Information and Communication Technology Cluster

- Facts and figures
- Leading companies
- Technology transfer
- Research and development
- Education
- Authorities and associations
- Networking
- Our services
Facts and figures: information and communication technology in Switzerland

Switzerland is one of the world’s leading countries for information and communication technology (ICT). Accounting for approx. 8% of the GDP, it occupies the number three spot after Japan and Sweden.

For international ICT companies, Switzerland is the ideal location for headquarter functions, sales, customer service and research activities, with significant levels of investment having been made by companies such as eBay, Google, Microsoft, IBM, Salt, T-Systems, Siemens, Dell, EDS, Yahoo, Reuters, and Hewlett-Packard. Many Swiss ICT start-ups are launching innovative products.

In Switzerland there are around 13,500 ICT companies and some 70 call or customer centers. The ICT companies are primarily engaged in software development and operations (design, development, operation) and telecommunications (solutions design, development and operation).

Switzerland offers ICT companies multilingual, highly trained personnel with extensive experience in software development, telecom, Internet, logistics and industrial applications. Many IT specialists are employed in sectors such as banking, industry, medicine and pharmacetics, logistics, transportation, automation and consulting. The ICT sector employs approx. 183,000 people.

The Swiss federal, cantonal and municipality administrations as well as international companies are key clients for the ICT products. The aim of the national strategy for e-government is to put the public administrations to communicate electronically with the population at large, industry and authorities efficiently, transparently and on a customer-friendly basis. The national e-health strategy is working on an electronic patient file and an online service for patients. The primary aim of the national action plan e-inclusion is to expand low-cost broadband Internet connections and to develop further training offerings aimed at specific target groups.

The powerful medical sector in Switzerland has created subsectors such as biotechnology and medical information technology. Switzerland intends to meet the demand through specialist courses and the Chair for Bio Information Technology. Numerous companies have been created in the medical sector.

Switzerland has a very well developed ICT infrastructure. 89% of the population have an Internet connection. 81% use the Internet several times a week and 75% use it daily.

The leading Swiss telecoms company Swisscom, the German T-Systems, the Chinese Huawei Technologies and the American eBay International, together with other companies, all have their Swiss headquarters and/or EMEA (Europe-Middle East-Africa) base in Bern. Thanks to the central location international ICT companies are within easy reach throughout Switzerland.

The Canton of Bern offers multilingual personal. That’s why numerous call centers such as Conduit Europe SA, Salt and Competence Call Center (CCC) are based here.

Key clients for ICT services are present in large numbers in the Canton of Bern: government administrations, authorities, semi-public companies such as SBB, Post and PostFinance. That’s the reason why many ICT companies have established a branch in Bern. Bern is also the center for the development of the national e-government, e-health and e-inclusion strategies.

In the Canton of Bern ICT companies are engaged primarily in the areas of network operation, software and hardware development as well as computer centers. 14% of the working population is engaged in the ICT sector and over 25% of the call center employees in Switzerland work here.

The tcb.ch – ICT Cluster Bern, Switzerland, is formed by ICT companies, training institutions, associations and authorities in the Canton of Bern. Approximately 200 members are represented in the ICT Cluster. In the Canton of Bern the network organization is working to strengthen the information and communication technology sector and to secure knowledge and technology transfer within the ICT sector.

The Canton of Bern is the home of numerous ICT training centers. These include the University of Bern (Institute for Information Technology and Applied Mathematics, Institute of Information Systems), the Bern University of Applied Sciences (Department of Technology and Information Technology, Swiss Software School), the Wirtschaftsinformatikschule Schweiz and the Telematikschule Bern. The tcb.ch – ICT Cluster Bern has also formed tcb GmbH which performs and organizes the regional information technology world.

Four key federal authorities are based in the Canton of Bern: the Swiss Federal Office of Information Technology, Systems and Telecommunication (FOIT), the Federal Office of Communications (OFCOM), the Federal Strategy Unit for IT (FSUIT) and the Federal Communications Commission (ComCoM).

