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Overview of artificial intelligence regulation

Report to the Federal Council

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Executive summary

Artificial intelligence (AI) has developed rapidly in recent years. At the latest since the launch of generative AI applications such as ChatGPT, the topic of AI has reached the general public as well. AI offers great opportunities for Switzerland as a business and innovation location. At the same time, new legal challenges arise, e.g. regarding the transparency and traceability of AI-based decisions. At international level, regulations such as the Council of Europe's AI Convention and the EU's AI Act have been drawn up. So far, there has been no overarching AI-specific legislation in Switzerland. The question arises as to whether the current legal framework is up to the new challenges. AI is accordingly a priority of the Federal Council's 2023-2027 legislative plan. The legislative plan calls for a fundamental decision to be made on the future Swiss regulatory approach in the field of AI. Against this backdrop, the Federal Council has commissioned DETEC (OFCOM) and the FDFA (State Secretariat, Europe Division) to draw up the present overview of the possible regulation of AI, which will serve as a basis for the Federal Council's decision.

The overview defines three overarching objectives that should be fulfilled by Swiss AI regulation: (i) strengthening Switzerland as an innovation location, (ii) safeguarding the protection of fundamental rights, including economic freedom, and (iii) strengthening public trust in AI. For this purpose, the overview outlines three possible regulatory approaches that would fulfil the objectives to varying degrees:

(i) Continuation of topic- and sector-specific regulatory activities: The need for regulation would continue to be identified and implemented on a topic- and sector-specific basis. Where necessary, this would also apply to overarching topics such as data protection. Beyond this, the Federal Council would refrain from proposing new regulatory measures and would not currently seek any overarching Swiss regulation of AI applications. With regard to cross-sectoral challenges, there would continue to be no coordinated regulatory approach at federal level apart from the usual consultation procedures.

(ii) Ratification of the Council of Europe's AI Convention with minimum implementation (option 1) or more extensive implementation (option 2): The main challenges regarding the protection of fundamental rights, democracy and the rule of law would be addressed through a coordinated approach at federal level, for example relating to transparency and through a risk and impact assessment of AI systems. In the case of minimum implementation, the obligations for the state would be more extensive than for private actors; in the case of more extensive implementation, similarly extensive obligations for public and private actors would be sought.

(iii) Ratification of the AI Convention and implementation in line with the EU AI Act: In line with the EU AI Act, the introduction of a risk-based approach for dealing with products with AI components would create the same conditions for Swiss companies as in the EU. This could facilitate the market access of Swiss products with AI components to the EU internal market, but would lead to a high level of regulation in Switzerland.

The regulatory approaches build on each other. Each approach goes further than the previous one in terms of implementation design. Depending on the Federal Council's decision, the regulatory approaches will have to be examined in greater depth in follow-up work. Additional measures can also be taken. For Switzerland as a business location, the agreement between Switzerland and the EU on mutual recognition in relation to conformity assessment (MRA) and its interplay with the AI Act are also important with regard to AI. The instrument of regulatory sandboxes could also be examined as a way of promoting innovation in the field of AI.

Several baseline analyses served as the basis for the approaches developed: (i) A country analysis presents the regulatory developments in 20 selected countries. (ii) A baseline legal analysis examines the effects and requirements of the AI Convention, the AI Act and the up-to-dateness of selected areas of Swiss law. (iii) A sectoral analysis provides an overview of the existing and planned changes to federal law in various sectors. (iv) An economic and European policy assessment includes a presentation of the need for action within the framework of the MRA arising from AI developments.

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References

1 Introduction

1.1 Background

Artificial intelligence (AI) applications now permeate all areas of life and are constantly opening up new possibilities. AI offers great opportunities for Switzerland as a business and innovation location. At the same time, AI poses certain challenges for people and society, for example if it is used in a non-transparent way or encourages disinformation or discrimination. The opportunities and risks of AI are heavily dependent on the context of use.

The Federal Council is closely monitoring developments in the field of AI and has already taken various measures: At national level, the Federal Council set up an Interdepartmental Working Group on Artificial Intelligence (IDAG AI) in 2018. In its 2019 report entitled 'Challenges of artificial intelligence'[1], the working group found that Switzerland was well positioned with regard to AI and that the existing general legal framework was in principle sufficient to meet the existing challenges of AI. At the same time, a considerable need for clarification and action was identified in certain areas of application. As a result, the Federal Council adopted strategic guidelines on artificial intelligence for the Confederation in 2020[2]. The seven guidelines provide the Federal Administration with a general frame of reference on the use of AI and are evaluated on a regular basis. In 2022, the Federal Council also created the Competence Network for AI (CNAI)[3], which serves networking in regard to specific AI projects in the Federal Administration. At international level, Switzerland has been actively involved in the development of international AI regulations for many years, for example in the Council of Europe, the OECD and UNESCO.

Currently there is no overarching AI-specific legislation in Switzerland. Regulatory adjustments are being made where necessary in the individual sectors. However, AI technology has developed rapidly in recent years, and there has also been a lot of movement in regulation at international level. In May 2024, the Council of Europe adopted a Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law (hereinafter: AI Convention)[4], in the development of which Switzerland played a key role. On 1 August 2024, the Artificial Intelligence Act (hereinafter: AI Act)[5] came into force in the EU. There are also increasing calls at national level for the legal situation of AI to be clarified in more detail, including various parliamentary procedural requests and civil society petitions[6].

1.2 Mandate and objective

The Federal Council wants to harness the diverse potential of AI. At the same time, fundamental rights must continue to be safeguarded and democracy and the rule of law guaranteed. The question arises as to whether and how the regulatory framework for the development and use of AI in Switzerland should be adapted and shaped in future.

The Federal Council has therefore defined AI as a priority topic in its legislative plan for 2023-2027[7]. In addition to the commitment to further develop the field of AI within the Federal Administration, the legislative plan states that a fundamental decision on the future Swiss regulatory approach to AI should be made in the first half of the legislative period. In addition, the Federal Council has made the development of a Swiss approach to AI regulation a focus theme of the Digital Switzerland Strategy 2024[8].

Specifically, on 22 November 2023, the Federal Council mandated DETEC (OFCOM) and the FDFA (Europe Division) to prepare an overview of possible regulatory approaches for AI by the end of 2024[9].

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1 Challenges of artificial intelligence, Report by the Federal Council's Interdepartmental Working Group on Artificial Intelligence (executive summary; full report in German and French): https://www.sbfi.admin.ch/dam/sbfi/en/dokumente/2021/05/challenges-ki.pdf.download.pdf/challenges-ki_e.pdf (accessed 30 September 2024).

2 Guidelines on Artificial Intelligence for the Confederation, General frame of reference on the use of artificial intelligence within the Federal Administration, available at: https://www.sbfi.admin.ch/dam/sbfi/en/dokumente/2021/05/leitlinien-ki.pdf.download.pdf/leitlinien-ki_e.pdf (accessed 30 September 2024).

3 Competence Network for Artificial Intelligence (CNAI), available at: www.cnai.swiss/en (accessed 30 September 2024).

4 Council of Europe (2023). Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law, ETS No. 225.

5 Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act), OJ L 2024/1689, 12.7.2024 (AI Act).

6 E.g. Postulate 23.3201, Marcel Dobler, Legal situation of artificial intelligence. Clarify uncertainties, promote innovation! available at: https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaeft?AffairId=20233201 (accessed 30 September 2024) and AlgorithmWatch (2024). Artificial intelligence can discriminate: Broad coalition calls on Federal Council to act, available at: https://algorithmwatch.ch/de/ki-appell-an-bundesrat/ (accessed 30 September 2024).

7 BBl 2024 1440, Art. 6 of the Federal decree on the legislative plan 2023-2027, available at: https://www.fedlex.admin.ch/eli/fga/2024/1440/de#art_6 (accessed 30 September 2024).

8 Digital Switzerland Strategy, available at: https://digital.swiss/en/ (accessed 30 September 2024).

9 Press release of the Federal Council of 22 November 2023, Federal Council examining regulatory approaches to AI, available at: https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-98791.html (accessed 30 September 2024).

This work is to be open with regard to outcome. The analysis is to build on existing Swiss law and identify possible regulatory approaches for Switzerland that are compatible with the EU AI Act and the Council of Europe's AI Convention. The overview should also show the regulatory activities in the individual sectors and take technical standards into account. The regulatory requirements should be examined with a particular focus on compliance with fundamental rights. The financial and institutional implications of the regulatory approaches should also be assessed.

With this report, DETEC and the FDFA are fulfilling the Federal Council's mandate. The overview presents developments up to autumn 2024. The various possible regulatory approaches are not elaborated in detail, but are roughly outlined. The overview is intended to serve as a basis for the Federal Council to make a decision so that it can issue a concrete mandate for a regulatory proposal on AI starting in 2025 and regulate the responsibilities within the federal government. This report focuses on legal and regulatory issues in connection with AI. More far-reaching aspects such as education and empowerment, infrastructure, security and sustainability are not addressed. The analysis is also limited to the need for legislation in federal law, excluding cantonal and communal law.

1.3 Procedure

This overview includes legal analyses as well as economic and European policy assessments, which required interdisciplinary cooperation across all departments. The work was therefore carried out within the framework of the Interdepartmental Coordination Group on EU Digital Policy (IC-EUDP), which consists of around 25 federal agencies. The IC-EUDP is under the lead of OFCOM and the FDFA's Europe Division. A core team was formed within the IC-EUDP, comprising the Federal Office of Justice (FOJ), the Directorate of International Law and the European Division of the FDFA as well as OFCOM. OFCOM provided the technical secretariat for this work.

Detailed baseline analyses were necessary to prepare the overview, namely a baseline legal analysis, an analysis of regulatory activities in the individual sectors and an analysis of AI regulations in other countries. The three baseline analyses are being published separately at the same time as this overview[10]. The first part of this overview summarises the most important findings of the baseline analyses. Building on this, it derives possible regulatory approaches for AI in Switzerland in the second part.

External stakeholders from the business sector, academia and civil society were also involved in the work. Over the course of 2024, OFCOM provided regular information on the overview via the Plateforme Tripartite[11], which is open to all interested parties, and offered the opportunity for exchange and input at several meetings. Interested stakeholders were able to present their positions on the regulation of AI. In May 2024, an exchange on AI regulation took place in cooperation with the State Secretariat for Economic Affairs (SECO) within the extraparliamentary Economic Policy Commission (EPC)[12]. The potential regulation of AI was also a dominant topic at the Swiss Internet Governance Forum (Swiss IGF)[13] on 5 June 2024.

On 11 September 2024, Federal Councillor Albert Rösti invited various experts from the business sector, academia and civil society to an advisory committee meeting as part of the Digital Switzerland Strategy to discuss possible regulatory approaches for AI.[14] In addition, representatives of the Federal Administration exchanged views with representatives of the Conference of Cantonal Governments (CCG) on 26 September 2024 as part of the work on the overview. Representatives from around ten cantons are also active in the Plateforme Tripartite.

[10] The baseline analyses are available under: https://www.bakom.admin.ch/content/dam/bakom/de/dokumente/KI/analyse_juritisch.pdf (in German), https://www.bakom.admin.ch/content/dam/bakom/de/dokumente/KI/ueberblick_regulierungsvorhaben.pdf (in German) and https://www.bakom.admin.ch/content/dam/bakom/en/dokumente/KI/analyse_laender.pdf (accessed 12 February 2025).

