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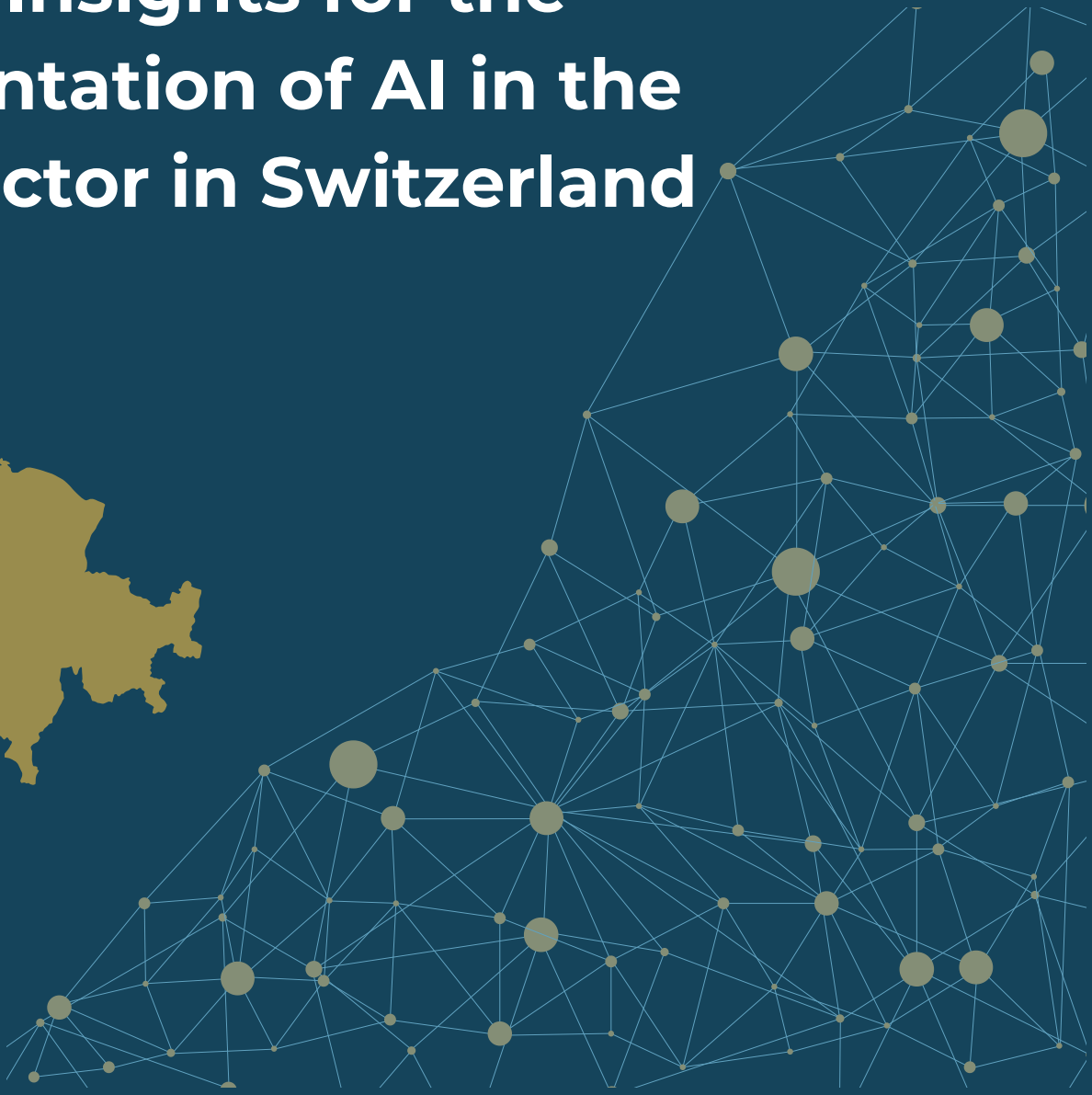
POLICY BRIEF SERIES

GOVERNING ARTIFICIAL INTELLIGENCE IN FEDERAL SYSTEMS

Federalism and Loosely Coupled Intelligent Centers: Practical Insights for the Implementation of AI in the Public Sector in Switzerland

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KEY TAKEAWAY

In Switzerland, the adoption of artificial intelligence (AI) in government follows the existing division of powers. The cantons develop AI applications in the fields they run, such as policing and education, while the federal government in its own domains, such as defense and technology. Rather than building a single “intelligent center”, federal systems should therefore govern AI through loosely coupled intelligent centers. This means combining a layer of binding national standards for data security, data access and interfaces, with sectoral and regional hubs that build on existing intergovernmental bodies, pool costs, and leave room for subnational autonomy.

