

# Data Space Rulebook

## *Code of Conduct*

**Author:** *Beyond Civic AG*  
**Version:** *v0.9, 28.03.2025*

# Table of content

- 1 Introduction..... 3
- 2 Actors and two different characteristics..... 3
- 3 Continuous Monitoring and Improvement..... 4
  - 3.1 Initial and Recurring Assessment..... 4
  - 3.2 Continuous Improvement..... 4
- 4 Principles of Data Ethics ..... 4
  - 4.1 Transparency and Openness..... 5
  - 4.2 Control and autonomy ..... 5
  - 4.3 Fairness and Equality ..... 5
  - 4.4 Security and Harm Prevention..... 5
  - 4.5 Accountability and Responsibility..... 5
  - 4.6 Sustainability and Effectiveness..... 5
- 5 Maturity Levels in Data Ethics ..... 5
  - 5.1 Initial (ad hoc or reactive) ..... 6
  - 5.2 Repeatable ..... 6
  - 5.3 Defined..... 6
  - 5.4 Managed ..... 6
  - 5.5 Optimising.....7
- 6 Code of Conduct Template ..... 8
  - 6.1 Assessment Process ..... 8
  - 6.2 Continuous Improvement Process ..... 8
  - 6.3 Transparency and Openness..... 8
  - 6.4 Control and autonomy ..... 8
  - 6.5 Fairness and Equality ..... 9
  - 6.6 Security and Harm Prevention..... 9
  - 6.7 Accountability and Responsibility..... 9
  - 6.8 Sustainability and Effectiveness..... 9
  - 6.9 Data Ethics Matrix: Data Space Governance Authority .....10
  - 6.10 Data Ethics Matrix: Data Space Participants ..... 11
- 7 Sources and References.....12

# 1 Introduction

In principle, the Code of Conduct in a Data Space or Data Ecosystem is there to strengthen trust between participants by providing clear and fair rules for handling and exchange data. It protects against misuse, such as unethical use or unauthorized disclosure. It also ensures transparency so that all parties involved can understand the conditions for data provision and use, thus creating common rules.

The following document is addressed to initiators and orchestrators (emerging and existing data space governance authorities) for the development and operation of a trusted data space. Chapters 2 to 5 describe how a target group-specific and dynamic code of conduct can be set up. Chapter 6 provides a template for the specific formulation of the selected ethical principles along the five levels. This can serve as a direct basis for a code of conduct and enables the implementation of an auditing process for participants in a data space. In addition, it should provide the basis for a recurring and automated review of ethical principles. Ideally, these can be linked directly to the data sharing agreements, for example, to require a minimum level of ethical maturity from a data user and to automatically verify this.

## 2 Actors and two different characteristics

A data space is a decentralized and interoperable ecosystem that enables trusted data sharing among multiple organizations while maintaining data sovereignty<sup>1</sup>. It allows participants to exchange and use data according to jointly agreed rules, standards and governance frameworks.

A data space is composed of two constituent elements: first, various participants, including data providers, data consumers, and data intermediaries; and second, the governing authority of the data space.

For the purposes of this assessment, we at Beyond Civic see it as expedient to cluster them into the two conceptual categories of **Data Space Governance Authority** and **Data Space Participants**. This approach is particularly beneficial because it considers the diverse tasks, roles, and demands on specific data-ethical processes and structures.

The Data Space Governance Authority is responsible for the trustworthy design and operation of the data space. The Data Space Participants are responsible for the appropriate provision and use of the data. Service providers act on behalf of the Data Space Governance Authority and are grouped under it.

---

<sup>1</sup> (International Data Spaces Association, 2024)

### 3 Continuous Monitoring and Improvement

It is of central importance for trust in a data ecosystem that the rules of conduct are not only accepted but actively practiced. One element of this is regular monitoring and reporting.

Ultimately, it depends on the purpose and scope of the data space what weight should be given to the ethical rules of conduct. For simple factual data, these requirements can be significantly lower than for personal data.

The specifications for the minimum level and improvement process should be part of the respective code of conduct. In addition, higher minimum levels can also be integrated directly into the data sharing agreements as a prerequisite for the use of the data.

#### 3.1 Initial and Recurring Assessment

Realistically and practically, both the participants and the Data Space Governance Authority will assess their own ethical level themselves. To ensure that this is not simply done across the board, it is advisable to carry it out individually along the six principles mentioned above. In this way, an organization must assess itself for each principle, which not only increases the level of detail but also provides an indication of the potential for improvement. To ensure that it is not done once and forgotten, it should be recorded how often this should be repeated. Again, this depends on the purpose and scope of the data space and can be done every two years or even every six months.

In particularly sensitive cases, an assessment can also be carried out by a commissioned, neutral organization instead of self-assessment. Random checks of participants by the governance authority are also conceivable.

