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Bitkom Policy Brief

Standardisation tools
in the Data Act Proposal

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Content

Even though it plays an important role in the implementation of the Data Act, standardisation is often overseen or left behind in Data Act discussions given its complexity and perceived technicality. Too little standardisation prohibits efficiency gains, while too much standardisation can make innovation and differentiation much harder.

Against that background, if done right, standards can simplify compliance with legal requirements, market access, enhance the functioning of the EU single market, and make space for new innovations. Thus, this policy paper:

1. Describes the goal of the Data Act Proposal regarding Data Processing Services;

2. Explains how this links to various standardisation tools and procedural steps;

3. Discusses relevant standardisation tools and procedural steps against the background of the Data Act and the EU standardisation legislation including:

   ▪ Open interoperability specifications,

   ▪ European standards ,

   ▪ Harmonised standards,

   ▪ Common specifications,

   ▪ Standardisation requests.

4. Contextualizes this with current debates around EU standardisation policy;

5. Evaluates the different standardisation tools if there is a need for them:

   ▪ The use of harmonised standards on interoperability is welcomed by Bitkom.

   ▪ The use of technical interoperability specifications is welcomed by Bitkom as well.

   ▪ The subsidiary use of common specifications is not welcomed.

6. Offers advice on how to proceed in the overall standardisation posture and the Data Act in particular.

1 Data Processing Services & Goal of Data Act

A Data Processing Service in the Data Act Proposal (the "Proposal") is defined in Art. 2 (12) as:

> "*a digital service other than an online content service as defined in Article 2(5) of Regulation (EU) 2017/1128, provided to a customer, which enables on-demand administration and broad remote access to a scalable and elastic pool of shareable computing resources of a centralised, distributed or highly distributed nature*"

With respect to data processing services, the Proposal intends to:

- facilitate switching between data processing services
- in order to enable a seamless multi-vendor cloud environment, a key requirement for a sovereign, innovative EU data economy on a level-playing field
- in order to make more data available and thus foster data-driven innovation and Europe's welfare.

To do this, the Proposal intends to:

- set regulatory obligations on providers of data processing services to eliminate contractual, economic, and technical barriers to effective switching between data processing services
- achieve this goal with legal obligations (Chapter 6) and standardisation tools (Chapter 8).

Not related to Data Processing Services, but to standardisation tools, is Article 30 that addresses smart contracts. Smart contracts are defined in Art. 2 (16) as

> "*computer programs stored in an electronic ledger system wherein the outcome of the execution of the program is recorded on the electronic ledger*".

2 Standardisation tools in the Proposal

2.1 General

The general legal nature of standards is voluntary. European harmonisation legislation often refers to standard to specify the technical details of basic requirements, e.g., for safety, interoperability, health and/or environmental protection. In EU harmonisation legislation following the principle of the New Legislative Framework (NLF), the European Commission will issue standardization requests to the European Standardization Organization for the development of respective European standards. *Harmonised* European standards developed under these requests will be listed in the Official Journal of the EU and thus unfold the presumption of conformity, meaning that compliance with the listed harmonised European standards is presumed to satisfy the associated requirements of the respective (parts of the) legislative act.

The Data Act Proposal refers to [Regulation (EU) 1025/2012](#), which sets framework conditions for European Standardization and the cooperation between the European Standards Organizations and the European Commission. In particular, the Data Act Proposal mentions:

- open interoperability specifications
- harmonised EU standards developed in accordance with Regulation (EU) 1025/2012,
- EU standards developed in accordance with Regulation (EU) 1025/2012,
- common specifications.

Generally, complying with a respective standardisation tool can be a simpler and more efficient way to suggest compliance with a given legal requirement.

Against this background, it is important to mention the recent [2022 EU standardisation strategy](#), which might effect current and future standardisation activities.

