Promoting Digital Self-Determination

The Swiss network "Digital Self-Determination" includes representatives from the Swiss Federal Administration, academia, civil society and the private sector. The network was set up in response to the action plan for the Federal Council's 'Digital Switzerland' strategy of September 2018.

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1. Introduction

The digital transformation is gradually reaching all levels of society and fundamentally changing our cultural, political and economic life. Yet, the reliance on and impact of emerging technologies has exponentially increased amidst the COVID-19 pandemic. After the first wave of infection, many governments have recognised the opportunity of using digital technologies to better control the spread of the virus. With the emergence of digital solutions, new impetus has been given to discussions on the use of our personal data and the risks related to increased government and corporate surveillance.

The COVID-19 crisis has not only shown the importance and benefits of digital technology. It has also exposed our approach towards and perspective on the digital transformation. Innovative data-based technologies can bring enormous benefits to society as a whole. However, these technologies cannot be used effectively in a democratic society if citizens feel that their data is being collected, analysed and passed on to third parties without their knowledge or control. Currently, individuals are primarily *users*, consuming an endless array of apps and digital services, whilst often being unable to control or enjoy the benefits of the growing "datafication". Mobility, energy, education and health are just some of the areas in which data is being collected extensively. Business models based on data processing for user profiling and intransparent recombination of user data undermine confidence in the data society.

The current *user* attitude stands in contrast to the ideal type of an active and responsible citizen in a democracy based on the rule of law. Allowing individuals to operate in the digital space in a self-determined way may strengthen democratic processes, increase welfare and open up new economic opportunities. The full potential of the digital economy can only be realised, if people are confident that the use of these technologies and the benefits they bring will not have to be paid for with a loss of personal rights and privacy. In the context of the COVID-19 crisis for example, trust is a prerequisite for the broad acceptance of contact tracing applications and thus essential for their effectiveness.

We see the concept of digital self-determination as a way of enhancing trust into digital transformation while allowing all actors of society to benefit from the potential of the data economy. The idea of digital self-determination advocates for the development of trustworthy data spaces based on democratic values. The objective is to build data spaces that are trustworthy, enable control and data sharing, in a user-oriented way, and operate decentralized and in close proximity with citizen's needs.

In concrete terms, citizens would have control of and access to the data they have provided as well as to the data that is relevant for their decision-making. Furthermore, they understand the relevance of this data, its potential value and the opportunities for its re-use. At the same time, digital self-determination benefits the private and the public sector as well, as they gain access to new data resources. The human-centred approach of trustworthy data space strengthens confidence in a sustainable data society, while enabling the private and public sector to realise the potential of shared data sets.

Areas such as mobility and tourism, health, education, and energy hold great promise for building trustworthy data spaces that will realise digital self-determination step by step. Individual actors[1] will gain more control over their data and will be empowered to act proactively. Greater trust will allow more high-quality data to be generated and exchanged. This, in turn, will lead to new, innovative applications that strengthen the economy, digital sovereignty, collaboration, and local communities. International and transnational cooperation will be key to ensure interoperability and acceptance of the trustworthy data spaces we seek to advance.

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[1] In the context of this paper, by actors we mean not only the citizens of a state, but also small and medium-sized enterprises and private and public bodies that generate data.

2. Key questions that we are working on

1. How can we enable **citizens** to…
   - …get control over their personal data and use it effectively?

   - …have confidence that their data will not be misused and that the data collected will not be used to manipulate their behaviour?

   - …collect more data relevant for a community and society and exchange it voluntarily allowing the creation of innovative applications and new business models?

2. What are possible **governance structures for data spaces…**
   - …that are able to create trust fostering the creation and sharing of data?

   - … that are based on cooperative, decentralised models?

   - …that provide maximum effectiveness at minimum cost?

   - …that allow for creating a new digital ecosystem, which gives a better balance between the interests of individuals, businesses, society and the public sector?

3. How can we enhance **innovation and added-value of the digital transformation** by…
   - …promoting the use of existing data to enhance the common good?

   - …strengthening the digital sovereignty of our societies and economies, as well as value creation?

4. How can we **cooperate internationally to create cross-border data spaces** that make digital self-determination possible at the international level?

3. Approaches to digital self-determination at the international level

The idea of digital self-determination should be part of a broader international discussion on how to best capitalise on the opportunities offered by digitalisation and to build citizens' trust. There is an increasingly relevant international discussion on possible governance models for the use of data. The European Union, for example, considers to build a governance model for data access and use in the single market as part of its data strategy.

Several governments in Europe have taken initiatives encompassing elements of digital self-determination. In Germany, digital self-determination is strengthened within the framework of improved educational opportunities and ethical guidelines. Furthermore, greater individual responsibility on the part of companies is addressed through a corporate digital responsibility initiative. Also, the final report of the Commission of Experts on Competition Law 4.0 considers stronger digital self-determination through the concept of data trustees. Data trustees are also highlighted as a possible approach in the EU data strategy and are already being implemented in the UK.

In the area of health, Finland has shown remarkable innovation in the self-determined use of data: Since the beginning of 2020 all health data is kept within the framework of FINDATA, the national data agency, and can now be used for research purposes under the Act on Secondary Use of Health and Social Data. Finish citizens can restrict and thus control the use of their data. This example shows the opportunities that digital self-determination presents for society and for innovations in the healthcare system.

