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# Digital Foreign Policy Strategy
## 2021–24

Foreign Policy Strategy
2020–23

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**Digital Foreign Policy Strategy
2021–24**

The present report, which was approved by the Federal Council on
4 November 2020, is a thematic follow-up strategy to the Foreign Policy
Strategy 2020–23 (FPS 2020–23). At the same time, it serves as a response
to postulate 17.3789 of former National Councillor Claude Béglé of
28 September 2017.

# Foreword

Digitalisation is everywhere. It has permeated almost all aspects of our lives and will continue to do so for decades to come. Digital technologies are constantly evolving and there is no telling where they will take us next. But one thing is certain: the new technologies shaping our future offer enormous potential to drive sustainable development and prosperity – here in Switzerland and around the world.

We live in a digital age. With social media we can connect with thousands of people at once, wherever they are. The young generation is growing up with smartphones and tablets as a part of everyday life. And while computers have long been used for routine tasks, artificial intelligence is opening up a whole new world of possibilities. Now, as the world grapples with the COVID-19 pandemic, the key role of digital applications has really come to the fore. But digitalisation also brings certain challenges, not least the vulnerability of our data in an information society. The frequency and scope of cyberattacks, cybercrime and political manipulation in the digital space are growing all the time, as are dependencies and vulnerabilities.

The Federal Council recognises the strategic importance of digitalisation. In the 2019–23 legislative programme, digitalisation takes on new significance and plays a growing role. In the Foreign Policy Strategy 2020–23 digitalisation features for the first time as one of four thematic priorities.

There are two aspects to the role of digitalisation in government. At one level it is a work tool and a means of simplifying processes, for example in consular services or IT applications. But digitalisation is now also a foreign policy matter, raising a number of important questions. How do we ensure that users can control their data and decide who can access it? How do we maintain Switzerland's leading position in business, innovation and education? How do we strengthen the position of International Geneva as a hub for digital governance? How do we enforce international law and human rights in the digital space? How do we promote a secure and stable digital space and strengthen trust between the different stakeholders? These are all questions that arise in the emerging context of digital foreign policy.

In the digital space itself, Switzerland is confidently and independently pursuing its interests and values – the same interests and values it pursues in the physical world, whether on the ground, in the air, at sea or in outer space. Here too the Federal Constitution provides a framework to promote Switzerland's freedom, independence, security and prosperity, the alleviation of need and poverty in the world, sustainable development, equal opportunities, human rights, democracy and commitment to a peaceful and just international order. We continue to be guided by this in the future to ensure a coherent and effective foreign policy, including in the digital space.

The present strategy sets out the various fields of action for the Federal Council's digital foreign policy over the coming years. In the annexes it also provides additional information on the broader context for a deeper understanding of the topic.

I hope you enjoy reading it.

Ignazio Cassis
Head of the Federal Department of Foreign Affairs

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# 1  Background

## 1.1  Postulate 17.3789

The Federal Council is publishing this strategy in response to postulate 17.3789, which was submitted on 28 September 2017 by former Member of the National Council Claude Béglé. It mandates the Federal Council to examine "how Switzerland could become the global epicentre of international governance in the area of cyberspace". The postulate also suggests the creation of a type of Geneva Convention for digitalisation and the foundation of a neutral organisation in Geneva, which could be responsible for its implementation.

On 8 December 2017, the Federal Council proposed that the postulate be adopted, indicating that the idea of a 'Geneva Digital Convention' would be met with great scepticism by most stakeholders and be almost impossible to implement. The Federal Council also announced that it would be willing to issue a report setting out Switzerland's priorities in the areas of international cybersecurity and digital governance. The National Council adopted the postulate on 15 March 2018 by 113 votes to 78.

## 1.2  Focus of the strategy

Since the postulate was adopted, digitalisation has progressed rapidly, permeating and changing politics, the economy and society as a whole. These digital advances present many opportunities, but also bring with them new challenges and issues. The global COVID-19 crisis has highlighted that while new digital technologies can help us better understand and contain the spread of a pandemic, for example through the use of digital contact tracing, and while they underscore the importance of issues relating to technical standardisation and cross-border cooperation, these technologies also raise a number of questions, for example about application security and data protection.

The Federal Council has taken into account the growing significance of digitalisation, having placed greater emphasis on this topic in its legislative programme for 2019–23. The need for the Federal Council's political agenda to now take advantage of the many opportunities presented by digitalisation was set out in the corresponding guidelines. Alongside peace and security, prosperity and sustainability, digitalisation is a new thematic foreign policy focus in the Foreign Policy Strategy 2020–23. The Federal Council's 'Digital Switzerland' strategy of September 2020 sets out the guidelines for government action with regard to digitalisation and indicates where and how authorities, business, science, civil society and politics must work together in order to jointly shape the transformation process for the benefit of all. A number of other baseline documents related to digitalisation have been adopted in recent years. These include the National strategy for the protection of Switzerland against cyber risks for 2018–22, the International Cooperation Strategy 2021–24 as well as the measures to strengthen Switzerland's role

as a host state during the 2020–23 period.[1] In the Federal Council's 2019 Foreign Economic Policy Report, the featured topic was also devoted to 'Digitalisation and foreign trade'.[2]

Key events have also since taken place on an international level. The UN secretary-general, for example, placed the subject high on the international agenda by convening a High-level Panel on Digital Cooperation to report on the topic. The report, to which former Federal Councillor Doris Leuthard contributed as a panellist, contained key recommendations on how to advance global digital cooperation. On 10 June 2020, the UN secretary-general presented a roadmap based on this report, which set out the next practical steps to implement these recommendations. It focuses on improving internet access around the world, greater capacity-building in developing countries, protecting human rights, improving cybersecurity and promoting inclusive governance models.[3]

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1  See Annex 3.
2  See 'Digitalisation and foreign trade', featured topic of the Federal Council's 2019 Foreign Economic Policy Report, published 15 January 2020, SR 20.008 (executive summary and featured topic available in English).
3  UN Secretary-General's Roadmap for Digital Cooperation

In addition, countries and organisations such as the European Union[4] have also put into place regulations that impact Switzerland and its foreign policy.

This context must be given due consideration. The Federal Council is addressing the fundamental issues raised in postulate 17.3789 on Switzerland's foreign policy positioning as well as the positioning of International Geneva, but is going beyond this in three aspects: firstly, it is integrating the latest developments at an international level, specifically the roadmap presented by the UN secretary-general. Secondly, it is aiming to foster a comprehensive understanding of the opportunities and risks related to digitalisation, which extends beyond the cybersecurity-specific focus. Thirdly, in fulfilment of the postulate, it conceives the report as a thematic follow-up strategy to the Foreign Policy Strategy 2020–23. In accordance with this strategy, Switzerland intends to further develop its digital foreign policy and raise its profile in this regard (objective 4.4). This will be taken into account here.

This strategy explains the conceptual understanding of various key notions, describes the international environment, sets out Switzerland's interests and values in the digital space as well as its strengths, identifies four action areas for Switzerland's digital foreign policy for the next four years and highlights the opportunities for Switzerland as a country. The strategy includes a glossary to help better understand the various concepts.

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4    With its European General Data Protection Regulation (GDPR), the EU has played a global leading role in protecting personal data. The EU is aiming to develop a wide-ranging governance model as part of its data strategy. In a White Paper on Artificial Intelligence (AI), the EU Commission also set out how AI will be used to benefit the European economy, while safeguarding citizens' rights. The EU's digital strategy and the measures relating to the digital single market and cybersecurity also flow into the EU's regulations.
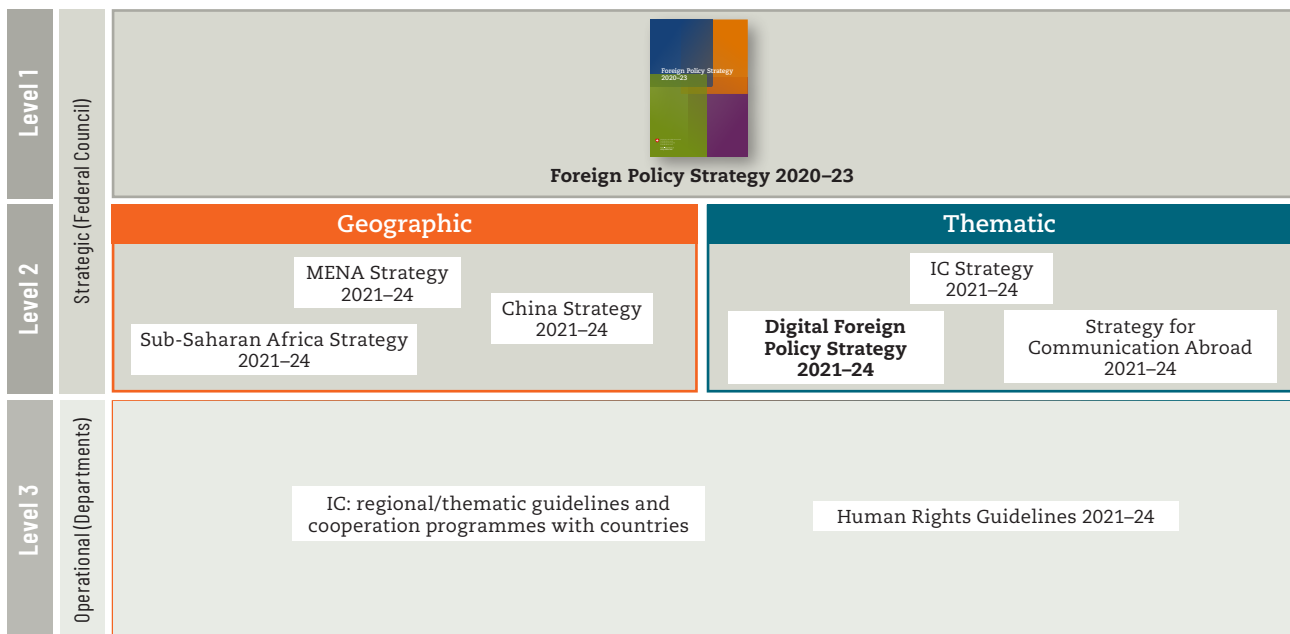


Figure 1: Cascade of foreign policy strategies to strengthen coherence (Source: FDFA – illustrative selection of documents).

# 1.3  Conceptual understanding

It is hard to provide clear-cut definitions of terms relating to the topic of digitalisation. Technology is moving at a rapid pace and it permeates all areas of our lives. However, a common understanding of the most important concepts and terms is necessary and the following definitions are proposed in this strategy:

Originally, **digitalisation** described the technical process for converting analogue information into digital formats. This is now referred to as digitisation. Continual technological developments have resulted in structural changes, new applications and systems, for example the creation of networks or the use of AI. Nowadays, the term digitalisation spans all of these developments, including opportunities for use as well as their social, economic and political impact, for example.

In principle, the **digital space** refers to networks of devices which exchange data with each other. The most frequently used and by far the most global of these networks is the internet. Today, around 50 billion end devices are connected to the internet and according to the UN, 54% of the world's population has active access to it.[5] Digital space not only includes networks and devices, but also the relevant actors, various processes and interactions. In the same way as land, sea and air are considered 'spaces' – and indeed as outer space has recently in the history of humankind been explored as a new 'space' – the digital space is also considered a new dimension which extends beyond national borders.
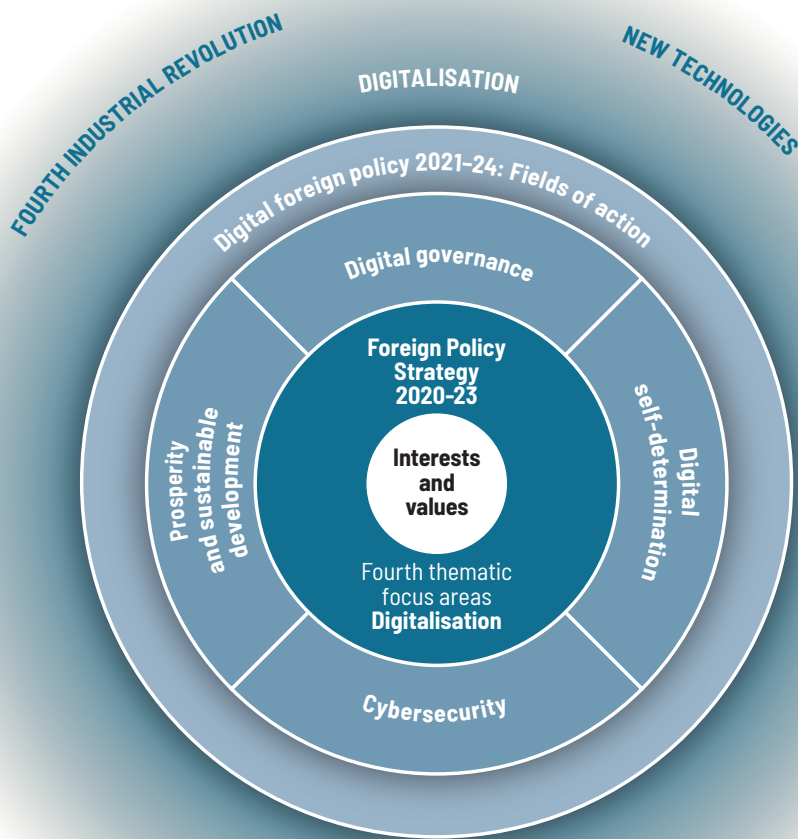
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5   UN secretary-general's roadmap, p. 5.



*Figure 2: Visualisation of the concepts and action areas for digital foreign policy (Source: FDFA).*

Switzerland also has interests and values in this new, digital space – these form part of its **digital policy** and, within that, **digital foreign policy,** which is a new area of foreign policy for the country. Nevertheless, it is consistent with Switzerland's aspiration to actively contribute to all policy areas: the protection of its sovereignty, its independence and security, access for its economy to global markets, its commitment to sustainability and a just international order, access for as many sections of the population as possible to opportunities in life and the protection of human rights. As such, there is no change in quality as regards the content of its digital foreign policy; it is much more a continuation of Switzerland's proven approach to protecting its interests and promoting its values in a new 'space'.

Promoting **digital governance** will play a key role. This represents an important area of digital foreign policy and will allow for the creation of common rules in the digital space and strengthen both institutions and cooperation mechanisms.

An equally important area of digital foreign policy is **cybersecurity,** Cybersecurity concerns all aspects of security in information and communications technology. This includes all information technologies related to the internet and other similar networks as well as the associated communication, processes, applications and information processed in relation to these. International cooperation between state and non-state actors in the area of cybersecurity aims to maintain and protect an open, free and secure digital space. It can also reduce the risks of cyberattacks between states. The term **cyber** is mostly used at an international level when discussing issues related to security and confidence-building, while **digital** has a broader social, economic and political dimension.

Ultimately, digitalisation is only part of a larger transformation. 'Digitalisation 2.0', which is based on new communication technologies and elements such as the internet of things, big data, blockchain, quantum computing and cloud technologies, is already being overshadowed by equally significant innovations in the area of bio and gene technologies. The convergence of digital, bio and physical technologies is often referred to as the **Fourth Industrial Revolution.** The potential for change already offered by each of these technologies is amplified when these areas come together and interact.