[11] Federal Office of Communications, Plateforme Tripartite, available at https://www.bakom.admin.ch/bakom/en/homepage/ofcom/international-activities/un-world-summit-on-the-information-society/wsis.html (accessed 30 September 2024).

[12] Federal Department of Economic Affairs, Education and Research, Economic Policy Commission, available at: https://www.admin.ch/ch/d/cf/ko/gremium_10723.html (accessed 30 September 2024).

[13] Swiss Internet Governance Forum, available at: https://igf.swiss/en/ (accessed 30 September 2024).

[14] Press release of the Federal Council of 11 September 2024, Digital Switzerland advisory committee: Exchange on the regulation of artificial intelligence, available at: https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-102413.html (accessed 30 September 2024).

Part 1: Baseline analyses

2 Definition of AI

There is no generally valid and accepted definition of AI. This overview relies on the definition in the Council of Europe's AI Convention. That definition is practically identical to that of the OECD from November 2023, which is probably the most widely used worldwide. Art. 2 of the Council of Europe's AI Convention defines an AI system as follows:[15]

> *"A machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations or decisions that may influence physical or virtual environments. Different artificial intelligence systems vary in their levels of autonomy and adaptiveness after deployment."*

The following chapters will refer to AI applications and AI systems. An AI application is the use of AI in a specific context. Applications can consist of one or more AI systems.

3 Regulation of artificial intelligence in selected countries

Many countries around the world are currently asking themselves whether and how they should regulate AI. Between spring and autumn 2024, OFCOM, with the support of the FDFA, analysed regulatory activities in 20 selected countries[16] across six continents. The focus was on five areas. Specifically, (i) the regulatory content, (ii) the application, (iii) the scope, (iv) the current status and (v) governance were examined. The detailed country reports can be found in the corresponding baseline analysis[17].

The analysis shows that there are many different approaches to regulating AI worldwide; there is no one regulatory approach that clearly prevails. Most of the countries analysed have at least a national strategy or action plan on AI, which Switzerland does not. However, apart from the EU Member States, where the AI Act has been in force since 1 August 2024, only very few countries had legally binding instruments specifically for AI in place as of autumn 2024. This is the case in the United States, for instance. Most countries are currently in the discussion or negotiation phase, although the development of legally binding instruments on AI is already well advanced in some countries (e.g. Brazil, Canada and South Korea).

With regard to whether AI regulation should be set out comprehensively in a horizontal enactment or via various sectoral enactments, there does not appear to be a clear international trend. Some of the countries analysed (such as the UK and Israel) prefer a sectoral regulatory approach, as this seems better suited to dealing with the dynamic development of AI technology. Others (such as Brazil, Canada, South Korea and the 27 EU Member States) are taking a horizontal approach – i.e. laying down principles on AI in horizontal laws that apply to all sectors – in order to address overarching challenges in a uniform manner. With regard to the mechanisms for assessing the risks and adverse effects of AI, a cross-sectoral approach is emerging in many countries (e.g. in Brazil, Canada and the EU).

In most of the countries analysed, regulatory efforts are directed at both the public and private sectors. Some countries (e.g. Australia, Japan, Singapore and the United States) limit themselves to voluntary guidelines for the private sector and have refrained from enacting binding regulations. The risk-based approach to regulating AI, as pursued by the EU in the AI Act, appears to be gaining adoption internationally by other countries. Brazil and Canada, for example, are drawing on this model in their current AI bills.

With respect to governance, some countries have created new, specific authorities for AI, such as AI safety institutes, while others are relying on existing ministries and regulators in the areas of justice, data protection, science and innovation, communication and security and empowering them to deal with the new challenges in the field of AI. In some cases, considerable financial resources are earmarked for this purpose (more than GBP 100 million in the UK, for example)[18].

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[15] This also corresponds to the CNAI's definition. See: Terminology – CNAI Competence Network, Version 2.1 of 21 Dezember 2023, p. 7.

[16] The analysis covers 20 countries, namely: Australia, Austria, Brazil, Canada, China, Denmark, France, Germany, Israel, Italy, Japan, Nigeria, Singapore, South Korea, South Africa, Spain, Taiwan, United Arab Emirates, United Kingdom, United States

[17] The country analysis is available under: https://www.bakom.admin.ch/content/dam/bakom/en/dokumente/KI/analyse_laender.pdf (accessed 12 February 2025).

[18] Government of the United Kingdom (2024), A pro-innovation approach to AI regulation: government response, available at: https://www.gov.uk/government/consultations/ai-regulation-a-pro-innovation-approach-policy-proposals/outcome/a-pro-innovation-approach-to-

In summary, the need for action regarding AI regulation is recognised in all 20 countries analysed, even if the respective approaches differ.

4 Baseline legal analysis

In order to examine the need for AI regulation in Switzerland, the Federal Council has mandated that this should be carried out on the basis of existing legislation. The FOJ has therefore carried out a baseline legal analysis to identify possible gaps in the Swiss legal framework in light of the challenges arising in connection with AI.

The analysis covers in particular the Council of Europe's AI Convention, which would be binding on Switzerland if ratified. The Convention identifies the main legal challenges of AI in relation to the protection of human rights, democracy and the rule of law. The analysis of the Convention is thus intended to identify the need for action in relation to these internationally recognised challenges. The analysis is also limited to the need for legislation in federal law, excluding cantonal and communal law. The cantons would be responsible for implementing the Convention within their jurisdiction. The baseline legal analysis also looks at the EU AI Act, which is the first binding legislation directly applicable at supranational level. The AI Act is not binding for Switzerland, but does affect Swiss actors who export to the EU. Finally, selected areas of law with a cross-sectoral character are also analysed. The most important findings are presented in the following sub-sections. Detailed explanations can be found in the separate baseline legal analysis[19]. The baseline legal analysis covers developments up to 31 August 2024.

4.1 AI Convention of the Council of Europe

On 17 May 2024, the Committee of Ministers of the Council of Europe adopted the Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law. This is the world's first intergovernmental agreement on AI that is binding between the contracting parties; it is not only aimed at European countries, but rather has a global focus: 57 countries[20] from almost all regions of the world, including all G7 members, took part in the negotiations chaired by Switzerland. When the Convention was opened for signature on 5 September 2024, the EU (for all 27 Member States), Andorra, Georgia, Iceland, Israel, Moldova, Norway, San Marino, the UK and the US already signed it.

The aim of the Convention is to ensure that the use of AI complies with existing international legal standards on human rights, democracy and the rule of law. For this purpose, it establishes a general obligation for states to guarantee the protection of human rights, the integrity of democratic processes and respect for the rule of law throughout the entire lifecycle of AI systems. It defines a set of principles[21] that states must follow when dealing with AI and requires the existence of legal remedies and procedural safeguards as well as mechanisms to assess the risks and adverse impacts of AI.

The contracting parties have wide latitude in choosing appropriate legislative, administrative or other measures to implement the Convention. For example, the Convention does not prescribe any specific bans on AI applications, but merely obliges the contracting parties to examine the need for moratoria or bans. The measures to be taken should follow a graduated and differentiated approach, depending on the severity and probability of the occurrence of adverse impacts of specific AI systems on human rights, democracy and the rule of law.

The Convention distinguishes between AI-related activities of public authorities – to which the provisions of the Convention apply directly – and private actors, where parties are required to address risks and impacts in a manner conforming with the object and purpose of the Convention. This requires that appropriate measures are taken. The contracting parties must also set out in a declaration the measures they intend to take vis-à-vis private actors to achieve the objective and purpose of the Convention.

Matters of national defence are excluded from the scope of the Convention. With regard to national security, states are not obliged to apply the Convention, but they may do so. In any case, the existing

ai-regulation-government-response#:~:text=To%20achieve%20this%2C%20the%20UK,and%20support%20regulators%27%20technical%20capabilities (accessed 30 September 2024).

19 The baseline legal analysis is available under: https://www.bakom.admin.ch/content/dam/bakom/de/dokumente/KI/analyse_juritisch.pdf (in German) (accessed 12 February 2025).

20 The Member States of the Council of Europe as well as ARG, AUS, CAN, CRC, ISR, JAP, MEX, PER, URU, USA, VAT.

21 Human dignity and individual autonomy, transparency and oversight, accountability and responsibility, equality and non-discrimination, privacy and personal data protection, reliability, and safe innovation.

standards on human rights, democracy and the rule of law must be observed. The area of research and development is excluded with exceptions from the scope of the Convention.

As part of the baseline legal analysis, an initial examination of the need for legislative action was carried out in the event that Switzerland were to ratify the Convention. This revealed the following:

- For some provisions of the Convention, Swiss law appears to offer a sufficient level of protection, so that adjustments would not be necessary. This is the case, for example, with respect to integrity of democratic processes and respect for the rule of law (Art. 5), and the requirement for public consultation on important questions in relation to AI (Art. 19).

- For other provisions of the Convention, Swiss law contains regulations that do not go far enough in comparison to the obligations of the Convention. Adjustments would accordingly be necessary. This concerns in particular transparency and oversight (Art. 8), safe innovation (Art. 13), remedies (Art. 14) and procedural safeguards (Art. 15). Implementation of key principles of the Convention, such as transparency and oversight (Art. 8), would also make the legal framework applicable in Switzerland more effective, e.g. in the areas of accountability, non-discrimination and data protection.

- For certain provisions of the Convention, Swiss law does not yet provide any corresponding standards. This applies in particular to the risk and impact management framework for AI systems required by the Convention (Art. 16) and to effective oversight mechanisms to oversee compliance with the obligations of the Convention (Art. 26). New legal bases would have to be created here, as the Swiss legal order has so far only regulated selective aspects (e.g. there is an impact management requirement set out in the Data Protection Act [FADP; SR 235.1]).

On the question of the extent to which the AI Convention also applies to the private sector, the baseline legal analysis shows that the application of the Convention would be limited to cases where there is a direct or indirect horizontal effect of fundamental rights in relations between private parties.[22] The Convention leaves considerable leeway in this respect. However, it appears that self-regulatory measures by the private sector without government measures would not be sufficient to meet the obligations of the Convention.

Should Switzerland decide to ratify the Convention, it would be necessary to examine in greater detail how the necessary new standards could be incorporated into existing Swiss law. For instance, it would have to be clarified whether the new standards can be provided for in one or more existing laws or whether a new law should be created. It is likely that the legal adjustments would affect several laws due to the breadth of the legal areas concerned. There also appears to be a need for coordination, in particular with the FADP.

An important aspect of any implementation of the Convention is proportionality. The political process of weighing which measures should be used to implement the Convention in Switzerland should – as stated in the Convention – be based on the severity and probability of the harm caused by the use of specific AI applications.

4.2 EU AI Act

The AI Act came into force on 1 August 2024 and is directly applicable in the EU Member States from 2 August 2026 – with certain exceptions. In principle, the AI Act does not apply to Switzerland, but it does cover Swiss actors operating in the EU internal market within the scope of the AI Act.

