



ECONOMIC STRUCTURE

2

2.1	Gross Domestic Product and Industry Structure	31
2.2	International Integration	34
2.3	Important Technologies and Industries	36

One of the most liberal and competitive economies in the world, Switzerland has always maintained close economic ties with other countries. A secure legal system, long-term stable fundamentals for investors, relatively little regulation, and the proximity to research institutions make it the location of choice in Europe for businesses offering high-quality products and services.

2.1 GROSS DOMESTIC PRODUCT AND INDUSTRY STRUCTURE

Switzerland's per capita gross domestic product is the second largest in the world (see Fig. 5). The per capita GDP was far above the EU average in 2019. The service sector generates some 70% of the gross domestic product. Comprising 25% of GDP, the industrial sector is also an important mainstay of the economy. Key sectors are the pharmaceutical industry, the financial sector, ICT, and the mechanical, electrical engineering and metal industry. The Swiss economy is strongly export-oriented; the ratio of export trade to the gross domestic product is one of the highest in the world. The EU plays a key role here, accounting for 55% of exports and 71.6% of imports. Small and medium-sized enterprises (SMEs) dominate the Swiss economic landscape. More than 99% of companies have fewer than 250 full-time employees. However, Switzerland is also home to multinational companies that account for around one third of the country's value creation. They employ 1.3 million people, with the result that one in three jobs is at a multinational concern. Employees are highly motivated, possess a keen sense of responsibility, and are very loyal to their company. These typical Swiss characteristics are responsible for the quality and service ethos in both the industrial and service sectors.

Gross Domestic Product per Capita (Nominal), 2019

in thousands of US dollars

(FIG. 5)

1	Luxembourg	113
2	Switzerland	84
3	Macau SAR	81
4	Norway	78
5	Ireland	78
8	USA	65
9	Singapore	64
10	Denmark	60
12	The Netherlands	52
13	Sweden	51
14	Austria	50
15	Hong Kong	49
18	Germany	47
19	Canada	46
20	Belgium	45
22	France	42
23	United Kingdom	41
24	Japan	41
28	Italy	33
30	South Korea	31

Source: IMF Online, 2019

More than 75% of people employed in Switzerland work in the service sector. The industrial sector accounts for nearly 22% (see Fig. 6). Although the industrial sector is increasingly diminishing in importance in advanced industrialized countries, in Switzerland the absolute number of people working in the secondary sector has remained stable for nearly 20 years.

Industry Structure and Shares of Workforce, 2019

(FIG. 6)

INDUSTRY	WORKFORCE (3 RD QUARTER 2019)	
	in 1,000	in %
Total (not including agriculture and forestry)	5,137.00	100%
Sector II Total	1,110.0	21.61%
Mining and mineral extraction	5.0	0.10%
Processing and manufacturing	690.0	13.43%
Energy	29.0	0.56%
Water supply and purification	22.0	0.43%
Construction	365.0	7.11%
Sector III Total	4,027.0	78.39%
Vehicle trading, maintenance, and repair	630.0	12.26%
Transport and warehousing	250.0	4.87%
Hospitality	266.0	5.18%
Information and communication	176.0	3.43%
Financial and insurance services	236.0	4.59%
Real estate and housing	67.0	1.30%
Professional, scientific, and technical occupations	452.0	8.80%
Other economic services	364.0	7.09%
Public administration	205.0	3.99%
Education	357.0	6.95%
Healthcare and social services	749.0	14.58%
Arts, entertainment and leisure	106.0	2.06%
Other services	169.0	3.29%

Source: Swiss Federal Statistical Office (FSO), employment statistics (BESTA)

In international competitiveness indexes, Switzerland has occupied one of the top spots for many years. Switzerland scores high for innovativeness, a strong education system, and a flexible labor market.

www.s-ge.com/business-navigator

Switzerland Business Navigator: Figures of Switzerland as an interactive map

International Competitiveness Ranking, 2020

Overall score from 1 to 100

(FIG. 7)

1	Singapore	100.0
2	Denmark	99.5
3	Switzerland	98.4
4	The Netherlands	98.4
5	Hong Kong	97.1
6	Sweden	95.9
7	Norway	94.6
8	Canada	93.5
9	United Arab Emirates	93.5
10	USA	92.4
12	Ireland	90.7
15	Luxembourg	87.7
17	Germany	85.9
19	United Kingdom	84.4
20	China	82.0
23	South Korea	79.2
32	France	71.7
34	Japan	69.9
43	India	62.1
44	Italy	62.0

Source: IMD World Competitiveness Center 2020

Switzerland is also one of the world's leading innovators. In 2019, it was ranked as the world's most innovative country for the ninth consecutive year, leading the Global Innovation Index.

Global Innovation Index, 2019

Overall score from 0 to 100

(FIG. 8)

1	Switzerland	67.24
2	Sweden	63.65
3	USA	61.73
4	The Netherlands	61.44
5	United Kingdom	61.30
6	Finland	59.83
7	Denmark	58.44
8	Singapore	58.37
9	Germany	58.19
11	South Korea	56.55
12	Ireland	56.10
14	China	54.82
15	Japan	54.68
16	France	54.25
17	Canada	53.88
19	Norway	51.87
21	Austria	50.94
22	Australia	50.34
30	Italy	46.30
52	India	36.58

Source: INSEAD, The Global Innovation Index 2019

Switzerland is the world's most innovative country. It stands out primarily because of its innovation output, offering an ideal environment for innovation and proving its strength through the high maturity of the market and the economy.