While this strategy is limited to the area of digitalisation, it also makes references to other new technologies. Science diplomacy plays a key role in this. New issues and action areas arise when science, technology and foreign policy come together. Science diplomacy is necessary to help shape digital change. Foreign policy should be based on scientific expertise and evidence (*science in diplomacy*) and should itself facilitate scientific collaboration between states and promote it where appropriate (diplomacy for science). At the same time, scientific collaboration can be particularly beneficial politically where there are no established diplomatic channels in place (or where these are insufficient), helping to foster confidence and cooperation (*science for diplomacy*).[6] As such, digital foreign policy and science diplomacy are closely related, especially at the multilateral level.

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6   See also Switzerland's International Strategy on Education, Research and Innovation, 2018.

# 2 Switzerland's digital foreign policy

## 2.1 Interests and values

The main aim of Switzerland's foreign policy is to promote its interests and values, as set out in the Federal Constitution – in particular in Articles 2, 54 and 101. These interests and values do not change with the emergence of new technologies or the progress of digitalisation.

The Swiss foreign policy aim of influencing these issues cannot be limited to the physical space. Switzerland's interests and values also apply both in and to the digital space. Digital foreign policy is the tool used to safeguard these interests and promote Switzerland's values within the digital space.

The Foreign Policy Strategy 2020–23 defines the basic principles for digital foreign policy and sets out the vision of a free, open and secure digital space. It is based on international law and focuses on people and their needs.[7] Specifically, the aim is to raise Switzerland's profile in the area of digital governance, further develop its digital foreign policy and position International Geneva as a prime location for discussing digitalisation and technology. Accordingly, this strategy is based on the Foreign Policy Strategy 2020–23 and refines the digital foreign policy guidelines as set out within it.

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7    See Annex 3.

## 2.2 Switzerland's strengths

Thanks to its neutrality and good offices, Switzerland is able to build confidence. This makes it easier for Switzerland to position itself as a bridge-builder in difficult, fragmented environments, including in the digital space. In light of prevailing digital geopolitics, and an increasing trend towards bloc-building, there is an increasing need for mediators. Switzerland can build on its key successes and proven track record in this regard: in recent decades it has repeatedly managed to bring new impetus to international discussions, for example with the holding of the World Summit on the Information Society (WSIS) 2003 in Geneva, and subsequently with the reform of the Internet Corporation for Assigned Names and Numbers (ICANN). This organisation assigns internet addresses and until 2016 was under the direct supervision of the US government, which had provoked major political controversy for two decades. The transition of ICANN into a multi-stakeholder model was negotiated under Swiss chairmanship of the Governmental Advisory Committee. Another example is the Open-Ended Working Group on Developments in the Field of ICTs in the Context of International Security as mandated by the UN General Assembly (UN OEWG), which Switzerland currently chairs. For the second time, Switzerland also has an expert representative on the Group of Governmental Experts on Advancing responsible State behaviour in cyberspace in the context of international security (UN GGE). Over 70 countries applied for a seat on this group of 25 experts. These examples show that Switzerland is perceived and valued as a solution-oriented, credible and capable partner.

Switzerland is also able to benefit from its role as a host state. International Geneva, as the operational platform for implementing the 2030 Agenda and its 17 Sustainable Development Goals, presents Switzerland with a wide range of opportunities. Switzerland also plays a leading role in researching new technologies thanks to its federal institutes of technology and other research centres. Many innovative and world-leading technology companies are based in Switzerland; in addition, there is a diverse SME landscape, especially in the field of digital services. Overall, the Swiss financial and business centre has so far responded successfully to the challenges of digitalisation. Furthermore, a number of important international organisations and NGOs involved in the discussion on digital change are also headquartered in the country. The presence of these stakeholders puts Switzerland in a good position to discuss digital issues.[8]

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8    See Annex 5.

# 3  International environment

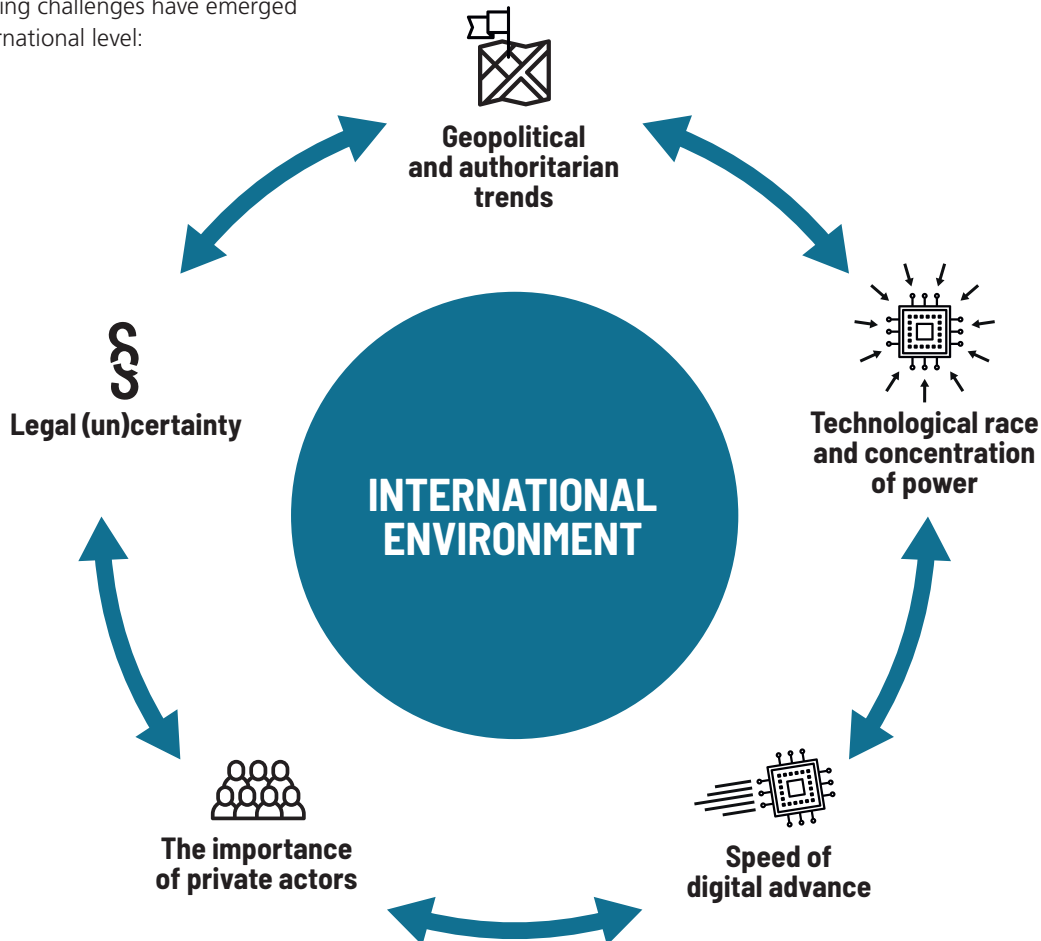The following challenges have emerged on an international level:



*Figure 3: The international environment (Source: FDFA).*

## Geopolitical and authoritarian trends

The ongoing shifts in global power have resulted in rising political fragmentation. The geopolitical renaissance is also evident in the digital space, creating the risk of networks decoupling from each other, thereby weakening the open, global internet. Deglobalisation trends, also witnessed during the COVID-19 pandemic, have in addition encouraged regionalisation in the form of competing economic, developmental and social systems. While the liberal-democratic model continues to be successful, it is coming under increased pressure. Authoritarian trends and models that do not link development and prosperity with individual rights or with political and social pluralism are on the rise in many parts of the world. The misuse of digital technologies, for example to keep governments in power, is also increasing in several countries. In this polarised context, a European approach is gradually emerging in which the economic and social potential of digitalisation should be utilised, while allowing individual rights to be protected to the greatest extent possible.

## Technological race and concentration of power

There are indications that a technological race is under way, particularly in the area of AI.[9] Given that data is becoming a strategic resource, and thus a key commodity in the digital economy, it now occupies a pivotal role as data linkage can be used to produce faster and more precise forecasts. It therefore has the potential to change existing power structures. The increased concentration of data in the hands of a small number of countries or companies also gives rise to new political and economic dependencies. Having equal access to network infrastructures and network speed thus plays an important role in this (net neutrality).

## Speed of digital advance

Digitalisation is proceeding at an exceptional pace like hardly any other process in human history. While it took radio 38 years and television 13 years to reach 50 million users, the internet took just four years. Smartphones have also had a major impact on the world in a single decade. Unlike before, technological achievements often become available all over the world at almost the same time. Developments in areas such as cloud computing, machine learning and automation are moving at a rapid pace: we can expect to see further, sometimes disruptive changes. Experts expect the Fourth Industrial Revolution to not merely surpass previous revolutions in terms of speed, but also in terms of scope and the impact it will have on economic, social and political systems.

## The importance of private actors

Given the commercial nature of the internet, the influence of the private sector has also increased. In many cases, for example, private companies not only provide technical components but also the telecommunication services themselves. The provision of some digital services has brought about a process of concentration. Large corporations based in the United States as well as their Asian competitors have assumed dominant positions and are establishing their own standards. Thanks to their general terms and conditions of use, they are able to influence the everyday lives of billions of users. Politicians in individual countries are barely able to keep up with these developments, which means the private sector, along with civil society and the technical and academic communities, must be involved in all governance issues and in shaping policy.

## Legal (un)certainty

While regulation of the digital space is progressing in various countries and in some cases regionally, the international rules and standards for the digital space remain incomplete. While there are multilateral rules that were largely put in place before digitalisation and still in principle apply in the digital space, there is often uncertainty or disagreement regarding their concrete application, as they are frequently subject to interpretation with regard to specific facts. There are many parallel processes under way for which numerous actors have developed specific rules and standards. This means that there is an overlap between old and new instruments that vary in scope and in terms of the degree to which they are binding. This can result in legal uncertainty and discriminatory measures, stifling investment and innovation, and lead to ambiguities over who is responsible for what in the digital space. Powerful countries are asserting their positions ever more bilaterally, and in some cases unilaterally, and international organisations are often not in a position to punish violations of international law. Conflicts of law and legal disputes between countries are likely to increase accordingly in the future.

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9   See Switzerland in the World 2028: report from the 'Switzerland's 2028 Foreign Policy Vision ✐' working group, 2 July 2019.

# 4  Fields of action

Based on the environment described above and the afore-mentioned Swiss interests and values in the digital space, it is possible to envisage various fields of action for Switzerland's digital foreign policy. To implement them requires action on the part of all departments as well as increased interdepartmental cooperation. It is necessary to combine both technical and political considerations, minimise risks and take advantage of opportunities, build on existing strengths and pursue foreign policy initiatives as targeted priorities. As described in the Foreign Policy Strategy 2020–23, coherence will play a major part in this.

The following fields of action form the centre of Switzerland's digital foreign policy for the current legislative period:

## 4.1  Digital governance

A global phenomenon such as digitalisation requires an international set of rules, comprising both legally binding and non-binding instruments. Legally binding instruments include international treaties and customary international law. Examples of non-binding instruments are soft law best practices, technical standards and benchmarks.

Globally interconnected to a high degree and with limited power-political opportunities, Switzerland is dependent on international law. With regard to its external economic interests too, it relies on there being legal certainty and a level playing field in the digital space so as to allow free competition to flourish.[10] At a global level, there is general agreement that the rules enshrined in international law also apply in the digital space, in the same way as for trade, the preservation of international security and the protection of human rights. This means that there is no need to completely overhaul the international set of rules: it is more a case of substantiating the existing standards, harmonising them with each other and continuing to develop them. International governance structures are essential in this regard so that all key stakeholders are involved in shaping the international set of rules and the cooperation mechanisms.

The Federal Council is sceptical of any single all-encompassing and legally binding instrument to regulate the digital space, as is proposed in the postulate. Given the wider international context, it is unlikely that a binding international agreement on cybersecurity will materialise in the foreseeable future. Specifically, western nations fear that any new instrument under international law could undermine the principle under which currently applicable international law applies in its entirety to the digital space. The idea of a Digital Geneva Convention has therefore yet to receive adequate support either from governments or from the scientific community, business or civil society.

In developing the rules and standards, there are a number of challenges. In recent years, a polarisation has become increasingly noticeable within the international community: there are clear differences of opinion between countries that advocate a centralised, state-driven understanding of the digital space and those in favour of a decentralised model. At the same time, many of the issues are being discussed in different forums, meaning they are addressed in thematic silos. With many newly identified issues where there is potential to adopt a position, for example AI, numerous ad hoc processes have been started to develop rules which are not aligned. There are also questions over the legitimacy of some of these processes as well as a high risk that rules may contradict each other.[11] Stakeholders are able to cherry-pick the processes and solutions that benefit them the most ('forum shopping'), which exacerbates this trend towards fragmentation. For Switzerland, it is important that there are processes and structures in place that enable as many countries as possible to make a substantial contribution in this area. This is a fundamental requirement for finding a fair and legitimate solution that is accepted over the long term.

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10  In the area of international business and commercial law, Switzerland works in various forums to further develop the legal framework with regard to the challenges of digitalisation. See 'Digitalisation and foreign trade', featured topic of the Federal Council's 2019 Foreign Economic Policy Report, published 15 January 2020, SR 20.008 (executive summary and featured topic available in English).

11  In 2020, the UN identified approximately 160 different ethical AI policies in organisations and in countries around the world..

## Thematic areas

### 1. Moderate regulation

Wherever possible, new rules should not be created, but instead existing rules should be applied to the digital space. Only in cases when gaps are identified in existing international rules should Switzerland support the creation of supplementary or additional rules. This prevents an issue being unnecessarily regulated or over-regulated and also ensures that existing international law is not undermined. A standard applies for as long as it remains in force and is not otherwise amended or supplemented. Switzerland is involved in these processes as a constructive force in order to uphold the practical application of existing standards under international law. It follows the principle of technological neutrality, focusing on regulating the conduct of the various actors and not the technology itself. Switzerland is in favour of a moderate approach which promotes and does not stifle the potential of new technologies, while at the same time counteracting specific risks.

### 2. Capacity-building

Switzerland supports capacity-building in developing countries in the areas of digital technologies and cybersecurity. So that countries are able to implement the standards and rules that are developed and their citizens and foreign nationals residing on their territory are able to benefit from the advantages that digitalisation brings, they must have the necessary capacities, which include both the ability to develop strategies and policies as well as specific technical expertise. In this regard Switzerland works closely with multilateral partners such as the development banks.

### 3. International Geneva

In line with its Foreign Policy Strategy 2020–23, the Federal Council aims to position Switzerland and specifically International Geneva as a leading centre for debate on digitalisation and technology. It is working to attract institutional pillars of any future digital governance architecture to Geneva and to strengthen existing institutions, such as the Secretariat of the UN Internet Governance Forum (IGF). With CERN, International Geneva played a major role in initiating the development of the internet. The Geneva Internet Platform (GIP) provides various actors with a key platform to expand their expertise in digital issues and thus promote targeted political dialogue on the subject. The aim is to further strengthen the GIP's position in implementing the UN secretary-general's roadmap. A multi-stakeholder approach should be followed so that the scientific community, business, civil society and technical experts are involved in the digital governance process alongside governments. International Geneva has already launched 'ecosystems' involving a number of actors covering various issues and is well positioned in this regard. The aim is to further build on this advantage.[12]

### 4. Science diplomacy

It is becoming ever more important for regulatory bodies and developers of technology to exchange information. Particularly in international governance forums, the latter are still insufficiently represented by reason of historical processes and structures. In establishing the Geneva Science and Diplomacy Anticipator (GESDA), the Federal Council is specifically promoting a dialogue between scientific and diplomatic experts on the social challenges posed by new technologies, in particular in the area of digitalisation. The FDFA also supports initiatives such as the Geneva Science-Policy Interface (GSPI), which is headquartered in Geneva and promotes cooperation between the city's universities and international actors.

