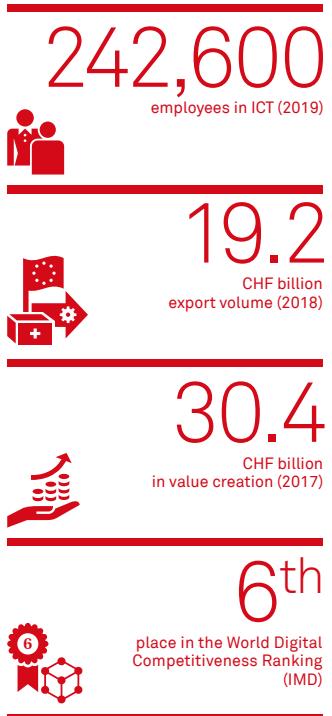


**KEY FIGURES**

Sources: ICTswitzerland; IMD 2020

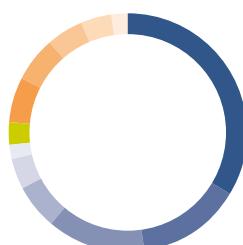
## SWITZERLAND: ICT BUSINESS LOCATION

**AT A GLANCE**

Information and Communication Technology (ICT) is a key technology for the Swiss economy. ICT applications permeate the economic and social fabric of the country and are an important driver for improving productivity in many other industries. Switzerland is extremely well-placed in this respect thanks to the adaptability of its companies in relation to new ICT solutions and the extensive ICT skills of their employees. Top-class specialists undergo training in the talent pipeline of the Computer Science departments at the Swiss Federal Institute of Technology Zurich (ETHZ) and the EPFL Lausanne (EPFL), the result of which contributes to a thriving startup and spin-off scene.

**Focus of activities**

ICT employees by subsector, 2019



Software developers 33%	Graphic and multimedia designers 6%
Other ICT employees 14%	IT infrastructure technicians 6%
Systems analysts 13%	User support technicians 5%
IT engineers 6%	Telecommunications engineers 4%
Network and security specialists 4%	Electronics engineers 2%
Multimedia developers 2%	
ICT executives 3%	

Quelle: ictSwitzerland; BFS SAKE, 2020

**ICT companies**

Selection of ICT companies active in Switzerland

AdNovum	Logitech
Adobe	Magnolia
Avaloq	Microsoft
Cisco	Netcetera
ELCA	Noser Group
Genedata	SAP
Google	Swisscom
HP	Temenos
IBM	Disney Research

OFFICIAL PROGRAM

## RESEARCH AND DEVELOPMENT (R+D)

- Thanks to the Computer Science Departments of ETH Zurich (ETHZ) and EPF Lausanne (EPFL), which are **among the world's best**, Switzerland has a considerable pool of talent (ETHZ ranked no. 6, EPFL ranked no. 14, according to the QS World University Rankings in 2021). A master's program in data science is now being offered at ETHZ. In a new interdisciplinary initiative, ETH researchers from the fields of mathematics, computer science and information technology are also increasingly dedicating themselves to the foundations of data science.
- In September 2019, the private research and training center **Schaffhausen Institute of Technology (SIT)** started operations in cooperation with renowned universities in the USA and Singapore. Nobel laureate in physics Konstantin Novoselov lends his weight to the private university as chairman of the advisory board. The SIT focuses on training and research in the areas of artificial intelligence, crypto architectures, new materials, quantum technology, software engineering and digital health.

### ICT investment in Switzerland, development

in CHF millions



Source: BFS, 2019

- Out of over 230 apprenticeship options, the **ICT apprenticeship** is one of the most popular in Switzerland. Apprenticeships are the pillar of the skilled worker system; more than 90% of ICT degrees are based on apprenticeships and vocational training.
- The Swiss Federal Institute of Technology Zurich maintains **intensive research collaborations with global players in the IT sector**, with key research themes directly influencing its teaching program. Private research centers, such as the multiple Nobel Prize-winning IBM Research Laboratory, Google's European Research Center (its largest research location outside the USA) and the Disney Research Lab are also all located in Switzerland.

- The **Human Brain Project** is one of the European Commission's most important projects, in which information and communication technologies play an important role. The project is housed in the Campus Biotech. It is intended to coalesce all the knowledge about the **human brain** and reproduce it by means of interdisciplinary research and computer-based models and simulations. The EPF Lausanne has taken on a leading position for this project.

- Private sector and state **ICT investments** in Switzerland increased from 6,932 to 26,447 million Swiss francs between 1996 and 2018. This corresponds to an average annual growth of 7%. In 2018, nearly three-quarters of investments went into software and databases, a good sixth into communications technology and the remaining investments into information technologies. The largest increase in investments since 1996 can be observed in software and data banks.

