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Strandardization for the Data Act

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What is the Data Act

- The context is the European strategy for data [COM(2020) 66 final](#)
  - aims to govern new technologies and create business opportunities,
  - while respecting fairness and the EU fundamental rights

- The Data Act is an EC proposal for a EU Regulation on harmonised rules on fair access to and use of data ([COM(2022) 68 final](#))

- The goal is to ensure fairness in the allocation of data value among the actors of the Data Economy

- Leverage on the development of common European data spaces and aims to ensure their interoperability

Issues with access to data in practice

Company owning a factory robot wants to send its data to an external data analytics company to improve performance.

But: The data from the robot are sent to the robot producer exclusively.

Smart dishwasher owner wants to share its data with a repair service provider.

But: Only the dishwasher manufacturer can access the data.

Car driver wants the repair technician to remotely check the cause of a dashboard warning. The technician needs to access the vehicle's data.

But: The data on car manufacturer's server are not granular enough, with limited frequency and high latency.

Ministry of Health needs dynamic population data from telecom providers to implement targeted anti-pandemic measures.

But: No mechanism in place other than purchasing data on a commercial basis.

Credits: European Commission

Key concepts requiring standardization in the Data Act

- Requirements to ensure interoperability between Data Spaces

- Interoperability for data processing services

- Requirements for smart contracts, introduced as possible appropriate technical means to ensure compliance with rights and obligations of the data holder and third parties

Requirements on standards in the Data Act proposal
Article 28: Essential requirements regarding interoperability

- Operators of data spaces shall comply with the following essential requirements to facilitate interoperability of data, data sharing mechanisms and services:
    - the dataset content, use restrictions, licences, …
    - the data structures, data formats, vocabularies, …, code lists …
    - the technical means to access the data, …
    - the means to enable the interoperability of smart contracts …
- Operators of data spaces that meet the harmonised standards … shall be presumed to be in conformity

Requirements on standards in the Data Act proposal
Article 29: Interoperability for data processing services

- Open interoperability specifications and European standards for the interoperability of data processing services goals:
  - … achieving interoperability between different data processing services …
  - enhance portability of digital assets …
  - … functional equivalence between different data processing services…
  - Address cloud interoperability, portability and application aspects of transport, syntax, semantic, behaviour, application metadata, policy, etc

Requirements on standards in the Data Act proposal
Policy and security requirements for electronic ledger trust services

From the Data Act definitions:

- *'smart contract' means a computer program stored in an electronic ledger system wherein the outcome of the execution of the program is recorded on the electronic ledger*
    - Very close to the definition in ISO 22739:2020 "Blockchain and distributed ledger technologies — Vocabulary" but based on "electronic ledger"

- *'electronic ledger' means an electronic ledger within the meaning of Article 3, point (53), of Regulation (EU) No 910/2014*
    - The definition is from the proposed revision of the eIDAS Regulation (eIDAS2)

eIDAS2 introduces a new electronic ledger trust service, therefore standardization is needed to specify its policy and security requirements

Requirements on standards in the Data Act proposal
Article 30: Essential requirements regarding smart contracts for data sharing

- The vendor of an application using smart contracts or the person that deploys smart contracts for others in the context of an agreement to make data available shall comply with the following essential requirements:
    - robustness: … ;
    - safe termination and interruption: … ;
    - data archiving and continuity: … (auditability); and
    - access control: … .
- The vendor or the person above shall perform a conformity assessment with a view to fulfilling the essential requirements and shall be responsible for compliance with the requirements

In conclusion...

- The data act strongly relies on standardization to create a data sharing ecosystem
- Benefits form the general policy measures that are part of the European strategy for data (and their standards):
  - Regulation (EU) 2016/679 - GDPR
  - Regulation (EU) 2018/1807 - free flow of non-personal data
  - Regulation (EU) 2019/881 - Cybersecurity Act
  - Regulation (EU) 2022/868 - Data Governance Act
  - Directive (EU) 2019/1024 - open data and re-use of public sector information