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12  See Annex 5.

# 4.2 Prosperity and sustainable development

Digitalisation opens up new opportunities particularly for export-oriented, resource-poor countries, which are therefore dependent on innovation, such as Switzerland. The aim is for Switzerland to be one of the most competitive business and research locations in the world. As a highly developed and globally integrated economy, Switzerland can also benefit from the opportunities that digitalisation opens up in foreign markets as well as access to high-quality digital services. Digitalisation is increasingly shaping global supply chains, in which the Swiss economy is highly integrated. Harmonised international rules, for example on cross-border data flows, play a key role in ensuring that these supply chains operate smoothly and that goods and services are traded with as little discrimination as possible. It is equally important that personal data and intellectual property are properly protected and that companies and infrastructures are protected against cyberattacks and industrial espionage. Ultimately the aim is to achieve standards in the areas of data protection and security that are as globally effective as possible.

Regional approaches to the regulation of the digital space, in particular at a European level, also play a significant role for Switzerland, which has an interest in ensuring that divergent standards do not create barriers to trade. Alongside data flows, access to big data is becoming increasingly relevant for research and innovation. It is therefore essential to put in place transparent structures for the use and forwarding of data to enable the development of innovative applications and increase added value.

Being able to rapidly exchange information and data facilitates scientific, economic and social innovations, which can be applied in various areas. This makes a key contribution to the universal implementation of the 2030 Agenda and helps make it possible to measure progress towards achieving the Sustainable Development Goals. To realise the 2030 Agenda, it is also necessary to have a broad-functioning digital network which provides access to as many users as possible as well as equal access to data as a key commodity for digital innovation. Cross-border data traffic should be as unfettered as possible.

Digitalisation has the potential to bring about fundamental economic and social change, which led to it being defined as one of the priorities in the IC Strategy 2021–24. Digital technology is relevant to development in two respects:

Firstly, digital tools are used as part of the IC projects and programmes to better achieve the development goals more efficiently and quickly. Digital data and applications are driving development-related and humanitarian innovation across the globe. This focuses on the benefits for people and their needs in order to achieve the goals set out in the IC Strategy 2021–24 and the 2030 Agenda. The FDFA's commitment to exploiting the full potential of new technologies in combating poverty is brought together in its Tech4Good approach.

Secondly, it relates to the digital transformation of partner countries so that they can make use of digitalisation in their economies, societies and administrations for the benefit of their entire resident population. There are various challenges in this regard: for example, digitalisation can result in disruptive technological leaps, which above all increase the probability of automation of routine tasks, posing a threat to jobs in those areas. At the same time, however, such changes can lead to new employment opportunities. Factors such as a lack of access to the internet, information and technologies, high costs or inadequate skills to make use of the possible applications prevent many people in developing countries from successfully using these technologies. According to the UN, only 19% of people in the least developed countries currently have access to the internet (in developed countries, this figure is 87%).[13] The main obstacle in this regard is still the high cost of mobile and telecommunications, which is why the UN is calling for increased cooperation with investors.

As part of the IC strategy, it is ultimately necessary to improve people's skills in these locations so they can make use of the applications related to development. Unequal access to the internet also carries a risk that social and economic inequality will grow further, both within and between countries (the digital divide) – which will impede development potential. A gender gap is emerging particularly in the least developed countries but also in middle-income nations: compared to men, 43% fewer women in the least developed countries have access to the internet.[14]

Switzerland is working with the World Bank, the International Monetary Fund, the OECD and the regional development banks to ensure that full use is made of the opportunities offered by new technologies. Switzerland benefits from exchanging knowledge with these organisations on digitalisation.

In addition to potential in the development sector, technological progress has always had a significant impact on the environment. The same is true for digitalisation. Although there are risks associated with increased resource or energy consumption, digitalisation also offers new possibilities for environmental monitoring, resource distribution and sustainable shaping of the economy.

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13  UN secretary-general's roadmap, p. 6.
14  UN secretary-general's roadmap, p. 11., and OHCHR HRBDT Submission

## Thematic areas

### 1. Cross-border data flows and digital trade

The way the digital economy is regulated is changing rapidly and unevenly across the world, at national and regional levels. It is therefore of paramount importance to develop common minimum standards that provide as level a playing field as possible for all market participants. Switzerland is therefore committed to the negotiations that began in May 2019 on a plurilateral initiative to clarify and supplement WTO rules governing digital trade. The objective of the negotiations is to promote digital trade by avoiding unnecessary barriers to trade and unjustified protectionism, while at the same time developing common basic principles for domestic regulation. Within the framework of the Council of Europe, Switzerland has also actively promoted the modernisation of its data protection convention.

### 2. Reliable data spaces

Switzerland depends on being able to access high-quality data in order to develop innovative applications and build its reputation as a place to carry out research. At present, much of this data is in the hands of a limited number of actors, which hampers innovation and free competition. Switzerland is therefore committed to creating reliable, decentralised data spaces at the international level. The aim is to help shape innovative models for the data economy, generate high-quality data and data spaces, and to make these accessible to Swiss actors (see also the section on digital self-determination).

### 3. Fintech

Digital financial technology and currencies hold great potential for Switzerland as a financial centre and business location. They are becoming more important not only with respect to international cooperation. They contribute to the competitiveness of the Swiss financial centre and strengthen its role in the global economy. They can also be used to attract larger sections of the population into the banking system, helping to reduce the informal sector. In future, for example, cost-effective services based on blockchain or distributed ledger technology could be offered that allow economic migrants to transfer money more easily back to their families in their home countries. Innovative financial technologies and services also provide SMEs with easier access to finance. Moreover, new financing models can actually strengthen the competitiveness of SMEs and start-ups. With its expertise in this area, Switzerland is working to exploit the full potential of such applications while keeping risks to a minimum. Taxation of the digital economy is ultimately an important focus area for the OECD, and Switzerland plays an active part in its work in this regard, aiming to ensure that, as a rule, taxation continues to take place where the value added is generated.

### 4. Use of innovative technologies for sustainable development/Tech4Good

Switzerland makes use of digital applications to promote prosperity and sustainable development, and in the area of sustainable finance, it is strengthening its position as a leading location in the use of digital technologies. There are significant application possibilities in the field of international cooperation: Fintech solutions can allow smallholder farmers in remote areas, for example, to transfer money using their mobile phones, while digital applications can also increase political participation and make public administration more efficient, transparent and user-friendly. In developing countries, SMEs can be better integrated into international value chains and trading systems thanks to digitalisation processes. Data from satellites or drones can be used to forecast natural disasters more precisely and improve the calculations underlying crop insurance. In the area of peacebuilding, big data analysis can help identify conflict situations at an early stage, while digitalisation enables humanitarian aid providers to save lives and reduce suffering more quickly and efficiently. During crises, people's needs can be identified and responded to more quickly and precisely. Moreover, digital technologies can make it easier to search for missing persons. Switzerland intends to further raise its profile by facilitating the creation of secure, reliable data storage and through the Humanitarian Data and Trust Initiative aimed at data responsibility in humanitarian action.

### 5. Availability and compatibility of data

Switzerland is committed to closer cooperation between the private and public sectors in order to standardise data sets and interfaces and make data more usable. It also promotes the reliability, compatibility and comparability of data. Precise and timely information is essential in shaping effective, fact-based international policy across all areas, such as peace and security, sustainable development and humanitarian aid.

# 4.3 Cybersecurity

Cyberespionage, attacks on critical infrastructure, digital crime, disinformation and propaganda are on the rise, with cyberattacks having caused more than USD 45 billion of damage worldwide in 2018.[15] The increased dependency of society, businesses and individuals on digital technology makes us more vulnerable to these attacks. This means an additional security risk for Switzerland, its citizens, its institutions and the services they provide as well as companies and organisations based here. This vulnerability also reduces people's trust in these networks. States are increasingly trying to impose rights of control over what was actually intended to be a global network, which limits its openness and reduces trust in it.

The digital space is increasingly becoming a field for military operations, with its globally connected nature, the complexity and anonymity of the internet, and the constant increase in the number of users also raising the risk of criminal activities. Highly innovative countries such as Switzerland are disproportionately affected by these risks as well as industrial espionage. An increase in intelligence-related cyberactivities ultimately leads to the risk of political processes being influenced. The potential for these attacks alone can undermine general trust in networks and, consequently, in the political and economic structures of a country. These trends are accentuated in light of increasing geopolitical tensions.

For countries such as Switzerland, it is not an option to close themselves off from the global network, simply for reasons of size and competitiveness. This means that cybersecurity concerns Switzerland in two respects: firstly, to guarantee the physical and data security of its citizens – both in Switzerland and abroad – its institutions, companies and organisations; and secondly, to safeguard and provide access to an internet that is as open, free and secure as possible. The National strategy for the protection of Switzerland against cyber risks for 2018–22 contains measures for prevention, for coping with incidents, for improving resilience to cyber risks and for strengthening international cooperation.

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15  Cyber Incident & Breach Trends Report 2018

## Thematic areas

### 1. Specification of standards under international law

Switzerland intends to step up its cybersecurity and specify standards under international law. In 2015, the UN GGE developed eleven voluntary norms of responsible state behaviour in the digital space, which supplement existing international law. Switzerland is in favour of international law being fully recognised, observed and enforced in the digital space. It is making clarifications regarding the specific application of the rules at a national level and in cooperation with other states. International humanitarian law will also continue to apply. With its humanitarian tradition, Switzerland is well positioned to make a credible contribution towards the specification of the applicable rules in the digital space. This includes seeking to work more closely with the International Committee of the Red Cross (ICRC) on the protection of civilians in the digital space during armed conflicts.

### 2. Inclusion of private actors

At a global level, there is no consensus on mandatory standards of conduct in the digital space, which is detrimental to cybersecurity. States cannot guarantee the security, freedom and stability of the digital space on their own; private-sector actors play a prominent role in this regard with their products and services. Switzerland is therefore in favour of a multi-stakeholder approach. At the start of 2018, it launched the Geneva Dialogue on Responsible Behaviour in Cyberspace and is now working on building a broadly diversified dialogue between companies around the world. The aim of this is to establish best practices in the area of product resilience, for example. In doing so, Switzerland is filling a void as there was previously no global dialogue on this subject.

### 3. Confidence-building measures

Confidence-building measures help promote transparency and cooperation between states so as to avoid any potential misunderstandings or escalations in the digital space. One example of this is the exchange of information concerning forthcoming or current cyber-operations. Thanks to its neutrality and its history as a location for peace talks, Switzerland is able to play a key role in implementing confidence-building measures in the digital space. To facilitate the implementation of the current measures, it can draw on experiences gained at a regional level, for example within the Organization for Security and Co-operation in Europe (OSCE). The list of measures developed by the OSCE, to which Switzerland made a significant contribution, was approved by all 57 participating states.

### 4. Good offices

There are many opportunities for Switzerland in the area of good offices. As Switzerland is not a member of the EU or NATO, it is able to bring its experience and credibility from the offline world into the online world. It must strengthen or build up the competencies required for this purpose. International Geneva plays a key role in this regard. Given the increasing trend towards bloc-building and digital geopolitics, there is a need for mediators who are able to build confidence and put in place a framework of trust for discussing cybersecurity. In terms of peacebuilding, Switzerland promotes the development and responsible use of digital technologies ('peacetech').

# 4.4 Digital self-determination

Digitalisation is changing the way our societies interact: whether banking transactions, mobility, shopping, education, sport or social contact, digital applications have become an integral part of people's everyday lives. Alongside the positive benefits that this change brings, more and more personal data is being collected, which is used in a variety of ways. It is often not clear exactly what happens to this data, and communities and society benefit little from the insights and economic value that this data could provide.

Human rights are equally valid in both the physical and digital worlds: they apply without geographical restrictions both online and offline. Specifically, they protect people's privacy and freedom of expression. These individual rights therefore also include the protection of individuals against the misuse of digital data. They ensure free communication in the digital space and guarantee the right to freely form opinions in the run-up to elections and votes, for example.

The use of digital technologies accentuates the differences in values between states with different regulatory traditions. Authoritarian trends are on the rise in many areas of the world, with governments making increased use of digital tools to restrict fundamental individual freedoms. This may include the widespread use of facial recognition for surveillance purposes or to control the behaviour of a population. In turn, other systems operate in a barely regulated environment, which enables private companies to collect, analyse or sell personal user data without any restrictions. Given the increasingly competitive marketplace, these companies have a limited interest in informing users – regardless of their nationality or the region they live in – about how their data is used, and can make it difficult or impossible for them to have any control over it. There is an increasing risk that the data collected is being misused or misinterpreted without their knowledge.

From a Swiss perspective, technological progress cannot be an end in itself, but must primarily focus on people, their rights and freedoms, and thus their self-determination. This means individuals having access to the data that has been collected about them, being able to understand the relevance and value of this data, and being able to manage how the data is used to a large extent themselves. Participating in the digital world should no longer mean individuals have to relinquish control over their own data. For this to be the case, there is a need for new, decentralised structures, which allow individuals to actively manage the digital transformation. If individuals can decide how to handle their data themselves, this will ultimately build confidence in a sustainable data society and allow for the creation of trustworthy data spaces.

## Thematic areas

### 1. Swiss Cloud

Many organisations headquartered in Switzerland work with highly confidential data, for example relating to people in conflict zones, as is the case at the ICRC. In April 2020, the Federal Council commissioned a study to clarify matters in relation to a potential Swiss cloud. Such a cloud could reduce the reliance on international providers and guarantee legal security over the handling of data stored in this cloud. A cloud service shaped by Swiss legal principles could be used by Swiss citizens, institutions and companies as well as international organisations based here.

### 2. Protection of individual freedom

Key aspects of the IC strategy include supporting reliable information channels and protecting social norms on the internet. Switzerland is committed to media freedom and supports projects aimed at creating codes of conduct for political parties relating to the use of social media and combating fake news and political manipulation. It works to ensure that individual rights are not breached as a result of disproportionate state intervention, for example turning off the internet. In this regard, Switzerland supports international efforts to improve understanding of the rule of law and principles of democracy in the area of digitalisation.

### 3. Promotion of digital self-determination

To achieve a better balance between the economy, society and the individual within the context of digitalisation and to support the creation of an inclusive data economy, Switzerland is committed to digital self-determination, It intends to increase trust that data is being handled responsibly. On an international level, Switzerland is reliant on other states having a very similar understanding of values that is based on democracy and the rule of law. The aim is to create an international network and to play a role in developing reliable cross-border data spaces. A network is also to be established at national level and both networks will contribute to a report on the feasibility of reliable data rooms based on digital self-determination. According to the 2020 Digital Switzerland strategy, this should be in place by the end of 2021.