Facts and figures: information and communication technology in the Canton of Bern

• ICT spending in Switzerland per inhabitant:
  - CHF 4,230 (EUR 2,821)
• Internet connections: approx. 89% of the population

Source: Swiss Federal Statistical Office

Swiss ICT Innovations

• World Wide Web at the CERN
• Pascal programming language
• Computer-controlled production of the Swiss watch
• SWX trading system for computerized stock exchanges

Key ICT companies and organizations in the Canton of Bern:

- Hewlett-Packard
- Google, Microsoft, IBM, Salt, T-Systems, Siemens, Dell, EDS, Yahoo, Reuters, and Hewlett-Packard
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Leading companies in the Canton of Bern

The Canton of Bern is the home of numerous leading companies in the field of information and communication technologies, many highly specialized SMEs in particular. A selected list of these companies is shown below:

**Trans Data Management AG, Bern**
Trans Data Management AG, Bern is a leading international provider of integrated security and communication solutions. Our tailor-made communication systems are used wherever there is a need for permanent monitoring, fast response times, and high safety standards.

**GE Fanuc CNC Switzerland, Biel**
A joint venture between General Electric and FANUC LTD from Japan. Global provider of hardware and software for automation technology and integrated EDP.

**BEDAG, Bern**
This full-service provider creates information systems that contribute towards efficient collaboration among citizens, government and industry.

**Other ICT companies**
- Huawei Technologies Switzerland, Kôniz/Bern
- SICAP, Baar
- In4u, Lyss
- Rolotec, Biel
- RUAG, Bern
- Syderal, Gais
- TOGEWA Holding/Confone, Bern
- United Security Providers, Bern
- Huawei Technologies - www.huawei.com
- SICAP - www.sicap.com
- In4u - www.in4u.ch
- Rolotec - www.rolo-tec.ch
- RUAG - www.ruag.com
- Syderal - www.syd-ral.ch
- TOGEWA - www.togewa.ch
- United Security Providers - www.united-security-providers.ch

Technology transfer

The Canton of Bern’s promotion of innovation is focused on growth sectors such as information and communication technologies. Approx. 90 percent of the contacts involving technology transfer is created on a business-to-business basis. That’s the reason why the Canton of Bern launched its cluster policy in 1997. It provides support for cluster organizations in Bern with the aim of promoting horizontal networking between companies as well as technology transfer.

**tcbe.ch – ICT Cluster Bern, Switzerland**
The tcbe.ch – ICT Cluster Bern, Switzerland, is a network of over 200 organizations in the area of information technology and telecommunications. The activities of tcbe.ch are focused on the organization of the world of work, promotion of Bern as a business location, knowledge know-how transfer, education and further training, internationalization and networks.

**University of Bern – Unitectra**
Unitectra, the technology transfer organization of the Universities of Bern and Zurich, uses its services to provide support for researchers in cooperation arrangements with private sector companies as well as private and public institutions.

**CTI, the innovation promotion agency**
As a federal development agency, the CTI supports financial research projects that have been developed jointly by companies and universities, and links partners from both areas. The CTI provides support for knowledge and technology transfer in the form of platforms and networks.

**innBE**
innBE acts as an intermediary for technology transfer between companies and universities. It offers free initial advice on company formation and innovation management for start-ups and SMEs. innBE advises and assists the companies in the planning and implementation of innovation projects throughout the entire innovation process.

**The Bern University of Applied Sciences (BFH)**
The BFH bases its offering on the needs of business, society, culture, and the public sector, always with the focus on innovative and marketable products and technologies.

Dr. Matthias Stürmer, President tcbe.ch – ICT Cluster Bern
“tcbe.ch – ICT Cluster Bern, Switzerland is the business network for the ICT sector in the Canton of Bern and adjacent areas. Among its core focal areas are networking, innovation, internationalization, and education and training. Our mission is to raise awareness of the opportunities for exploiting the potential of digitization for the ICT sector and for all other branches of industry in the greater Bern area.”