#### 3.2 Continuous Improvement

Starting with a minimum level and continuously improving with a clear goal is the best approach. This applies to both the governance authority and the participants. The initial level is not exclusive, and organizations have the opportunity to continuously improve and learn together. This increases trustworthiness not only within the data space but also in the direct environment of the respective organization.

## 4 Principles of Data Ethics<sup>2 3 4</sup>

Data ethics can be summarized in several basic principles, with the orientation for the basic roles being differentiated. There are a number of different sets of ethical principles in the context of data use. The following six principle clusters are a compilation from various sources with the aim of achieving the broadest possible coverage. The Code of Conduct for trustworthy data spaces of the Federal Council served as the main basis and was selectively amended and refined.

---

<sup>2</sup> (Bundesrat, 2023)

<sup>3</sup> (Sathasevam, 2024)

<sup>4</sup> (Christen, 2020)

#### **4.1 Transparency and Openness**

The handling of data must be documented in a clear, understandable, and comprehensible manner. Stakeholders must know what data is collected, how it is used, and where it is stored. The purpose of data collection and use must be communicated clearly and comprehensively.

#### **4.2 Control and autonomy**

Individuals and organizations must be able to retain control over their data. This includes freedom of choice, the ability to restrict or delete data, and the protection of privacy.

#### **4.3 Fairness and Equality**

Data should be collected, used and shared in a fair and proper manner, avoiding any form of discrimination or bias. It must be ensured that all actors are treated fairly and that benefits and risks are distributed fairly. The use of data should not have unintended or discriminatory consequences for certain groups. The results of data use must be fair and balanced.

#### **4.4 Security and Harm Prevention**

Data must be protected from unauthorized access, loss or misuse. Minimizing potential harm to individuals and communities is key. Potentially negative or harmful consequences of data use should be identified early and prevented before they occur.

#### **4.5 Accountability and Responsibility**

Clear responsibilities for handling data must be defined. Organizations must take responsibility for their data practices and respond appropriately to breaches of the rules.

#### **4.6 Sustainability and Effectiveness**

Data management should be ecologically, socially and economically sustainable. At the same time, data spaces and practices should be able to respond effectively and flexibly to changing requirements. The purpose should be socially meaningful and beneficial in the long term.

## **5 Maturity Levels in Data Ethics**

The division into five maturity levels<sup>5</sup> has proven effective and is established despite the respective adapted formulations. The following five levels are derived from the principles of the Open Data Institute (ODI)<sup>6</sup>.

Also in this case, it is reasonable to subdivide the maturity for the Data Space Governance Authority and for the Data Space Participants and to consider them separately. These may well differ in the aspired or required level, even between the Data Space participants.

Data Ethics Maturity Level acc. ODI:

---

<sup>5</sup> (Olli Pitkänen, 2025)

<sup>6</sup> (John Burton, 2022)

Level 1	Level 2	Level 3	Level 4	Level 5
Initial	Repeatable	Defined	Managed	Optimising

### 5.1 Initial (ad hoc or reactive)

Data Space Governance Authority:

- The data space has no clear rules or processes for handling data.
- Security measures, transparency and ethical principles are missing or are only improvised in the event of problems.
- Governance structures are not defined.

Data Space Participants:

- Data is used without clear guidelines or safeguards.
- Actors are often unaware of the risks and ethical requirements.
- Data is provided and used in an uncoordinated manner.

### 5.2 Repeatable

Data Space Governance Authority:

- Initial basic processes (e.g. for data protection and security) have been implemented, but only for certain scenarios.
- Individual teams are developing solutions, but there is no consistent strategy.
- Transparency and control measures are introduced selectively.

Data Space Participants:

- Data is better organized and provided in defined processes.
- Initial tools for accessing and managing data are being used.
- Participants learn to handle data more responsibly, but without standardized guidelines.

### 5.3 Defined

Data Space Governance Authority:

- Standards and guidelines for the data space are documented and based on best practices.
- Processes for transparency, security and fairness are introduced and actively communicated.
- Governance structures promote cooperation and compliance with ethical principles.

Data Space Participants:

- Clear rules and requirements for data use and provision are accepted and implemented.
- Members have access to documentation and tools to fulfill their responsibilities.
- Cooperation between the players is standardized.

### 5.4 Managed

Data Space Governance Authority:

- Processes for governance, security and data ethics are implemented across the board.
- There are regular monitoring and audits to ensure compliance with standards.
- Responsibilities and competencies are clearly defined.

Data Space Participants:

- Members actively and reliably use the tools and processes provided.
- There are clear mechanisms for reviewing and improving their own data usage practices.
- Cooperation between members is strengthened through monitoring and feedback.