> ***“The potential advantage of loosely coupled intelligent centers is that they build on the logic that there are several centers of intelligence instead of one central one. Applied to a decentralized federation such as Switzerland, this idea implies that there are various hubs of cantons that collaborate on AI related projects.”***

THE ISSUE

Federal systems divide authority over the decision-making regarding the content of public policies and over their implementation between central and subnational governments. This allows government action to be calibrated to regional needs and decisions to be shared across levels of government. But it can also make nationwide policies difficult to achieve, if subnational governments can veto them or change their substance during implementation.

When it comes to AI, **governments face the challenge of adopting AI as a tool to make the state more efficient while also regulating its use to protect the population**. In the adoption of AI, new technologies are "Janus-faced". Whilst they open many new possibilities for governments, they also entail a drive towards centralization, because deploying AI tools requires an "intelligent center". In other words, **a central unit is needed to organize and supervise the use of AI, so as to ensure that technologies are compatible, functional and effective across the entire polity, even where service delivery remains devolved**. This may entail redesigning the division of powers between levels of government.

Federal states are well equipped to resist such centralization, because authority is distributed vertically between levels of government and horizontally between member states. Yet this also creates challenges for adopting and regulating AI. On the one hand, it may slow down nationwide projects, because **governments avoid transferring competencies and seek to shift the costs of new technologies onto others.** On the other, constituent units may adopt many different AI projects bottom-up, resulting in a fragmented, uneven landscape of tools and rules.

Research on federalism and policy performance and on the institutional foundations of federalism shows that policy solutions developed at lower levels can be uploaded to the national level or transferred to other subnational governments. With regard to AI, scholars have pointed out that **the bottom-up adoption of AI regulation can produce innovative solutions tailored to specific problems, and sector-specific rules rather than a single encompassing regulation**.

These questions are on the political agenda in Switzerland today. The 26 cantons hold primary competencies in fields such as policing and education, and they implement much federal legislation. In February 2025, the Federal Council opted for a sector-specific approach to AI regulation. Switzerland will incorporate the Council of Europe's AI Convention into Swiss law, with amendments that are "sector-specific as far as possible", and a consultation draft is due by the end of 2026. This runs in parallel with recent efforts to harmonize the governance of the digital state. First, the Confederation and the cantons have decided to develop their joint organization, Digital Public Services Switzerland (DVS), towards a political platform with binding standard-setting. Second, both chambers of parliament have asked the Federal Council to prepare a constitutional article on digitalization. The question of how much centralization AI requires, and in which fields, is therefore part of a broader ongoing debate on digital governance.

THE FINDINGS

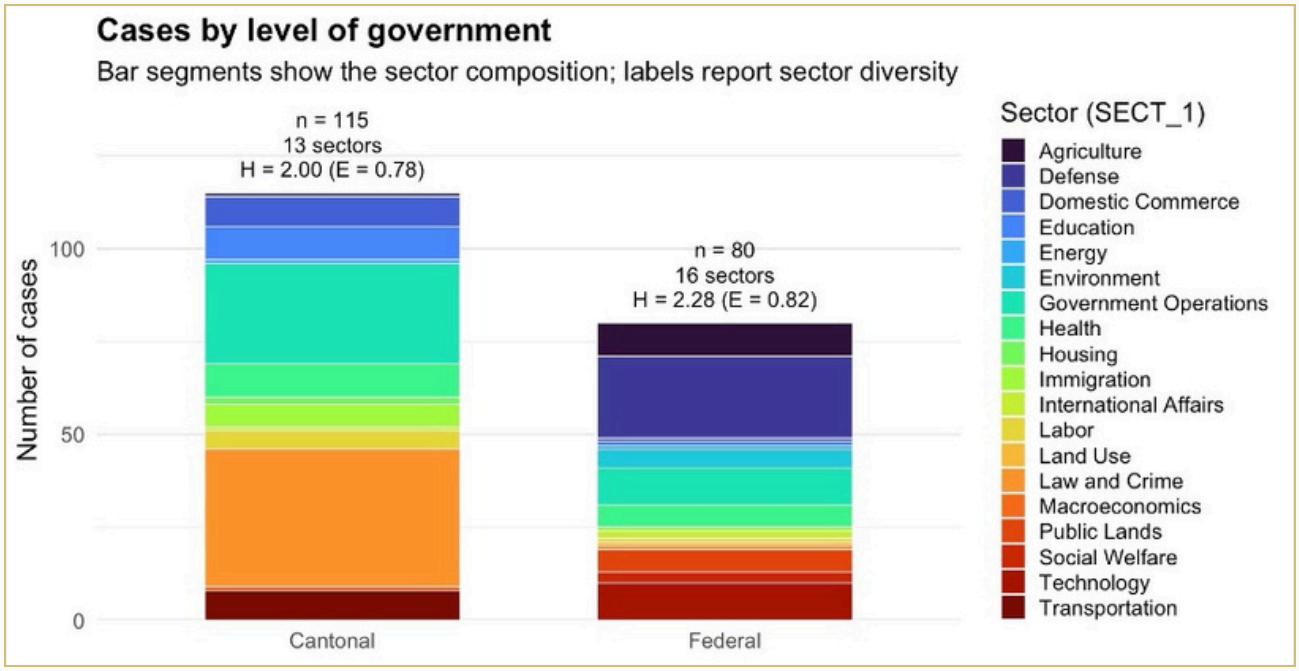
We now turn to the results of an empirical analysis of AI adoption in Switzerland across levels of government and policy fields.