The AI Act covers the development, placing on the market, putting into service and use of AI systems in the EU. It aims to ensure that AI systems placed on the EU market are safe throughout their entire lifecycle and comply with applicable EU standards, in particular with regard to product safety. In addition, the AI Act is intended to enable the free cross-border movement of AI-based goods and services and prevent market fragmentation. The aim is to harmonise the EU internal market in the field of AI as well. The AI Act is indirectly aimed at protecting the fundamental rights of data subjects and as such contains few individual protection rights.

[22] Indirect effect: Takes place within the framework of a relationship under private law via a corresponding regulation under private law; a fundamental right has no horizontal effect *in itself*. In contrast, in the case of direct effect, fundamental rights can be enforced directly between private parties without the need for regulation under private law.

The AI Act pursues a risk-based approach. It classifies AI systems according to the degree of risk they pose to fundamental rights, health and safety. Depending on the classification, the AI Act provides for different obligations for market access:

- AI systems with no or minimal risk are not subject to any obligations (except for any voluntary codes of conduct);
- market access for AI systems with limited risk entails transparency obligations;
- high-risk AI systems are subject to strict obligations that must be fulfilled before they are placed on the market (e.g. risk assessment systems, high data quality, detailed documentation);
- with some exceptions, AI systems with unacceptable risk are prohibited on the EU internal market (e.g. AI systems that are used to classify natural persons based on their social behaviour [social scoring][23]).

The AI Act applies equally to public and private actors. It distinguishes between different roles: The requirements for the roles of "providers" and "deployers" of AI systems based in the EU or in a third country are particularly relevant.[24] The AI Act is largely dedicated to the obligations of providers of high-risk AI systems.

Of particular relevance to Swiss actors are the initial placing on the market and initial putting into service of AI systems in the EU internal market, although deployers must also draw up a post-market monitoring plan to assess the ongoing conformity of AI systems with the requirements of the AI Act. Also relevant is the use of outputs in the EU that were generated by an AI system from a third-country provider or deployer (e.g. in Switzerland). The AI Act also applies to actors in a third country who are commissioned from within the EU to provide a service in connection with high-risk AI systems. These provisions are intended to prevent the rules from being circumvented by developing AI systems in a third country, even though the outputs generated by the AI system are ultimately used in the EU.

As soon as Swiss actors are affected by the application of the AI Act, they must fulfil the obligations contained therein. These obligations differ depending on which risk category the AI system falls into. This is also relevant with regard to the penalties that apply in the event of a breach of these obligations.[25] The European legislator has also included GPAI models[26] in the AI Act, which are dealt with separately. GPAI (general-purpose AI) models differ from other AI models in that they are versatile and can handle a variety of tasks, from text generation to image processing to language translation. GPAI models are associated with more risks, which must also be taken into account for Swiss providers of such models.

The European legislator has defined a broad scope of application in the AI Act. If there is the political will in Switzerland to bring legislation closer in line with the AI Act, this would lead to new extensive obligations for affected actors in Switzerland, e.g. with regard to the obligations for providers or deployers of AI systems or the introduction of risk categories for AI systems. When developing such a regulatory approach, the special features and differences in the legal systems of Switzerland and the EU would have to be taken into account.

The AI Act has only just come into force. From a legal, institutional and practical perspective, many questions remain unanswered in connection with its application. These questions range from its application in the Member States to the practical effects on and requirements for actors in third countries. In this context, the Swiss-EU agreement on mutual recognition in relation to conformity assessment (MRA CH-EU; SR 0.946.526.81)[27] is relevant for Switzerland and is discussed in section 7.2.

4.3 Selected areas of law with a cross-sectoral character

In addition to the AI Convention and the AI Act, the baseline legal analysis also covers other areas of law that are relevant to AI. Particular attention is paid to the field of intellectual property and selected areas of private and criminal law.[28]

[23] Art. 5 para. 1 let. c of the AI Act.
[24] Definition of "provider": Art. 3 para. 3 of the AI Act; definition of "deployer": Art. 3 para. 4 of the AI Act.
[25] See Chapter XII of the AI Act and section 5.3.1 of the baseline legal analysis.
[26] General-purpose artificial intelligence models. GPAI models include, for example, GPT-4 – these models are trained with large amounts of data, which they can use as the basis for other AI applications such as ChatGPT.
[27] Agreement between the Swiss Confederation and the European Community on mutual recognition in relation to conformity assessment (MRA CH-EU; SR 0.946.526.81).
[28] The transversal thematic areas of data protection and non-discrimination are dealt with across the baseline legal analysis, in particular in Chapter 4 on the AI Convention.

In the area of intellectual property in particular, questions are increasingly being raised as to whether the current legal situation meets the challenges of AI. Generative AI systems are often trained with works protected by copyright. At the same time, more and more people are using AI systems to create content such as images, text or music themselves. This raises copyright issues that are currently controversial from a legal perspective. It concerns, for instance, the questions of whether AI outcomes are protected by copyright and whether the training of AI is relevant to copyright or not. It can be assumed that the answer to the second question in particular will highlight the need for regulation. If the training of AI is relevant under copyright law, it must be examined how the (further) development of AI can be ensured with training that is compatible with copyright law. If, on the other hand, the training of AI is not relevant in terms of copyright, it must be examined to what extent the interests of the rights holders of works should be taken into account in a different way. Outside the baseline legal analysis, this aspect was also addressed in the context of the consultation on the partial revision of the Federal Copyright Act (CopA; SR 231.1)[29], which aims to implement a neighbouring right for media companies. At this stage, the majority of consultation participants were against regulating the copyright aspects of AI. This brackets AI from the introduction of a neighbouring right for media for the time being, but does not generally exclude it.

In patent law, on the other hand, there is currently no need for regulation. Since 2016, the number of patent applications for AI-based inventions has been increasing exponentially and does not appear to present any challenges in this area. This indicates that the system is functioning satisfactorily. The increasing use of AI could lead to a further development of the patent law concepts of novelty and invention. However, a clear practice should be established with regard to the disclosure of training data for AI-based inventions. Worldwide developments in patent law regarding the requirement of a natural person as inventor should be followed closely.

In general, Swiss civil law and, in particular, liability law with its open general clauses is capable of absorbing technical developments and provides the courts with a set of instruments to arrive at fair solutions in individual cases. The existing strict liability and insurance obligations in road traffic and aviation also mean that liability gaps in key areas of application – e.g. for self-driving cars or drones – can be excluded. In principle, it is also possible to enforce claims in court on the basis of existing rules. Adopting the EU AI Liability Directive currently under discussion[30] could nevertheless facilitate the judicial enforcement of civil law claims and also help to better implement the requirements of the Council of Europe's AI Convention in the private sector. However, an isolated introduction of the directive – without simultaneous alignment with the AI Act – does not appear to be useful. The additional analyses and outcomes of the discussions in the EU on the AI Liability Directive – the future of which is uncertain – also remain to be seen.

Due to the technical developments of products – not only, but also in connection with AI – there is a general need for modernisation with regard to the Product Liability Act (PLA, SR 221.112.944). However, the adoption of the revised EU directive on liability for defective products[31] must be awaited before a decision is made.

In labour law, AI poses several challenges with respect to transparency, non-discrimination and data protection. These challenges arise as soon as AI applications process and/or evaluate employees' personal data and provide decision-making solutions that influence the hiring process, for example. At the present time, there therefore appears to be a specific need for legislation in some specific aspects of labour law. However, these questions do not only arise in the area of labour law, which is why they must be placed in the context of the development of the general legal framework.

Swiss criminal law, with its technology-neutral approach, offers a suitable instrument for capturing the use of AI systems by an offender or a group of offenders, especially in the case of intentional offences. Challenges lie primarily in (practical) demarcation issues relating to the responsibilities of manufacturers and users of AI applications as well as in the corresponding application of the law and legal enforcement in the case of opaque constructs. The detailed specification of due diligence obligations in dealing with AI systems, as can be found in the planned ordinance on automated driving, for example, can create better predictability in this area. However, any intervention by the legislator that goes beyond the existing

[29] Consultation 2022/52 on the revision of the Federal Copyright Act (CopA; SR 231.1), available at: https://fedlex.data.admin.ch/eli/dl/proj/2022/52/cons_1 (accessed 30 September 2024). The consultation lasted from 25 May to 15 September 2023.

[30] Proposal for a directive of the European Parliament and of the Council on adapting non-contractual civil liability rules to artificial intelligence (AI Liability Directive) of 28 September 2022, COM/2022/496 final.

[31] Proposal for a directive of the European Parliament and of the Council on liability for defective products of 28 September 2022, COM/2022/495 final.

framework would have to be evaluated in the context of the relevant scope of application. Regulation of AI systems in the context of criminal law is also being considered in principle at international level, for example by the Council of Europe.[32] It accordingly cannot be ruled out that more topic-specific developments could follow in addition to the Council of Europe's AI Convention.

In principle, the currently applicable regulations in these selected cross-sectoral areas of law therefore largely provide answers to the questions raised by AI applications. Challenges arise in certain areas, however. In addition, regulations that could be introduced on the basis of the Council of Europe's AI Convention could strengthen the existing legal framework.

5 Sectoral regulatory activities

Due to the wide range of areas in which AI applications are used and their highly dynamic nature, the question arises as to what need for regulation has been identified in the sectors concerned. As already discussed, Switzerland has so far adopted the approach that any regulatory measures in connection with AI are taken in the respective sectors. Adjustments to existing sector-specific laws are in principle the responsibility of the relevant specialist authorities.

As part of the baseline analysis of current sectoral regulatory activities in connection with AI[33] (hereinafter: sectoral analysis), a survey internal to the Federal Administration was conducted in spring 2024. The survey compiled current or planned regulatory activities in connection with AI. 66 federal agencies were surveyed. 41 responses were received.[34] The survey results reveal three main areas of focus. These consist of the use and handling of AI in the Federal Administration (see below in this section), the promotion of innovation in the sectors (see section 7.3) and the influence of international regulatory developments on the Swiss sectors (see sections 6 and 7.2).

The sectoral survey showed that AI poses new challenges for all sectors in principle. The focus is particularly on issues of transparency and traceability as well as the protection of privacy and data protection. At issue is the recognisable, traceable and comprehensible use of AI applications and respect for privacy and the protection of personality when training and using an AI system. Issues relating to discrimination and fairness as well as cybersecurity are also relevant for the sectors. The use of AI applications should not treat people differently on the basis of protected characteristics, and AI applications should be robust against attacks and errors. However, all issues are weighted differently depending on the sector, as each sector focuses on different aspects within its field of activity and therefore involves different risks.

When AI is used within the Federal Administration, governance processes are particularly relevant for data processing, such as those used for internal decision-making. Applications relevant to infrastructure management are also being developed or are in use.

Federal agencies in whose sector AI applications are particularly relevant are addressing AI from a regulatory perspective, are examining it or are planning to examine it in the near future (non-exhaustive list):

- The Swiss Federal Office of Energy (SFOE) is currently conducting a screening of AI activities, including new standards and international best practices in AI promotion and regulation. Potential regulatory measures and recommendations for the energy sector are being identified on that basis.

- The Federal Office of Police (fedpol) is currently procuring a new automated fingerprint identification system (AFIS). In light of the widespread use of AI in AFIS systems, the framework agreement with the provider contains explicit provisions on the responsible use of AI. In addition, the accreditation (ISO 17025) of the fedpol service which uses AFIS operationally sets sensible guidelines with regard to traceability and validation. Separately, the Federal Act on the Federal Police Information Systems (FPISA; SR 361) is currently being revised and made data-protection-compliant, with reference already being made to AI applications.