## **5.5 Optimising**

Data Space Governance Authority:

- The data space promotes innovation in data ethics and security and sets new standards in the industry.
- Processes are continuously improved and flexibly adapted to new requirements.
- Cooperation with external partners and promotion of ethical networks.

Data Space Participants:

- Members actively contribute to the further development of the data space.
- They not only use the data in a compliant manner, but also implement their own ethical innovations.
- There is an active exchange of best practices between members.

## 6 Code of Conduct Template

The following two clusters are considered differently and are made up as follows:

- Data Space Governance Authority including Service Provider and operating organizations contracted by the Governance Authority
- Data Space Participants as a collective term for Data Provider, Data User and Data Intermediary.

### 6.1 Assessment Process

All organizations must commit to carrying out an initial and repeated self-assessment along the six principles. The self-assessment is a basic prerequisite for participation in the data space and for the exchange of data of any kind.

- Data Space Governance Authority independently carries out a self-assessment at least once a year and communicates the results to all participants.
- Data Space Participants are responsible for conducting a self-assessment at least every second year and making the results transparent in advance of a data transaction and towards the Data Space Governance Authority.

### 6.2 Continuous Improvement Process

Participation in the data space requires a minimum level of data ethics principles within the respective organization. All organizations also commit to ongoing development towards the next higher levels.

- Data Space Governance Authority: A minimum level of "3: defined", according to the respective matrix below, is required for the start of operation and organization of the data space. The goal is to reach the level "5: optimizing".
- Data Space Participants: A minimum level of "2: repeatable", according to the respective matrix below, is required to join the data space. Every organization must reach level "3: defined" within two years of joining and "4: managed" within five years. A higher level can be required for sensitive data in the respective data sharing agreement.

### 6.3 Transparency and Openness

The handling of data must be documented in a clear, understandable, and comprehensible manner. Stakeholders must know what data is collected, how it is used, and where it is stored. The purpose of data collection and use must be communicated clearly and comprehensively.

- Data Space Governance Authority is responsible for ensuring that the data space rules, processes, and business models are clearly documented and communicated. This includes ensuring the origin and use of data in the data space is traceable.
- Data Space Participants declare the purposes and practices of data usage and ensure transparent communication with other participants and stakeholders.

### 6.4 Control and autonomy

Individuals and organizations must be able to retain control over their data. This includes freedom of choice, the ability to restrict or delete data, and the protection of privacy.

- Data Space Governance Authority provide tools that allow participants to control their data (e.g. access rights, deletion options) and implement data protection compliant processes.
- Data Space Participants manage their data independently and ensure that it is only used in accordance with the established rules. They actively control the provision and usage of the data.

### **6.5 Fairness and Equality**

Data should be collected, used and shared in a fair and proper manner, avoiding any form of discrimination or bias. It must be ensured that all actors are treated fairly and that benefits and risks are distributed fairly. The use of data should not have unintended or discriminatory consequences for certain groups. The results of data use must be fair and balanced.

- Data Space Governance Authority create fair conditions for participation and use of the Data Space and ensure non-discriminatory rules and standards for all participants.
- Data Space Participants use and provide data in a way that does not discriminate or bias and ensure fairness in the in collaboration with other participants.

### **6.6 Security and Harm Prevention**

Data must be protected from unauthorized access, loss or misuse. Minimizing potential harm to individuals and communities is key. Potentially negative or harmful consequences of data use should be identified early and prevented before they occur.

- Data Space Governance Authority develops security measures and protocols to protect data in the Data Space and continuously improves them to minimize the risk of data loss or misuse.
- Data Space Participants ensure that the data is secure before it is imported into the data space and comply with the security requirements of the data space.

### **6.7 Accountability and Responsibility**

Clear responsibilities for handling data must be defined. Organizations must take responsibility for their data practices and respond appropriately to breaches of the rules.

- Data Space Governance Authority defines and assumes clear responsibilities for managing the Data Space and acts responsibly in the event of rule violations or security incidents.
- Data Space Participants take responsibility for their own data usage and adhere to the established rules, as well as respond appropriately to the misconduct of other participants.

### **6.8 Sustainability and Effectiveness**

Data management should be ecologically, socially and economically sustainable. At the same time, data spaces and practices should be able to respond effectively and flexibly to changing requirements. The purpose should be socially meaningful and beneficial in the long term.

- Data Space Governance Authority designs the data space to be sustainable, efficient and flexible in the long term and to encourage environmental, social and economic sustainability.

- Data Space Participants use and provide data in a sustainable manner to ensure the long-term benefit of the data space and participate in its continuous further development.

