

POSITION PAPER

# SWISS DIGITAL SOVEREIGNTY



# SWITZERLAND'S PATH TO DIGITAL SOVEREIGNTY

## CREATING A BALANCE BETWEEN CONTROL AND INTERDEPENDENCE

### FROM A TERRITORIAL TO A DIGITAL SOVEREIGNTY

Data-based value creation is becoming a key factor for economic and social welfare. It is the foundation for future business models, public security, and informed decisions in a 21st century democracy. As such, questions regarding digital sovereignty are taking center stage in political and business-related debates – particularly in Switzerland where this is one of three focal themes of the “Digital Switzerland Strategy” in 2023.<sup>1</sup>

Digital sovereignty governs the way a nation's ability to facilitate the free flow of data while simultaneously securing it. At the same time, the term is not clearly defined, and depending on perspective, describes individualistic claims or fundamental principles of policy making, often implying aspects of territorially construed sovereignty.

As a result of the high dynamics of change, and the increasing frequency of crises from the Ukraine war to turmoil in the global banking sector, it is not surprising that the focus of these debates is often from a defensive perspective, tending to address potential risks or state the loss of claims to national sovereignty. Nevertheless, given the rapid transition to artificial intelligence as a component of the new economic and societal paradigm, and the worldwide scope of digital data exchange, it becomes apparent that a forward-looking understanding of digital sovereignty cannot be confined to geographical boundaries. It requires a new understanding that also goes beyond static or absolute claims regarding competencies and rights of (international) service providers. This can create a dynamic balance between control and free data traffic, enabling the potential of data-based innovations and effective digital self-determination to unfold.

### LEVERAGING THE SWISS DNA

Switzerland's unique locational advantages provide the necessary basics to develop a future oriented digital sovereignty: A network of top universities leading in computer and social sciences, a diverse start-up landscape, innovative SMEs, strong global corporations in highly regulated sectors from life science to financial services as well as the local presence of international cloud providers and domestic data center operators. Above all, the principle-based legal framework's reliability is rooted

in its structure and supports the handling of unpredictable future technologies and applications. This framework consolidates international trust in the nation, making it secure and stable. These strengths can be reaffirmed as the country enters the digital age, with a progressive understanding of sovereignty.

Adopting a comprehensive perspective also involves assessing national constraints. The systematic identification of long-term developments on a governmental level is still limited. And the lack of strong collaboration both within and between the federal and cross-sector levels presents significant barriers to developing the collective ability to tackle critical issues in their early stages. The still missing foundations in the digitalization of the healthcare system with the establishment of a trustworthy digital health record show exemplarily that the traditional approach of reactive regulation is not sufficient as Switzerland is losing ground in the international environment.

Given the speed at which the EU is moving to build data spaces, a proactive strategy is needed to make the leap into the 21st century. In this context, maintaining a consistent approach to shaping the European data industry and fostering cooperation among various stakeholders is crucial, particularly considering the significance of global trade for Switzerland's welfare. Vice versa, EU's fragile trust in Switzerland's role in Europe could further be put to the test if Switzerland were to neglect digital interconnectivity when shaping its external relations.

### CORNERSTONES OF A FORWARD-LOOKING CONCEPT OF A SWISS DIGITAL SOVEREIGNTY

Digital sovereignty requires a legislative framework for digital data and technologies, which enables control and protection as well as economic and social value creation for individuals, organizations, and the state through freedom of choice in digital applications as well as digital self-determination.

*Data sovereignty* includes the protection of privacy and intellectual property, the utilization of anonymized shared data for economic and social welfare, and the standardization and interoperability of high-quality datasets for cross border compatibility with emerging data spaces.

*Technological sovereignty* includes neutrality regarding technological platforms, transparency regarding the use of technology, e.g., with generative artificial intelligence, compatibility of different technology platforms, access to a skilled workforce, and stable operating conditions.

At the heart of a digitally sovereign Switzerland lies the competence of all actors as well as the availability of decisive key technologies and legal frameworks. These enable informed self-determination of individuals and organizations – where digital self-determination must be understood as a goal, not as an individual and clearly defined legal entitlement.

### AREAS OF ACTION FOR POLITICS, ADMINISTRATION, SCIENCE, AND BUSINESS

Several preconditions are needed to translate the cornerstones of digital sovereignty into practice: First, an ongoing fact-based discussion of the advantages and disadvantages of a balance between control and global interdependence. Second, the availability and understanding of key digital technologies as the basis for autonomous and goal-oriented decisions. And third, a systematic coordination of the relevant actors across industries and disciplines for knowledge and technology transfer and purpose-driven projects.

To achieve this, multiple areas of action can be identified where different stakeholders are assigned to specific roles but share responsibility. Their main challenge is to efficiently and promptly translate these theoretical concepts into practical legal and business measures.

**1. Establish a governance model for data sovereignty:** Switzerland has the potential to be the ideal breeding ground for developing, trialing, and implementing innovative approaches that meet the strictest requirements for data protection and data-based value creation while at the same time leveraging the full spectrum of digital infrastructures. To establish credibility as a trustworthy data industry, it is necessary to tap into the ecosystem of world-leading private, public, and academic institutions and implement beacon projects. Additionally, capitalizing on the long-standing tradition of settling international disputes can translate this strength into the data context and further enhance the nation's credibility.