- As part of the overview of the legal framework for AI applications in the financial sector, the State Secretariat for International Finance (SIF) is reviewing aspects that are intended to result in a secure

[32] See Artificial Intelligence and Criminal Law – European Committee on Crime Problems, available at: (https://www.coe.int/en/web/cdpc/artificial-intelligence-and-criminal-law (accessed 30 September 2024).
[33] The sectoral analysis is available under: baseline analyses are available under: https://www.bakom.admin.ch/content/dam/bakom/de/dokumente/KI/ueberblick_regulierungsvorhaben.pdf (in German) (accessed 12 February 2025).
[34] See section 1 of the sectoral analysis and its appendices 1 and 2.

legal framework for AI use in the financial sector. FINMA already deals with the risks associated with AI applications as part of its supervisory practice.

- As part of OFCOM's work on the regulation of large communication platforms, the effects of AI on users of such platforms (e.g. Google or YouTube) were analysed. As a result, one aspect of the planned regulation is the containment of intended and unintended negative consequences of recommendation systems that make use of algorithms.

- AI applications offer a great deal of potential for public statistics, as public statistics per se only involve minor intrusions into the privacy of the people concerned. As part of the complete revision of the Federal Statistical Office's (FSO) statistical ordinances into a single Federal Statistical Ordinance (FStatO; SR pending), AI applications and their handling by the FSO and the other federal public statistics producers are explicitly addressed so that this potential can be exploited within a defined framework.

- The principles of the FADP apply to data protection also when AI is used. Currently, the provisions of the FADP, which came into force in September 2023, appear sufficient.[35] However, the challenges are amplified when AI is used. The increasing ability of AI to link different data sets and compare different types of information makes it more difficult to distinguish between personal and factual data. Also, even impersonal data can be used by AI to generate personal data through inferences, which raises questions regarding consent, purpose and use of the data. According to the survey conducted as part of the sectoral baseline analysis, the FDPIC supervises the application of the federal data protection regulations (Art. 4 of the FADP) and reviews the data protection impact assessment in accordance with Art. 23 of the FADP. The FDPIC has published a short communication on the applicability of the FADP to AI-supported applications, and it refers to its guidelines and the FOJ's guidelines on this topic for the DPIA.[36]

Similarly, AI is already being considered in certain (partial) revisions of existing laws in light of the new FADP, because the profiling referred to in the FADP is a method of data processing. AI applications may be deployed for this purpose, which is why the possibility of using AI applications is provided for within the framework of profiling, for example in the federal employee sector. In a broader context, Art. 21 of the FADP also stipulates that a person affected by an automated individual decision must be informed thereof.

Of the 41 offices that responded to the survey, the majority stated that a purely sectoral regulatory approach was not sufficient. Because of the issues arising in the field of AI that can be identified in all sectors, albeit with different weightings, 80% of respondents believe that an overarching approach does not seem out of place. The survey indicated that a cross-sectoral approach should address various challenges arising from the above questions. This would mean that broadly based challenges could potentially be resolved using a cross-sectoral common logic, while other issues that are sector-specific would still have to be solved on a sector-by-sector basis. Further reasons for the need for horizontal regulation arise from a time perspective, according to which a purely sectoral approach cannot ensure that all sectors are regulated simultaneously in an appropriate and timely manner. The creation of uniform cross-sectoral requirements for AI applications also appears to make sense in terms of legal certainty, particularly in order to prevent divergent sectoral regulations. Compatibility with EU law must be taken into account. Finally, according to the feedback, an overarching, cross-sectoral approach also appears to be more efficient and useful in terms of resources and expertise.

6 International technical standards

At a technical level, non-binding international standards and best practices are currently being developed to supplement and further specify the landscape of legal standards. In sectors with an international orientation, this is relevant for Switzerland and, according to the sectoral analysis survey, is already being observed and in some cases monitored by the federal agencies concerned.

As part of the World Standards Cooperation (WSC), the International Electrotechnical Commission (IEC), the International Organization for Standardization (ISO) and the International Telecommunication Union

[35] FDPIC, Short communication of 9 November 2023, Current data protection legislation is directly applicable to AI, available at: https://www.edoeb.admin.ch/edoeb/en/home/kurzmeldungen/2023/20231109_ki_dsg.html (accessed 30 September 2024).
[36] Section 3.1.1 of the sectoral analysis.

(ITU) are developing various standards to address society's concerns about AI. The standards are intended to provide suitable guidelines for responsible, secure and trustworthy AI development. The IEC and ISO have jointly developed a set of standards for AI that cover the entire AI ecosystem, including terminology, governance, risk management, cybersecurity and ethical considerations. For example, the Institute of Electrical and Electronics Engineers (IEEE) has developed technical standards (e.g. on terminology for safety tests and the robustness of AI applications) and is continuously working on further standards. These technical standards are also relevant for Switzerland.

At European level, the European Commission has adopted an implementing decision on a standardisation request in support of Union policy on artificial intelligence.[37] This would also prepare the necessary technical environment for implementation of the AI Act. This request was directed to the European Committee for Standardisation (CEN) and the European Committee for Electrotechnical Standardisation (CENELEC). They have started work on European standards and European standardisation documentation. The content of the standards will be the specifications for the design and the development of AI systems identified as high-risk AI systems in the AI Act, as well as specifications for AI providers' quality management systems and for the conformity assessment of AI systems. The standards to be developed will be relevant not only for the EU internal market, but also for Switzerland: Areas include civil aviation as well as road and rail transport, i.e. sectors with a cross-border character for which international technical standards are essential. The federal agencies concerned are actively monitoring these developments or are involved through their membership of technical committees in their respective sectors.[38] As a result, adjustments to technical standards in the relevant Swiss laws or ordinances would be necessary.

AI is also becoming increasingly important in electronic transactions. The United Nations Commission on International Trade Law (UNCITRAL) commissioned work on the subject of automated contracting, which Switzerland actively supported. In summer 2024, UNCITRAL adopted the UNCITRAL Model Law on Automated Contracting based on this work. The model law is intended to complement and supplement existing instruments on electronic transactions. The extent to which the model law will be incorporated into the Swiss legal system is an open question.[39]

7 Economic and European policy considerations

The question arises as to what impact a possible regulation of AI would have on the Swiss economy. The first step in analysing the current situation was to gain a better understanding of the needs of the Swiss economy in this context. First of all, it should be noted that no reliable figures on the size and significance of the Swiss AI market are yet available. It was not possible to collect such figures within the limited scope of this overview.

It seems clear that due to the broad scope of application of AI and the increasing use of AI components in products and services, many different economic operators would be affected by any regulatory measures on AI – start-ups and SMEs as well as large companies in a wide range of economic sectors and production areas, from medical technology, mobility and transportation, and the machine industry to consumer electronics. The needs and expectations appear to vary accordingly – a uniform attitude of the Swiss economy towards any AI regulation could not be identified in this overview as of autumn 2024. Economiesuisse, the umbrella organisation of the Swiss economy, rejects AI-specific legislation along the lines of the EU model at the present time.

7.1 Impact of the EU AI Act on the Swiss economy

The EU AI Act must also be included in the economic policy considerations, given that it applies to Swiss economic operators that are active in the EU internal market within the scope of the AI Act. An exchange on this topic took place in May 2024 within the framework of the Economic Policy Commission (EPC). In addition, OFCOM sent out a questionnaire to economic operators on their assessment of the impact of the AI Act on Swiss companies. Very few responses were received to the questionnaire. This is probably primarily because it has not yet been possible to gain any concrete experience of its impact on Swiss companies, given the novelty of the topic and the fact that the AI Act is still being implemented.

[37] Commission Implementing Decision of 22.5.2023 on a standardisation request to the European Committee for Standardisation and the European Committee for Electrotechnical Standardisation in support of Union policy on artificial intelligence, recital 5, available at: https://ec.europa.eu/transparency/documents-register/detail?ref=C(2023)3215&lang=en (accessed 30 September 2024).
[38] See sections 5.2.11 ff. of the baseline legal analysis and section 5 of the sectoral analysis.
[39] See section 6.4.1 of the baseline legal analysis and section 5 of the sectoral analysis.

In any event, market access barriers for Swiss exports to the EU should be avoided. For Swiss companies, the EU is the main sales market for AI products and services in light of existing economic relations and geographical proximity.[40] At the same time, the Swiss market should be kept as open as possible, and Switzerland as an innovation location should not be weakened by cumbersome regulations. Discussions with private sector actors (including in the Plateforme Tripartite, the Swiss IGF and the Economic Policy Commission) revealed that Switzerland's full adoption of the AI Act is generally viewed critically, partly because of fears that it would result in a high level of bureaucracy and a preference for selective adjustments to individual existing laws. However, no uniform opinion was identified here either. It was often argued that Switzerland should not rush into anything at the moment and should first wait for the specific national implementations of the AI Act in the EU Member States. The wish was also expressed that there should be no "Swiss finish" of the AI Act, i.e. that possible Swiss regulations should not contradict or be different/more far-reaching than those of the EU. This wish was also expressed in the Digital Switzerland Advisory Board on the focus topic of AI.

7.2 Importance and relevance of the MRA Switzerland – EU

The MRA CH-EU is important in connection with the impact of the AI Act on the Swiss economy. In terms of value, the agreement covers around two thirds of trade in industrial products between Switzerland and the EU.[41] More than half – 12 out of 20 – of the product sectors listed in the MRA CH-EU are affected by the provisions of the AI Act if the products in question contain AI components.[42] The AI Act classifies products in these 12 product categories as high-risk AI systems if they are subject to the conformity assessment procedure by a conformity assessment body acting as a third party in accordance with existing EU harmonisation legislation.

The technical regulations of Switzerland and the EU are currently recognised as equivalent in these product sectors affected by the AI Act.[43] Thanks to this mutual recognition, the conformity assessments required for the EU internal market can be carried out by a Swiss conformity assessment body (CAB) in accordance with Swiss technical regulations. In addition, in areas where the manufacturer is otherwise obliged to have a direct representation in the EU, this can be dispensed with. Conversely, the same applies to recognitions of conformity assessments from the EU. For less risky products, there is the option of a manufacturer's declaration.

From August 2027, the requirements of the AI Act for high-risk AI systems will be added, which will be applied to products in the aforementioned 12 sectors of the MRA with high-risk AI components. Irrespective of the MRA CH-EU, these will take effect within the EU. The requirements are not currently covered by the MRA, however. If a product contains AI components, an additional conformity assessment must be carried out by a conformity assessment body in the EU in accordance with the requirements of the AI Act in addition to the existing conformity assessment by third parties that currently applies to the Swiss market and the EU internal market. An authorised representative in the EU (representative of the manufacturer who assumes certain obligations on the manufacturer's behalf) would also have to be appointed for the AI aspects, and the address of the importer would have to be indicated on the packaging. Access to the EU internal market will therefore entail additional difficulties for Swiss products with AI components starting in August 2027. The double conformity assessment will lead to additional work and costs for the companies concerned.