### 4. AI

AI offers significant opportunities for science, the economy and society, but also poses new risks, such as opaque or discriminatory decision-making or a human not having final responsibility for a decision. At present, there are numerous projects under way that are focused on the future international regulation of AI. Switzerland will support moderate regulation, which promotes the use of AI, but also counteracts specific risks. With regard to the military use of AI, it is committed to upholding existing international humanitarian law.[16]

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16 See the 'Challenges of Artificial Intelligence' report of the interdepartmental working group of December 2019.

# 5 Opportunities for Switzerland as a digital governance hub

Digital governance is transversal and interdisciplinary. Close collaboration between various government agencies is crucial for states. In Switzerland, this type of whole-of-government approach can also be extended through the use of direct democracy instruments – i.e. the involvement of actors from the private sector, civil society and the technical and academic community in political decision-making – towards a whole-of-Switzerland approach.

The conditions for this are good. With its universities, other research facilities and innovative private companies, Switzerland offers a stable and favourable environment and is at the forefront in the development of digital applications and technologies. The country is among the top countries worldwide in terms of the number of AI start-ups per capita. It is home to major international companies for which digitalisation is either part of their core business or is increasingly important – from finance to pharmaceuticals to engineering. Added to this, there is an increasing number of innovation parks and clusters with a lively start-up scene, such as Crypto Valley around Zug and the newly launched Trust Valley in the west of Switzerland. Utilising potential synergies will strengthen Switzerland's position as a digital hub.

International Geneva already plays a key role in global digital policy. Several key organisations in this area are based in Geneva as the operational hub of the UN system, such as the Secretariat of the UN Internet Governance Forum (IGF), the International Telecommunication Union (ITU), the International Organization for Standardization (ISO), the International Electrotechnical Commission (IEC) and the World Economic Forum (WEF). Besides this digital cluster, digitalisation also affects other traditional issues covered by International Geneva and has an impact on the work of other international organisations, such as the World Trade Organization (WTO), the UN Human Rights Council and the ICRC. Closer networking of these various actors can strengthen Geneva's role as a hub for addressing digital policy issues. Institutions based in Geneva benefit from close liaison with experts, a broad range of conferences and conventions, and a solid higher education environment. The more expertise there is in the ecosystem, the more Geneva and Switzerland will attract other actors. For example, the Libra Association and the Cyber Peace Institute – which is jointly funded by several US companies – have recently been set up in Geneva.

In the longer term, these developments should be bolstered by establishing stronger links to leading tech locations, including through the swissnex network, which is internationally recognised.

Promoting Switzerland as a location for governance will require accompanying infrastructure measures, which the Federal Council set out in its dispatch of 20 February 2019 on measures to strengthen Switzerland's role as a host state during the 2020–23 period. Local stakeholders must be given the opportunity to maximise the potential of digitalisation. It is therefore in Switzerland's interest that the data handled by Swiss-based international organisations is safely and securely stored in Switzerland. This will not only deliver a practical competitive edge compared with other potential host states, but is also consistent with Switzerland's fundamental efforts to combine security and human rights in the digital space.

Implementation of the UN Secretary-General's Roadmap for Digital Cooperation also offers new opportunities. This pioneering international document features a multi-stakeholder approach, which is one of Switzerland's core concerns. It is now important to further strengthen Geneva's digital ecosystem, which already plays a vital role. For example, Geneva-based organisations and institutions play a key part in each of the eight areas for action outlined in the roadmap. Specific ideas for the future include the UN secretary-general's planned appointment of a UN special envoy on technology ('tech envoy'), establishing an international AI centre, implementing digital helpdesks, fostering dialogue with investors under the auspices of the UN to extend internet access to around 40% of the world's population, and strengthening the IGF secretariat in Geneva.

# 6 Conclusion

Digitalisation is transforming society, business and our daily lives – but also international politics, as demonstrated in this strategy. Switzerland seeks to promote its interests and values not only in the physical world but also in the digital space. Swiss foreign policy formulation must therefore also extend to the virtual world.

Switzerland has an outstanding reputation and tangible strengths through its proven role as a bridge-builder, its innovative economy, cutting-edge research and its position as a leading centre for education, as well as International Geneva – the epicentre of international governance. Through its digital foreign policy, Switzerland now seeks to tackle the challenges outlined in this strategy and, above all, seize the opportunities.

As illustrated in this strategy, Switzerland intends to do so by strengthening digital governance, clarifying the standards under international law, utilising digitalisation to drive international cooperation and the 2030 Agenda, bolstering cybersecurity, promoting digital self-determination and strengthening the role of Geneva as a digital hub. The Foreign Policy Strategy 2020–23 establishes digitalisation as a new and forward-looking area of foreign policy. Over the next four years the Federal Council will thus pursue and promote Switzerland's digital foreign policy objectives as set out in this digital foreign policy strategy.

# Annex 1: List of abbreviations

| | |
|---|---|
| AI | Artificial intelligence |
| CCW | Convention on Certain Conventional Weapons |
| CERN | European Organization for Nuclear Research |
| FDFA | Federal Department of Foreign Affairs |
| FPS | Foreign policy strategy |
| GDP | Gross domestic product |
| GESDA | Geneva Science and Diplomacy Anticipator |
| GGE | Group of Governmental Experts |
| GIP | Geneva Internet Platform |
| GSPI | Geneva Science-Policy Interface |
| IC | International cooperation |
| ICANN | Internet Corporation for Assigned Names and Numbers |
| ICRC | International Committee of the Red Cross |
| ICT | Information and communication technologies |
| IEC | International Electrotechnical Commission |
| IGF | Internet Governance Forum |
| ISO | International Organization for Standardization |
| IT | Information technology |
| ITU | International Telecommunication Union |
| MENA | Middle East and North Africa |
| NATO | North Atlantic Treaty Organization |
| NCS | National strategy for the protection of Switzerland against cyber risks |
| NGO | Non-governmental organisation |
| OECD | Organisation for Economic Co-operation and Development |
| OEWG | Open-Ended Working Group |
| OPT | Occupied Palestinian territory |
| OSCE | Organization for Security and Co-operation in Europe |
| SME | Small and medium-sized enterprises |
| UN | United Nations |
| WEF | World Economic Forum |
| WSIS | World Summit on the Information Society |
| WTO | World Trade Organization |

# Annex 2: Glossary ⚭

**2030 Agenda:** The 2030 Agenda with its 17 Sustainable Development Goals forms a global frame of reference regarding the three inextricably-linked dimensions of the economy, the environment and society. Switzerland recognises the 2030 Agenda as an important orientation framework. While it is not a legally binding framework, it is a means of setting policy objectives and forming opinions, both for domestic and for foreign policy. It also serves as a frame of reference for digital foreign policy (see 'Digital foreign policy').

**Artificial intelligence:** AI is a technology that combines data, algorithms and computing power.[17]

**Big data:** Big data are extremely large data sets that are too large or complex to be dealt with by traditional data processing software.

**Bilateralism:** When foreign policy issues are discussed or negotiated between two parties, we talk about bilateralism. If there are more than two parties involved, we talk about multilateralism (see 'Multilateralism').

**Blockchain:** The term 'blockchain' refers to decentralised collaborative data management. Multiple copies of the data are stored on the computers of a decentralised network. A transaction is carried out without a central authority managing the account. The transactions are grouped in blocks and stored unalterably.

**Cloud computing:** This involves the provision of IT infrastructures, in particular storage, processing power and software, via a computer network without having to be installed on the local computer.

**Coherence:** This term denotes the greatest possible consistency and coordination between a country's different policy areas.

**Cybersecurity:** Cybersecurity concerns all aspects of security in information and communications technology. This includes all information technology associated with the internet and comparable networks, and incorporates communication, applications, processes and information processed on this basis. International cooperation between state and non-state actors in the area of cybersecurity aims to develop and protect an open, free and stable cyberspace. It can also reduce the risks of cyberattacks between states.

**Data:** In information technology and data processing, data are understood to be representations of information (usually in digital format) that can be read and processed (by a machine).

**Data protection:** The protection of personal data from misuse, often in conjunction with privacy protection.

**Digital divide:** This describes inequalities in access to, and use of, digital technologies.

**Digital foreign policy:** This term refers to the design and implementation of foreign policy (i.e. safeguarding interests and promoting values) in the digital space (see 'Foreign policy', 'Digital space').

**Digital governance:** This refers to the establishment, shaping and consolidation of institutional and regulatory systems and of mechanisms for international cooperation in the digital space (see 'Global governance', 'Digital space').

**Digital self-determination:** The individual should be at the heart of digitalisation. They should be able to control and use their data, and decide who can access it. This approach also guarantees fundamental values such as privacy and freedom of choice in the digital space (see 'Data protection'). High-quality data spaces should therefore be established, which offer social benefits and reinforce democratic values.

**Digital space:** This term refers to the entire physical and virtual space that is opened up or permeated by digitalisation (see 'Digitalisation). The digital space refers not only to systems, but also to actors and processes.

**Digital technologies:** These are devices, programmes or infrastructure that enable information to be digitally processed, stored or transmitted.

**Digitalisation:** The process of digitalisation involves the integration of digital technologies in society, government and business. Digitalisation comprises a broad range of digital applications, such as new communication technologies, robotics, cloud computing, big data analysis, artificial intelligence and the internet of things.

**Facial recognition:** A facial recognition system is a technology capable of identifying or verifying the identity of a person on the basis of a digital image or video frame.

**Fake news:** This refers to false stories that are spread with the intent of misleading or manipulating. Such content can quickly reach a wide audience on social media.

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17 See also 'Artificial Intelligence' guidelines of December 2019.

**Fintech:** This term is derived from financial technology and comprises innovations in the field of financial services that result in new financial instruments, services or business models, e.g. blockchain.

**Foreign policy:** Foreign policy shapes the relations of a state with other states and international organisations and safeguards a state's interests abroad. In Switzerland, the entire Federal Council is responsible for foreign policy. The Federal Department of Foreign Affairs (FDFA) is responsible for coordinating foreign policy and ensuring coherence with other departments (see 'Coherence').

**Geneva Conventions:** The four Geneva Conventions of 1949 and their two Additional Protocols of 1977, as well as the Additional Protocol of 2005, form the core of international humanitarian law applicable in armed conflicts (see 'International humanitarian law'). Among other things, they protect people who are not or are no longer taking part in hostilities and govern the conduct of war.

**Global governance:** This term refers to the development of an institutional and regulatory system and of mechanisms for international cooperation to tackle global problems and cross-border matters. It involves the UN system, international organisations, state- and non-state actors and regional organisations. Switzerland plays a key role in this and International Geneva is one of the key centres (see 'International Geneva').

**Good offices:** This is an umbrella term to describe the efforts of a third party to peacefully settle a conflict between two or more states.

**Host state:** This term describes a country that hosts foreign representations (embassies, missions, consulates) or international organisations. Switzerland – and Geneva in particular (see 'International Geneva') – hosts a multitude of international organisations.

**International cooperation (IC):** International cooperation comprises the activities of humanitarian aid, development cooperation and peacebuilding.

**International Geneva:** Geneva is the heart of the multilateral system and the location of the UN's European headquarters. Thirty-eight international organisations, programmes and funds, as well as 179 states and 750 NGOs are represented there. International Geneva provides 45,000 jobs and contributes more than 11% to the GDP of the canton (1% of Swiss GDP). Around 3,300 international conferences are held in Geneva every year, the main themes of which are: 1) peace, security, disarmament; 2) humanitarian aid and international humanitarian law, human rights, migration; 3) labour, economy, trade, science, telecommunication; 4) health; 5) the environment and sustainable development.

**Internet governance:** Internet governance is the development and application of shared principles, norms, rules, decision-making procedures, and programmes that shape the evolution and use of the internet (see 'Global governance').

**International humanitarian law:** International humanitarian law governs the conduct of hostilities and protects the victims of armed conflicts. It applies in all international and non-international armed conflicts, regardless of the legitimacy or cause of the use of force.

**International law:** International law is the result of collaboration between states and regulates how they coexist. It underpins peace and security and aims to ensure the protection and well-being of persons. International law comprises different areas, such as the prohibition of the use of force, human rights, protection of individuals during armed conflicts (see 'International humanitarian law'), prevention and prosecution of war crimes, crimes against humanity, genocide, transnational organised crime and terrorism. It also regulates other areas, such as the environment, trade, development, telecommunications and transport. On account of the sovereignty of states, international law only applies for each state insofar as it has agreed to adopt certain international obligations. This excludes mandatory international law, which comprises basic standards that no state may override, such as the prohibition of genocide. International law also applies in the digital space (see 'Digital space').

**Human rights:** Human rights are inherent and inalienable rights that all people enjoy without distinction by virtue of their being human. They are crucial to the protection of human dignity, physical and psychological integrity and are an important foundation for the development of every individual. They are the basis of the peaceful coexistence of nations. They are guarantors of a society based on the obligation to respect the rights of the individual. They apply in both international relations and domestic policy, but also at the place of residence of every individual and in the digital space. Human rights are universal, indivisible and interrelated. Every state is obliged to respect, protect and implement human rights.

**Multilateralism:** Multilateralism is when issues of public interest are discussed and negotiated between more than two states (see also 'Bilateralism').

**Multi-stakeholder approach:** This refers to the idea that as many relevant stakeholders as possible should be involved in decisions and regulatory efforts.

**Rule of law:** The rule of law refers to the supremacy of law over the rule of might. At national level, the fundamental objective of the rule of law is to safeguard the primacy of the law at all levels of government and to protect the associated freedom of citizens. In terms of foreign policy, the rule of law is crucial to international peace and security, economic and social progress, development and the protection of human rights and freedoms. It is primarily achieved by strengthening international law, which guarantees political stability and the reliability of international relations (see 'International law').

**Science diplomacy:** This terms refers to, for example, the use of scientific collaboration between states to address common problems and to develop international partnerships. At the interface between science, technology and foreign policy, articulating issues and objectives from a scientific perspective can support confidence-building and stimulate both bilateral and multilateral discussions. Science diplomacy is also an important approach in digital foreign policy, especially at the multilateral level.

**Social media:** Social media enables users to participate in social networking, and to share content via digital media. It allows users not only to consume, but also to create their own content.

**Sustainability:** Switzerland promotes sustainable development on the basis of the Federal Constitution. It uses the definition formulated by the Brundtland Commission in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." The principle was substantiated in the 17 goals of the 2030 Agenda in 2015 (see '2030 Agenda').

**Tech4Good:** This term refers to the use of digital technologies within the framework of international cooperation (see 'International cooperation (IC)'). Digital technologies and technical innovations offer many opportunities to improve living conditions worldwide. Switzerland promotes their use in international cooperation in order to deliver on the sustainable development goals more quickly or in a more broad-based and cost-effective manner. For example, new technologies can help alleviate need and poverty, tackle global challenges such as climate change, and contribute to better governance. New technologies also involve risks, which is why Switzerland combines its innovation transfer with training measures, for example.

# Annex 3: Conceptual basis

## Dispatch of 29 January 2020 on the legislative programme for 2019–23 (de/fr/it) ([link](#) ✎)

→ The Federal Council sets out the priorities of its agenda for the 2019–23 legislative period in three guiding principles and 18 objectives.

→ For the first time, the topic of digitalisation was included in one of the guiding principles: "Switzerland will secure its sustained prosperity and utilise the opportunities of digitalisation."