2.2 Relevant chapters

Chapter 6

Chapter 6 introduces minimum regulatory requirements of contractual, commercial, and technical nature, imposed on **providers** of cloud, edge and other data processing services, (i.e., data processing services) to enable switching between such services. The Proposal contains an exception for technical unfeasibility but puts the burden of proof in this regard on the provider.

Chapter 8

Chapter 8 provides for essential requirements to be complied with regarding interoperability for **operators of data spaces** and **data processing services** as well as essential requirements for **vendors of smart contracts**[1].

Chapter 8 enables **open interoperability specifications** and **European standards** for the interoperability of **data processing services** to promote a seamless multi-vendor cloud environment (Art. 29).

Chapter 8 provides for **essential requirements** regarding the interoperability of **data spaces** (Art. 28) and for smart contracts for data sharing (Art. 30). Harmonised standards shall be adopted for **operators of data spaces** and **vendors of smart contracts** (with presumption of conformity). **Common specifications** shall be adopted by the EU Commission for **operators of data spaces** and/or **vendors of smart contracts** in case harmonised standards do not exist or where they are insufficient.

Chapter 11

Chapter 11 provides for the committee procedure to adopt implementing acts to facilitate the adoption of common specifications for interoperability and smart contracts, where harmonised standards a) do not exist or b) are insufficient to ensure the conformity with essential requirements.

3   Interoperability standards

In detail, the Proposal provides for the following standardisation tools:

3.1   Open interoperability specifications

- **Target:**
- Art. 26 (3) states that certain data processing services – not covered by Art. 26 (1) (i.e., roughly not IaaS) – shall ensure compatibility with open interoperability specifications that are identified in accordance with Art. 29 (5)
- **Substance Requirements:**
- Interoperability is defined in Art. 2 (19) as "*the ability of two or more data spaces or communication networks, systems, products, applications or components to exchange and use data in order to perform their functions*".

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[1] 1 „*The vendor of an application using smart contracts or, in the absence thereof, the person whose trade, business or profession involves the deployment of smart contracts for others in the context of an agreement to make data available [...]*". In the following, we use the term *vendor of smart contracts* for the sake of simplicity.

- Art. 29 (1) sets out requirements for open interoperability specifications (performance oriented; enhance digital assets portability; and guaranteeing, where technically feasible, functional equivalence between different data processing services that cover the same service type).

- "digital asset" is not directly defined in the Proposal but only indirectly in recital (72) as *"elements in digital format for which the customer has the right of use, including data, applications, virtual machines and other manifestations of virtualisation technologies, such as containers"*, which in our opinion could mean **almost everything a customer of a data processing service is directly or indirectly using or consuming.**

- Art 29 (2)(a)-(c) specify the three areas the open interoperability specifications shall address:
  - cloud interoperability
  - cloud data portability
  - cloud application portability

- **Process Requirements:**

- Defined in Art. 2 (15) as *"ICT technical specifications, as defined in Regulation (EU) No 1025/2012, which are performance oriented towards achieving interoperability between data processing services"*.

- Regulation (EU) 1025/2012 Annex II sets out the requirements, which ICT technical specifications must meet:
  - para 1 contains requirements on market acceptance and absence of frictions with other EU or international standards,
  - para 2 contains requirements for coherency,
  - para 3 mandates non-profit orientation of the body producing a technical specification, as well as rules regarding openness, consensus, and transparency,
  - para 4 contains further requirements, that are maintenance ('up-to-date'), availability, FRAND license of IP rights if applicable, relevance, neutrality and stability, and quality.

- However, Art. 29 (3) only requires compliance with paragraphs 3 and 4 but not paragraphs 1 or 2 of Regulation (EU) 1025/2012 Annex II.

- According to Art. 29 (5), the EU Commission is empowered to adopt delegated acts to publish them in central EU standards repository in accordance with Art. 38.

- **Drafted by whom:**

- These specifications do not necessarily have to be adopted from an EU standardisation organization and, hence, may come from ISO/IEC/IEEE/ANSI/DIN/etc.