**InnoBE**
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Research and development

In the Canton of Bern research into communication and information technology is conducted primarily by the University of Bern and the Bern University of Applied Sciences. ICT is also a focus for research by the CSEM, the Swiss Center for Electronics and Microtechnology in nearby Neuenburg.

University of Bern
The Institute of Computer Science and Applied Mathematics has five research groups: computer geometry and graphics, image analysis and artificial intelligence, computer networks and distributed systems, software composition theory of information technology and logic.

The Institute of Information Systems conducts research into the use of information and communication technologies in order to improve business management processes. Research projects include for example compliance requirements, data quality management in ERP systems, e-learning, Enterprise Resource Planning or Swiss Open Laboratory for E-Tourism.

Bern University of Applied Sciences (BFH)
The BFH University of Applied Sciences conducts application and development research, working closely with SMEs, public institutions, and government authorities.

It has brought its competencies in ICT together under one roof at the BFH Centre for the Digital Society. This Center combines the competencies of the University of Bern, the Swiss Center for Electronics and Microtechnology CSEM, Neuenburg, the Federal Office of Information Technology, the Federal Information Technology Administration (FOITT), and the Swiss Telecommunications Federation (Asut). It brings together researchers from the fields of information and communication technologies in order to improve business management processes. Research projects include for example compliance requirements, data quality management in ERP systems, e-learning, Enterprise Resource Planning or Swiss Open Laboratory for E-Tourism.

The BFH Centre for Digital Society, which specializes in the challenges presented by the digitization of business, the public sector, and society. It has brought its competencies in ICT together under one roof at the BFH Centre for the Digital Society. It also carries out application-oriented research into ICT solutions for industry and business. The objective of CSEM is to develop Switzerland further as a high-tech location.

CSEM, Switzerland’s leading institute for microtechnology, is engaged in the area of applied research, product development, prototype development and small series production as well as in technology consulting. It primarily conducts research and development into micro- and nanotechnology, microelectronics, system engineering, microorganisms, photonics as well as in information and communication technology. The CSEM renders services for industrial clients. It also develops its own commercial activities with existing companies as well as with the formation of spin-offs and start-ups. The objective of CSEM is to position Switzerland as a world leading location for nanotechnology.

Swiss Center for Electronics and Microtechnology CSEM, Neuenburg
CSEM, Neuenburg specializes in the challenges presented by the digitization of business, the public sector, and society. It has brought its competencies in ICT together under one roof at the BFH Centre for the Digital Society.

Prof. Dr. Herbert Binggeli, Rector Bern University of Applied Sciences
“Applied research is very much geared towards practical needs and close net-working with partners, particularly as far as ICT is concerned, through the BFH Centre for the Digital Society.”

Philipp Metzger, Director of the Federal Office of Communication OFCOM
“Switzerland is predestined to attract innovative companies: thanks to developments in telecommunications and the postal system, but also in the media sector, it is perfectly placed to utilize the opportunities offered by digitization to the full. Information Technology is a key factor in this process.”

Education

University of Bern
The Institute for Computer Sciences and Applied Mathematics (IAM) offers Bachelor, Master, PhD and Doctorate courses in information technology. Within the Business Administration course, the Institute of Information Systems offers an ancillary subject in information systems.

www.jam.unibe.ch / www.iwi.unibe.ch

Bern University of Applied Sciences (BFH)
The BFH offers a number of study programs relating to ICT, such as the Bachelor of Science in Electrical and Communication Engineering, Information Technology, Medical Informatics, Multimedia Production, and Business Information Technology, as well as a Master of Science in Business Information Technology.

www.bfh.ch/studium

It also offers a range of continuing education options – from short courses to Master of Advanced Studies - to enable experienced professionals to keep their ICT knowledge up-to-date.