→ The topic of digitalisation is also incorporated in four objectives:

- Objective 2: *"The federal government will perform its state activities efficiently and digitally where possible."*
- Objective 3: *"Switzerland will ensure optimal and stable economic conditions that encourage innovation in the digital age, and will support the domestic workforce."*
- Objective 5: *"Switzerland will remain at the forefront of education, research and innovation and will utilise the opportunities of digitalisation."*
- Objective 18: *"The federal government will counter cyber risks, and support and implement measures to protect citizens and critical infrastructures."*

→ The topic of digitalisation has thus been upgraded in relation to the legislative programme for 2015–19. The Swiss parliament added an additional objective to the 16 objectives for the legislative period: *"Switzerland will ensure favourable conditions so that digitalisation can help safeguard and increase prosperity."*

## Digital Switzerland strategy of 11 September 2020 ([link](#) ✎)

→ Switzerland's strategic goals for the digital space have been regularly updated – and adapted to reflect increasing digitalisation – since the first Federal Council strategy for an information society back in 1998.

→ The current Federal Council Digital Switzerland strategy of September 2020 sets out the federal government's principles and key objectives of its national and international commitment.

The principles are:

- To put people at the centre
- To provide room for development
- To facilitate structural change
- To create networked transformation processes

The key objectives are:

- To enable equal participation of all and strengthen solidarity
- To ensure security, trust and transparency
- To further strengthen people's digital empowerment and self-determination
- To ensure added value, growth and prosperity
- To reduce the environmental footprint and energy consumption

'International engagement' is one of nine fields of action. The Federal Council states that in a thematic follow-up strategy to the FPS 2020–23 it will explain the concept of digital foreign policy, specify the corresponding FPS guidelines and define the individual foreign policy fields of action.

## Foreign Policy Strategy 2020–23 of 29 January 2020 ([link](#)⚿)

→ In accordance with the legislative programme, the Federal Council defined digitalisation as one of four thematic focus areas of Swiss foreign policy: *"Switzerland will raise its profile in global efforts to consolidate digital governance. It will further develop its digital foreign policy and position Geneva as a leading location for debate on digitalisation and technology. In its digital foreign policy, it advocates the inclusion of all relevant stakeholders. It will contribute to finding new solutions and pursue the goal of an open and secure digital space which is based on international law and which revolves around people and their needs."*

→ On this point, it set out five objectives:

- Objective 1: *"Switzerland will bring together actors from all stakeholder groups to clarify responsibilities in the digital space and to develop new governance models. It will play a key role as a bridge-builder in the implementation of the recommendations of the UN Secretary-General's High-level Panel on Digital Cooperation."*

- Objective 2: *"Switzerland will advocate appropriate framework conditions in a global digitalisation and data policy that promote access to and use of data for social and economic development. Democratic self-determination, the rule of law and respect for human rights must continue to be guaranteed. For this purpose, Switzerland will establish an international network to promote digital self-determination. It will further develop its cooperation with the EU and utilise the opportunities of a common European data space and a digital single market."*

- Objective 3: *"Switzerland will promote the role of Geneva as a hub for global digital and technology policy. It will strengthen existing forums, such as the Geneva Internet Platform, the GESDA foundation and the Geneva Dialogue. It will also step up cooperation with research institutes in other cantons."*

- Objective 4: *"Switzerland will enhance its digital diplomacy profile. It will support international confidence-building to minimise risks. The principle of 'law before power' also applies in the virtual world, which is why Switzerland is supporting initiatives to clarify the application of intertional law in cyberspace."*

- Objective 5: *"Switzerland will support developing countries in the use of new technologies and in handling the associated risks. It is committed to reducing the negative environmental impacts of commodities extraction and will promote the use of new technologies to prevent humanitarian crises. It will create the necessary vehicles to promote humanitarian innovation at all levels. In collaboration with selected partners such as the ICRC, it will develop a framework to protect digital humanitarian data."*

## National strategy of 18 April 2018 for the protection of Switzerland against cyber risks (NCS) for the period 2018–22 ([link](#)⚿)

→ The strategy builds on the first NCS (2012–17) and supplements it with new measures so that it reflects the current threat level. It was drawn up in collaboration with businesses, cantonal authorities and universities and forms the basis of the collective efforts needed to reduce cyber risks.

→ The NCS states that Switzerland is committed to international cooperation to increase cybersecurity, promoting dialogue on cybersecurity policy, participating actively in international expert bodies,and cultivating exchange with other states and international organisations to optimally safeguard Swiss interests.

→ Three measures are set out in the sphere of action 'Active positioning of Switzerland in international cybersecurity policy':

- Measure 1: *"Active shaping of and participation in processes of foreign cybersecurity policy."*
- Measure 2: *"International cooperation to build and expand cybersecurity capacities."*
- Measure 3: *"Bilateral political consultations and multilateral dialogues on foreign cybersecurity policy."*

## 'Digitalisation and foreign trade', featured topic of the Federal Council's 2019 Foreign Economic Policy Report, published 15 January 2020 ([link](#)⚿)

→ The Federal Council highlights the effects of digitalisation on the international economy, in particular on cross-border value chains, as well as the pressure placed on the global trading system to adapt.

→ Furthermore, the Federal Council sets out the fields of action in foreign economic policy and trade diplomacy at the multilateral and bilateral levels, and underscores the importance of regulatory interoperability with important trading partners.

→ For the Federal Council, the overriding goal is to exploit the potential of increased productivity in the digital age as an important driver of economic growth and to ensure the highest possible labour force participation and high-quality jobs.

## Other basic principles

→ Dispatch of 19 February 2020 on **Switzerland's Strategy for International Cooperation 2021–24** (IC Strategy 2021–24) (BBl 2020 2597): utilising the 'potential of digitalisation' is defined as a priority. (link ⬀)

→ Dispatch of 20 February 2019 on **measures to strengthen Switzerland's role as host state 2020–23 period:** refers to the opportunities and challenges of digitalisation and new technologies for International Geneva. (link ⬀)

→ **Switzerland's International Strategy on Education, Research and Innovation,** July 2018, and related dispatches. (link ⬀)

→ **Report of the interdepartmental working group on artificial intelligence** of December 2019, submitted to the Federal Council, and the strategic guidelines for 2020. (link ⬀)

# Annex 4: International rules and standards

## The existing international rules and standards for the digital space

International rules and standards for the digital space **already exist.** They comprise various instruments, many of which were established before digitalisation. Others have been developed more recently specifically for issues related to the digital space. They can be split **into five levels:**

→ At the highest level are the **provisions of general international law.** These include customary international law (e.g. the rules on state jurisdiction such as the territorial principle). They also include the major multilateral treaties (e.g. the UN charter, WTO agreements on trade in goods and services, human rights treaties or – in the case of armed conflicts – international humanitarian law). Finally, they also include general legal principles (e.g. good faith). All these general provisions of international law also apply in the digital space.

→ In addition to these general provisions, there are also numerous **specific international agreements.** On the one hand there are a large number of treaties and agreements which were drawn up before digitalisation, but which are relevant to the digital space. Bilateral mutual legal assistance treaties are one example. Among other things, they regulate the conditions and procedures by which Swiss prosecution authorities can access evidence obtained abroad. In principle, this also applies to digital data. On the other hand, there are agreements which deal with a specific aspect of the digital space. One example is Convention 108 of the Council of Europe for the Protection of Individuals with regard to Automatic Processing of Personal Data.

→ **Decrees** adopted by states and organisations can also have international significance in the digital space, e.g. the US CLOUD Act and the EU's General Data Protection Regulation. While they are not applicable *de iure* for states like Switzerland, they may have *de facto* relevance.

→ **Soft law** instruments also already exist, mainly established for issues specifically relating to the digital space. One example are the reports of the UN Governmental Group of Experts, which adopted a set of non-legally-binding guidelines to promote responsible state behaviour in the digital space.

→ In terms of **best practices, benchmarking and technical standards,** there are many instruments that generally contain specific legally non-binding regulations for the digital space. One example would be ISO standards, which set standards for the necessary digital infrastructure.

This **five-level body of international rules and standards** for the digital space can be illustrated as follows:

| General international law |
| --- |
| Specific international agreements in a given area |
| Decrees adopted by states or organisations with de facto international relevance |
| Soft law |
| Best practices, benchmarking, technical standards |

## Challenges in the application of these rules and standards

There are three key challenges in the application of the existing international rules and standards:

→ The first challenge is the **application** of international law **provisions that were established before digitalisation to the digital space.** This applies to both general provisions and to specific agreements. For example, there are no clear territorial boundaries in the digital space. Application of the territorial principle is therefore a challenge, as several territories may be affected by a behaviour in the digital space and various states could thus claim regulatory authority. At the same time, it must be possible to separate state competences in the digital space. In the context of mutual legal assistance treaties, it is often unclear whether the location where the data is stored is relevant, or the location where the technology company holding the data is incorporated. The customary contractually-agreed points of contact and processes for accessing evidence obtained abroad may face limitations in this respect. Clarification is thus often needed regarding how the provisions of customary international law should be applied under the special conditions of the digital space.

→ The second challenge is that it is not only states that are present in the digital space, but also **numerous new players,** which means that large parts of the infrastructure of the digital space are operated by private companies. This raises questions about precisely which provisions of the international body of rules – which was largely established for states – these actors are subject to, and where they themselves can help shape these rules and standards.

→ The third challenge lies in linking up the various levels of the international body of rules so they contain coherent and predictable regulations for all actors. This particularly applies to the **linking of technical standards to legal requirements:** if legal requirements cannot be implemented in the digital space owing to contrary technical standards, these requirements are simply empty words. This is therefore also about implementing the international rules and standards.

# Important ongoing processes to clarify and further develop the international rules and standards

Given the stated challenges in implementing the international rules and standards, they need to be clarified and developed by sub-area. This should bring greater legal certainty for all parties. Such **clarification and development processes apply to all levels of the international body of rules.**

**Key examples** of ongoing processes to clarify and develop the international rules and standards are:

→ **WTO e-commerce negotiations:** 82 WTO member states have been conducting plurilateral talks since 2019 with a view to developing specific e-commerce regulations.

→ **OECD/G20 project on taxation of the digital economy:** In 2019, the OECD published a work programme on the tax challenges arising from the digitalisation of the economy. The guidelines are designed to apply to the entire digital economy.

→ **Open-ended Working Group (OEWG) 2019–20/UN Group of Governmental Experts (UN-GGE) 2019–21:** Both UN working groups are looking at current developments in the field of cybersecurity. Part of the UN-GGE mandate is to develop national positions on international law for the final report in 2021.

→ **Development of an international convention on cybercrime:** The UN General Assembly has planned negotiations with the goal of developing an international convention on cybercrime. The preliminary work commenced summer 2020.

→ *Convention on Certain Conventional Weapons (CCW): Group of Governmental Experts on Lethal Autonomous Weapons Systems.* In light of technological developments and the use of AI for military purposes, for a number of years the CCW has been addressing legal, political, military, technical and ethical issues, as well as the need for regulations with regard to the use of force by (partially) autonomous weapon systems in armed conflicts.

→ *Council of Europe Ad-hoc Committee on Artificial Intelligence:* The Committee of Ministers of the Council of Europe decided to set up an intergovernmental expert committee to review the feasibility of a legal framework for the development, design and application of artificial intelligence based on human rights, democracy and the rule of law.

# Annex 5: Key stakeholders, forums and processes

Below is an extract of key actors, forums and processes in the fields outlined in the strategy.

## Governance

### Global forums and processes

#### UN World Summit on the Information Society / WSIS process

The UN World Summit on the Information Society (WSIS) was held in two phases, in 2003 in Geneva and in 2005 in Tunis, during which the international community was able to agree on an initial comprehensive UN vision for dealing with digital technology. Switzerland played a key role in shaping both WSIS meetings and helped to promote acceptance with respect to the involvement of business, science and civil society in digital governance. The UN Working Group on Internet Governance (2004–05), whose secretariat was headed by a Swiss national, was likewise instrumental in this respect. The WSIS follow-up process is primarily supported by the annual WSIS Forum in Geneva (organised by the International Telecommunication Union (ITU), United Nations Educational, Scientific and Cultural Organisation (UNESCO), United Nations Conference on Trade and Development (UNCTAD) and United Nations Development Programme (UNDP) and supported by Switzerland) as well as the United Nations Commission on Science and Technology for Development (UN CSTD), in which Switzerland will have a seat until 2024. Evaluations of the WSIS outcomes are conducted on a periodic basis, with the most recent having taken place in 2015 (WSIS+10) and the next planned for 2025 (WSIS+20).

#### UN Internet Governance Forum / IGF (secretariat in Geneva)

The annual IGF is the most important outcome of the WSIS process. It is open to all interested parties and is now the world's largest global multi-stakeholder dialogue platform on issues relating to digitalisation, ranging from technical, economic and regulatory topics to subjects such as cybersecurity, the handling of social and traditional media, human rights and development aspects. The IGF secretariat is based in Geneva and the preparatory meetings for the annual IGF are also held in Geneva. The IGF itself is held on an annual basis at different locations around the world.

Switzerland has helped in shaping the bottom-up structure of the IGF and played a key role in the successful launch of the IGF with its initial funding. After the IGF fell into a state of crisis from 2015, suffering a decline in terms of both momentum and importance, Switzerland stepped in as host country in 2017 and contributed to the IGF's revitalisation. The IGF is now well positioned once more. Over the years, the number of participants has increased from around 1,000 initially to almost 5,000 (IGF Berlin 2019). The IGF mandate has to be extended within the context of the WSIS evaluations.

Since the first IGF, which took place in Athens in 2006, a number of national and regional IGF structures, now totalling more than 100, have spontaneously been established. The largest initiative after the global IGF is the European Dialogue on Internet Governance (EuroDIG), which was launched in 2008 with the involvement of Switzerland. Since 2015, Switzerland has also been home to the Swiss IGF, which is coordinated by the Federal Office of Communications (OFCOM).

## High-level Panel on Digital Cooperation and UN secretary-general's roadmap

On the initiative of Switzerland, the United Arab Emirates and private stakeholders, the UN secretary-general launched the High-level Panel on Digital Cooperation (HLP) in 2018. The panel's final report, which was presented in 2019, contains five recommendations for improving global digital cooperation, including the use of the digital transformation for the achievement of the UN's Sustainable Development Goals (2030 Agenda), consolidating existing efforts aimed at securing the digital space and further developing digital governance architecture.

Switzerland and International Geneva played a key role in the content of the work performed by the HLP. The panel was co-financed by Switzerland, the secretariat was jointly based in New York and Geneva and the director of the Geneva Internet Platform acted as co-head of the secretariat. One of the two official meetings of the HLP took place in Geneva. Former Federal Councillor Doris Leuthard was one of the panel's 22 members and as head of the working group on the principles, functions and mechanisms of digital cooperation and governance she played a key role in shaping the corresponding recommendations.

Following the publication of the panel's report, a follow-up process lasting around one year was commenced, during which the recommendations were discussed further as part of roundtable discussions. Switzerland was involved in several of these. Based on the feedback from this consultation process, the UN secretary-general presented his Roadmap for Digital Cooperation at the start of June, outlining the next practical steps. Focus areas include improved access to the internet and public digital goods (data, open-source software, etc.), greater capacity-building in developing countries, protection of human rights, the strengthening of cybersecurity and the promotion of inclusive governance models. In his roadmap, the UN secretary-general also announced the appointment of a 'tech envoy' for 2021.

