SWITZERLAND GLOBAL ENTERPRISE

KEY FIGURES

1st
place –
Global Innovation Index

3rd
place – number of secure
internet servers per
one million inhabitants

>50%
of global digital policies
happen from Geneva

1st
place –
Global Talent Competitiveness

Sources: WIPO Global Innovation Index,
2021, MSM Research; The World Bank,
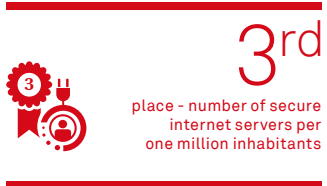2021, INSEAD Global Talent Competitive-
ness Index, 2021

SWITZERLAND AS A CYBERSECURITY LOCATION

AT A GLANCE

Switzerland's strengths such as neutrality, legal certainty and political stability are also valid in the cybersecurity sector. Its greatest asset lies in a high level of privacy protection and a low density of regulations as well as the availability of highly specialized engineers. Switzerland has a top-notch internet infrastructure in comparison to other countries. Its reliable and cost-effective power supply ensures flawless operation of servers in data centers and security operations centers (SOCs). All these are reasons why many international companies such as Kaspersky, Acronis, or SWIFT choose Switzerland as the preferred location for their regional data centers.

In its humanitarian tradition, Switzerland is making an important contribution to improving cybersecurity across the world and to promoting a peaceful use of ICT. The country hosts many organizations, such as the Internet Society, the Internet Governance Forum (IGF), DiploFoundation, the International Telecommunication Union (ITU), ICT-4Peace, the Geneva Centre for Security Policy (GCSP), and the WEF Cyber Security Center. In 2020, the Cantons of Vaud and Geneva joined forces to create the "Trust Valley", a center of excellence in digital trust and cybersecurity to create a unique ecosystem and encourage the development of innovative projects.

RESEARCH AND DEVELOPMENT (R&D)

- Switzerland's expertise is defined by excellence in engineering, encryption and algorithms. The country has a **strong commercial base in the areas of security and encryption**, with companies such as Kudelski, Acronis, OneConsult, Infoguard, Protonmail, Securosys and IDQuantique. In addition, many companies in Switzerland offer niche services in all important areas of cybersecurity with a strong hands-on approach.

- As security concerns become increasingly important in hardware manufacturing, there is a growing demand for better manufacturing processes that provide optimal device security. Swiss companies such as Securosys have built an international reputation for the **reliability, quality and end-to-end security of "Swiss Made" products** and manufacturing methods. The encryption for mobile phones is particularly good in Switzerland, since small companies, mainly spin-offs from the Swiss Federal Institutes of Technology in Zurich (ETH Zurich) or Lausanne (EPFL), offer cutting-edge technology.

- There is a high increase in partnerships between Swiss cybersecurity startups and different organisations, which has resulted in various solutions available in the market, for instance a payment fraud prevention app by **NetGuardians** and **Finestra**, an Ethereum 2.0 staking solution by **Securosys** and **Consensus**, or a digital signature management solution by **Sysmosoft** and **Entrust.**

A Selection of Promising Swiss Cybersecurity Startups

Anapaya Systems
Cysec
Decentriq (dq technologies)
Exeon Analytics
Futurae Technologies
Proton Technologies
PXL Vision
Thretray
Xorlab

Source: Top 100 Swiss Startups, 2022

- Renowned international companies choose Switzerland as a location for their data centers because of the country's security and independence:
  - **SWIFT** set up a subterranean European data center in Diessenhofen (TG) in 2013, which handles all European transactions entirely within Europe.
  - At the end of 2018, the Russian cybersecurity group **Kaspersky** opened a data center in Glattbrugg (ZH) as part of its global transparency initiative.
  - **Acronis** has set up a new Cyber Protection Operation Center (CPOC) in Schaffhausen. According to the company, this should serve as a type of commando headquarters for the economic area of Europe, the Middle East and Africa (EMEA).