**2. Strengthen international reach and cooperation:** As a laboratory for modern data infrastructures, Switzerland has the potential to establish future-oriented skills with an impact reaching far beyond its borders. To this end policymakers should work with other countries and international organizations to develop common standards, architectures, and best practices related to digitalization efforts, such as digital infrastructure, data flows and security.

**3. Set up a forward-looking regulation:** In a highly dynamic technology landscape, a systematic and continuous early detection of new key digital technologies, applications, and their impacts is a prerequisite. It will allow the fostering of a liberal and technology-neutral approach that privileges soft regulation. This will enable the rapid and secure use of technological potential, preventing reactive regulations that often effect more harm than good.

**4. Prioritizing the digitalization of public authorities:** To increase confidence in the legal framework and credibly communicate the level of competence, Switzerland must establish itself as an expert in digitalizing administration. Achieving this will require concerted training for government and agency officials in tandem with actors from the business sector to ensure they are aware of and understand key technologies and can link them with existing processes to the country's benefit.

**5. Building up a digital democracy:** Policymakers and scientists should explore different ways to use digital technology in order to promote democratic and inclusive participation in policymaking and design, as well as informing and educating society in a level-appropriate way. Fostering transparency and accountability is key to increasing acceptance and protection, and accelerating progress in a digital society.

**6. Ensure the resilience of critical infrastructure:** As home to international organizations and a recognized location to foster data-driven innovation, Switzerland must guarantee the robustness of its critical system components, such as its digital infrastructure, energy-grid, workforce, as well as legal frameworks and policy system. Furthermore, these system components must have the capacity to respond to acute and long-term challenges, such as cyber-attacks, public health crises, or the energy transition – with resourcefulness, redundancy, and rapidity.

<sup>1</sup> <https://digital.swiss/en/>

# SWISS DIGITAL SOVEREIGNTY

Strengthening of liberal democracy

Enabling cross-border connectivity

Empowering Switzerland in international competition for digital business models

## OPPORTUNITIES FOR SWITZERLAND

Planning certainty for businesses – from SMEs to corporations

Trust of the public in the digital economy

Protection of Swiss organizations against cyber attacks

## DATA SOVEREIGNTY

## TECHNOLOGY SOVEREIGNTY

Growing energy demand for data storage and processing

Increasing integration of AI applications

Raising awareness for digital security and privacy

Interconnecting data for future value creation

Compatibility and interoperability of data and systems

Utilization of data for societal value

Protection of critical data of individuals and organizations

Redesign of Swiss relations with the EU and the USA

Regulation of AI outputs

Freedom of choice of technological solutions

Transparency in the use of technology

Diverse regulations in a multipolar world

Limited resources for hardware

Demand for transparency in the use of AI

Expansion of connected infrastructure

Interdependencies between providers of digital infrastructure, countries, and companies

DIGITAL SOVEREIGNTY IS THE BALANCE OF FREEDOM AND CONTROL IN THE DIGITAL SPACE

ECONOMY

POLITICS

SOCIETY

TECHNOLOGY

ECOLOGY

FUTURE FRAMEWORK CONDITIONS

TECHNOLOGY

SOCIETY

ECOLOGY

ECONOMY

POLITICS

FUTURE FRAMEWORK CONDITIONS

## STRENGTHS OF SWITZERLAND

Innovation competency and quality of research & development

Robust principles-based legal framework

Subsidiarity

Quality and reliability of products and services

Short distances and close networking between economy, science, and politics

## AREAS OF ACTION FOR POLITICS, ADMINISTRATION, SCIENCE, AND BUSINESS

### GOVERNANCE FOR DATA SOVEREIGNTY

Applying the long-standing tradition of resolving international disputes to the digital world

### INTERNATIONAL REACH AND COOPERATION

Close collaboration of political decision-makers with other countries and international organizations

### FORWARD-LOOKING REGULATION

Promotion of an innovation-friendly and technology-neutral approach

### DIGITALIZATION OF PUBLIC AUTHORITIES

Continuing education initiative for government officials to build national and international trust

### DIGITAL DEMOCRACY

Piloting of digital technologies for democratic and inclusive participation in shaping politics and law

### RESILIENCE OF CRITICAL INFRASTRUCTURE

Resources, redundancies, and speed in protecting critical system components to promote data-driven innovations

Data-driven value creation is becoming a key factor for economic and societal prosperity. Therefore, it is increasingly important for individuals, organizations, and policymakers to effectively use and protect data. With the current debates on digital sovereignty in Europe and Switzerland, the foundations for handling data and digital applications from a national and cross-border perspective are being developed.

The position paper “Swiss Digital Sovereignty” highlights the importance of digital sovereignty for the future resilience of Switzerland and outlines the key areas of action on organizational, technological, and legal levels to translate Switzerland’s historical strengths into the digital age and pave the way for a digitally self-determined Switzerland with international openness and interconnectivity.

Innovate Switzerland is a cross-industry network of forward-thinkers who proactively shape the future conditions of the data-driven economy. The focus is on the belief that a multi-stakeholder approach incorporating relevant perspectives and needs will lead to sustainable solutions.

[www.innovate-switzerland.ch](http://www.innovate-switzerland.ch)