



KEY FIGURES



Sources: BFS, 2011/2012, and WEF, 2015

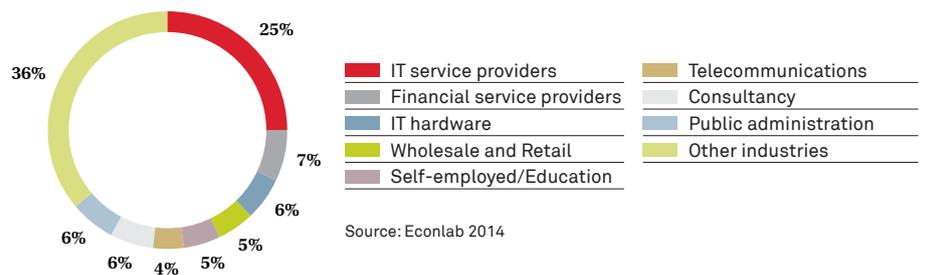
SWITZERLAND AS AN ICT HUB

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 EPF Lausanne (EPFL), the result of which contributes to a thriving startup and spin-off scene.

Focus of activities

ICT employees by industry, 2013



Ten ICT companies

Selection of ICT companies active in Switzerland

Google	Cisco Systems
IBM	SAP
Swisscom	Logitech
Microsoft	Doodle
Walt Disney Research	HP

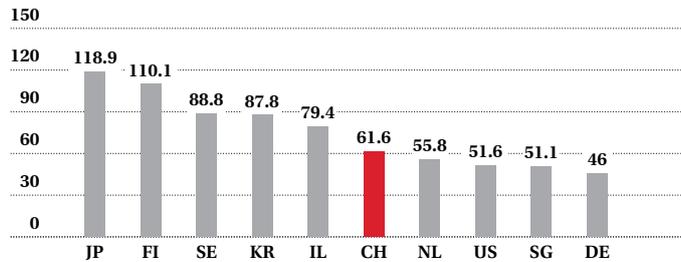
RESEARCH AND DEVELOPMENT (R&D)

- Thanks to the **Computer Science Departments of ETH Zurich and EPF Lausanne**, which are among the world's best, Switzerland has a considerable pool of talent (ETH ranked no. 15, EPFL ranked no. 34 according to the Shanghai ranking in 2015). In 2013, the two universities recorded a total of almost 2,000 ICT students: at the ETH there were over 800 studying for Bachelor's and Master's degrees, plus 200 taking doctorates; at the EPFL there were 690 Bachelor's and Master's students, plus 200 taking doctorates. Other courses in Computer Science, Business, Information Technology and Bioinformatics are also offered at other Swiss universities.
- On average, 23% of the Swiss workforce hold a university degree. In the ICT industry the **proportion of university graduates is especially high** at 43%.
- Out of over 250 apprenticeship options, the **ICT apprenticeship** is one of the most popular in Switzerland (ranked 6th). In 2013 almost 2,000 persons started an apprenticeship in this field. Following the apprenticeship there are further education options such as training schemes for ICT applications developers, ICT systems technicians, ICT business technicians and media technicians.
- 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 Noble 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, designed to last more than ten years, with costs likely to reach a total of EUR 1.19 billion. 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.
- The **EPFL Innovation Park** in Lausanne, with 55,000 m² of floor-space, offers companies and researchers from a variety of industries a total of 1,700 workplaces. These include companies such as Cisco and Logitech. The Innovation Park brings research and industry closer together, enabling them to enrich one another.

- In comparison with other countries, Swiss companies are technology-friendly because they **introduce new technologies relatively quickly** (ranked 6 out of 140).

Adoption of new technologies

Willingness of companies to adopt new technologies, 2015



Source: WEF, 2015

- Switzerland offers a **productive environment for app and game developers**. In 2014 there were around 30 companies involved in the development of games, some of which were awarded international prizes for their games. Zurich University of the Arts also offers Bachelor and Master's courses in Game Design. The first ever Zurich Game Festival was held in 2014.

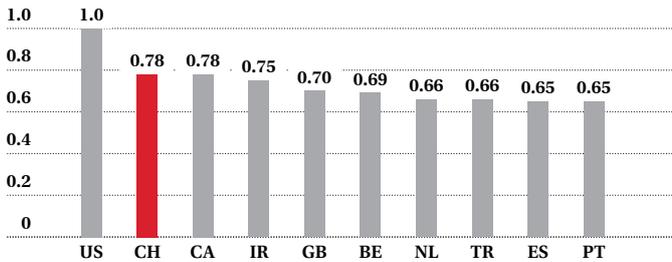
COSTS AND FINANCING

- Significant **venture capital and private equity fund options are available in Switzerland**. In 2012/2013 the ICT sector raised a total of CHF 216 million in venture capital (for example GetYourGuide, Knip, Sophia Genetics, Demiurge Technologies, Hulbee, etc.) and next to biotechnology and med-tech, it was the sector that attracted the most money.
- The Commission for Technology and Innovation (CTI) promotes the transfer of technology by offering funding for up to 50% of expenses for collaborative R&D projects between the industry and universities. Around 1,000 research posts are funded in this way each year. The ICT sector received CHF 19.2 million from the CTI in 2013.