## European Union / EU

Digitalisation is a key area of the EU Commission's work programme. In its communication of 19 February 2020, the Commission set out its guidelines and objectives for Europe's digital future: (1) a digital strategy that contains the key measures of the EU; (2) a data strategy that should ensure the free movement of data; (3) a White Paper on Artificial Intelligence (AI) that aims to increase quality and trust in dealing with AI. According to this, the existing opportunities presented by digitalisation should be better utilised in future in order to make the EU a leading global provider of corresponding technologies and services (keyword: strategic autonomy) as well as a standard-setter. On the domestic front, the EU wishes to exploit the economic and social potential offered by digitalisation, thus allowing the single market to generate greater growth and prosperity. The Commission has already communicated that in future it also wants to make market access, both in the area of data and AI products, dependent on whether the legal basis with respect to data protection is considered equivalent to EU regulations.

As a European country, Switzerland also follows a digitalisation policy that aims to allow for the economic and social potential of technologies to be tapped, while at the same time respecting individual rights to the greatest possible extent. For Switzerland, a strengthening of these values, especially at a multilateral level, would be important. Located at the heart of Europe, Geneva aims to be the leading global hub for the development of digital governance.

## World Economic Forum (Geneva)

The World Economic Forum, which is based in Geneva, also deals with various topics related to digital governance. It brings together expertise from the realms of politics, business and civil society through publications, forums and project work. The Forum also has an important role to play in putting issues on the global agenda. In the area of digitalisation, among other things, it examines questions relating to internet access (e.g. Global Information Technology Report), digital commerce, cybercrime, cybersecurity, the impact of digitalisation on society and the world of work as well as support for states in developing AI strategies. In 2016, the Forum opened the Centre for the Fourth Industrial Revolution in San Francisco, which is dedicated to promoting global dialogue about the impact of scientific and technological changes on society and the economy worldwide. In 2019, the Federal Department of Foreign Affairs (FDFA) concluded a memorandum of understanding with the Forum, which also foresees greater cooperation in the area of digitalisation. The World Economic Forum Centre for Cybersecurity is an observer at the Geneva Dialogue on Responsible Behaviour in Cyberspace.

## Global support mechanisms

### Geneva Internet Platform / DiploFoundation (Geneva)

The Geneva Internet Platform (GIP) serves as a neutral information and discussion platform on all aspects of digital governance and organises briefings and capacity building courses. It was launched in 2104 by the FDFA and OFCOM in cooperation with DiploFoundation, an NGO set up by Malta and Switzerland. The Canton of Geneva is also involved in the steering group. The GIP reports on events, trends, findings and decisions in all subject areas of digital governance and organises regular briefings. It thus helps, in particular, small and developing countries in better understanding the opportunities and challenges presented by digitalisation and becoming involved in the global debate. The GIP also plays an important role as an instrument and platform for the strengthening of interdisciplinary cooperation between the Geneva-based stakeholders, such as the international organisations. The GIP and DiploFoundation also organise courses for employees of the Federal Administration. Within the context of the roadmap, there is the potential for the GIP to take on an enhanced role as a so-called "help desk".

### Geneva Science and Diplomacy Anticipator / GESDA (Geneva)

On 1 January 2020, the Geneva Science and Diplomacy Anticipator foundation, which was founded by the Federal Council and the City and Canton of Geneva, commenced its work. Its objective is to make use of scientific expertise in order to address the opportunities and risks associated with technological progress at a political level. Its role is to create a common language and common goals between stakeholders from a range of different backgrounds and to transform them into effective coalitions that bring together actors from the scientific and business communities and from civil society.

GESDA is currently in its 36-month pilot phase and is focusing on the development of an academic and a diplomatic forum that should ensure mutual exchanges between the different subject areas. There is also an impact fund that is to be used to finance specific project activities. In this respect, GESDA is already currently supporting the International Digital Health & AI Research Collaborative project, which is active in AI for health and is led by Amandeep Gill, former co-director of the High-level Panel on Digital Cooperation. A Geneva-based centre for science diplomacy in the area of conflict modelling is also to be initiated together with ETH Zurich, the University of Geneva and international partners.

### Swiss Digital Initiative / SDI (Geneva)

The SDI is a Geneva-based private foundation that aims to encourage companies around the world to adopt ethical codes of conduct. It was launched on 2 September 2019 at the first Swiss Global Digital Summit in Geneva with the participation of major national and international companies. The SDI aims to bring about a voluntary commitment to ethical standards and conduct such as transparency, responsibility, non-discrimination and explanatory power, which are still only partly institutionalised. To this end, it also wants to develop instruments that make this voluntary commitment measurable for users. The SDI is under the patronage of Federal Councillor Ueli Maurer. The foundation is chaired by former Federal Councillor Doris Leuthard. Federal Chancellor Walter Thurnherr is an ad personam member of the Foundation Board.

## Institutions of higher education and universities (Switzerland)

Switzerland's institutions of higher education and universities play an important role in contributing scientific and technical expertise to different political processes. The federal institutes of technology are involved in different projects in International Geneva, including cooperation with IOs and the private sector as part of preparations for the World Data Forum. The Swiss Federal Institute of Technology Lausanne (EPFL) also organises the Applied Machine Learning Days, which provide important expertise for many Geneva-based stakeholders. At the University of Geneva and the Graduate Institute, issues relating to digital governance are an important part of education and research activities. The Graduate Institute also operates the platform for societal transformations, which deals with the social impact of new technologies. The International Digital Health & AI Research Collaborative (I-DAIR) project is also based at the Graduate Institute. These are just some examples.

# Prosperity and sustainable development

## Technical standardisation / communication logic

### International Telecommunication Union / ITU (Geneva)

The International Telecommunication Union (ITU) is a specialised agency of the United Nations responsible for issues relating to information and communication technologies. With its three sectors (standards, radio communication and development), the ITU promotes the development and coordination of global technical standards, coordinates the joint use of the radio-frequency spectrum worldwide and works to improve the telecommunications infrastructure in developing countries. As a member of the ITU Council, Switzerland is involved in technical study groups, working groups on political issues related to the internet and the coordination of the European position within the ITU. Switzerland also supports a better understanding of the opportunities and risks presented by the internet of things, 5G mobile technology and artificial intelligence.

The Standardisation Sector of the ITU (ITU-T) is particularly important for the further development of technical standards. For years, Switzerland has chaired ITU-T Study Group 13, which develops standards for future mobile networks, including cloud computing. The ITU has recently been playing an increasingly significant international role in the field of AI. The AI for Good Global Summit, organised by the ITU (together with the UNDP and UNESCO) since 2017, brings together AI experts from governments, industry and civil society each year in order to develop ideas for AI applications for the achievement of the UN Sustainable Development Goals. In 2019, Switzerland (FDFA and OFCOM) entered into a partnership with the ITU to further strengthen the summit.

### Internet Corporation for Assigned Names and Numbers / ICANN (office in Geneva)

The private Californian institution ICANN is responsible for the global allocation of domain names and IP addresses. It was originally under the supervision of the US government. Following two and a half years of intensive negotiations, the decision-making and accountability mechanisms, including the possibilities to exert influence, were reorganised. During this period, Switzerland chaired the ICANN Governmental Advisory Committee and therefore played a major role in ensuring that the governments were ultimately able to agree on a compromise for a new self-governance model acceptable to all. In order to promote contact with governments and international organisations, Switzerland supported ICANN in opening an office in Geneva.

### CERN (Geneva)

The European Organization for Nuclear Research (CERN) was established in 1954, has 23 members and operates the world's largest particle physics laboratory. Its main function is to provide the infrastructures necessary for research. For this purpose, a large computer installation used to store and analyse data from experiments is located at the main site in Meyrin. As the researchers require remote access to these facilities, CERN has developed important digital applications in parallel to its own work that are now benefiting the general public, for example the World Wide Web (WWW), Hypertext Markup Language (HTML) and the Hypertext Transfer Protocol (HTTP). By addressing practical problems and thanks to its existing expertise, CERN plays an important role in developments in the field of data processing. With the development of the Large Hadron Collider, for example, owing to the huge amounts of data to be processed, a system that accesses free server capacities worldwide and thus processes data on a decentralised basis was developed. This approach now underpins the widespread use of cloud computing.

### International Organization for Standardization / ISO (Geneva)

ISO, which has existed since 1947, is an international standards-setting body that comprises representatives from various national standards organisations. Many of the international standards and related documents developed by ISO cover aspects that relate to information and communication technologies (ICT) with a view to ensuring their quality, security and reliability. These include, for example: information security, sensor networks, cloud computing services and devices, cloud data management, virtual private networks, future networks, unique identification for the internet of things, digital signatures, health informatics and software management.

## United Nations Economic Commission for Europe / UNECE and UN CEFACT (Geneva)

The UNECE is one of the five regional commissions that report to the United Nations Economic and Social Council (ECOSOC). It comprises 56 member states (primarily from Europe) and aims to promote economic cooperation and integration between them. In the area of digitalisation, the UNECE's Centre for Trade Facilitation and Electronic Business (UN CEFACT) has an important role to play as a focal point for recommendations and standards for electronic commerce. It has a global membership with experts from governments, intergovernmental organisations and the private sector. CEFACT also performs a range of activities in the area of ICT for development. An example here is the development of a joint environmental information system throughout the UNECE region. In particular, the role played by the UNECE in the standardisation and interoperability of intelligent transport systems and autonomous vehicles should also be mentioned. This stems from the UNECE's long-standing role as secretariat for multilateral agreements and conventions in the area of road transport (e.g. the Vienna Convention on Road Traffic).

## Internet Engineering Task Force / IETF

The IETF is a US-based organisation that develops and promotes open and voluntary internet standards, especially those that make up the Internet Protocol. It plays an important role in the further development of the architecture for the protocols and procedures used by the internet. It has no formal membership list and instead comprises voluntary developers. However, their work is generally financed by their employers or sponsors. The IETF began as an institution sponsored by the US government but has been under the auspices of the Internet Society since 1993.

## Institute of Electrical and Electronics Engineers / IEEE

The IEEE is a US-based association of engineers who work together on the development of industry standards, including in connection with ICT-relevant topics such as wireless communication. In addition to developing standards, the IEEE also organises events and publishes scientific publications on various aspects of computer sciences, including security and data protection.

## European Telecommunications Standards Institute / ETSI

The ETSI is a non-profit organisation set up at the initiative of the European Commission that develops standards for information and communication technologies. Some of the specific areas in which the ETSI develops standards include the following: broadband, cybersecurity, cloud computing, internet of things, transition to IPv6, next generation protocols and smart cities. In addition to its work on the development of standards, the institute has also published white papers.

## International Electrotechnical Commission / IEC (Geneva)

The IEC is an international standardisation organisation that develops and publishes standards for all electrical, electronic and related technologies – electrical engineering. Several technical committees deal with the internet of things (IoT), including, for example: standardisation in the fields of sensor networks, portable technologies, smart cities and smart grids. Alongside the development of standards, the IEC has also published white papers, roadmaps containing recommendations and other resources relating to IoT-related topics. The IEC is headed by Philipp Metzger, former director of OFCOM.

## European Computer Manufacturers' Association / ECMA (Geneva)

Ecma is a standardisation organisation for information and communication systems. It was founded in 1961 with the objective of standardising computer systems in Europe. Membership is open to companies around the world that produce, market or develop computer or communication systems. Facebook, Google and Microsoft, among others, are members of Ecma. EPFL and ETH Zurich are not-for-profit members.

# Cross-border data flows

## World Trade Organization / WTO (Geneva)

The WTO is an intergovernmental organisation that provides a central legal and institutional framework for establishing and maintaining global rules for digital trade over the longer term. The most important agreements are the General Agreement on Tariffs and Trade (GATT), which deals with trade in goods, the General Agreement on Trade in Services (GATS) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Within this framework, the WTO deals with various issues relating to internet governance and digital policy, including e-commerce, arbitration, the liberalisation of telecommunications markets and trade in telecommunications services. Its basic principles of non-discrimination (most-favoured nation and national treatment) and transparency also apply to the digitalised economy. The WTO dispute settlement bodies have already examined issues relating to trade in digital services in light of WTO legislation and issued binding judgements. Nevertheless, numerous questions regarding the application of existing rules to digital barriers to trade remain open or disputed, especially owing to the often political nature of the national rules behind them. Since May 2019, 82 WTO members have therefore been negotiating clarifications and additions to the WTO rules on digital trade as part of a plurilateral initiative. The objective of the negotiations is to promote digital trade by avoiding unnecessary barriers to trade and unjustified protectionisms, while at the same time developing common basic principles for domestic regulation (e.g. localisation). The starting point is formed by the existing standards in bilateral and regional free trade agreements. Switzerland is actively participating in the negotiations. The negotiating group, which represents around 90% of world trade, has the potential to establish rules with a global impact.

## Organisation for Economic Co-operation and Development / OECD

The Organisation for Economic Co-operation and Development (OECD) is made up of 36 member states. Its work focuses on improving market-based policies, which should contribute to the general well-being of the population. It promotes agreements between the members states, including guidelines and standards, and encourages policy discussions with its scientific publications (outlooks, annual overviews and comparative statistics). As part of the OECD's Going Digital Initiative, cross-thematic knowledge on the digital transformation is to be developed. This includes the analysis of issues related to digital trade, including the significance of market openness in the digital age, the impact of the regulation of cross-border data transmission and how digital security can be enhanced in line with market principles. In a first step, this work can lead to precursors for common recommendations (best practices) and promote a coherent and comprehensive policy approach for the digital transformation. The standards can, for example, be incorporated in the negotiations within the WTO or free trade agreements.

The OECD also plays an important role in the area of AI. In autumn 2018, it set up a group of experts in which Switzerland was represented. The group developed a Council Recommendation that contains five general principles for the responsible use of AI as well as five specific recommendations for governments. The OECD Council Recommendation was adopted by the OECD member states (including Switzerland) and a number of other countries in spring 2019. The OECD is also in the process of establishing an AI Policy Observatory, which is likewise supported by Switzerland.

## European Free Trade Association / EFTA (Geneva)

In the past, Switzerland has negotiated various texts on e-commerce within the context of the European Free Trade Association (EFTA) and bilaterally as part of free trade agreements. The most recent text dates from 2017 and was concluded between the EFTA states and Turkey. In the course of 2019, the EFTA member states decided to commence work on a new EFTA model text on e-commerce for future free trade negotiations. A draft has therefore been drawn up on the basis of known text elements at several working group meetings. While this draft has not yet been completed, it already contains the key elements from the point of view of the EFTA member states and should be finalised in 2020. The EFTA e-commerce model text will contain numerous new elements that are now standard for e-commerce texts in trade agreements, including provisions on cross-border data flows and the disclosure of source codes, for example.

## Access, applications and sustainable development

### World Bank

The World Bank is an international financial institution that issues loans and grants to the governments of poorer countries in order to pursue capital projects. Switzerland joined the World Bank in 1992. The World Bank's work programme in the ICT sector focuses on cybersecurity, the expansion of access to fast, affordable internet and the development of reliable online platforms that encourage improved service provision and good governance. For example, Switzerland is supporting the World Bank's GovTech partnership programme to promote the use of new technologies in the public sector. It aims to improve the transparency, accountability and efficiency of public administrations and thus to contribute to better public services and the combating of corruption. SMEs, in particular, benefit from the digitalisation of public services. The digitalisation of the customs system promotes trade, while technological applications contribute to simplifying the foundation of new companies and market access.