AI Adoption in Switzerland Follows the Division of Competencies

Figure 1 below shows the number of AI-related projects at the cantonal and the federal levels. The cantonal data come from the Atlas of Automation of AlgorithmWatch CH, an organization that monitors algorithmic systems. The federal data come from the project database of the federal government's Competence Network for Artificial Intelligence (CNAI).

We identify 115 projects in 13 policy fields at the cantonal level and 80 projects in 16 fields at the federal level, ranging from case work in law enforcement to the more efficient organization of government work. The figure also reports two standard measures of how diverse the projects are. The first (H) increases when projects are spread over more policy fields and more evenly; the second (E) rescales this between 0 (all projects in a single field) and 1 (projects spread perfectly evenly across fields). Both values are somewhat higher at the federal level. In other words, although the cantons have more projects overall, the federal level covers a wider variety of policy areas.

Figure 1: AI-related projects at the cantonal and federal levels



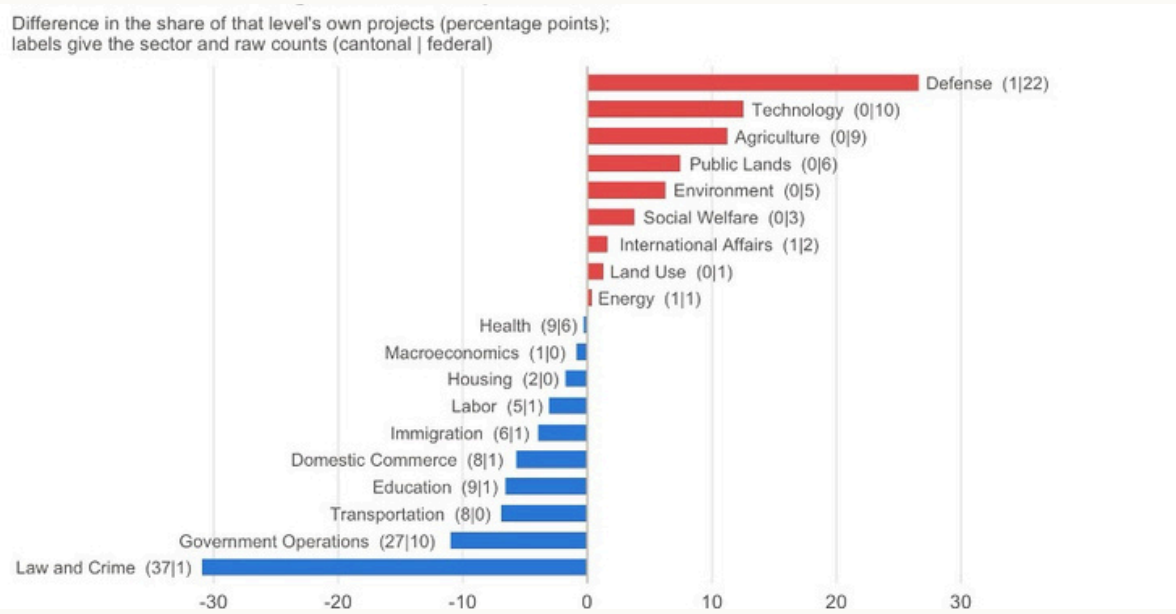
Source: Authors' compilation based on the AlgorithmWatch CH Atlas of Automation (cantons) and the CNAI project database (Confederation)

