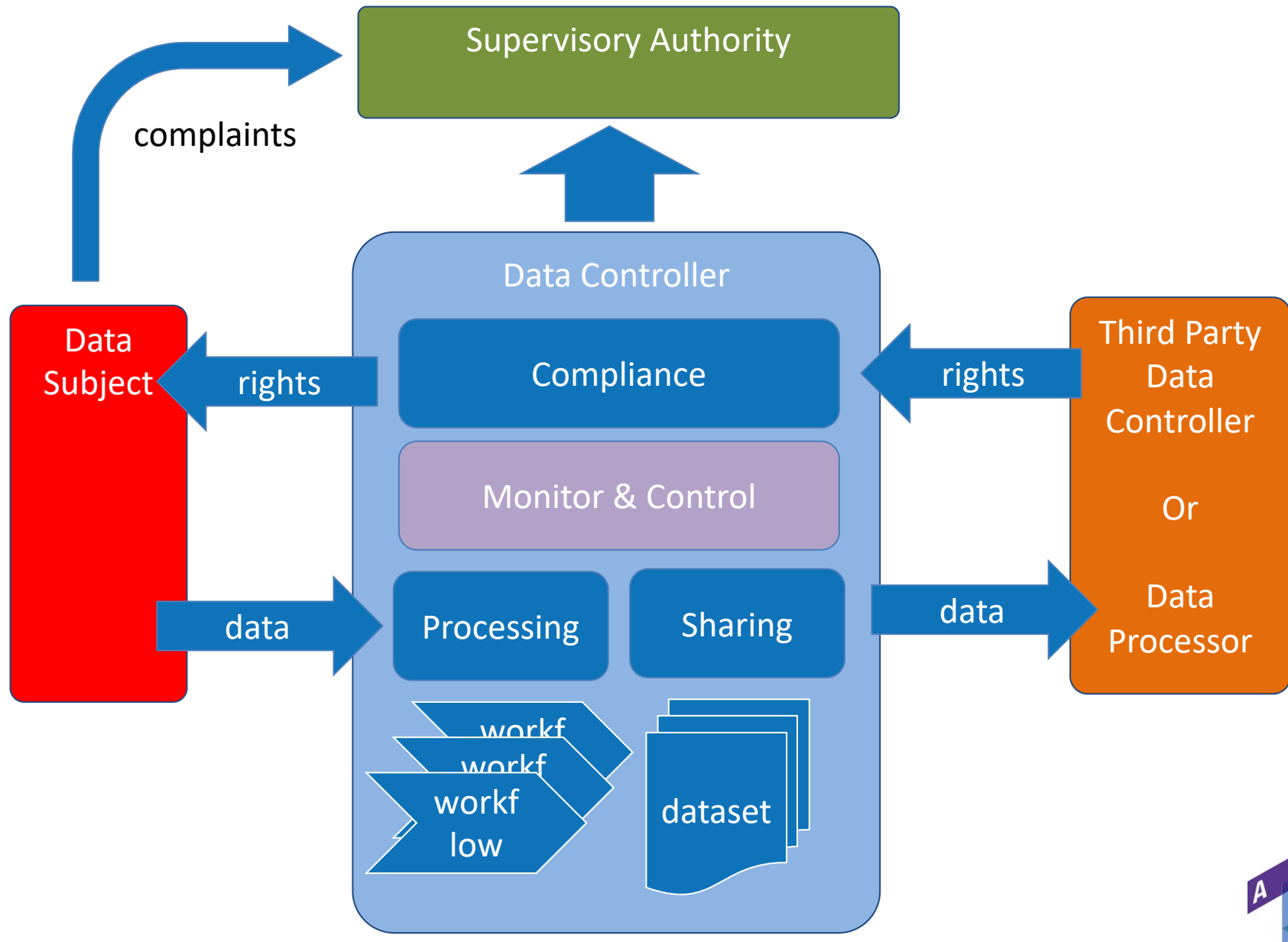
Interoperability reference
points



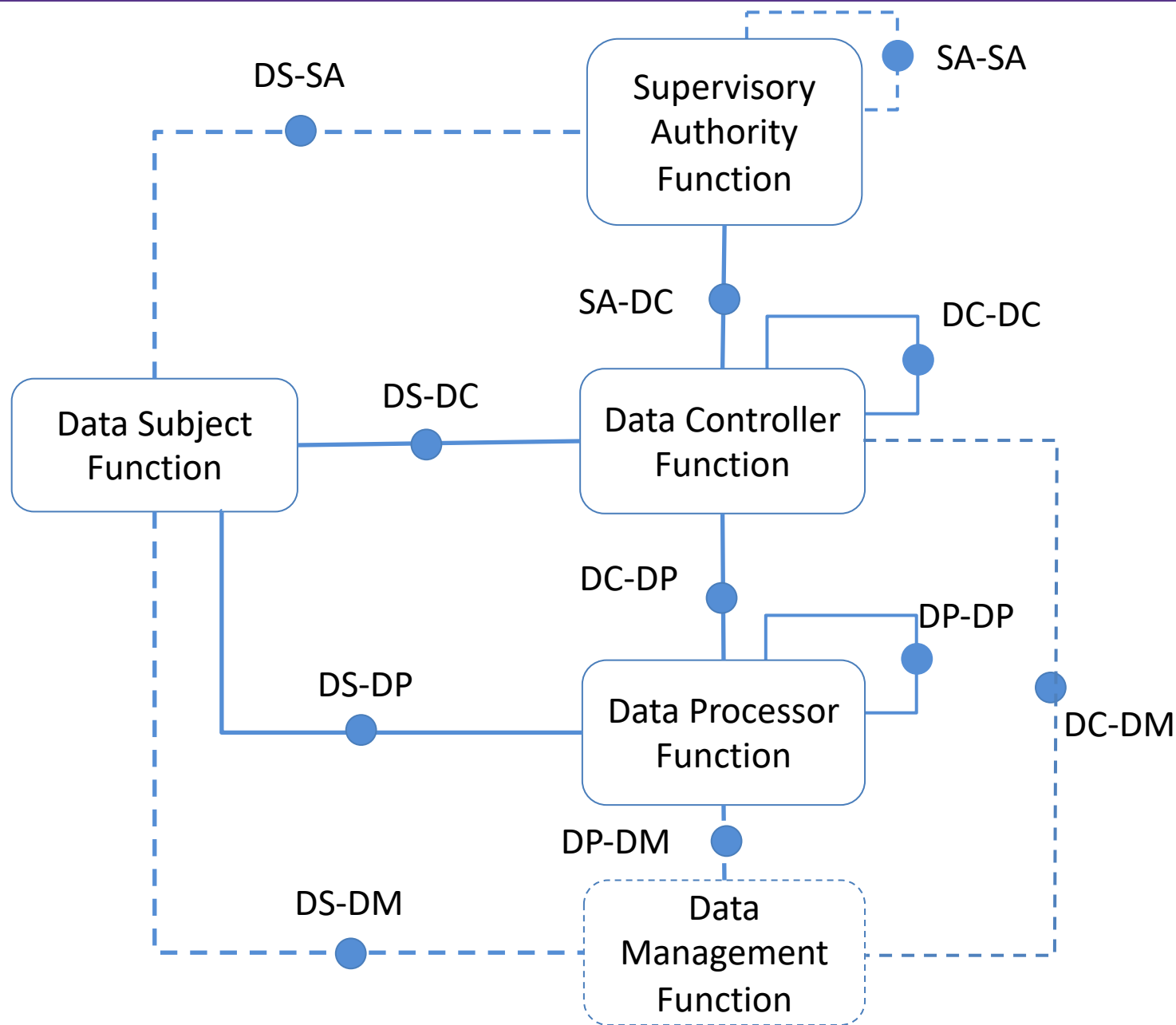
Major data categories



Map into Open Data models



GDPR Data Interoperability Reference Model



Entities

DS - Data Subject

DC - Data Controller

DP – Data Processor

SA – Supervisory
Authority

Interaction Type

REQ(quirement)

PROC(ess)

