



KEY FIGURES

204,800
employees in ICT



4.5
percent –
ICT's share of GDP



30
CHF billion
in value creation



5th
place in the World Digital
Competitiveness Ranking
(IMD)



Sources: ICTSwitzerland; IMD 2018

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

Focus of Activities

ICT employees by subsector (total: 210,800), 2015

Subsector	%	Subsector	%
Software developer	30	ICT executives	13
Systems analyst	8	Telecommunications/electronics engineers	2
Application programmer	2	Telecom infrastructure technician	4
Web & multimedia developer	2	IT infrastructure technician	4
Database & network specialist	3	User support technician	5
General IT worker	17	Other ICT workers	2
Graphic & multimedia designer	8		

Source: BFS, 2017

ICT Companies

Selection of ICT companies active in Switzerland

- AdNovum
- Adobe
- Avaloq
- Cisco
- Elca
- Genedata
- Google
- HP
- IBM

- Logitech
- Magnolia
- Microsoft
- Netcetera
- Noser Gruppe
- SAP
- Swisscom
- Temenos
- Walt Disney Research

OFFICIAL PROGRAM



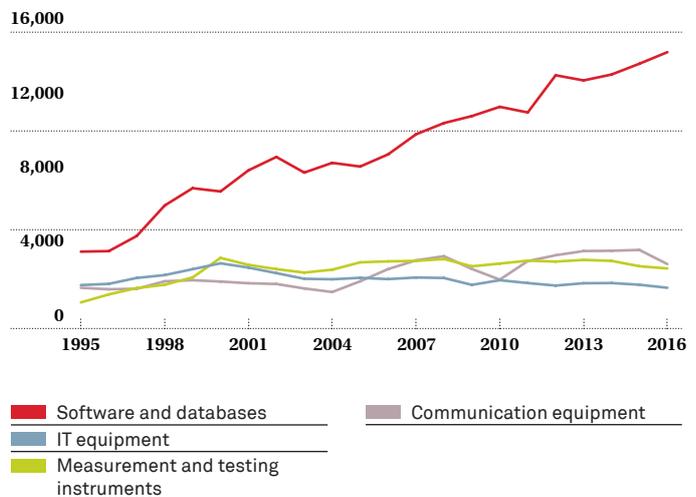
RESEARCH AND DEVELOPMENT (R+D)

- 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. 9, EPFL ranked no. 18, according to the QS World University Rankings in 2018). A master's program in data science is now being offered at ETHZ. Other courses in Computer Science, Business, Information Technology and Bioinformatics are also offered at other Swiss universities.
- Around 35% of the Swiss population holds a university degree. In the ICT industry the **proportion of university graduates is especially high at 43%**.
- Out of over 230 apprenticeship options, the **ICT apprenticeship** is one of the most popular in Switzerland. 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. Apprenticeships are the pillar of the skilled worker system; about 70% of higher ICT degrees are based on apprenticeships. At WorldSkills 2017, the young ICT professionals won gold for Switzerland twice.
- 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, designed to last more than ten years, with costs likely to reach a total of EUR 1.2 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 55,000 m² **EPFL Innovation Park** in Lausanne offers companies and researchers from a variety of industries space for more than 2,000 workstations. This includes over 120 start-ups, 23 larger companies and around 20 service providers. The Innovation Park brings research and industry closer together, enabling them to enrich one another.
- In 2015, Switzerland submitted 25.7 **ICT patent applications** per million inhabitants, putting it tenth among OECD countries.

- 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 fifth place in the World Digital Competitiveness Ranking (IMD). Switzerland does especially well in the areas of talent and cooperation between industry and research.
- Only one-third of ICT employees work in traditional ICT companies. The remaining two-thirds are active in other sector, such as life sciences, finance, and precision goods.