THE FINDINGS

Figure 2 shows more precisely where each level is active. The cantons develop projects in fields where they hold primary competencies: 37 of the 115 cantonal projects concern law and crime (against one at the federal level), and nine concern education (one federal). This is unsurprising, because these policy domains are mostly a cantonal competence. The federal government focuses mainly on the domains within its own competence, such as defense (22 federal projects, one cantonal) and technology (ten federal, no cantonal). Both levels are active in areas of shared competence, such as health (nine cantonal and six federal projects), and in the organization of government itself such as service delivery (27 cantonal and ten federal projects). Some projects are joint undertakings among several cantons, sometimes with the federal government, but not necessarily in areas of shared competence. In health policy, for example, there is no joint project: all projects are either cantonal or federal. In law and crime, by contrast, many projects span several cantons and sometimes also include the federal level. We nevertheless coded these as cantonal, since our aim is to highlight specialization.

Despite high federal activity across many fields, a clear division of labor remains, following the allocation of competencies. We therefore do not find the clear centralizing tendency that the literature on digital government would lead us to expect. Instead, AI adoption produces several intelligent centers, at the federal or the cantonal level depending on the policy field. The same is likely to unfold for the regulation of AI. Because policing and schooling fall under cantonal jurisdiction, the knowledge of the data, procedures and legal frameworks needed to regulate AI in these fields is also located in the cantons, or in groups of cantons that work together.

Figure 2: Where each level of government specializes



Source: As Figure 1. Bars show the difference between the share of a policy field in cantonal and in federal projects; numbers in brackets give the counts (cantonal | federal).

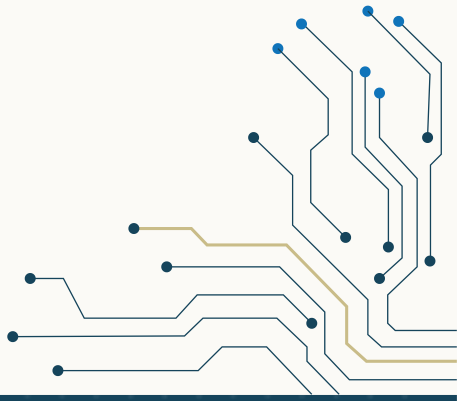
THE FINDINGS

Loose Coupling and Current Intergovernmental Mechanisms for AI

Dunleavy and Margetts illustrate the "intelligent center" with corporate examples such as Amazon or Walmart. In this model, corporations use decentered logistic centers that are fully automatized and under full technical control by the organizational center. In contrast, the idea of loosely coupled intelligent centers is different. **Loose coupling means that organizational units retain some autonomy while maintaining important ties with the center and in between them**. The potential advantage of loosely coupled intelligent centers is that they build on the logic that there are several centers of intelligence instead of one central one. Applied to a decentralized federation such as Switzerland, this idea implies that there are various hubs of cantons that collaborate on AI related projects. In Switzerland, it is highly unlikely that cantonal competencies will be dissolved in response to technical imperatives such as AI and turn cantonal administrations into automated satellites of the central government, even in the case of smaller cantons, given the strong ties between elites representing those cantons and elites from other cantons.

Loose coupling therefore means, above all, that the different levels of government need to coordinate the adoption and regulation of AI. Switzerland already has a number of instruments that are relevant for intergovernmental coordination regarding AI, including the following:

- The federal strategy on the use of AI systems, in force since March 2025, commits the administration to exploit synergies with cantonal and communal administrations, but does not set out a mechanism for doing so.
- DVS (Digitale Verwaltung Schweiz) is the national organization that coordinates the digitalization of the public sector in Switzerland. Within DVS, a coordination body on data science and AI serves as an exchange platform for the Confederation, cantons and communes. Its expert group on AI governance, co-led by the canton of Fribourg and the Federal Statistical Office, has published a guide for developing AI strategies. The standards association eCH has set up an expert group on AI standards for public administrations.
- Groups of cantons cooperate. Graubünden, St. Gallen, Thurgau and the two Appenzells, with the Principality of Liechtenstein, carried out a joint analysis of the potential of AI in their administrations and assessed more than 120 use cases, which they plan to keep updating together.