- There is a high willingness to **invest in software**. In 2013, in an international comparison, Switzerland occupied second place when it came to investments in software as a percentage of GDP.

International comparison of company software expenditure

Spending on software in thousandths of GDP, 2013



Source: WEF, 2015

- 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.
- **Digitization technology** is one of the **most important growth drivers** in many economic sectors. It is now responsible for over 55% of the production process in the precision goods industry.
- After the United Kingdom, Switzerland's broadband connection fees are **the lowest in Europe**.

Countries with the lowest-priced broadband connections in Europe

Broadband connection costs in relation to GDP per capita, 2013

Country	Ranking
United Kingdom	1
Switzerland	2
Norway	3
Ireland	4
Austria	5
Luxembourg	6
Finland	7
Sweden	8
France	9
Iceland	10

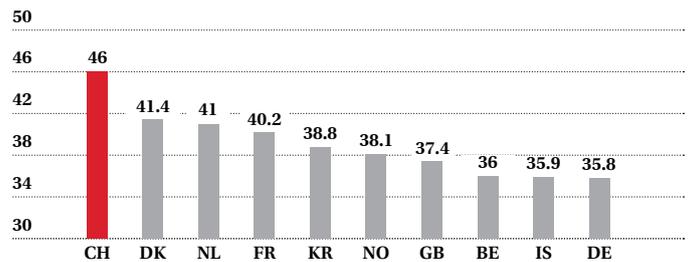
Source: International Telecommunication Union ITU, 2013

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). In 2012 the IT industry accounted for 1,800 of an available quota of 8,500 and was thus the industry allocated the most foreign skilled workers.
- Switzerland has complete broadband and cellphone coverage. A stable power supply also ensures the secure operation of ICT infrastructure. Switzerland's excellent infrastructure is ideal for the ICT industry with its exceptionally secure power supply. Switzerland regularly occupies a top position in the Network Readiness Index.
- Switzerland prides itself on having the world's highest concentration of broadband connections and, with an average speed of 16.7 Mbps, enjoys the fastest internet connections in Europe.

Countries with the highest concentration of fast internet connections

Number of broadband connections per 100 inhabitants, 2014



Source: WEF, 2015

- The free trade agreements in place with the EU and 38 other countries, including China, **provide access to the world's most important export markets**. Switzerland has the third most concentrated network of bilateral investment protection agreements after Germany and China.
- Companies in the Swiss ICT sector exported **goods and services worth over CHF 18 billion** in 2014; almost two thirds of ICT exports took the form of services.
- 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.

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

CURRENT DEVELOPMENTS

- The Switzerland Future Fund project (www.zukunftsfonds-schweiz.ch) involves setting up a fund through which pension funds can voluntarily make some of their funds available to start-up companies in Switzerland in the form of 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.
- The bill for a reform of the Taxation of Corporate Taxpayers was rejected by the Swiss people on 12 February 2017. This means that the current attractive regulations in the area of taxation remain valid. Switzerland, which has one of the lowest debt ratios by European standards (35% as measured by GDP), has the financial strength to offer a low level of taxation in the long term. It can be assumed that a new business-friendly proposal will soon be developed by the Swiss Federal Finance Administration, which will then be discussed and decided upon by the Swiss parliament. This process is expected to last until 2019.
- The startup promotion agency MassChallenge has been in operation on Lake Geneva since the start of 2016. Young Swiss companies and new businesses from around the world can apply for funding from the agency.
- The digitalswitzerland initiative has also been launched to promote startups with a variety of measures. It is intended to establish Switzerland as an attractive option for innovative young companies.

CONTACTS AND FURTHER INFORMATION

Authorities and Regulators

The Federal Office of Communications (OFCOM)
www.bakom.admin.ch

Federal Office of Telecommunications and Information Technology
www.bit.admin.ch

IT Management Body of the Federation
www.isb.admin.ch

State Secretariat for Education, Research and Innovation
www.sbf.admin.ch

Swiss Federal Commission for Technology and Innovation KTI
www.kti.admin.ch

Swiss Computer Science Conference
www.sik.ch

Innovation and Startup Support

Finance platform for high-tech startups
www.cti-invest.ch

Publications

The economic significance of the internet for Switzerland (in German)
www.ictswitzerland.ch
> Publikationen > Die ökonomische Bedeutung des Internet für die Schweiz

Digital Agenda 2.0 (in German)
www.ictswitzerland.ch
> Publikationen > Wirtschaft präsentiert Vision «Smart Switzerland»

Further Links

www.swissict-award.ch
www.breitbandatlas.ch
www.humanbrainproject.eu
www.itrockt.ch

Associations and Networks

www.alpict.com
www.asut.ch
www.at.ed.ch
psycho-sensori-motrice
www.digitalswitzerland.com
www.ech.ch
www.epfl-innovationpark.ch
www.fintechfusion.ch
www.fongit.ch
www.ictswitzerland.ch
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www.masschallenge.org
www.sgda.ch
www.swico.ch
www.swissfintech.ch
www.swissict.ch
software
www.tcbe.ch
www.theark.ch

S-GE Resources

Handbook for investors
www.s-ge.com/handbookforinvestors

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