### United Nations Development Programme / UNDP

The UNDP is a UN agency that works to eradicate poverty and reduce inequality. The UNDP also supports ICT development activities and helps the UN member states in creating a favourable environment for economic and social growth through the use of ICT. The UNDP is one of the UN specialised agencies that was appointed as part of the WSIS process to pursue specific WSIS lines of action in the areas of capacity-building and e-government as well as to create a favourable environment. For Switzerland, the UNDP is a partner within the framework of the Core Government Functions programme (promotion of e-governance as a means of achieving better governance) as well as the fintech dialogue programme.

### United Nations Commission on Science and Technology for Development / UN CSTD (Geneva)

The UN CSTD is a subsidiary body of the United Nations Economic and Social Council (ECOSOC). The CSTD was established by the UN General Assembly in 1993 in order to examine specific science and technology issues for development: ranging from access to technologies to their applications (e.g. health, climate change, more inclusive financial systems, smart cities). Following the WSIS meeting, the CSTD has been supporting progress in the implementation of the process at a regional and international level and is preparing corresponding draft resolutions for ECOSOC. The UNCTAD secretariat in Geneva provides substantive support to the CSTD. The CSTD comprises 43 members (each elected for four years) and meets annually. Switzerland has been an active member since 2006 and is currently elected until 2024.

### Broadband Commission (Geneva)

The Broadband Commission for Sustainable Development was established in 2010 as a joint initiative of the ITU and UNESCO in order to promote internet access (especially broadband networks) and reduce the digital divide. The Broadband Commission primarily performs advocacy work (reports, studies, recommendations) for the introduction of standards and guidelines for the establishment of broadband networks in developing countries, the development of digital skills (education and capacity building) among all population groups and, specifically, for reducing the digital divide between the genders. The Broadband Commission is also increasingly addressing the significance of internet access as a driver of sustainable growth and development. Its work therefore also includes issues such as digital health and the relationship between ICTs and climate change.

### Fintech dialogue platform (Geneva)

The global dialogue platform on fintech, which was launched in 2020 by the UNDP, Switzerland and Kenya, aims to ensure that the rules and practices relating to the digitalisation of the financial system also take account of its impact on sustainable development. Together with stakeholders from developing countries and international organisations, such as the World Bank and the World Economic Forum, criteria, standards and norms are to be developed that incorporate the goals of the 2030 Agenda for Sustainable Development.

**Task Force on Digital Financing of the UN secretary-general**

In 2018, the UN secretary-general launched a Task Force on Digital Financing in order to explore the potential of financial innovations, new technologies and digitalisation for bringing about broader access to financial resources for the achievement of the SDGs and to minimise risks in the process. The task force will submit its report with recommendations to the UN secretary-general during the course of 2020.

**Libra Association (Geneva)**

The Libra Association, initiated by Facebook, comprises several private sector and civil society organisations seeking to promote a global online currency called Libra. The Libra payment system is based on blockchain technology.

**United Nations Conference on Trade and Development / UNCTAD (Geneva)**

The United Nations Conference on Trade and Development (UNCTAD) is part of the UN secretariat. Its objective is to maximise developing countries' trade, investment and development opportunities and to promote their efforts to integrate into the world economy. It conducts research, produces political analyses and data collections and provides technical assistance to developing countries. In the digital field, it supports developing countries in drawing up e-commerce legislation, building capacities, for example for the production of underlying statistics for ICT policies, promoting the use of technology in the economy (in order to bridge the gender-specific digital divide, it primarily supports female entrepreneurs) and helping countries to develop appropriate consumer protection legislation.

**International Trade Centre / ITC (Geneva)**

The ITC is a multilateral organisation which has a joint mandate from the WTO and UNCTAD to contribute to sustainability goals. In the area of e-commerce, it primarily supports SMEs in acquiring the required skills. It has developed an e-solutions programme which provides companies with access to a platform of shared technologies and services, including access to international payment solutions and logistics. A virtual marketplace project aims to strengthen the capabilities of SMEs so that they can effectively utilise new technologies in order to improve their visibility on international markets. The centre also offers e-learning programmes and produces publications related to e-commerce.

**UN World Data Forum**

The UN World Data Forum was established following the report 'A World that Counts' by the UN secretary-general's Independent Expert Advisory Group on the Data Revolution for Sustainable Development (2014). It acts as a platform for cooperation between different stakeholders from the areas of data science, information technology and civil society. The first World Data Forum was held in South Africa in 2017, while the second took place in the United Arab Emirates in 2018. Switzerland will be the host country for the third forum, which was scheduled for autumn 2020 in Bern and will now likely be held in 2021. The question of how digital data (including big data) can be used for development is playing an increasingly important role. Switzerland has launched a series of events leading up to the forum, entitled Road to Bern. In Geneva, it has supported a process in this context which should allow for cooperation between international organisations as well as private stakeholders and facilitate the sharing of data for sustainable development. This also includes questions relating to collection, data protection, security and interpretation.

**International Committee of the Red Cross / ICRC (Geneva)**

The work of the ICRC focuses on responding to emergency situations and promoting respect for international humanitarian law and its implementation in national legislation. Digitalisation is important in different ways here. On the one hand, support provided to population groups in need can be made more efficient through the use of digital tools, for example the use of facial recognition software when searching for missing persons. Especially in conflict zones where the ICRC is active, special care must be taken to ensure that personal data is not stolen and misused. For this reason, the ICRC is at the forefront of efforts to find technical and political solutions that prioritise data protection and thus the protection of individuals. In addition, the ICRC is the guardian of international humanitarian law and promotes adherence to the four Geneva Conventions and their Additional Protocols. The use of weapons is a focus area here and in this respect the ICRC also devotes itself to issues relating to cyberwarfare and the use of autonomous weapon systems (which must be in accordance with international humanitarian law). Switzerland works closely with the ICRC. Among other things, the Humanitarian Data and Trust Initiative (see section 4) was launched together with the ICRC and the United Nations Office for the Coordination of Humanitarian Affairs (OCHA).

## International Labour Organization / ILO (Geneva)

The ILO's mandate is to promote social and economic justice by defining international labour standards. Digital developments will have a major impact on the world of work. The enhancement and partial replacement of human work processes by robotics, AI and the internet of things are creating new work structures, but also a risk of rising unemployment. In order for digital technologies to be used profitably, social systems such as the education system, social dialogue between employers and employees and the principles based upon this, such as worker protection, must be guaranteed. With its work in the area of the Future of Work and the Centenary Declaration of 2019, which gives priority to the effects of technological developments on work processes, the ILO has an important role to play in the structuring and promotion of a socially sustainable digital economy.

## World Intellectual Property Organization / WIPO (Geneva)

WIPO is a specialised agency of the United Nations which aims to lead the development of a balanced and effective international intellectual property system that enables innovation and creativity for the benefit of all. In the area of digital governance, WIPO has long been addressing issues relating to the protection of trademarks as part of the domain name system. To this end, it has set up a dispute resolution service with ICANN for the registration of domain names.

WIPO is active in the field of digitalisation and has undertaken various initiatives, in particular the development of digital tools and services such as the digital time stamp WIPO PROOF, presentations in committees, research and events (e.g. within the framework of WSIS and IGF conferences).

## World Health Organization / WHO (Geneva)

The WHO is a specialised agency of the United Nations that is responsible for international public health. Digital health is one of the WHO's focus areas. This is largely understood to refer to the use of ICT to improve health. Several resolutions of the General Assembly have focused on issues such as the standardisation of health data to allow for better analyses, the use of the top-level domain 'health' (question of the credibility of medical information provided online) and the online advertising and distribution of medical devices (protection against counterfeits, etc.). A Global Observatory for eHealth aims to support member states with information and guidelines on eHealth practices and standards.

## United Nations Children's Fund / UNICEF

The United Nations Children's Fund (UNICEF) is an organisation that is responsible for the provision of humanitarian and development assistance to children worldwide. With its Innocenti research centre, it is dedicated to identifying and researching opportunities and risks for the implementation of children's rights, including in the digital domain. Together with the London School of Economics and EU Kids Online, it has launched the Global Kids Online initiative in order to further explore the understanding of the risks and opportunities presented by the internet for children. Following the report of the High-level Panel for Digital Cooperation, UNICEF is working to develop a platform for digital public goods.

## United Nations Environment Programme / UNEP

The United Nations Environment Programme (UNEP) promotes the implementation of sustainability in the environmental field. It assesses global, regional and national environmental trends, develops international and national environmental instruments and works to strengthen the relevant institutions. The increasing use of ICT presents both opportunities and challenges in the area of environmental protection. Digitalisation is therefore becoming increasingly important for the UNEP. In performing its work, it focuses on developing strategies and instruments in order to support the ICT sector with innovations and facilitate environmental sustainability efforts. The initiatives of the UNEP also revolve around improved data analyses (e.g. on climate change) as well as global supply chains and electronic waste. The UNEP has a leading role in the WSIS action lines on the environment.

## World Meteorological Organization / WMO (Geneva)

The WMO is a specialised agency of the United Nations. Among other things, it allows for the consolidation of enormous amounts of global weather and climate data. Its work covers numerous areas in which ICTs are used as tools for the management of climate-related challenges. In the area of urban development, the agency promotes resilient cities through the development of integrated urban weather, environmental and climate services. It also researches the use of technologies for meteorological and environmental observations and data collection, the reduction of natural hazards and disaster risks as well as the transmission of forecasts, warnings and public alerts. The WMO operates the World Weather Information Service, which uses the internet and digital technologies in order to make weather information publicly available in a user-friendly manner.

# Cybersecurity

**UN Group of Governmental Experts
on Developments in the Field of
Information and Telecommunications
in the Context of International Security
/ UN GGE (New York and Geneva)**

The UN GGE convened by the UN General Assembly
discusses standards for responsible state behaviour as well as
the validity and application of international law in the digital
space. Until now, there have been five such expert groups (in
different compositions), three of which adopted consensus
reports (2010, 2013 and 2015). Within these, the experts
agreed that international law in its entirety is applicable in the
digital space and that the principles of international human-
itarian law also apply here. The 2015 report also contained
11 voluntary standards for responsible state behaviour that
contribute to the promotion of international cybersecurity.
The UN General Assembly supported each of these reports.
Since 2016–17, Switzerland has been able to play an active
role in the expert group. The current process should be
concluded with a report to the UN General Assembly in 2021.

**Open-Ended Working Group / UN OEWG**

In addition to the UN GGE, a new UN body – the OEWG –
has been meeting since September 2019 on the initiative of
Russia on the topic of international cybersecurity. Unlike the
UN GGE, participation is open to all states and it also provides
for consultations with the scientific community, the private
sector and civil society. The UN OEWG also has a broader
mandate than the UN GGE and provides for very fundamental
discussions on perceived challenges. As the chairing country,
Switzerland is also closely involved in this process. In its role
as chair, Switzerland is concerned to ensure that the content
is consistent with the discussions in the UN GGE. The work
of the UN OEWG was scheduled to be completed for the UN
General Assembly in 2020, but is likely to be delayed owing
to the coronavirus crisis.

**Group of Governmental Experts on Lethal
Autonomous Weapon Systems (Geneva)**

In order to address the issues relating to newly emerging
technologies in the areas of lethal autonomous weapon
systems (LAWS), a group of government experts (UN GGE
on LAWS) was established for the first time in 2013 within
the framework of the states parties to the Convention on
Certain Conventional Weapons (CCW). The group is open to
all States Parties to the CCW. The issues discussed include,
among others, the promotion of a common understanding
of the concept of LAWS, possible challenges for interna-
tional humanitarian law, the human element in the use of
lethal force (aspects of human-machine interaction), possible
military implications of the technologies and the management

of humanitarian and international security challenges arising
from them. The group will continue its work in order to
present potential recommendations on autonomous weapon
systems within the framework of the Convention at the Sixth
Review Conference in 2021.

**Cybersecurity package/strategy
of the European Union**

On 13 September 2017, the European Commission published
a cybersecurity package with which Europe's critical
infrastructure should be better protected and its digital
self-assertion vis-à-vis other regions of the world should
be promoted. In implementing this, the Cybersecurity Act
entered into force in June 2019, providing for two relevant
innovations: 1) the strengthening of the mandate of the
European Union Agency for Cybersecurity (ENISA); 2) the
introduction of an EU-wide certification framework for the
cybersecurity of products, services and processes in the area
of ICT. A further important element of the EU strategy in
the area of cybersecurity is the cyber-sanctions regime for
the imposition of restrictive measures in response to cyber-
attacks, which was adopted by the  Council of the EU on
17 May 2019. The EU will in future also invest even more
in the development of its own cybersecurity capacities.
This includes the planned creation of an EU cybersecurity
competence centre (The European Cybersecurity Industrial,
Technology and Research Competence Centre) as well as a
network of national competence centres. These are to be
managed by the planned Digital Europe Programme (DEP)
and financed using funds of the DEP and the EU research
programme Horizon Europe.

Developments at EU level are being closely followed with
respect to their impact on Switzerland and with a view to
potential participation opportunities. With respect to the
planned EU-wide certification programme for ICT products,
it will be especially important to avoid any barriers to
market access for Swiss ICT companies. In the case of the
EU cyber-sanctions regime, it is currently being examined
whether an adoption based on the Swiss Embargo Act
would be possible in principle. Ultimately, Switzerland aims
to participate in the DEP and Horizon Europe, although it
is still open as to whether and under what conditions third
countries will be provided with access to activities in the area
of cybersecurity.

## Organization for Security and Co-operation in Europe / OSCE

At a regional level, the Organization for Security and Co-operation in Europe (OSCE) plays an important role. In 2013 and 2016, it adopted a catalogue of 16 confidence-building measures in the field of cybersecurity. It is the first agreement of this kind anywhere in the world. The measures aim to reduce the risks posed by new information and communication technologies and to improve transparency among OSCE members. Since the beginning of this process, Switzerland has contributed with specific substantial proposals. It played a decisive role in the development of the confidence-building measures and is continuing its commitment during their implementation.

## Geneva Dialogue on Responsible Behaviour in Cyberspace (Geneva)

In order to advance the global consensus on binding behavioural norms and responsibilities in the digital space, the FDFA launched the Geneva Dialogue on Responsible Behaviour in Cyberspace at the beginning of 2018. The dialogue uses International Geneva as a platform to create greater clarity with respect to the responsibility of states, business, science and civil society in the digital domain. The first results were recorded in a report in 2019. At present, the dialogue is being pursued further between a number of leading global companies with the Geneva DiploFoundation with the objective of identifying shared industry best practices in the area of product safety. A first package is expected to be ready at the end of 2020. Participants in the dialogue include, among others, ABB, Cisco, Huawei, Kaspersky, Microsoft, Siemens, SwissRe and UBS. As part of the Geneva Dialogue, Switzerland also held an expert dialogue in 2019 for an informal legal exchange between governmental legal experts.