POLICY LESSONS

Moving forward, a model of loosely coupled intelligent centers requires determining where sharing and centralization are actually necessary, and where room to maneuver can be maintained at the subnational level. The findings suggest four key implications for policymakers:

1. **Minimal national standards for data security are indispensable.**
2. The **federal government will need to ensure that certain types of data are made available to the cantons**. The cantons would then retain a degree of freedom in how they use these data and how they develop their own services based on national data and standards.
3. **Interfaces which facilitate interoperability between systems are needed**, so that information can be exchanged where necessary.
4. **Economies of scale matter.** At some point, subnational governments will need to share the costs of procuring AI-related services. Purchasing similar products together would allow them to obtain better prices and to invest jointly in the required security measures.

What a Loosely Coupled Intelligent Center Could Look Like in Switzerland

In practical terms, we suggest building the model on existing intergovernmental structures rather than creating a new AI agency. It would have three layers:

- **A binding national core**. DVS, strengthened by the planned constitutional basis, should make a small number of rules mandatory for all levels: data security, access to key federal data, interfaces, and the use of shared trust infrastructure such as the e-ID. The new competence should be used narrowly, for what must be common, and not to centralize applications.
- **Sectoral intelligent centers**. Where cantons hold the competencies, existing joint bodies, such as PTI in policing, Educa in education and eHealth Suisse in health, together with the conferences of cantonal ministers that steer them, should become the places where AI applications are tested, assessed and shared. Cantons would adopt these solutions voluntarily, but according to common standards.
- **Regional clusters**. Groups of cantons, such as those in eastern Switzerland, should be able to develop and procure AI solutions together and make them available for reuse by others.

Coherence would come from **shared standards and transparency**. A joint register of AI projects at all levels of government, building on the CNAI database, which currently covers only the federal level, and on cantonal collections of use cases, would show where solutions already exist and help avoid duplication. Conflicts would be handled where they are handled today: technical conflicts in specialized organizations such as DVS, and political conflicts in intergovernmental bodies such as the Conference of Cantonal Governments (KdK) and the sectoral conferences, in which the Confederation and the cantons negotiate.

POLICY LESSONS

What to Avoid

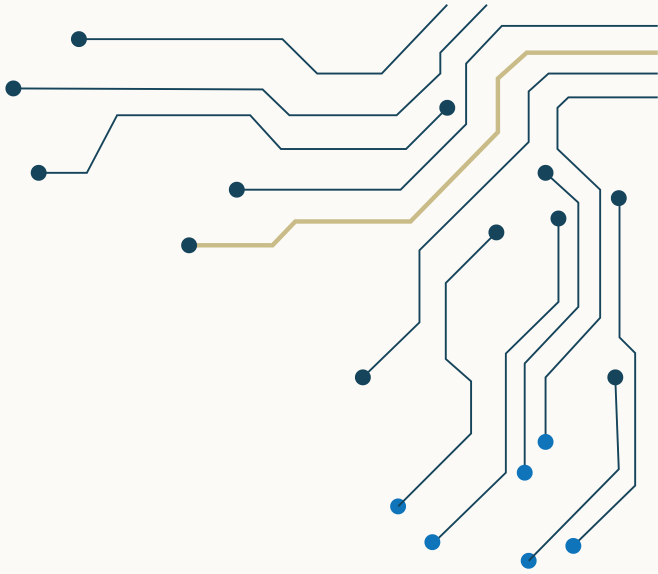
- **Fragmented infrastructure**. The example of the Swiss electronic patient record shows that spreading shared infrastructure across many providers can stall adoption and leads to poorly functional results that result in more centralization.
- **Centralizing applications where expertise is cantonal**. AI in policing or schooling depends on cantonal data, procedures and law; a single federal solution would lack this knowledge as well as legitimacy.
- **Duplication**. Without a joint register and joint procurement, 26 cantons risk paying several times for similar tools and security measures.

Why Loose Coupling can be an Advantage

In addition to these structural conditions, **loosely coupled intelligent centers have three distinctive advantages** that may make them more attractive than a single intelligent center with devolved delivery:

1. **Such systems may be more resilient where data storage is decentralized**. Even if the federal government guarantees access to certain data for all cantons, it may leave storage to cantonal infrastructures, which can be easily isolated in a crisis.
2. **They may enjoy greater legitimacy**, because allocating competencies and resources across levels of government is a political process that takes longer and involves more public debate.
3. **Distributed infrastructure and a broader political consensus** together make such systems **more robust**.

> ***"In Switzerland, it is highly unlikely that cantonal competencies will be dissolved in response to technical imperatives such as AI. Loose coupling therefore means, above all, that the different levels of government need to coordinate the adoption and regulation of AI."***



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