### Share of ICT specialists in international comparison

in % of employees, 2016

Country	%
Finland	6.5
Sweden	5.9
United Kingdom	4.9
Luxembourg	4.9
Switzerland	4.6
The Netherlands	4.5
Belgium	4.5
Denmark	4.4
Ireland	4.3
USA	4.2
Austria	4.0
Norway	3.9
OECD	3.7
Germany	3.6
France	3.2
Spain	3.1
Italy	2.8

Sources: BFS, OECD 2020

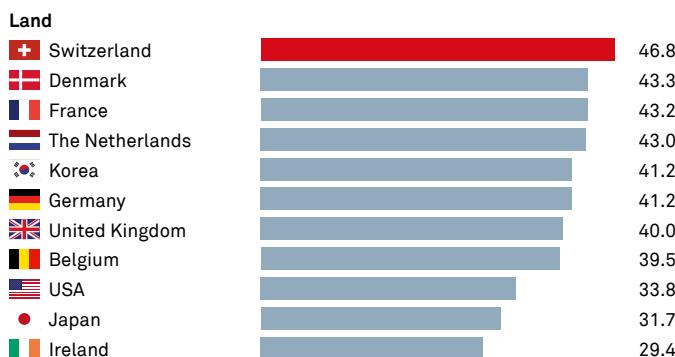
- Rankings have shown Swiss companies to be more technology-friendly than those from other countries, as they introduce new technologies relatively quickly. Switzerland currently occupies **sixth place in the World Digital Competitiveness Ranking (IMD)**. The country performs particularly well in the 'knowledge' category, which defines a country's capacity to understand and learn new technologies and utilize them for digital transformation. Switzerland also attracts talented professionals from around the world and invests heavily in R+D.

- Only one-third of ICT employees work in traditional ICT companies. The remaining two-thirds are active in other sectors, such as life sciences, finance, and precision goods.

## COSTS AND FINANCING

- In 2018, the ICT sector has replaced life sciences as the **largest Swiss venture capital sector**. Backers of Swiss ICT companies include some of the world's most famous VCs, such as Index Ventures and GV, the venture capital arm of Google's parent alphabet.
- The ICT landscape in Switzerland is characterized by ownerled, cash-flow financed, and highly specialized SMEs such as Abacus, Opacc, Elca, and Netcetera.
- The Swiss Innovation Agency (**Innosuisse**) promotes the transfer of knowledge and technology between companies and universities. It brings partners from these two areas together in applied research and development projects and provides assistance to startup companies during the development phase. Innosuisse has a budget of 200 million Swiss francs.
- Startups and newly-established foreign companies are eligible for partial, or in some cases **complete, exemption from corporate and capital taxes** at cantonal level for a period of up to ten years.

**Subscribers to Broadband Internet Access**  
per 100 inhabitants



Quelle: BFS, 2019

- The increasing popularity of broadband technologies is crucial to the development of e-commerce, e-government and other applications. Switzerland is currently one of the leading countries in the OECD comparison. End of 2018, in terms of fixed broadband connections, the country came first in the OECD member states ahead of Denmark. Furthermore, 96% of Swiss households had Internet access in 2019. Switzerland was thus above the EU-27 average (90%).

## FRAMEWORK CONDITIONS AND MARKET ENTRY

- Companies have ready access to skilled workers based **outside of Europe**. If no suitable candidates can be found within Switzerland, the EU or the EFTA countries, a certain quota of computer scientists can be recruited from outside the EU (e.g. Asia or America).
- Switzerland has complete broadband and cellphone coverage. A stable power supply also ensures the secure operation of ICT infrastructure.
- The free trade agreements in place with the EU/EFTA and 40 other countries, including China and Japan, provide **access to the world's most important export markets**.
- Switzerland is one of the **top 10 exporters of ICT services**. The export volume of ICT goods and services has grown from around 14 billion Swiss francs in 2000 to over 19.2 billion Swiss francs in 2018 – twelve times **more than the export of cheese and chocolate combined**. The continuously growing ICT service sector is the sixth most important service export group in Switzerland.
- Switzerland is considered a **magnet for international IT companies**. The high quality of life is another competitive factor contributing to Switzerland's global appeal as a business location for highly-qualified skilled workers.
- With the introduction of the **General Data Protection Regulation (GDPR)** in the European Union, the importance of data storage locations will become increasingly important in the future. The Basel-based firm **swiss made software** has developed a "swiss hosting" label, guaranteeing that data stored at Swiss companies will not be transferred outside of Switzerland but remains in Swiss hands and is processed according to Swiss law. The label represents an assurance of both Swissness and quality and the aim is for the new label to become a seal of quality.
- In May 2019, the Swiss electorate adopted the Federal Law on Tax Reform and AHV Financing (TRAF). The adoption of the TRAF means that the **Swiss tax system has been modernized** and now offers companies an attractive tax environment in line with internationally established tax practices (see factsheet at [www.s-ge.com/corporate-taxation](http://www.s-ge.com/corporate-taxation)).