- **Presumption of conformity:**

- Does not seem to apply.

3.2 European standards

- **Target:**

- Art. 26 (3) states that certain data processing services – not covered by Art. 26 (1) (i.e., roughly not IaaS) shall ensure compatibility with European standards that are identified in accordance with Art. 29 (5).

- **Substance Requirements:**

- Interoperability is defined in Art. 2 (19) as "*the ability of two or more data spaces or communication networks, systems, products, applications or components to exchange and use data in order to perform their functions*".

- Art. 29 (1) and (2) set out essential requirements for European standards for the interoperability of data processing services (performance oriented; enhance digital asset portability; and guaranteeing, where technically feasible, functional equivalence between different data processing services that cover the same service type) for (roughly) Non-Iaas-Data Processing Services.

- **Process Requirements:**

- Nomenclature: All harmonised standards are European standards, but not all European standards are harmonized standards.

- This is an undefined term in the Proposal (c.f. Art. 2). Given the fact that (i) Art 2(20) refers to Regulation (EU) 1025/2021 for a definition of "harmonized standard" and that (ii) Art 2(1)(b) includes a definition of the term "European standard" we may (quite safely?) assume that the EU Commission wants to be consistent here and use the Art 2(1)(b) definition, which is the following:

- According to Art 2(1)(b) Regulation (EU) 1025/2021, "European standard" means "a standard adopted by a European standardisation organisation".

- The EU Commission may issue standardisation request as per Art 29(4). However, existing European standards would also be suitable, for which no standardisation request would be needed.

- EU standardisation organization(s) accept(s) standardization request – if needed develop(s) – and adopt(s) the harmonised standard.

- According to Art. 29 (5), the EU Commission is empowered to adopt delegated acts to publish them in central EU standards repository in accordance with Art. 38.

- **Drafted by whom:**

- European standards could be formulated by anyone (e.g., CEN/CENELEC/ETSI/ISO/IEC/IEEE/ANSI/3GPP/DIN/ÖNORM).

- It is necessary that such standards are then adopted by a European standardisation organisation (i.e., CEN, CENELEC and/or ETSI).

- **Presumption of conformity:**

- Does not seem to apply.

3.3 Harmonised standards

- **Target:**
- Art. 28 (1) operators of data spaces shall follow essential requirements.
- Art. 30 (4) smart contracts shall comply with the essential requirements.
- **Substance Requirements:**
- Art. 28 (1) sets out essential requirements for harmonised standards for operators of data spaces.
- Art. 30 (1) sets out essential requirements for common specifications for vendors[2] of smart contracts.
- **Process Requirements:**
- Nomenclature: All harmonised standards are European standards, but not all European standards are harmonized standards.
- Art. 2 (20) refers to Art. 2, point (1)(c), of Regulation (EU) No 1025/2012, where harmonised standard is defined as a "*European standard adopted by a European standardisation organization on the basis of a request made by the Commission for the application of Union harmonisation legislation*".
- EU standardisation organization(s) accept(s) standardization request – if needed develop(s) – and adopt(s) the harmonised standard.
- The EU Commission publishes reference to harmonised standard in the OJUE, thus evoking presumption of conformity.
- **Drafted by whom:**
- European standards could be formulated by anyone (e.g., CEN/CENELEC/ETSI/ISO/IEC/IEEE/ANSI/3GPP/DIN/ÖNORM).
- It is necessary that such standards are then adopted by a European standardisation organisation (i.e., CEN, CENELEC and/or ETSI).
- **Presumption of conformity:**
- For operators of data spaces, according to Art. 28 (3), if standards are published in OJEU are met, there is a presumption of conformity with the regulation to the extent those standards or parts thereof cover those requirements and given their reference is published in the OJEU.
- For smart contracts, according to Art. 30 (4), if standards are published in OJEU are met, there is a presumption of conformity with the regulation to the extent those standards or parts thereof cover those requirements and given their reference is published in the OJEU.
- **Declaration of conformity:**
- For smart contracts, the vendor shall perform a **conformity assessment** as to whether it fulfils to fulfil Art. 30 (1) requirements. In case it does, it shall issue an **EU declaration of conformity**. By issuing such a declaration of conformity, the vendor shall be responsible for compliance with the requirements under Art. 30 (1).