- **Amazon** has chosen the Kudelski Group's cybersecurity test laboratory, based in Cheseaux-sur-Lausanne in the canton of Vaud, to carry out tests on the devices in which its virtual assistant Alexa is installed. **Kudelski** is now part of a **select group** of companies authorized by Amazon to test third-party equipment incorporating its Alexa voice assistant. To date, only a dozen organizations in the world are authorized to conduct these tests.

Attractiveness as a Location for Talent
Level of attractiveness for recruiting talent to a country, 2021

Country	Rank
Switzerland	1
Singapore	2
United States of America	3
Denmark	4
Sweden	5
Netherlands	6
Finland	7
Luxembourg	8
Norway	9
Iceland	10

Source: INSEAD Global Talent Competitiveness Index, 2021

- The **Swiss Fort Knox I+II** is an underground data center concept with several locations in the Swiss Alps. The concept represents a huge investment volume and is considered the **safest data center in Europe**.

- **Geneva** is already a recognized center of excellence in the field of internet governance, with key organizations such as the Internet Society, the ITU and the Secretariat of the Internet Governance Forum. The city is **home to more than 50% of global internet activity.**

- ETH Zurich has one of the world's top five cybersecurity teams at its disposal. The cross-sectoral Zurich Information Security & Privacy Center (ZISC) was founded back in 2003; it provides clear technical focus to develop solutions to the growing challenges of information security together with industry and politics. The scientists at **ETH-ZISC** work on next-generation networks, cyber-physical systems and cryptography.

- The researcher Adrian Perrig is developing the new **SCION** internet architecture at ETH Zurich's Institute of Information Security. Among other things, this security architecture prevents unwanted redirects (via centralized control codes) and provides advanced protection against cyberattacks. The Swiss National Bank (SNB) is already using the high-security technology to communicate with its branch in Singapore.

- The **Idiap research institute in Martigny (VS)** has made a name for itself internationally with its Swiss Research and Evaluation Center for Biometric Security. Idiap was chosen as the only European partner in Google's exclusive Abacus research project. IARPA, the US intelligence department, has also partnered with Idiap for spoofing attacks.

COSTS AND FINANCING

- Investments in the Swiss ICT sector, including fintech and cybersecurity, are constantly **growing**. The **Swiss Cybersecurity Startup Map** showcases all Swiss cybersecurity startups in one place and demonstrates a rapid increase of numbers in startups.

- **Tech4Trust** is a Swiss startup acceleration program in the field of digital trust and cybersecurity. With a 6-month program, Tech4Trust helps the world's most promising companies to get their business ready for market.

Secure Internet Servers in Europe
Number of secure internet servers per million inhabitants, 2020

Country	Number
Denmark	277,081
Netherlands	136,865
Switzerland	120,019
Ireland	115,599
Germany	97,424
Estonia	84,257
Finland	81,633
Iceland	75,521
Luxembourg	44,771
United Kingdom	36,379
France	36,220
Italy	20,637

Source: The World Bank, 2021

FRAMEWORK CONDITIONS AND MARKET ENTRY

- Being at the center of Europe with a politically **stable environment**, security of power supply, strong connectivity and a reputation for technical innovation, Switzerland is an ideal location to build **data centers**. There is a rapidly growing market for providers of data centers with state-of-the-art infrastructure which is extremely well protected against physical risks, as well as threats arising from cyber attacks.

- With the launch of the **"National Strategy for the Protection of Switzerland against Cybersecurity"** the Swiss government recognized the growing importance of cybersecurity. The main components of the strategy are the development of skills and knowledge, the promotion of international cooperation and the strengthening of incident and crisis management and cooperation in cyber prosecution, as well as cyber defense measures by the army and the Federal Intelligence Service. The increased awareness drives demand for cybersecurity solutions and leads to an increased need for experts.

- The **National Cyber Security Center (NCSC)** provides information on cyber security threats and policies to individuals, businesses and selected operators of critical national infrastructures.

- Compared to the US, for example, **Switzerland offers significantly greater legal protection for personal data**. Due to the rapid technological developments of recent years, an update of the Swiss Data Protection Act is underway. Swiss laws are also being adjusted to data protection legislation at the European level (EU GDPR) to ensure equivalence of the data protection levels between Switzerland and the EU.