## TESTIMONIAL



"It is critical that we, as a technology company, have access to both the domestic and foreign talent markets. The federal institutes of technology in Lausanne and Zurich contribute greatly to helping us achieve this, thanks to their world-renowned study programs. The free movement of people is of additional importance as it allows us to employ skilled workers from other EU countries. We also benefit from the presence of other major international companies in Switzerland, who also play their part in ensuring that the high quality of the local workforce is maintained."

MARIANNE JANIK  
Country Manager of Microsoft Schweiz  
[www.microsoft.ch](http://www.microsoft.ch)

## CURRENT DEVELOPMENTS

- The Switzerland Future Fund project ([www.zukunftsfonds.ch](http://www.zukunftsfonds.ch)) provides for a fund to be established, by means of which pension funds can make part of their funds available to startup companies in Switzerland as venture capital. The aim is to encourage the creation of new companies and jobs in promising business sectors. The ICT industry would also benefit hugely from this.
- In October 2020, **digitalswitzerland** and **ICTswitzerland** agreed to merge and operate under the name digitalswitzerland. This **new umbrella organization combines the strengths of 220 members** from business, the public sector, non-government organisations and associations, as well as research and academia to further strengthen Switzerland as a **leading digital research and innovation location**.
- The Federal Council wants Switzerland to exploit the opportunities of digitalization to the full. Therefore, in September 2020, it adopted a **"Digital Switzerland" strategy** for the next two years. In the future, the aspects of data and the environment are to be given greater emphasis in the digital policy of the Confederation.
- The International Telecommunication Union (ITU) and the Telecommunications Regulatory Authority (TRA) of the United Arab Emirates have signed an agreement to establish a **new center for digital innovation and transformation in Geneva**. Known as **I-CoDI**, this new center to be based in Geneva will help ITU Members, Sector Members and other key stakeholders to integrate innovation into their national development agendas and activities.

## CONTACTS AND FURTHER INFORMATION

### Authorities and regulators

[Federal Office of Communications](http://federalofficeofcommunications.admin.ch)  
[bakom.admin.ch](http://bakom.admin.ch)

[Federal Office of Information](http://federalofficeofinformation.admin.ch)  
[Technology, Systems and Telecom-  
munication](http://technologysystemsandtelecommunications.admin.ch)  
[bit.admin.ch](http://bit.admin.ch)

[Federal IT Steering Unit](http://federalitsteeringunit.admin.ch)  
[isb.admin.ch](http://isb.admin.ch)

[State Secretariat for Education,  
Research and Innovation](http://statesecretariatforeducationandresearch.admin.ch)  
[sbfi.admin.ch](http://sbfi.admin.ch)

[Innosuisse - Swiss Innovation Agency](http://innosuisse.ch)  
[innosuisse.ch](http://innosuisse.ch)

[Swiss Computer Science  
Conference](http://swisscomputerscience.org)  
[sik.ch](http://sik.ch)

### Associations and networks

[alpict.com](http://alpict.com)  
[asut.ch](http://asut.ch)  
[ated.ch](http://ated.ch)  
[biometrics-center.ch](http://biometrics-center.ch)  
[digitalimpact.ch](http://digitalimpact.ch)  
[digitalswitzerland.com](http://digitalswitzerland.com)  
[ech.ch](http://ech.ch)  
[epfl-innovationpark.ch](http://epfl-innovationpark.ch)  
[ictswitzerland.ch](http://ictswitzerland.ch)  
[idiap.ch](http://idiap.ch)  
[sgda.ch](http://sgda.ch)  
[sit.org](http://sit.org)  
[swico.ch](http://swico.ch)  
[swissict.ch](http://swissict.ch)  
[swissmadesoftware.org](http://swissmadesoftware.org)

### Innovation and startup promotion

[baselarea.swiss](http://baselarea.swiss)  
[investiere.ch](http://investiere.ch)  
[kickstart-innovation.com](http://kickstart-innovation.com)  
[masschallenge.org/programs-switzerland](http://masschallenge.org/programs-switzerland)  
[swissparks.ch](http://swissparks.ch)  
[swissstartupfactory.com](http://swissstartupfactory.com)  
[theark.ch](http://theark.ch)  
[ventures.swisscom.com](http://ventures.swisscom.com)  
[zurich.impacthub.ch](http://zurich.impacthub.ch)

### Publications

[ICT foreign trade study 2019](http://ictforeigntradestudy2019.ictswitzerland.ch)  
[ictswitzerland.ch](http://ictswitzerland.ch)

[Swiss Venture Capital Report 2020](http://startupticker.ch)  
[startupticker.ch](http://startupticker.ch)

[S-GE resources](http://s-ge.com/handbookforinvestors)  
[Handbook for Investors](http://s-ge.com/handbookforinvestors)  
[s-ge.com/handbookforinvestors](http://s-ge.com/handbookforinvestors)

[More fact sheets on](http://s-ge.com/factsheets)  
[Switzerland as a business location](http://s-ge.com/factsheets)  
[s-ge.com/factsheets](http://s-ge.com/factsheets)

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