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2 „*The vendor of an application using smart contracts or, in the absence thereof, the person whose trade, business or profession involves the deployment of smart contracts for others in the context of an agreement to make data available [...]*"

3.4 Common specifications

- **Target:**

- Art. 28 (1) operators of data spaces shall follow essential requirements to facilitate interoperability.

- Art. 30 (4) smart contracts shall follow essential requirements.

- **Substance Requirements:**

- Art. 28 (1) sets out essential requirements for common specifications for operators of data spaces to facilitate interoperability of data, data sharing mechanisms and services.

- Art. 30 (1) sets out essential requirements for common specifications for vendors of smart contracts.

- **Process Requirements:**

- The EU Commission can adopt such common specifications if no harmonised standards exist, or they are considered insufficient to ensure conformity with the essential requirements of Art 28 (1).

- Operators of data spaces: Art. 28 (5) sets out that the EU Commission can adopt them by way of implementing acts, in accordance with the examination procedure referred to in Article 39 (2).

- Smart Contracts: Art. 30 (6) sets out that the EU Commission can adopt them by way of implementing acts, in accordance with the examination procedure referred to in Article 39 (2).

- **Drafted by whom:**

- These are adopted by the EU Commission by way of implementing acts, in accordance with the examination procedure referred to in Article 39 (2).

- It is unclear which organisation or institution could draft common specifications.

- **Presumption of conformity:**

- n/a

- **Declaration of conformity:**

- For smart contracts, the vendor shall perform a **conformity assessment** as to whether it fulfils to fulfil Art. 30 (1) requirements. In case it does, it shall issue an **EU declaration of conformity**. By issuing such a declaration of conformity, the vendor shall be responsible for compliance with the requirements under Art. 30 (1).

3.5 Standardisation requests

- Standardisation requests are not a standardisation tool but a possible procedural step when developing a European standard (which may be a harmonised standard at the same time).

- The process for issuing standardization requests is laid out in Article 10 of Regulation (EU) No 1025/2012.
- According to recital 76, as market-driven processes have not demonstrated the capacity to establish technical specifications or standards that facilitate effective cloud interoperability at the PaaS (platform-as-a-service) and SaaS (software-as-a-service) levels, the Commission should be able, on the basis of this Regulation and in accordance with Regulation (EU) 1025/2012, to request European standardisation bodies to develop such standards.
- The European standardisation organisations are CEN, CENELEC, and ETSI.

4 Evaluation

Need for standardisation tools

If/where the Data Act Proposal envisages the development or adoption of new standards, this should be done with care and where strictly necessary. Generally, standards must come at the right time; must not go too far, create global fragmentation, nor built on a non-inclusive process.

On a first note, this means that the rules regarding smart contracts (Art 30) shall be eliminated. The proposal is not capable of demonstrating a compelling need to specifically regulate this type of software versus any other types of computer code.

Open interoperability specifications

Against that background, the use of open interoperability specifications is welcomed by Bitkom given that they are developed in a transparent process, that is industry driven and practical, and inclusive to other stakeholder groups. It is important that they allow for an internationally harmonised framework and are not limited to a European nexus.

European standards

The use of European standards and European harmonised European standards on interoperability and smart contracts is welcomed by Bitkom. European standards are developed in a transparent process, inclusive, industry driven, have market acceptance, and are practical.

EU standards pursue the goal of a coherent body of standards and the highest possible level of international connectivity, which opens markets for European companies.