- The World Economic Forum (WEF) opened the **WEF Global Center for Cybersecurity in Geneva**. Headquartered in Switzerland, the new center is an independent institution led by the **WEF**; it aims to help establish a secure global cyberspace and enhance collaboration between individuals and governments worldwide. In addition, an association was created to help fintech companies and data aggregators to improve their cybersecurity.

- Microsoft, Hewlett Foundation, and MasterCard launched the the **CyberPeace Institute, based in Geneva,** to advance global discussions on acceptable behavior in cyberspace and to support victims of cyberattacks.

TESTIMONIAL

"Acronis is a global market leader in cyber protection, combining data protection and cybersecurity to deliver integrated, automated cyber protection that solves the safety, accessibility, privacy, authenticity, and security (SAPAS) challenges of the modern digital world. Acronis is a global company founded in Singapore in 2003 and incorporated in Switzerland in 2008. From our base in Switzerland, we can access the whole of Europe and the rest of the world easily. Other benefits of the location are political and economic neutrality and stability, the support for education and the sciences, and the presence of so many international technology and business centres."

SERGUEI BELOUSSOV
Founder and CIO of Acronis
www.acronis.com

CURRENT DEVELOPMENTS

· Due to its political neutrality and its top position as a high-tech location, Switzerland is in an ideal starting location to create new "digital trust". The **Trust Valley** is a public-private partnership, aiming to promote the excellence of the Geneva area in the field of digital trust and cybersecurity,

· In 2022, the **Swiss Digital Initiative** launched the **Digital Trust Label.** It is a commitment to digital responsibility and the first of its kind anywhere in the world. The label was developed together with the main partner EPFL in a multi-stakeholder process and supported by leading academic institutions in Switzerland, first-mover companies, an audit company and public consultation of civil society and consumer organizations.

· The Federal Council initiated the consultation on the proposed introduction of a **reporting obligation for cyberattacks** on critical infrastructures. The proposal creates the legal basis for the reporting obligation and defines the tasks of the **NCSC**, which is intended to be the central reporting office for cyberattacks.

· In November 2020, it was announced that **Amazon Web Services** will open data centres in Switzerland in the second half of 2022. These infrastructure regions will comprise three Availability Zones, enabling customers to run workloads and store data in Switzerland while providing end users with even lower network latency.

CONTACTS AND FURTHER INFORMATION

Authorities and regulators
National Cyber Security Center
(NCSC)

Swiss Digital Transformation and
ICT Steering

FDFA, Federal Department of
Foreign Affairs, Division for Security
Policy (DSP)
eda.admin.ch

DDPS, The Federal Department of
Defense, Civil Protection and Sport
vbs.admin.ch

FINMA, Swiss Federal Financial
Market Supervisory Authority
finma.ch

Associations and networks
asisonline.ch
cysecmap.swiss
c4dt.org
digitalswitzerland.com
digitaltrust-label.swiss
diplomacy.edu
gcsp.ch
giplatform.org
ict4peace.org
internetsociety.org
intgovforum.org
isss.ch
itu.int
sig-switzerland.ch
swiss-cyber-experts.ch
swiss-digital-initiative.org
swisssecurity.org
trustvalley.swiss
weforum.org/centre-for-cyberse-
curity
zisc.ethz.ch

Innovation and startup support
ifj.ch
innosuisse.ch
kickstart-accelerator.com
startupticker.ch
swissparks.ch
trustvalley.swiss/tech4trust

Publications
Swiss Venture Capital Report 2021
www.startupticker.ch

The Swiss Cybersecurity Startup
Map

S-GE Resources
Handbook for Investors
s-ge.com/handbookforinvestors

More fact sheets on
Switzerland as a business location
s-ge.com/factsheets

WE OFFER FREE CONSULTATION
Are you expanding in Europe and considering Switzerland as a business location for your company? Here, you can get free advice and support through the entire evaluation and settlement process: we will connect you unbureaucratically with the cantonal business promotion agencies and provide you with expert contacts for practical issues such as taxes or real estate.

Get in touch with us: **s-ge.com/invest**