Other governments have taken data governance initiatives at the international level. During Japan's 2019 G20 presidency, heads of state and governments agreed to further work on challenges related to privacy, data protection and intellectual property rights in order to facilitate the free flow of data and to cooperate to encourage the interoperability of different frameworks. Similar to digital self-determination, Japan has put the issue of trust at the center of its initiative.

Among such initiatives, the network "Digital self-determination" aims to promote the concept of trustworthy data spaces. We want to connect the dots between the different international approaches that share the vision of digital self-determination, with a view to ensure not only technical interoperability but to allow local data infrastructures to grow together and form interoperable regional, national and transnational data spaces. Our aim is to create an international network that represents the basic principles of digital self-determination and on this basis will elaborate best practices, standards and agreements to develop international data spaces. In doing so, technical interoperability as well as compliance with the basic principles of digital self-determination and respective rules in data traffic within and between data spaces will be the focus of our work.

4. Swiss approaches to creating reliable data spaces and data collaboration

4.1 Basic principles of digital self-determination

We propose to realize the concept of digital self-determination according to the following basic principles:

1. **Transparency and trust**: Creating confidence and trust in the digital transformation is the underlying principle of our initiative. The aim is to create a framework built on trust which allows for transparency in the collection, use and processing of data and incorporates a clearly defined purpose and traceability of third-party access to such data. Such a system encourages individuals to generate and share data, which in turn leads to new forms of use and strengthens innovation, society and state sovereignty.

2. **Control and self-determined data sharing:** Citizens have control over their own personal data. They can access all data relevant to their decisions and assess the validity and potential value of that data. They know and control who has access to their data and on this basis can largely determine how it will be used by third parties.

3. **User-oriented data spaces:** Individuals have the possibility to transfer their own data efficiently to other service providers. Data collaboration within data spaces promotes the exchange of data between different actors with different expertise, thereby increasing the benefits of the digital transformation for society, local communities and the national economy.

4. **Decentralisation and proximity to citizens:** Data is currently used extensively for services at the national and global level. At the local and regional level, by contrast, there are few actors with sufficient financial weight to effectively use data's full potential, although it is often highly relevant to their users and customers. Data collaboration should create new possibilities for the use of data and serve to improve services at the local and regional level.

4.2 Building trustworthy and reliable data spaces

The development of innovative data-based services require the availability of high-quality data. Thus an increased willingness by individuals and data producers to supply data and to make it available beyond its original purpose[2] is necessary. This can be achieved through reliable and trustworthy data spaces at the national and international level, designed according to the basic principles of digital self-determination. One possibility would be to set up a "data collaboration arrangement" to realise a business idea or a not-for-profit purpose (e.g. the development of a bypass project by city authorities, based among other things on motor vehicle movement data).

In addition to data collaborations, other forms of data sharing at the national and international level are conceivable. To some extent they already exist in some countries, e.g. in the form of data markets, data platforms, or digital twins. These forms of "data collaboration" can be used by different economic sectors (e.g. Energy Data Space) or within a geographical scope (e.g. city, region, state). The decentralised nature of data spaces has the advantage that digital systems and services may be optimally tailored to the needs of the respective regions, thereby enhancing the personal responsibility of the participating individuals and companies. In addition, for reasons of cybersecurity, decentralised networked data spaces and data collaborations are also preferable to central 'super-infrastructures'.

4.3 Challenges and risks

Digital ecosystems will only be successful if they are trusted, widely accepted and user-friendly. Trust in data exchange systems requires "rules" (regardless whether they are private or state-driven) and an oversight of compliance with those rules. Furthermore, rule-breaking must be sanctioned

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[2] Of course only as long as the concerned data subjects are informed and agree to this.

appropriately. The risks of malpractice must be minimised through proper governance of the data spaces.

Aggregation and combination of data generates different scale and network effects. On one hand, this might impact the competitiveness of new data spaces being created under the initiative. Proper identification of specific niche markets is therefore of the essence. On the other hand, once data spaces have been established, it is necessary to ensure a level playing field so that potential new entrants do not encounter undue barriers.

The operation of technical infrastructures for data exchange carries a number of risks, ranging from manipulation to insufficient financial resources. Service-level agreements with the operators of data spaces and robust business models can reduce such risks. Numerous technological challenges will also need to be addressed, as highly sensitive data might be available or transmitted via data infrastructures, potentially making them attractive targets for cybercriminals. Comprehensive technical and organisational measures to protect data can minimise these risks.

5. Fostering digital self-determination globally

The Swiss network "Digital self-determination" is a group of representatives from Swiss Federal Administration, academia, civil society and the private sector that share the basic principles and work towards realization of digital self-determination in Switzerland and with interested partners abroad. The network has established different sectoral and thematic working groups. It is coordinated by a coordination group led by representatives from Swiss Federal Administration, academia, and civil society and has a small secretariat.

The Swiss network is interested in engaging in partnerships with other initiatives and individuals that share similar goals. We strive to create an international network that supports digital self-determination. The international network should be a community of like-minded actors from businesses, civil society, municipalities, democratic governments, and multilateral organizations that cooperate regularly to realize digital self-determination.

If you would like to cooperate with us you may contact our secretariat at dig.self-determination@eda.admin.ch.