In the context of the Data Act, it is key that they do not come too late which would slow down early investments, or overall market development. At the same time, if they come too early, they will be difficult to implement.

European harmonised standards

Similarly, the use of European harmonised standards on interoperability and smart contracts is welcomed by Bitkom. Like all European standards, European harmonised standards are developed in a transparent process, inclusive, industry driven, have market acceptance, and are practical.

Like European standards in general, European harmonised standards in particular pursue the goal of a coherent body of standards and the highest possible level of international connectivity, which opens markets for European companies.

Harmonized European standards increase legal certainty for manufacturers and suppliers through the presumption of conformity. By participating in the development of harmonised standards, stakeholders from companies, small and medium enterprises, academia, the public sector, as well as representatives of consumer protection and environmental interests can actively shape the technical concretisation of legal requirements. Here, it is key to ensure international acceptance of EU (harmonised) standards at all times.

In the context of the Data Act, it is key that they do not come too late which would slow down early investments, or overall market development. At the same time, if they come too early, they will be difficult to implement.

This is particularly important for European harmonised standards, as they entail more complex requirements, including HAS consultants and potentially longer need for consensus.

Common specifications

The use of common specifications (in the context of data spaces and smart contracts) is not welcomed by Bitkom. These are not guaranteed to be transparent, inclusive, or industry driven and would put the current EU standardisation regime in question. In particular,

i)   the process for the EU Commission to establish that existing standards are *insufficient* or *absent* seems unclear both in terms of timing and substance,

ii) the process for the EU Commission to draft such common specification and adopt it by means of a delegated act seems unclear.

This could endanger their i) practical relevance, ii) applicability, iii) ability to enable innovation, iv) role to prevent high entry barriers, v) domestic uptake, and vi) international uptake and should – if anything - only be the very last option.

5 Outlook

5.1 What practical steps must be taken by public and private stakeholders?

- To ensure an innovation-friendly, inclusive, and practicable interoperability framework, **stakeholder dialogue** is a key element, even well before standardisation workstreams commence. This already does take place and will have to take place on different layers in parallel even more.
- **Industry stakeholders** have to continue and step-up their engagement in national, European, and international standardisation organisations, which requires further capacity, increased openness, and willingness for constructive dialogue.
- **European and national standardisation organisations** have to consider the Commission's standardisation strategy and engage in constructive dialogue to i) realise future potential and ii) address potential room for improvement proactively.
- **European and national standardisation organisations** have a role to play in moving from roadmap-design to standardisation work, while ensuring consistency between their roadmaps and outcomes with the international standardisation posture.

5.2 What existing standards / tools can be used in the future context of the Data Act?

- Key concepts in the Data Act Proposal must be in line with accepted international standards in the cloud- and edge-services ecosystem. Without this, the openness of the EU digital single market, international scalability, and interoperability are at stake, while unnecessarily re-inventing the wheel.
- Where standardisation instruments for switching or interoperability exist, these should primarily be adopted, or at least correspondence with them should be paramount for EU-led efforts.
- Consistency with Gaia-X (future) deliverables, specifications and/or standards is highly welcomed by Bitkom and is an important element to consider at all times.

- The following standards should be considered with relevance to the Data Act. Where available, respective specifications should be taken into account as well, where unavailable, these could be developed.
  - ISO/IEC JTC 1/SC 32/WG 6 "Data usage"
    - ISO/IEC 5212 „Data usage — Guidance for data usage"
    - ISO/IEC 5207 "Data usage — Terminology and use cases"
  - ISO/IEC JTC 1/SC 38 "Cloud computing"
    - ISO/IEC 19944 „ Cloud computing and distributed platforms — Data flow, data categories and data use"
    - ISO/IEC 23751 "Information technology — Cloud computing and distributed platforms — Data sharing agreement (DSA) framework"
  - ISO/IEC JTC 1/SC 42/WG 2 "AI – Data" – CEN/CLC JTC 21
    - ISO/IEC 5259 "Artificial intelligence — Data quality for analytics and machine learning (ML)"
    - ISO/IEC 8183 "Information technology — Artificial intelligence — Data life cycle framework"
  - ISO/TC 307/WG 3 "Blockchain – Smart contracts" – CEN/CLC JTC 19 "Blockchain"
    - ISO/TS 23259 "Blockchain and distributed ledger technologies - Legally binding smart contracts"
    - ISO/TR 23455 "Blockchain and distributed ledger technologies - Overview of and interactions between smart contracts in blockchain and distributed ledger technology systems"
    - ISO/PWI 18126 "Smart contract classification"
  - CEN/CLC JTC 13 – ISO/IEC JTC 1/SC 27/WG 5
    - Cybersecurity and Data protection standards