The AI Act contains requirements for the 12 product categories for the placing on the market, putting into service and use of AI systems that are safety components of those products or are themselves such

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[40] With an estimated market size of USD 31.6 billion, the EU is already one of the world's largest AI sales markets. The EU market is expected to have an annual growth rate of 28.43%, leading to a market volume of USD 141.8 billion by 2030. The US market is comparatively larger (estimated 2024 market size of USD 50.1 billion, expected annual growth rate of 28.30% with a market volume of USD 223.7 billion by 2030), while China is of a similar size to the EU (estimated 2024 market size of USD 34.2 billion, expected annual growth rate of 28.61% with a market volume of USD 154.8 billion by 2030). Statista, Artificial Intelligence, available at: https://www.statista.com/outlook/tmo/artificial-intelligence/europe, https://www.statista.com/outlook/tmo/artificial-intelligence/eu-27, https://www.statista.com/outlook/tmo/artificial-intelligence/united-states, https://www.statista.com/outlook/tmo/artificial-intelligence/china (accessed 30 September 2024).

[41] See the MRA CH-EU 2023 trade statistics, available at: https://www.seco.admin.ch/dam/seco/en/dokumente/Aussenwirtschaft/Wirtschaftsbeziehungen/Technische%20Handelshemmnisse/MRA_CH_-_EU/handelsstatistik2019.pdf.download.pdf/Trade%20Statistics%20MRA%20CH-EU27%202023.pdf (accessed 30 September 2024).

[42] Specifically, these product categories are machinery, lifts, pressure vessels, gas appliances, personal protective equipment, toys, medical devices, telecommunications terminal equipment, equipment intended for use in potentially explosive atmospheres, motor vehicles, agricultural or forestry tractors, and cableway installations. For details, see the baseline legal analysis, section 5.3.2.

[43] In 2017, the EU adopted a new Medical Device Regulation, which came into force in May 2021. Switzerland has adopted legislation corresponding to that of the EU. However, the EU refuses to update the agreement due to a lack of progress in the negotiations on institutional issues. As a result, Switzerland no longer benefits from mutual recognition in the area of conformity assessment and, consequently, Swiss suppliers of medical devices encounter numerous obstacles when accessing the EU market, including the need to have the conformity assessment of the products carried out by a conformity assessment body in the EU and to appoint an authorised representative in the EU. In future, this deadlock could also affect other MRA areas that have undergone or will undergo a major revision in the EU (machinery, construction products, toys).

products. To avoid new technical barriers to trade in these areas, Switzerland would have to adapt its product regulations in these product sectors to those in the AI Act. In addition, the MRA CH-EU would also have to be expanded in terms of product-related AI legislation.

7.3 Innovation and support measures for AI

Promoting innovation is a driving force in the field of AI in order to stay at the forefront of developments. With regard to European policy, it is important to note that the EU is active not only in legislative terms. In addition to legislative initiatives, the EU also engages in a large number of non-regulatory initiatives and measures. These include various support programmes, action plans and joint investments.[44] Various other countries have also planned comparable AI support measures.[45]

In its response to postulate 24.3410[46] on an innovative environment for AI testing and promotion, the Federal Council stated that the possibility of existing and new financial support instruments for the development of important AI applications and access to the EU's Digital Europe Programme are to be addressed in a separate report. That report will be available by mid-2026 at the latest. This overview does not aim to anticipate that SERI report.

An innovation-friendly environment is crucial to making Switzerland an important location for the development and use of transparent and trustworthy AI. For the 2025-2028 funding period of the federal education, research and innovation policy (ERI), the relevant stakeholders – including the ETH Domain and the Swiss Academies of Arts and Sciences – have placed many priorities on digitalisation, digital infrastructure and transformation, with AI playing a central role.[47] Higher education institutions have created competence centres for AI (e.g. the Swiss AI initiative of ETH Zurich and EPFL), contributing to Switzerland's relevance as a location in the field of AI. In summer 2024, Innosuisse announced a Flagship Initiative on AI and health, aiming at solutions that are relevant to a large part of the Swiss economy or society.

8 Monitoring the federal AI guidelines

In 2020, the Federal Council adopted the Guidelines on Artificial Intelligence for the Confederation. The seven guidelines in total provide the Federal Administration and the agencies entrusted with performing administrative tasks for the federal government with a general frame of reference and aim to ensure a coherent policy on AI. The Federal Council tasked OFCOM with monitoring the guidelines in cooperation with the federal agencies concerned. An evaluation of the guidelines is to be carried out every two years. For this purpose, OFCOM conducted a survey in the Federal Administration in 2022 and in spring 2024 to evaluate the guidelines.

The 2024 survey showed that the AI guidelines are well known in the Federal Administration and are also used in specific cases as a general frame of reference for AI in the Federal Administration. The guidelines are easy to understand and continue to cover the relevant topics. They are formulated in an open manner and in principle enable an innovative, pragmatic and safe use of AI technologies. However, just over a third of respondents see a need for adjustment. First and foremost, they propose providing further detail to the guidelines. The effect and regulatory power of the guidelines on the design of specific projects is currently rather limited because they are formulated in a general way.

The survey results show that there is a need for practical AI instructions and directives in the Federal Administration. In light of the recognised need for action, a revision of the federal AI guidelines should be considered as part of the deliberations on AI regulation. A revision should be in line with the existing federal code of conduct for human-centred and trustworthy data science[48] and avoid duplication. In this context, both the role of the guidelines and their content should be examined, also in light of the fact that

[44] See, e.g., European Commission, Artificial Intelligence (AI) in Science, available at: https://research-and-innovation.ec.europa.eu/research-area/industrial-research-and-innovation/artificial-intelligence-ai-science_en (accessed 30 September 2024).

[45] E.g. Germany, AI Action Plan of the Federal Government, available at: https://www.bundesregierung.de/breg-de/themen/digitalisierung/kuenstliche-intelligenz/aktionsplan-kuenstliche-intelligenz-2215658 (accessed 30 September 2024); United Kingdom, UK Research and Innovation, available at: https://www.ukri.org/news/7-million-to-back-next-wave-of-ai-innovations/ (accessed 30 September 2024) and United States, Fact Sheet, available at: https://www.whitehouse.gov/ostp/news-updates/2024/07/16/fact-sheet-biden-harris-administration-announces-commitments-from-across-technology-ecosystem-including-nearly-100-million-to-advance-public-interest-technology/ (accessed 30 September 2024).

[46] Postulate 24.3140, Matthias Michel, available at: https://www.parlament.ch/de/ratsbetrieb/suche-curia-vista/geschaeft?AffairId=20243140 (accessed 30 September 2024).

[47] For more detailed information, see section 4 of the sectoral analysis.

[48] Document available at: https://www.bfs.admin.ch/asset/de/29325686 (accessed 12 November 2024).

the Federal Council has set itself the goal of developing an internal federal sub-strategy for the use of AI in the Federal Administration by 2025.[49]

[49] Objectives of the Federal Council 2025, available at: https://www.bk.admin.ch/bk/de/home/dokumentation/fuehrungsunterstuetzung/ziele-des-bundesrates.html (accessed 30 September 2024).

9 Interim conclusion

The baseline analyses show that the protection of fundamental rights is crucial in all areas. The market access of Swiss companies that develop or use AI applications, which is relevant for Switzerland as a business location from an economic perspective, should also not be neglected. The technological neutrality of existing standards is also proving to be essential in the rapid development of AI applications. The existing legal framework already addresses many of the core challenges in Switzerland today. Apart from the protection of fundamental rights and the empowerment of market participants, public trust in the security of useful and efficient applications is also crucial. Without public trust, no basis can be created for a social dialogue and the further development of new emerging technologies. Uncertainties remain in the face of the future development of AI applications and depend on those applications.

As the country analysis shows, there are different regulatory approaches to dealing with the regulatory challenges of AI around the world. Many countries – like Switzerland – are in a discussion or testing phase. Apart from the EU Member States, only a few countries have adopted AI-specific regulatory instruments to date. Most regulatory efforts are aimed not only at private actors but also at public actors, and many regulatory approaches take the risk-based approach of the AI Act as a model. What all the countries examined have in common is the recognition of a need for action with regard to AI regulation.

To identify Switzerland's need for action with regard to international agreements such as the Council of Europe's AI Convention or the significance of Switzerland's convergence with the EU AI Act, the baseline legal analysis examines those two enactments. The baseline legal analysis also examines the current landscape of the Swiss standards relevant to AI. With respect to the AI Convention, the analysis concludes that Switzerland will require regulation in certain areas if it ratifies the Convention. These areas include transparency, the analysis of the risks and impacts of AI systems and the necessary control mechanisms. The analysis notes that the AI Convention gives states a certain amount of leeway when implementing it in national law. If Switzerland were to align itself with the AI Act, there would be a need for extensive legislative adjustments. This would entail, for instance, the introduction of risk categories for AI systems and corresponding detailed obligations for providers and deployers. The EU Member States still have certain questions regarding the application of the AI Act, the answers to which will also be relevant for Switzerland.

In the selected cross-sectoral areas of the currently applicable Swiss legal framework, there is a selective need for action. In principle, however, the existing standards provide answers to the questions that arise. For certain sectors in particular, the sectoral analysis shows the current or planned legal adjustments and analyses the Federal Council's AI guidelines. It also shows that initial adjustments have already been made, particularly in the tech-driven sectors. Adjustments due to the new data processing requirements of the FADP – e.g. for profiling – were used in part to regulate the possibility of using AI applications. Within the Federal Administration, monitoring of the federal AI guidelines has shown that there is room for improvement in terms of their practicability. The survey on sectoral regulatory activities revealed a fundamental desire to tackle common challenges of AI applications – for example relating to transparency – in a uniform and overarching manner.

One topic that should be addressed from an economic and European policy perspective is the MRA CH-EU. 12 of the 20 product sectors listed in the existing MRA CH-EU are affected by the AI Act if the products in question contain AI systems. To avoid new technical barriers to trade for Swiss exports in these product sectors to the EU, Switzerland would have to adapt its product regulations to those in the AI Act. Furthermore, the MRA Switzerland-EU would have to be updated or even extended to include the AI area, which would only be possible once the ‘Stabilisation and further development of the bilateral approach’ package enters into force, i.e. 2028 at the earliest.

The various baseline analyses thus consistently show that there is a need for action to regulate AI in Switzerland.

Part 2: Derived need for action

10 Overarching regulatory principles and regulatory objectives

The Federal Council has already outlined on various occasions which regulatory principles must be observed in the case of a new and innovative technology.[50] The main principles to be observed are:

- Policymakers should provide an optimal framework conducive to innovation for business and research, while market and society preferences should determine which technologies will prevail. The legal order must always be observed.

- Fundamental rights are basic rights of the individual and core values. They form the basis for the ordering principles of the rule of law and democracy. For these reasons, fundamental rights must be respected throughout the legal system, with the aim of their full realisation.

- Switzerland should not fundamentally call into question its proven and balanced legal framework, but should make the necessary adjustments if legal gaps or obstacles arise.

- Switzerland should pursue a principle-based and technology-neutral legislative and regulatory approach, but should also allow exceptions if necessary; the rules should be as competition-neutral as possible.

- For efficiency reasons, the state should intervene in the market economy through regulation only if market efficiency can be increased compared to the status quo.