DATA

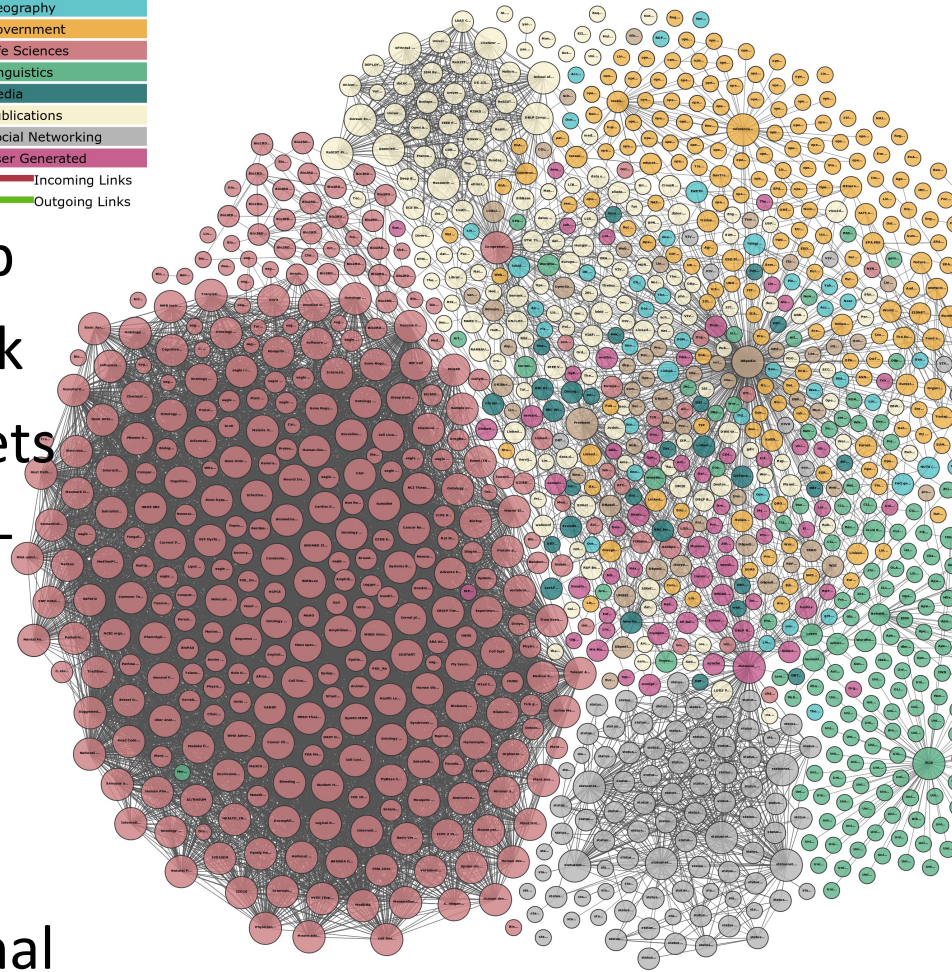
FORMAT

Category	DS	DC	DP	SA
Provenance	--	Maintain	Maintain	Inspect
Agreements	--	With DC and DP	With DC and DP	Inspect
Consent	Provide	Ask for consent	--	Inspect
Certification	--	Audit	Audit	Provision
Compliance	--	Ongoing, Demonstrate, Check (DP)	Ongoing, Demonstrate (SA and DC)	Check

Table 2. Describing the relation between information categories and entities

W3C Open Data

- Open Data Standard for the Web
- Resource Description Framework
- Wide Adoption for Public Datasets
- Conservative in standardisation - horizontal vocabularies
- Liberal in community-driven development, extension and interlinking of data vocabularies
- Enterprise Linked Data for internal knowledge graphs

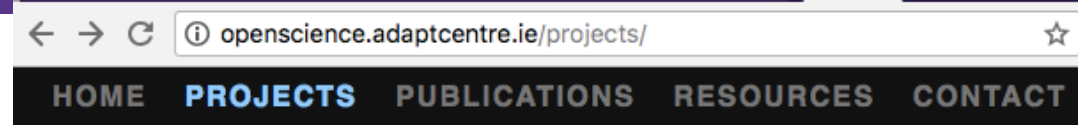


<https://lod-cloud.net/>



- Linkable RDF version of GDPR Text
- Consent Lifecycle Model
- Provenance Ontology Profile for GDPR compliance logging
- Data Protection Profile of Open Digital Rights Language
- Traceability extendable to: decisions, policies, guidance, Privacy Seal requirements
- RDF as a common format process and data models – R2RML for uplift
- SPARQL Queries and SHACL Constraints for compliance checks

<https://openscience.adaptcentre.ie/projects>



projects

Consent & Data Management Framework for GDPR Compliance

[project page](#)

This project contains:

[GDPRtEXT resource and ontology](#)

[GDPRov ontology](#)

[Data Protection Rights Language](#)

[Consent ontology](#)

[GDPR Interoperability Model](#)

Applications:

[GDPR readiness checklist](#)



- Sufficient motivation for concerted efforts on GDPR interoperability
- Initial Framework for Interoperability Reference Points for GDPR compliance processes
- Focus on meta-data rather than the actual personal data
- Propose an open data approach – leverages existing open standards for provenance, cataloguing, queries, constraints, deontic rules
- Initiated an open science approach to fine-grained tracking of proposals against GDPR provisions and other regulatory/policy sources
- Future Work:
 - Alignment with emerging open data research on data quality and data value
 - Standardisation avenues: W3C community group, ISO/IEC JTC1 SC42 “Trustworthy AI” study group