## Working Party on Security and Privacy in the Digital Economy (WP SPDE) of the OECD

The OECD Working Party on Security and Privacy in the Digital Economy aims to develop international principles and guidelines for policy measures aimed at reducing the cybersecurity risks of digital products, without stifling innovation or reducing the opportunities presented by digitalisation. It is expected that such guidelines will be developed by 2021. By means of reports to be prepared in advance, the basis for the development of an OECD Recommendation is to be created. The FDFA represents Switzerland in this working group.

## Work on cybersecurity at the International Telecommunication Union in Geneva (ITU)

The ITU has been working on a Global Cybersecurity Agenda since 2007. The agenda includes support in the area of cybercrime, technical measures for the establishment of security standards, the development of organisational structures and national capacities. A process is currently under way to update the agenda, but this is highly controversial. In this dossier, the FDFA is working together with the OFCOM, which has the lead role.

## United Nations Institute for Disarmament Research / UNIDIR (Geneva)

UNIDIR is an autonomous institution within the UN that conducts research in the area of disarmament and security. Within the cyber domain, UNIDIR organises conferences and workshops and conducts its own research in order to help countries better understand the associated new challenges. The institute acts as an expert adviser to the UN GGE and organises an annual Cyber Stability Conference. Within the framework of its programme on newly emerging security issues, UNIDIR is examining issues in relation to the use of new technologies (such as machine learning, artificial intelligence, robotics and computing) as a means of warfare.

## Global Forum on Cyber Expertise / GFCE

The Global Forum on Cyber Expertise (GFCE) is a multi-stakeholder community of more than 115 members and partners from all regions of the world that has set itself the goal of strengthening cyber capacities and expertise at a global level. The GFCE aims to be a pragmatic, action-oriented and flexible platform for international cooperation and to reduce overlaps in the cyber capacity-building ecosystem. Switzerland has been a member of the GFCE since 2015 and is involved in several projects.

## Geneva Centre for Security Policy / GCSP

As part of its programme for newly emerging security challenges, the GCSP has a cybersecurity cluster that covers educational and training activities as well as political analyses and events. The cluster also provides a platform for dialogue and exchanges on cyber challenges between experts from the public, private and civil society sectors. Many of the activities of the GCSP fall under the category of capacity-building. For example, the annual Cyber 9/12 Student Challenge held at the GCSP brings together students from Europe, the Middle East, India and the United States in Geneva.

## Geneva Centre for Security Sector Governance / DCAF

As part of its work to improve governance within the security sector, DCAF also looks at issues relating to cybersecurity. Various publications developed by DCAF address aspects such as vulnerabilities in the digital space and how they can be tackled at a national and international level, and challenges posed by demographic governance in the area of cybersecurity, cyberwarfare etc. DCAF also organises events and activities for capacity development in the field of cyber-security.

## ICT4Peace (Geneva)

ICT4Peace is an international foundation that focuses on capacity-building and policy cooperation (strategy papers, recommendations, facilitator). It was founded by former ambassador Daniel Stauffacher. Its objective is to promote a peaceful digital space through international negotiations with governments, companies and non-state stakeholders. It also promotes the use of ICT within the context of humanitarian or conflict-related crisis management and works to combat the use of the internet for terrorist purposes.

## CyberPeace Institute (Geneva)

The CyberPeace Institute was launched by Microsoft, Mastercard and the Hewlett Foundation in 2019. It aims to promote the stability of the digital space. Using technical expertise, it aims to shed light on cyberattacks, making the information publicly accessible in order to draw attention to weaknesses and the possibility of attacks. It also promotes the exchange of knowledge between different players through the organisation of expert panels.

## Center for Digital Trust / C4DT

The Center for Digital Trust (C4DT), which is based at the Swiss Federal Institute of Technology Lausanne (EPFL), brings together 12 founding members, 34 laboratories, civil society and political stakeholders in order to advance confidence-building technologies on the basis of the latest research.

## Spamhaus (Geneva)

The Spamhaus Project is an international non-profit organisation. Its work focuses on tracking spam and providing real-time threat information. Spamhaus also tracks other cyber threats such as phishing, malware and botnets. It maintains several real-time threat block lists that protect more than two billion user mailboxes and block the vast majority of spam and malware messages sent on the internet. The organisation also publishes updated statistics on a regular basis. The data produced by the organisation is used by many internet service providers, email service providers, companies, universities, governments and military networks. Spamhaus also supports law enforcement authorities in their investigations into spam, botnets and malware operations.

## Cooperative Cyber Defence Centre of Excellence / CCDCOE

In May 2019, the Federal Council decided that Switzerland would participate in the CCDCOE in Tallinn. The CCDCOE seeks to increase research and training cooperation in the areas of cyber defence and cybersecurity. The NATO-accredited centre of excellence is financed by 25 countries. Countries participating in the Partnership for Peace, including Switzerland, can participate as 'contributing partners'. Through this cooperation, Switzerland gains access, in particular, to knowledge and information as well as the various research and training activities of the CCDCOE. Switzerland can also second one or two civilian or military experts.

## Cyber-Defence Campus (Thun)

The Cyber-Defence Campus (CYD Campus), founded in 2019, forms the link between the federal government, industry and science in research, development and training for cyber defence. New research developments and technologies are translated into proofs of concept and prototypes for the Swiss Armed Forces and other federal offices. The CYD Campus also works closely with ETH Zurich and EPFL, and is represented at both university locations. In addition, it maintains a network with universities and colleges all over Switzerland, to respond to various cyber security questions. The CYD Campus is the federal government's centre of excellence for research in the field of cyber defence and maintains partnerships and cooperation with similar international institutions worldwide.

# Digital self-determination

**Human Rights Council (Geneva)**

The UN Human Rights Council (HRC) plays a decisive role in protecting and promoting human rights in the digital age. The HRC is an intergovernmental body whose mandate is to strengthen the promotion and protection of human rights around the world and to address human rights violations and recommendations for compliance with these rights. The council is made up of 47 member states elected by the UN General Assembly. Freedom of expression, the protection of privacy online and the protection of human rights in light of the emergence of new technologies are issues dealt with by the HRC. They have been addressed in resolutions adopted by the HRC as well as in the reports of special rapporteurs appointed by it. Switzerland was most recently a member of the HRC between 2015 and 2018 and also participates actively in the processes as an observer state.

**Office of the High Commissioner for Human Rights / OHCHR (Geneva)**

The Office of the High Commissioner for Human Rights (OHCHR) is a department of the United Nations Secretariat that is committed to the promotion and protection of human rights. The office coordinates humans rights activities across the entire UN system. In the area of digitalisation, it looks at, among other things, how digitalisation impacts privacy and freedom of expression and at content published online that affects the rights of the individual. The office also looks at issues relating to the prevention and combating of extremism online. At the request of the Human Rights Council, the office can draw up reports. For example, it has prepared a report on the prevention and combating of violent online extremism. More recently, the High Commissioner for Human Rights has also addressed the issue of fake news and its impact on freedom of expression online. Furthermore, the OHCHR is currently developing guidelines for the application of the UN's Guiding Principles on Business and Human Rights in the area of new technologies (B-Tech). Switzerland provides financial support for this work.

**Council of Europe**

For years, the Council of Europe has played a pioneering role in many areas of digital governance. It involves business, science and civil society in the work performed by its expert groups and uses forums such as the IGF and EuroDIG in a targeted manner in order to promote multi-stakeholder cooperation with the objective of developing specific solutions.

The Council of Europe Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data, which was drawn up in 1981 and updated in 2018, has been the only binding international agreement on data protection issues over the last almost 40 years and has influenced national legislation in this area far beyond Europe. It has been adopted by Parliament in June 2020. Switzerland chaired the Advisory Committee on the Convention for many years.

The Convention on Cybercrime (also referred to as the Budapest Convention) has governed the harmonisation of criminal law and criminal procedures since 2001. It has now been signed by more than 20 non-members of the Council of Europe and has influenced corresponding legislation in more than 100 countries.

In September 2019, the Committee of Ministers set up the Ad hoc Committee on Artificial Intelligence (CAHAI) to investigate the feasibility of and approaches to a legal framework for the development, design and application of AI. Switzerland is represented on the committee.

Over recent decades, the Steering Committee on Media and Information (CDMSI) has developed a wide range of soft-law instruments aimed at strengthening democracy, the rule of law and freedom of expression, the protection of privacy and other human rights, and a functioning media system in the digital world. Switzerland has been an influential member of the CDMSI for years, has headed various expert groups and held the chair of the CDMSI in 2018/2019.

## United Nations Educational, Scientific and Cultural Organization / UNESCO

The United Nations Educational, Scientific and Cultural Organization (UNESCO) is a UN specialised agency that seeks to contribute to sustainable development and intercultural dialogue through education, science, culture, communication and information. In the digital field, it conducts activities to promote freedom of expression online, multilingualism in the digital space, digital literacy and other issues that should bridge the digital divide at a non-infrastructural level. It is committed to open ICT standards and open licences (such as open access) in order to expand universal access to information and knowledge; it runs the Institute for Information Technologies in Education for this purpose. It is also one of the UN organisations that drives the WSIS process and as such participates in the annual WSIS and IGF. In addition, along with the ITU, it was a founder of the Broadband Commission.

In the area of AI, UNESCO is playing an increasingly important role. Together with the People's Republic of China, it organised the International conference on Artificial intelligence and Education in spring 2019. During the conference, the Beijing Consensus on Artificial Intelligence and Education was adopted. Together with the UNESCO member states, the director-general is encouraged to develop guidelines and resources for the use of AI in education and called to establish an 'AI for Education' platform. UNESCO also looks at the ethical dimensions of AI. In 2019, its working group on ethics and AI presented a preliminary study that recommends a standard-setting instrument in this area. A draft text for a recommendation is to be presented to the General Conference in 2021. Switzerland is participating actively in the interim consultations on the working group's text.

Switzerland also supports UNESCO's work as a member of the Information For All Programme for the promotion of free access to digital media and content as well as to support the quality of journalism and the safety of media professionals.

## Humanitarian Data and Trust Initiative (HDTI)

The Humanitarian Data and Trust Initiative (HDTI) is a long-term diplomatic initiative of Switzerland, the ICRC and the OCHA Centre for Humanitarian Data that aims to ensure the protection and responsible handling of humanitarian data. With its three pillars of Policy & Dialogue, Research & Development and Education & Outreach, the HDTI combines technological knowledge with evidence-based policy recommendations, which it channels into concerted action by states, humanitarian organisations and academic institutions. Its aim is to ensure the optimal use of the great potential offered by digital technologies in the humanitarian field and to minimise the associated risks. With the help of this joint initiative, further states and humanitarian organisations are to be won over for this objective.

## Kofi Annan Foundation (Geneva)

The Kofi Annan Foundation is an independent, non-profit organisation whose activities are chiefly focused on achieving better governance. The topic of digitalisation is becoming increasingly important for the foundation. In January, the Kofi Annan Commission on Elections and Democracy in the Digital Age presented its report, thereby bringing digital issues further to the fore of the foundation's work. Switzerland works together with the Kofi Annan Foundation in country-specific contexts in order to promote the integrity of elections.

## International Parliamentary Union (Geneva)

In line with its objective of developing strong and democratic parliaments, the IPU supports parliaments in building up their ability to make effective use of ICT in order to promote efficiency, effectiveness and transparency. The IPU has also been mandated by its member states to build capacities for parliamentary committees that monitor compliance with the right to privacy and individual freedoms in the digital environment.

## Internet Society (Geneva office)

The Internet Society is an American non-profit organisation established by the co-founder of the internet Vint Cerf, which aims to "ensure and sustain an open development, use and evolution of the internet for the benefit of all users throughout the world". It primarily deals with technical standards of the internet, which should allow free access to the greatest possible extent (e.g. decentralised systems). The Internet Society is organised in regional 'chapters' with a total of around 70,000 members; it has two main offices (in the United States and in Geneva). The Public Interest Registry, a subsidiary of the Internet Society, operates the three top-level domain names (.org, .ngo and .ong), which are primarily used by non-profit, non-governmental organisations. The IETF (see above) also works under the auspices of the Internet Society.

**Access Now / RightsCon**

Access Now is an NGO that is active in the field of digital human rights. It acts as a global organisation with several offices around the world (in New York, Washington DC, Brussels, San José, Manila and Tunis). In addition to advocacy and the development of political guidelines, its activities also include the provision of technical support, for example as part of a helpline for activists, journalists and human rights defenders on the issue of internet safety. Switzerland is supporting an Access Now project aimed at preventing internet shutdowns within the context of elections.

Since 2011, Access Now has organised the annual RightsCon conference, which with almost 3,000 participants from around 120 countries (in 2019) is one of the most important multi-stakeholder forums on the issue of human rights in the digital age. Switzerland participates actively in RightsCon.

**Freedom Online Coalition**

In October 2019, Switzerland joined the Freedom Online Coalition, a group of more than 30 states set up in 2011 at the initiative of the Netherlands that works to promote democracy and human rights on the internet. The right to privacy and the rights to freedom of expression, peaceful assembly and free association are of particular importance within this context.

# Annex 6: Postulate 17.3789

**Switzerland should be in a position to become the global centre for digital governance**

Submitted by: BÉGLÉ CLAUDE, CVP parliamentary group
Christian Democratic People's Party of Switzerland

Opposed by: TUENA MAURO

Submitted on: 28.09.2017

Submitted to: National Council

Consultation status: Accepted

## Text submitted

The Federal Council has been tasked with examining how Switzerland could become the global centre for cyberspace governance. The first objective is to work towards creating a Geneva Convention on digitalisation containing principles governing the peaceful use of cyberspace. Second, a neutral organisation similar to the ICRC should be set up in order to ensure that these principles are applied. Third, the aim should also be to establish the headquarters of this organisation in Geneva.

Such a project would be fully in line with Switzerland's engagement at international level. It is vital that Switzerland position itself clearly on this issue as soon as possible.

## Rationale

The European Union (EU) and North Atlantic Treaty Organization (NATO) have been cooperating on digital governance since 2010. The development of the internet has created a new space: cyberspace. In this arena, a cyberattack can bring a country to its knees. No state can pretend that it is able to protect itself against such attacks on its own.

That is why international cyberspace governance must be established.

In so doing, the following is to be avoided:

- the development of a climate of mistrust resulting in a cyber arms race, or fragmentation of the internet if individual states resort to putting sovereignty first;
- states attacking other states;
- states attacking critical businesses, tech companies or critical public services such as healthcare.

States must commit to:

- drawing attention to gaps in security rather than exploiting them (to avoid a repeat WannaCry incident whereby the NSA used its knowledge of the security gap for its own purposes);
- protecting citizens in the virtual world (only states can ensure such protection).

The following ideas are also to be advocated:

- that dialogue and coordination are essential;
- that states are responsible for any cyberactivity taking place on their territory, which therefore requires the establishment of an international arbitration panel to identify the perpetrators of cyberattacks;
- that the objective of national armed forces is to defend, not escalate conflict.

A similar proposal was set out in the 2015 report of the United Nations Group of Governmental Experts (UN GGE) on Developments in the Field of Information and Telecommunications in the Context of International Security. An EU-NATO agreement signed in February 2016 provides for the exchange of best practice in preventing, detecting and defence against cyberattacks.

Without state-level involvement however, the recommendations of the GGE remain a dead letter. The internet must remain a public good.

## Timeline

**15.12.2017 – National Council**
Opposed. Debate postponed

**15.03.2018 – National Council**
Accepted