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Tool	Subject	Substance Requirements	Process Requirements	Conformity
Open interoperability specifications	Art. 26 (3) states that **certain data processing services – not covered by Art. 26 (1) (ie roughly not IaaS)** – shall ensure compatibility with **open interoperability specifications** that are identified in accordance with Art. 29 (5)	**Substance:** Art. 29 (1) and (2) set out essential requirements for **open interoperability specifications** (performance oriented, enhance data portability and functional equivalence between different processing services which use the same service type) for roughly **Non-Iaas-Data Processing Services**	(Somebody writes specification) According to Art. 29 (3), requirements in paras 3 and 4 of Annex II EU 1025/2012 must be met According to Art. 29 (5), EU COM empowered to adopt delegated acts to publish them in central EU standards repository in accordance with Art. 38	n/a
European standards	Art. 26 (3) states that **certain data processing services – not covered by Art. 26 (1) (ie roughly not IaaS) –** shall ensure compatibility with **European standards** that are identified in accordance with Art. 29 (5)	**Substance:** Art. 29 (1) and (2) set out essential requirements for **European standards** (performance oriented, enhance data portability and functional equivalence between different processing services which use the same service type) for roughly **Non-Iaas-Data Processing Services**	(optional) EU COM issues standardisation request EU standardisation organisation(s) (or somebody else) draft(s) standard EU standardisation organization(s) adopt(s) European standard According to Art. 29 (5), EU COM empowered to adopt delegated acts to publish them in central EU standards repository in accordance with Art. 38	n/a
Harmonised standards	Art. 28 (4) targets **operators of data spaces** Art. 30 (4) targets **smart contracts**	Art. 28 (1) sets out essential requirements for harmonised standards **for operators of data spaces** Art. 30 (1) sets out essential requirements for harmonised standards **for vendors of smart contracts**	EU COM issues standardisation request EU standardisation organisation(s) (or somebody else) draft(s) standard EU standardisation organization(s) adopt(s) European standard EU COM publishes reference to the harmonised standard in the OJEU	Operators of data spaces: According to Art. 28 (3), if standards are met, there is a presumption of conformity with the regulation to the extent those standards or parts thereof cover those requirements and given their reference is published in the OJEU. Smart Contracts: According to Art. 30 (4), if standards are published in OJEU are met, there is a presumption of conformity with the regulation to the extent those standards or parts thereof cover the requirements and given their reference is published in the OJEU.
Common specifications	Art. 28 (5) targets **operators of data spaces** Art. 30 (6) targets **vendors of smart contracts**	**On substance,** Art. 28 (1) sets out essential requirements for common specifications **for operators of data spaces** **On substance,** Art. 30 (1) sets out essential requirements for common specifications **for vendors of smart contracts**	EU COM can adopt common specifications if no harmonised standards exist or they are considered insufficient Operators of data spaces: Art. 28 (5) sets out that EU COM can adopt them by way of implementing acts, in accordance with the examination procedure referred to in Article 39 (2) Smart Contracts: Art. 30 (6) sets out that EU COM can them by way of implementing acts, in accordance with the examination procedure referred to in Article 39 (2)	n/a