ICT investment in Switzerland, development

in CHF millions



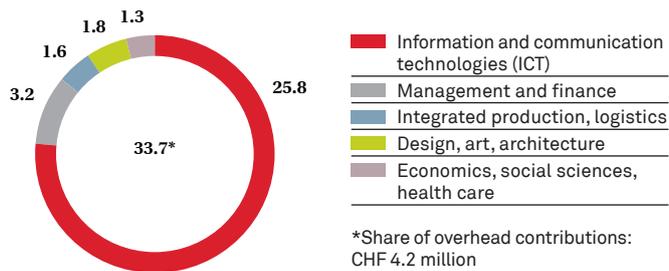
Source: BFS, 2017

COSTS AND FINANCING

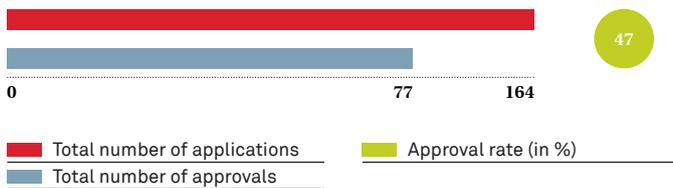
- Significant **venture capital** and **private equity fund** options are available in Switzerland. The ICT sector (including fintech) received a total of CHF 306 million in venture capital in 2017, an increase of more than 10% over the previous year.
- The ICT landscape in Switzerland is characterized by owner-led, cash-flow financed, and highly specialized SMEs such as Abacus, Opacc, Elca, and Netcetera.
- The Swiss Innovation Agency (**Innosuisse**) specifically promotes cooperation between science and the market with innovation projects, networking, training and coaching. Innosuisse has an annual funding budget of around CHF 200 million. The lion's share of this goes to supporting innovation projects. The ICT sector received CHF 25.8 million in federal funds in 2017.

- There is a **great deal of keenness to invest in software and data centers**. Between 1995 and 2016, investment in this area more than tripled.
- 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.
- According to OECD estimates, in June 2017 there were 46 **fixed broadband connections** per 100 inhabitants in Switzerland. This puts Switzerland well above the average for OECD countries (31), placing it first, ahead of Denmark and the Netherlands..

Federal Funding for Enabling Sciences
CHF million, 2017



Evaluated applications and approvals for ICT R&D projects



Source: Innosuisse, KTI Activity Report, 2017

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. Switzerland regularly occupies a top position in the Network Readiness Index.
- 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 also has the third most concentrated network of bilateral investment protection agreements after Germany and China.
- The export volume of ICT goods and services has grown from around CHF 14 billion in 2000 to CHF 19.5 billion in 2015 – twelve times more than the export of cheese and chocolate combined. The continuously growing ICT service sector is the **fifth 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.

Anteil der ICT-Spezialisten

Internationaler Vergleich, in % der Beschäftigung 2016

Land	%
Finland	6,2
Schweden	5,6
Schweiz	5,0
Vereinigtes Königreich	5,0
Niederlande	4,5
Dänemark	4,4
Irland	4,3
Luxemburg	4,1
USA	4,1
Österreich	3,8
OECD	3,7
Deutschland	3,6
Frankreich	3,1
Italien	2,8

Quelle: BFS, OECD 2017

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.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.
- Switzerland is currently in the process of modernizing its corporate tax system. The goal is to provide an attractive tax environment for companies and to ensure that taxation arrangements are in line with internationally established tax practices. The Swiss Federal Department of Finance (FDF) has already prepared a new proposal with tax proposal 17 (SV17). The reform is expected to come into effect no earlier than 2020. Until then, the current attractive tax regime will remain valid at national level.
- 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 and uses a variety of activities to promote startups. It is intended to establish Switzerland as an attractive option for innovative young companies.

CONTACTS AND FURTHER INFORMATION

Authorities and regulators

Federal Office of Communications
www.bakom.admin.ch

Federal Office of Communications
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

Innosuisse - Swiss Innovation Agency
www.innosuisse.ch

Swiss Computer Science
Conference
www.sik.ch

Innovation and startup support

www.baselarea.swiss
www.investiere.ch
www.masschallenge.org/programs-switzerland

Publications

ICT foreign trade study
www.ictswitzerland.ch

Swiss Venture Capital Report 2018
www.startupticker.ch

Further links

www.breitbandatlas.ch
www.digitaleconomyaward.ch
www.humanbrainproject.eu
www.swissdigitalhealth.com

Associations and networks

www.alpict.com
www.asut.ch
www.at.ed.ch
www.baselarea.swiss
www.biometrics-center.ch
www.digitalswitzerland.com
www.ech.ch
www.epfl-innovationpark.ch
www.fintechfusion.ch
www.ictswitzerland.ch
www.idiap.ch
www.sgda.ch
www.swico.ch
www.swissfintech.ch
www.swissict.ch
www.swissmadesoftware.org
www.tcbe.ch
www.theark.ch

S-GE resources

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

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