- Swiss authorities should position themselves as open towards new technologies and innovations and cultivate regular dialogue with all stakeholders, from private actors to government agencies.

As the first part of this report shows, the current legal framework can be used with a certain degree of flexibility for new developments and already provides guidance on most questions in the AI context. The principles mentioned therefore also appear relevant for the development of a legal framework for AI.

AI is considered a basic technology used in many different areas of life, with a high productivity impact on a wide range of economic sectors. The broad field of application of AI systems can lead to both positive and negative impacts on both the individual and the overall social or economic level.

Although many people in Switzerland already use low-threshold AI applications in their daily lives[51], there is an ambivalent attitude towards AI technologies.[52] A secure legal framework can help to increase people's trust in AI because they are then protected from misuse, can act autonomously and are able to assert their rights.[53]

With a medium-sized, open economy, Switzerland is characterised by a pronounced international orientation. At the same time, it has a relatively small domestic market, which means that integration into international trade is of vital importance.[54] It therefore aims in principle to avoid, remove or at least reduce technical barriers to trade.[55] In the dispatch on the 2023-2027 legislative plan, the Federal Council also states that, in addition to foreign trade aspects, the country's innovative strength plays an important role

[50] See, e.g., Federal Council (2018). Legal basis for distributed ledger technology and blockchain in Switzerland, available at: https://www.newsd.admin.ch/newsd/message/attachments/55153.pdf (accessed 30 September 2024), pp. 13 f. and Challenges of Artificial Intelligence, Report of the interdepartmental Working Group on Artificial Intelligence to the Federal Council, available at https://www.sbfi.admin.ch/dam/sbfi/de/dokumente/2019/12/bericht_idag_ki.pdf.download.pdf/bericht_idag_ki_d.pdf (accessed 30 September 2024), pp. 34 f.

[51] These include, for example, health apps, voice assistants and ChatGPT, see Latzer Michael, Festic Noemie, Kappeler Kieran, Odermatt Céline (2023) Internetanwendungen und deren Nutzung in der Schweiz 2023. Topic report of the World Internet Project – Switzerland 2023, pp. 22 ff., available at https://www.mediachange.ch/publications/ (accessed 30 September 2024).

[52] See Mobiliar DigitalBarometer 2024 of the Risk Dialogue Foundation, digitalbarometer.ch/uploads/digitalbarometer_2024_de.pdf#asset:3923@1:url (accessed 30 September 2024), pp. 17 ff.

[53] According to the Mobiliar DigitalBarometer 2024, public trust in the state to regulate AI appropriately is currently rather low, see DigitalBarometer 2024, p. 23.

[54] See discussion of the legislative indicator on foreign trade exposure, available at: https://www.bfs.admin.ch/bfs/de/home/statistiken/querschnittsthemen/monitoring-legislaturplanung/indikatoren/aussenhandelsverflechtung.html (accessed 30 September 2024).

[55] See Art 1 para. 1 of the TBA.

in maintaining and expanding prosperity.[56] Switzerland has been considered a very strong innovation location internationally for years.[57]

All regulatory approaches pursued by Swiss legislation should therefore be geared towards regulatory objectives that take these aspects into account and consider both an individual and a societal perspective as well as an economic and innovation policy perspective. Against this background, the following overarching, complementary regulatory objectives are identified as part of this overview:

- Strengthening Switzerland as an innovation location: AI regulation must help to support Switzerland as a location for innovation, give actors room to develop where necessary and ensure that business and research have access to the relevant markets and research areas and that imports are as barrier-free as possible.

- Safeguarding the protection of fundamental rights, including economic freedom: AI regulation must help to protect fundamental rights and ensure that their protection keeps pace with technological developments.

- Strengthening public trust in AI: For the population to be open to the use of AI systems, they must be trustworthy, reliable and robust. Appropriate transparency, traceability and explainability of processes and decisions that use AI must be guaranteed. The population must also be able to use AI systems competently.

These regulatory objectives are taken into account when discussing possible regulatory approaches.

11 Possible regulatory approaches

Now that detailed baseline analyses have been carried out and the regulatory principles and regulatory objectives have been presented, possible regulatory approaches for AI in Switzerland and their institutional consequences are outlined below. The various regulatory approaches are not elaborated in detail, but are roughly outlined. Depending on the Federal Council's decision, the regulatory approaches will have to be examined in greater depth in follow-up work.

11.1 Regulatory approaches and possible institutional forms

The possible regulatory approaches build on each other. Each approach goes further than the previous one in terms of implementation design, as the following figure shows:

[56] See dispatch on the 2023-2027 legislative plan, available at: https://www.fedlex.admin.ch/filestore/fedlex.data.admin.ch/eli/fgae/2024/13/de/pdf-a/fedlex-data-admin-ch-eli-fgae-2024-13-de-pdf-a.pdf (accessed 30 September 2024), p. 58.

[57] In the Global Innovation Index (GII) 2024, Switzerland was ranked 1st out of 132 economies worldwide, as in the previous year. The Global Innovation Index is a ranking that presents the innovative capacity of individual countries. It is published annually by the French business school INSEAD, Cornell University and the World Intellectual Property Organization (WIPO) of the United Nations. See Switzerland Ranking in the Global Innovation Index 2024, https://www.wipo.int/web-publications/global-innovation-index-2024/en/ , accessed 21 November 2024.

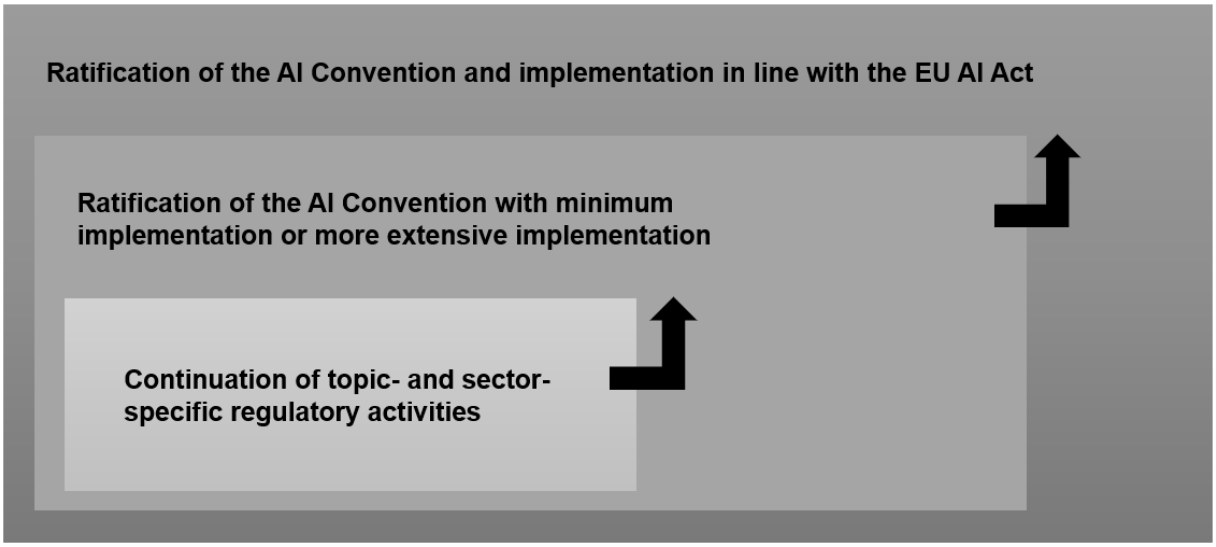

Figure 1: Visual representation of the regulatory approaches building on each other

11.1.1 Continuation of topic- and sector-specific regulatory activities

Regulatory adjustments in relevant sectors or cross-sectoral regulations (e.g. the FADP) are indispensable due to the wide range of possible uses and different impacts of AI applications. One possible regulatory approach for Switzerland would be to continue the work that has already been planned and undertaken and to make regulatory adjustments that have been recognised as a national need, as has been the case in the past. These selective adjustments to existing laws would continue to be the responsibility of the relevant specialist authorities. There would be no overarching coordination effort at federal level for common challenges posed by AI. Ratification of the Council of Europe's AI Convention by Switzerland or overarching Swiss regulation of AI applications would not be envisaged. The Federal Council would refrain from proposing new regulatory measures for now and continue to monitor developments. In addition to the existing horizontal regulations, which also apply to AI applications, no cross-sectoral standards applicable throughout Switzerland would be enacted for overarching issues such as the safety, approval or operation of AI applications.

It is not possible to define in advance exactly which federal agencies would be affected in future. Some federal agencies are planning or already implementing regulatory adjustments.[58] Others are considering a possible need for adjustment (e.g. in the financial or energy sector) or have not yet identified a need.[59] Sector-specific regulatory adjustments can place obligations on various actors. New or adjusted, sector-specific regulation could:

- be addressed exclusively to a public agency if processes are affected that are carried out by the federal authority itself and involve AI applications. This may also relate to sector-specific supervisory activities, such as FINMA in the financial sector.

- be addressed to private actors, provided it makes sense to do so in the specific sector. This can range from specifications for development to the use of AI applications in the respective sector.

- depending on the sector, entail obligations for both public and private actors.

The appropriate level of standard-setting should be selected depending on the content and structure of the regulation. This could range from new (or adjustments to existing) internal administrative guidelines and ordinances that are binding solely on the administration to new or amended laws. Each federal agency concerned would have to make the appropriate arrangements for a legislative project in its respective sector. Existing overarching regulations would have to be observed, such as the FADP, which requires a formal legal basis in principle for data processing by federal bodies.[60] There may also be a

[58] See section 3.1.2 of the sectoral analysis.
[59] For current or planned legal adjustments at sectoral level, see section 3.1.2 of the sectoral analysis.
[60] Art. 34 para. 2 and 3 of the FADP.

need for selective adjustments to cross-sectoral legislation. The aim should then be to design new or adjusted standards in a way that is as technology-neutral as possible.

It would be the responsibility of the actors concerned to strive for compatibility with international and EU regulations in their sectors. The Federal Act on Technical Barriers to Trade (TBA; SR 946.51) stipulates that technical regulations must be designed in such a way that they do not act as technical barriers to trade. For this purpose, they would have to be aligned with the regulations of Switzerland's most important trading partners. This would affect both international technical standards that are currently being developed and compatibility with the product sectors affected by the AI Act, where access to the EU internal market would be relevant for companies in the respective sector. Please refer to section 11.1.3 with regard to the effects of a (non-)adaptation of the MRA CH-EU, which will occur regardless of the selected future regulatory option.

Continuing the existing and currently planned regulatory activities would mean that challenges would be addressed directly in the relevant areas. Legal certainty for the private and/or public actors concerned would be increased only in the specific sectors. With regard to overarching challenges (e.g. transparency and traceability of decisions), this approach would therefore reach its limits. The approach would probably lead to additional legislative work and divergent solutions, which would be difficult for the actors concerned to implement. Contradictions, gaps and ambiguities could also remain with regard to overarching challenges, which could lead to (legal) uncertainties. This would be the case, for example, with regard to the problem of transparency and traceability of decisions made by AI applications, damaging public trust in AI. Similarly, fundamental rights may not be protected sufficiently or in a timely manner in relevant areas. This could also have an impact on the international perception of Switzerland.