www.bfh.ch/en/continuing_education

Swiss School of Information Sciences (WISS)
The WISS offers modular training courses in information technology such as IT specialist with teaching certificate or federal diploma or training as an IT project leader. It also provides support for companies with over 50 PC workstations or IT terminals on matters relating to education and further training.

www.swissx.ch

TEKO Swiss Institute of Advanced Sciences:
School of Information Technology and Business Administration (IBS)
In the IBS, trainees can take courses to obtain a Swiss IT certificate, the European Computing Driving Licence and an IBS course in computer sciences.

www.teko.ch

Gewerblich-Industrielle Berufsschule Bern (GIBB)
The GIBB offers training courses for various occupational groups in its Information Technology and Electronic Engineering Department. The Telematikschule Bern of GIBB is an institute for telematics.

www.gibb.ch / www.tsb.ch

Occupational Training Centre Biel-Bienne (BBZ)
The BBZ offers training as an advanced media IT specialist and an information technology specialist.

www.bbz-biel.ch

Authorities and associations

Federal Office of Information Technology, Systems and Telecommunication (FOITT)
The FOITT renders services for the federal administration, for cantons, municipalities and organizations. As a competence center, it guarantees the functioning of information technology and telecommunications.

www.bit.admin.ch

Federal Office of Communications (OFCOM)
The OFCOM performs all the regulatory tasks in the areas of telecommunications and radio communications (radio and television).

www.bakom.admin.ch

Federal Communications Commission (ComCom)
The ComCom is the independent licensing and regulating authority in the area of telecommunications.

www.comcom.admin.ch

Federal Strategy Unit for IT (FSUIT)
The FSUIT is the staff agency of the Swiss Federal Information Technology Board. It formulates the decision-making bases for the strategic control of information technology within the Swiss Federal Administration. The FSUIT also operates the e-government Switzerland agency.

www.isb.admin.ch

Swiss Telecommunications Federation (Asut)
Asut is an industry association that represents the interests of ICT companies in Switzerland.

www.asut.ch

Callnet.ch call center Network Switzerland
Callnet.ch is the sector association for contact centers and customer contact management in Switzerland.

www.callnet.ch

ICT Switzerland
ICT Switzerland is the umbrella organization of the main federations and associations in the Swiss information technology and telecommunications sector.

*“E-power for Switzerland” is a lobbying organization.

www.ictswitzerland.ch/en/organisation/e-power/
Networking

Bern Cluster Day
The annual Bern Cluster Day provides an information and networking platform for technology companies in the areas of innovation, knowledge transfer and technology transfer. The Bern Cluster Day is particularly suitable as a springboard for company co-operations and business opportunities. It is held annually in May.

www.berninvest.be.ch/events

InfoSocietyDays
The InfoSocietyDays in Bern are an important forum for ICT applications in the areas of education, government and healthcare.

www.infosocietydays.ch

Swiss Telecommunication Summit
Top class experts and representatives of the worlds of business, politics, administration and the media meet every June for one of the country’s foremost ICT industry events. Besides being a forum for up-to-the-minute information, the conference is an excellent opportunity to network and meet decision-makers from the world of ICT and from user companies.

www.asut.ch

Our services

The Bern Economic Development Agency (BEDA), will provide you with free support and assistance in your search for a location and for setting up business in the Canton of Bern.

- Conducting individual evaluation visits
- Granting tax breaks and other financial benefits
- Procurement of grants for research and development activities
- Support in the search for a location and for procuring real estate and land
- Information on and clarification of questions relating to work and residence permits, social security, building approvals, etc.

In order to make your start in the Canton of Bern simple and straightforward we will provide you with useful contacts for

- government bodies and federal institutions
- education institutions
- sector and cluster organizations
- financial service providers and risk capital
- advise and solicitors
- other corporate networks

The BEDA is a one-stop shop for companies wishing to relocate to and expand in the Canton of Bern.

Imprint