## 6.9 Data Ethics Matrix: Data Space Governance Authority

Maturity Level	1: initial	2: repeatable	3: defined	4: managed	5: optimising
<b>Transparency and Openness</b>	No clear documentation; sporadic communication.	Initial, basic documentation; only available for certain areas.	Clear and documented processes; regular communication with members.	Fully transparent; comprehensive, easily accessible information.	Continuous improvement of transparency; promotion of open standards.
<b>Control and autonomy</b>	No mechanisms for control or data management.	First tools for managing access rights.	Clear rules and tools for controlling data.	Comprehensive control mechanisms; regular training.	Promoting innovation for autonomous and flexible data use.
<b>Fairness / equality</b>	No measures against discrimination or for equal treatment.	Initial guidelines to ensure fairness, but incomplete.	Clear, documented rules to prevent discrimination.	Monitoring and audits to ensure fairness.	Actively promote fairness and inclusion in data practices.
<b>Safety and harm prevention</b>	No safety measures or mitigation.	Basic measures (e.g. passwords, encryption).	Standardized processes for security and damage prevention.	Regular security reviews and risk mitigation.	Proactively develop innovative security solutions.
<b>Accountability and responsibility</b>	Unclear responsibilities; no accountability.	Initial responsibilities defined, but not comprehensive.	Clear responsibilities; documentation of processes.	Monitoring and enforcement of responsibilities.	Promoting a responsible culture throughout the data space.
<b>Sustainability and effectiveness</b>	Resources are used in an uncoordinated manner; data silos are created	Initial approaches for sustainable and effective processes.	Documented strategies to promote data minimization and sustainability.	Sustainability and efficiency reviewed through regular monitoring metrics.	Continuously improving processes to achieve maximum benefit from minimum data effort.

## 6.10 Data Ethics Matrix: Data Space Participants

Maturity Level	1: initial	2: repeatable	3: defined	4: managed	5: optimising
<b>Transparency</b>	Lack of clarity about the use and provision of data.	Partial understanding of data flows, but incomplete.	Access to documented guidelines and own data.	Proactive action to promote transparency for other participants.	Active cooperation with the owners to improve transparency.
<b>Control and autonomy</b>	No control over data provided.	Limited tools for managing access rights.	Independent management of data within the framework of defined rules.	Active use of monitoring tools; feedback for improvement.	Promotion of innovative control options; active co-design.
<b>Fairness / equality</b>	Lack of clarity about fair use or benefits of participation.	Partially fair conditions, but inconsistent.	Recognition and implementation of fairness rules.	Proactive feedback and promotion of fair practices.	Supporting the sponsors in the further development of fairness standards.
<b>Safety and harm prevention</b>	No security considerations when using data.	Initial security measures, but uncoordinated.	Implementation of and compliance with the specified security standards.	Active participation in safety strategies; reporting risks.	Promote best practices for data security and risk mitigation.
<b>Accountability and responsibility</b>	No responsibility for own data use.	Partial responsibility for own data.	Recognition and implementation of own responsibilities	Proactively taking responsibility; supporting other participants.	Active collaboration to promote a responsible data culture.
<b>Sustainability and effectiveness</b>	Focus on short-term and extensive data use without regard to efficiency and sustainability.	Initial approaches to resource-conserving data use and data economy.	Clear focus on data minimization and participation in defined sustainability initiatives.	Targeted and efficient use of data and participation in sustainable measures.	Active participation in the further development of standards for data economy and sustainability.

## 7 Sources and References

- Bundesrat. (2023). *Verhaltenskodex für den Betrieb von vertrauenswürdigen Datenräumen*. Retrieved from Datenökosystem Schweiz:  
[https://www.bk.admin.ch/bk/de/home/digitale-transformation-ikt-lenkung/datenoekosystem\\_schweiz.html](https://www.bk.admin.ch/bk/de/home/digitale-transformation-ikt-lenkung/datenoekosystem_schweiz.html)
- Christen, M. C.-I. (2020). *Code Of Ethics For Data-Based Value Creation*. Retrieved from Data Innovation Alliance : <https://data-innovation.org/data-ethics/>
- International Data Spaces Association. (2024). *Data Sovereignty - International Data Spaces*. Retrieved from International Data Spaces:  
<https://internationaldataspaces.org/why/data-sovereignty/>
- John Burton, D. Y. (2022). *Data Ethics Maturity Model: benchmarking your approach to data ethics*. Retrieved from ODI open data institute :  
<https://theodi.org/insights/tools/data-ethics-maturity-model-benchmarking-your-approach-to-data-ethics/>
- Olli Pitkänen, M. T. (2025). *Rulebook model for a fair data economy (version 3.0)*. Retrieved from SITRA : <https://www.sitra.fi/en/publications/rulebook-for-a-fair-data-economy/>
- Sathasevam, T. (2024, May 29). *Data Ethics: Examples, Principles And Uses*. Retrieved from UNSW Online : <https://studyonline.unsw.edu.au/blog/data-ethics-overview>