Each sector would itself have to address the challenges of AI applications with its own resources and mechanisms. It is unlikely that any new institutions would be created, but rather – where necessary – the scope of activities of existing ones would be expanded.

11.1.2 Ratification of the AI Convention with minimum implementation or more extensive implementation

A second possible regulatory approach would be Switzerland's ratification of the Council of Europe's AI Convention. It should be noted at the outset that sector-specific regulatory activities (as discussed in section 11.1.1) would continue at the same time. However, due to the obligations arising from the AI Convention, these activities would now be coordinated to a certain extent at federal level. Beyond these efforts, additional measures would be taken to ratify the AI Convention.

The Council of Europe's AI Convention is the world's first international agreement on AI that is binding on the contracting parties. It covers the main challenges posed by AI in relation to the protection of fundamental rights, democracy and the rule of law. Switzerland's ratification of the AI Convention would show the public that the Federal Council is taking the risks in this field seriously. Ratification would also ensure that the level of protection in Switzerland corresponds to the international standard. This would prevent Switzerland from being sidelined or placed at a disadvantage in terms of the trustworthiness of AI applications. Ratification would also be in line with Switzerland's position in the negotiation process to seek harmonisation of the international legal framework on AI. Not least of all, this is also important for Switzerland as a reliable partner for international trade in AI applications.

As the analysis of the AI Convention showed (see section 4.1), amendments to Swiss law would be necessary in certain areas in order to ratify the Convention. This applies in particular to the obligations in the following areas:

- transparency
- performance of a risk and impact assessment of AI systems
- creation of oversight mechanisms.

However, the Convention leaves the contracting parties a great deal of leeway in its implementation. The decision on the exact form and scope of the measures and on the institutional structure can therefore be

made at national level. A minimum and a more extensive possible implementation of the AI Convention are therefore outlined below.

Regardless of whether the Convention would be implemented minimally or more extensively, measures at a cross-sectoral level appear necessary for ratification. Whether the new provisions in connection with ratification of the Convention would have to be regulated in existing laws or in a new law is a technical legal question that can be decided only at a later stage. As far as the private sector is concerned, a purely self-regulatory system would not be sufficient. It is unlikely that the objectives of the Convention can be achieved in Switzerland without public measures.

Finally, from an institutional point of view, there is a need for a coordinated approach at federal level following ratification of the AI Convention. This would ensure that a coherent approach to cross-sectoral, overarching challenges (such as transparency or the risk and impact assessment of AI systems) would be taken across all federal agencies. Such a coordinated regulatory approach at federal level would also contribute to general legal certainty, reduce the risk of inconsistencies and gaps and reduce the time and effort required for legislation.

A consultation procedure would be carried out for ratification of the Convention and a dispatch would be sent to Parliament. Ratification of the AI Convention would also be subject to an optional referendum (in accordance with Art. 141 of the Federal Constitution [Cst.; SR 101]).

11.1.2.1 Minimum implementation

Implementation of the AI Convention in national law would be only minimal. Ratification would entail certain obligations for both the public and private sectors. However, in view of the legislative discretion provided for in the Convention, more flexible rules could be provided for the private sector, which would go less far than for the public sector. The scope of the Convention for the private sector would be limited to cases in which a direct or indirect horizontal effect of fundamental rights in relations between private parties exists or is to be recognised. The protection of fundamental rights would be guaranteed, but would only cover the bare essentials, although further implementation of the Convention could go further.

Substantive adjustments would have to be made in the area of transparency, for example. One possible measure would be introduction of a registration requirement for AI systems used by the state in a public register. In addition, the measures provided for in data protection regarding the duty to provide information in the case of automated individual decisions (Art. 21 of the FADP) could also be supplemented with corresponding provisions for partially automated individual decisions. Further measures could also be examined in the area of non-discrimination, where a ban on discrimination already applies to public actors. However, these measures would not go so far as to extend the guarantees of fundamental rights.

To ensure the risk and impact assessment for AI systems required by the AI Convention, the legislator would have to take new measures – as already explained above – given that Swiss law currently only provides for selective instruments (in particular the existing obligation to carry out an impact assessment in the FADP). In a minimum implementation of the Convention, the obligation to carry out a risk and impact assessment for AI systems could, for example, be limited to public actors and a limited circle of private actors and be formulated in less substantive detail.

With regard to the oversight mechanisms required by the Convention to monitor compliance, the existing regulatory and oversight structures would be built upon as far as possible, e.g. FINMA in the financial market sector, the FDPIC with regard to data protection, ComCom in the telecommunications sector, etc. The supervisory authorities would also have reduced powers of intervention (in particular investigative powers, but no powers to make decisions or impose sanctions, for example). The existing powers of the existing authorities would not be limited.

With regard to the need for coordination at federal level in the event of minimum implementation, an existing federal agency could be tasked with the coordination function. Coordination could also take place within the framework of a competence network for regulatory issues relating to AI, in which several

existing bodies would join forces. Under this approach, no new institutions would be created, only additional tasks.

11.1.2.2 More extensive implementation

Implementation of the Council of Europe's AI Convention in national law could also take place through more ambitious measures. In particular, similarly extensive obligations could be provided for the private and public sectors (although the obligations for the public and private sectors would not have to be identical). This could be accompanied by more requirements for businesses. At the same time, fundamental rights could be protected more comprehensively.

With respect to transparency, for example, the introduction of a registration requirement for AI systems in a public register could be examined not only for public actors, but also for private actors. New rights and obligations could also be created in the area of non-discrimination. As discussed above, the constitutionally guaranteed prohibition of discrimination already applies to public actors. Discrimination by private actors, on the other hand, has so far been captured only in a fragmentary way. A strengthening of protection against discrimination could be examined in this regard.

To ensure the risk and impact assessment for AI systems required by the AI Convention, the group of private actors to be obligated could be defined more broadly, and a higher level of detail could be provided. In addition, the need to have the risk and impact assessment confirmed by an authority could be examined, which could increase safety. The supervisory bodies required to monitor compliance with the Convention could be given more extensive powers (e.g. powers to make decisions or impose sanctions). In view of the need for coordination at federal level, the creation of a new coordination office could be examined, which would ensure a coherent approach to cross-sectoral issues.

11.1.3 Ratification of the AI Convention and implementation in line with the EU AI Act:

A third possible regulatory approach, which would go further than and build on the continuation of existing regulatory activities and the ratification of the AI Convention, would be an implementation of the AI Convention by way of comprehensive product regulation of AI systems based on the EU AI Act.

This regulatory approach again builds on the previous approaches. Sector-specific adjustments would therefore continue to be made. Switzerland would also sign the Council of Europe's AI Convention and ratify it through coordinated implementation in national law by means of a dispatch from the Federal Council to Parliament. The regulatory option presented here is furthermore aimed at comprehensive and cross-sectoral product regulation based on the AI Act. In this way, the greatest possible compatibility with international law and international developments would be sought via the national level, with a focus on developments in the EU.

While implementation of the AI Convention aims to protect fundamental rights, democracy and the rule of law, product regulation would regulate AI systems as products in parallel. To align with the AI Act, the approach would divide AI systems according to risk levels[61] and define obligations for the providers and deployers of AI systems. The development of risk levels and any bans on AI systems must mirror the risk levels of the AI Act if compatibility and interoperability are to be achieved.

As providers or deployers of AI systems, private and public actors would be subject to obligations such as risk assessment systems, data quality requirements and detailed documentation obligations. For the sake of consistency, these obligations would have to be drawn up for all the sectors concerned together. This regulatory approach also raises the question of whether comprehensive product regulation should be achieved by adapting existing regulations or through new regulations. Given the connection between the various aspects from risk classification to oversight, it would likely make sense to regulate everything comprehensively in a separate law.

If Swiss product regulation were introduced and the MRA CH-EU were expanded to include AI aspects as a result, Swiss AI systems could gain access to the EU internal market with fewer hurdles, which

[61] See section 4.2.

would benefit market efficiency. AI systems developed in Switzerland would have to meet the same standards as those set out in the AI Act, even if access to the European single market was not intended. Should a Swiss AI system nonetheless be used in the EU without such an intention, it would already meet the requirements of the AI Act in principle. However, it is currently impossible to estimate the number of Swiss products with AI components that would only be used in Switzerland.

This regulatory approach would lead to a high density of AI regulation in Switzerland which would come close to that of an EU Member State. This regulatory approach would combine the more fundamental-rights-oriented approach of the AI Convention with the more market-regulatory approach of the AI Act. It would strive for the highest possible degree of compatibility with international and EU law. However, without a simultaneous adjustment of the MRA CH-EU, this would not lead to easier market access for Swiss products with AI components.

An extension of the MRA to the AI sector would help to reduce the effort and costs involved in the commercialisation of AI systems from Swiss companies in the EU. To achieve such an extension, however, Swiss law would have to provide for equivalent obligations to the EU AI Act in key aspects. Comprehensively harmonised legal adjustments for the relevant sectors in Switzerland would contribute to uniformity and legal certainty for the actors concerned.

From a European policy perspective, an extension of the MRA depends on the outcome of the current negotiations between Switzerland and the EU. Due to the overall relationship between Switzerland and the EU, there are currently relatively many uncertainties, and it is difficult to make a precise assessment. Before the successful conclusion of the current negotiations, an update or even extension of the MRA does not seem realistic.

Beyond product regulation and the MRA CH-EU itself, selected laws and ordinances in areas where the EU is planning adjustments (e.g. in private law) would also have to be adapted. On the import side, there would probably be new barriers to trade with countries outside the EU that do not adjust their legislation to the AI Act.

Finally, it would be necessary to identify which institutions need to be created or adapted. These institutions would have to perform tasks such as the supervision of legal requirements. It would have to be weighed whether the supervisory bodies specified by the AI Convention should be expanded to include the product-centric tasks or whether it would make more sense to perform the tasks separately. In addition, practical guidelines could be created for specific use cases, the application of which could also be supervised under certain circumstances.

11.2 Other possible regulatory measures regardless of the regulatory approach chosen

In addition to the regulatory approaches proposed above, there are other possible regulatory measures that should be considered in legislation. These regulatory measures primarily concern the possibilities for promoting innovation, the current status of which is described in section 7.3.

AI is already being addressed as part of innovation promotion. As part of the ERI dispatch for 2025-2028, the federal government is supporting important innovation promotion actors – such as the Swiss Innovation Agency Innosuisse – which attach great importance to digitalisation and AI as part of their promotion activities.[62] These promotion instruments will continue to be used regardless of any regulatory approach chosen.

To promote innovation and contribute to the further development of future legislation, there is also the opportunity to implement promising projects within the framework of regulatory sandboxes. The regulatory sandbox is an instrument that can be used to test the added value of innovative technologies and business models. The term sandbox covers pilot projects (which aim to test new rules) and sandboxes in the narrower sense (which aim to understand existing rules in their concrete application). Other instruments that promote innovation include risk-based regulations, which provide different rules for different

[62] See section 7.3 of the overview and, for more detailed information, section 4 of the sectoral analysis.

companies, or innovation hubs, where companies are supported through an exchange with the authorities and other stakeholders.[63]

The aim of a sandbox is to carry out pre-approved projects within its framework that are otherwise (partially) excluded from the applicable law. In this environment, innovative companies can test new approaches in an otherwise highly regulated sector. On the other hand, sandbox projects help political decision-makers to better understand existing regulatory hurdles to the implementation of promising innovative technologies and business models. For example, sandbox projects for a secure power supply that are intended to test solutions are already possible today; this also applies to projects with AI applications.[64] The specialist agency Educa also supports projects in the field of AI and education with the Innovation Sandbox for Artificial Intelligence of the Canton of Zurich.[65]

However, sandbox projects can disproportionately put individual companies in a better market position for the duration of the project, creating an imbalance on the market.[66] Also, depending on their nature and comprehensibility, sandbox projects may not provide the legislator with sufficient information to develop durable solutions. The legislator must therefore consider in advance whether such sandbox projects appear useful and whether the instrument should be pursued further.

In addition to regulatory sandboxes, other measures that are not legally binding can also be applied. In future, industry-specific codes of conduct, AI strategies by and for economic sectors or even scientific endeavours could be supported, for instance. One example would be the AI guidelines in the Swiss Press Council's Code of Conduct.[67]

11.3 Financial impact

Each of the aforementioned AI regulatory approaches is associated with cost implications. Because these regulatory approaches can be presented only in very generic terms at this stage, it is not possible to make a serious assessment of their specific financial impact. However, it is clear that AI and well-crafted regulation can also have a positive financial impact by increasing Switzerland's competitiveness. Both the economically relevant financial impact and the budgetary impact for the public actors must be considered.

However, it can be assumed that the financial impact would be lowest if current and planned sector- and topic-specific regulatory activities were simply continued, given that no additional coordinating and institutional tasks would be added. If the AI Convention is implemented via product regulation in line with the AI Act, the figures from the EU's regulatory impact assessment of the AI Act could provide a frame of reference: The total cost of compliance is estimated to be between EUR 100 and 500 million by 2025, which would represent up to 4-5% of investment in high-risk AI systems. The cost of compliance assessments could account for a further 2-5% of investment in high-risk AI systems. Companies or public authorities that develop or use AI applications not considered high-risk would not have such costs.[68] Companies that already operate in the EU and are subject to the AI Act are already affected by the cost assessment impacts of the EU and would probably not experience any additional costs under the third approach.

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63 State Secretariat for Economic Affairs SECO, Prüfauftrag zu Regulatory Sandboxes, Grundlagen für die Wirtschaftspolitik Nr. 35, Study, June 2022, available at: https://www.seco.admin.ch/dam/seco/de/dokumente/Publikationen_Dienstleistungen/Publikationen_Formulare/Regulierung/Weiterentwicklung/pruefauftrag_regulatory_sandboxes_juni-2022.pdf.download.pdf/pruefauftrag_regulatory_sandboxes_juni-2022.pdf (accessed 30 September 2024). See also the comments on Art. 13 of the AI Convention in the baseline legal analysis. Pilot tests are also possible in the Federal Administration in general under Art. 15 of the Federal Act on the Use of Electronic Means to Carry Out Official Tasks (EMOTA; SR 172.019).

64 For details, see section 4 of the sectoral analysis and Federal Department of the Environment, Transport, Energy and Communications DETEC, Implementation of sandbox projects under Art. 23a ESA, available at: https://www.bfe.admin.ch/bfe/en/home/forschung-und-cleantech/sandbox-projekte.exturl.html/aHR0cHM6Ly9wdWJkYi5iZmUuYWRtaW4uY2gvZW4vcHVibGljYX/Rpb24vZG93bmxvYWQvMTEyMzk=.html (accessed 30 September 2024) and further information at https://www.bfe.admin.ch/bfe/en/home/research-and-cleantech/sandbox.html (accessed 30 September 2024).

65 For details, see section 3.1.2.5 of the sectoral analysis. Further information on the Innovation Sandbox of the Canton of Zurich is available at: https://www.zh.ch/en/wirtschaft-arbeit/wirtschaftsstandort/innovation-sandbox.html (accessed 30 September 2024).

66 State Secretariat for Economic Affairs SECO, Prüfauftrag zu Regulatory Sandboxes, Grundlagen für die Wirtschaftspolitik Nr. 35, Study, June 2022, available at: https://www.seco.admin.ch/dam/seco/de/dokumente/Publikationen_Dienstleistungen/Publikationen_Formulare/Regulierung/Weiterentwicklung/pruefauftrag_regulatory_sandboxes_juni-2022.pdf.download.pdf/pruefauftrag_regulatory_sandboxes_juni-2022.pdf (accessed 30 September 2024).

67 Available at: https://presserat.ch/journalistenkodex/ki_leitfaden/ (accessed 21 November 2024).

68 Impact Assessment of the Regulation on Artificial intelligence of 21 April 2021, available at: https://digital-strategy.ec.europa.eu/en/library/impact-assessment-regulation-artificial-intelligence (accessed 30 September 2024).

The regular application and approval procedures for any additional resources required as part of implementation of a regulatory approach apply a priori to the public sector units concerned. It can be assumed that the need for resources would increase with new oversight and monitoring tasks, for example. The regulatory impact assessment (RIA) is used as an instrument to determine the financial impact of a proposal on the economy. The content and application of the RIA are defined in the Federal Council's RIA directives.[69]

Due to the relevance of AI applications for private actors, additional regulatory costs for companies in accordance with Art. 5 of the Business Cost Relief Act (BCRA; SR 930.31) will have to be estimated for the regulatory approach to be pursued and presented in the proposal to the Federal Council, the explanatory report and the dispatch. These analyses can be carried out as part of the RIA or separately. The BCRA contains obligations for the drafting of enactments that increase transparency regarding the impact on companies, thus improving the basis for decision-making. These provisions come into force on 1 October 2024.

12 Summary and next steps

AI is continuing to develop, and Switzerland's technology-neutral standards landscape offers a stable foundation in principle. However, adjustments are already necessary within the existing legal framework, and it is becoming apparent that the defined regulatory objectives for AI cannot be satisfactorily met with the current regulations. These three objectives consist of: (i) strengthening Switzerland as an innovation location, (ii) safeguarding the protection of fundamental rights, including economic freedom, and (iii) strengthening public trust in AI. As a conclusion to the overview, the potential of each regulatory approach to fulfil these objectives is presented below:

- If the existing, sector- and topic-specific efforts to regulate AI are continued, the defined regulatory objectives for AI will be difficult to meet. Due to the lack of overarching coordination, challenges in the area of transparency, for example, would not be able to be tackled jointly. Discrepancies between adopted solutions would be expected, which would serve neither the protection of fundamental rights nor public trust in AI. At the same time, the AI regulation density would remain rather low, which would give the business sector plenty of leeway.

- The Council of Europe's AI Convention aims to protect fundamental rights, democracy and the rule of law in the development and use of AI. Switzerland's ratification of the AI Convention would address these challenges through a coordinated approach at federal level, for example in the area of transparency and through the introduction of a risk and impact assessment of AI systems. In the case of minimum implementation, primarily the public sector would be held accountable, which would make the protection of fundamental rights less comprehensive. If implementation is more extensive, the private sector would also be subject to similar obligations. Efficient coordination and oversight mechanisms would contribute to a more tangible impact of the AI Convention for Switzerland, strengthening public trust in AI.

- Due to the extensive new obligations – not only for manufacturers, but especially also for users of AI systems – comprehensive product regulation might curb the free development of the economy to a certain extent and lead to new technical barriers to trade on the import side. However, the AI Act already imposes the same obligations on companies throughout the EU. Swiss companies operating there must fulfil these obligations. For that reason, developments in the implementation of the AI Act in the EU must be monitored in any case. Through Swiss product regulation and an adjustment of the MRA CH-EU, access to the EU internal market would be simplified for Swiss companies exporting AI systems to the EU. However, adjustment of the MRA CH-EU would require prior successful conclusion of institutional negotiations with the EU. Any Swiss product regulation should remain clear and transparent in order to strengthen public trust in AI applications.

[69] Federal Council (2024) Federal Council directives for the regulatory impact assessment of federal legislative projects, available at: https://www.seco.admin.ch/dam/seco/de/dokumente/Wirtschaft/Wirtschaftspolitik/RFA/rfa_richtlinien.pdf.download.pdf/RFA-Richtlinien.pdf (accessed 30 September 2024).

Regardless of any regulatory approach chosen, AI innovation can be promoted. The current promotion instruments will continue to be used. The instrument of regulatory sandboxes could also be examined as a concrete new option for promoting innovation in the field of AI.

A fundamental decision by the Federal Council as to which regulatory approach it intends to pursue is now needed. Depending on the regulatory approach chosen, in-depth clarifications will be required. These clarifications concern the precise design of a particular approach and its institutional and financial impacts. For instance, the last two regulatory approaches raise the question of whether necessary adjustments should be regulated in existing laws or in a newly created law. Irrespective of the approach chosen, in-depth clarifications should be carried out on the consequences of a (non-)adaptation of the MRA CH-EU, as this agreement is of central importance for the Swiss economy. The planning of these clarifications is yet to be defined.

On the basis of these decisions and additional clarifications, Switzerland's already stable yet flexible regulatory foundation will be further strengthened, enabling it to cope with future developments in the field of AI.

Abbreviations

Fig.	Figure
OJ	Official Journal of the European Union
para.	Paragraph
AFIS	Automated fingerprint identification system
AI	Artificial intelligence
ARG	Argentina
Art.	Article
AUS	Australia
OFCOM	Federal Office of Communications
BBl	Federal Gazette
BFE	Swiss Federal Office of Energy
FSO	Federal Statistical Office
ERI	Federal education, research and innovation policy
FOJ	Federal Office of Justice
CAN	Canada
CEN	European Committee for Standardisation
CENELEC	European Committee for Electrotechnical Standardisation
CNAI	Competence Network for Artificial Intelligence
ComCom	Federal Communications Commission
CRC	Costa Rica
FDFA	Federal Department of Foreign Affairs
FDPIC	Federal Data Protection and Information Commissioner
EC	European Community
EPFL	Federal Institute of Technology Lausanne

ETH Zurich	Federal Institute of Technology Zurich
EU	European Union
EEC	European Economic Community
f.	Following page or section
ff.	Following pages or sections
fedpol	Federal Office of Police
FINMA	Swiss Financial Market Supervisory Authority
GPAI	General-purpose artificial intelligence
GPT	Generative Pre-trained Transformer
IDAG AI	Interdepartmental Working Group on Artificial Intelligence
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IC-EUDP	Interdepartmental Coordination Group on EU Digital Policy
ISO	International Organization for Standardization
ISR	Israel
ITU	International Telecommunication Union
JAP	Japan
CCG	Conference of Cantonal Governments
CAB	Conformity assessment body
EPC	Economic Policy Commission
MEX	Mexico
MRA	Mutual Recognition Agreement
No/No.	Number
OECD	Organisation for Economic Co-operation and Development
PER	Peru

RIA	Regulatory impact assessment
p.	Page
SIF	State Secretariat for International Finance
SECO	State Secretariat for Economic Affairs
SR	Classified Compilation of Federal Legislation
Swiss IGF	Swiss Internet Governance Forum
UK	United Kingdom
UNCITRAL	United Nations Commission on International Trade Law
URU	Uruguay
USA	United States of America
DETEC	Federal Department of the Environment, Transport, Energy and Communications
VAT	Vatican City
WSC	World Standards Cooperation

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