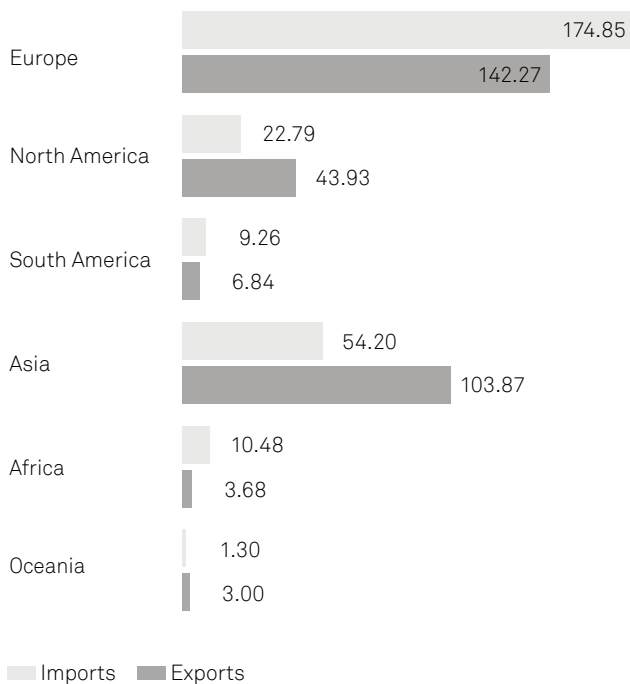
2.2 INTERNATIONAL INTEGRATION

As the Swiss domestic market is small and the country lacks natural resources (apart from water), Swiss companies have been forced to seek and cultivate abroad what have often been their key markets since the advent of industrial production. Due to this necessity to open the country to the outside, Switzerland is an important player in world trade. Exports make up around 33% of the gross domestic product. As a result, Switzerland has taken a leading role among the important exporters in world trade, with regard to both goods and services.

Foreign Trade by Economic Area, 2018

Imports and exports (billions CHF)

(FIG. 9)



Source: Swiss Customs Administration (EZV) 2020

2.2.1 Goods and Services Trade

Europe is by far Switzerland's most important trade partner (2019). Germany has traditionally been Switzerland's most important buyer and also supplier, while Italy and France are its second and third most important suppliers. Internationally, the United States and China are Switzerland's most important trade partners.

The classic example of a successful export-oriented branch of industry is what is known as Switzerland's "secret automobile and aviation industry" – a little-known network of highly specialized manufacturing companies and problem-solvers providing components for a range of areas, from precision and micromechanics to materials technology, plastics, and textiles. As technology and innovation leaders, these Swiss companies have been able to position themselves as reliable suppliers of quality and precision products.

Switzerland is a co-signatory of the WTO Agreement, and has continually championed market liberalization through free trade agreements, as a member of EFTA, and through bilateral agreements with the EU. As a result of its consistent market liberalization policy, Switzerland has become an efficient trading center and a market of economic significance – not only relative to its market size.

Switzerland is an attractive location for foreign investors. At the end of 2018, foreign direct investments amounted to approximately 1'300 billion Swiss francs.

2.2.2 Direct Investments

Switzerland's exposure to global markets is among the strongest of any country. At the end of 2018, direct investments abroad totaled 1,467 billion Swiss francs. Swiss companies with direct investments abroad employ around 3 million people in their foreign subsidiaries and operating units, and they are also important employers in Switzerland. Switzerland is among the top fifteen largest direct investors in the world. Switzerland is an important direct investor in the USA as well; in 2018, 19.5% of all Swiss direct investments were made in the USA, a total of 285,535 million Swiss francs.

Switzerland is also an attractive location for foreign investors, in particular from the EU (84% or 1,087,992 million Swiss francs) and the USA. The capital stock of U.S.-American investors in Switzerland is 5.8% or 74,928 million Swiss francs.

Direct Investments Capital Stock, 2018

(FIG. 10)

CAPITAL STOCK AT YEAR END, 2018	SWISS DIRECT INVESTMENTS ABROAD		FOREIGN DIRECT INVESTMENTS IN SWITZERLAND	
	CHF (millions)	in %	CHF (millions)	in %
Total	1'466'548	100.0 %	1'295'914	100.0 %
EU	809'986	55.2 %	1'087'992	84.0 %
United Kingdom	78'309	5.3 %	80'202	6.2 %
Germany	58'160	4.0 %	20'444	1.6 %
The Netherlands	156'981	10.7 %	342'392	26.4 %
Luxembourg	191'191	13.0 %	380'316	29.3 %
France	63'803	4.4 %	44'856	3.5 %
Italy	17'815	1.2 %	2'934	0.2 %
Ireland	117'691	8.0 %	51'956	4.0 %
Austria	9'275	0.6 %	75'982	5.9 %
Rest of Europe	60'267	4.1 %	59'480	4.6 %
Offshore financial centers	25'907	1.8 %	N/A	N/A
Russian Federation	23'551	1.6 %	N/A	N/A
North America	316'757	21.6 %	80'038	6.2 %
USA	285'535	19.5 %	74'928	5.8 %
Canada	31'222	2.1 %	5'111	0.4 %
Central and South America	139'829	9.5 %	51'961	4.0 %
Brazil	10'487	0.7 %	N/A	N/A
Offshore financial centers	3'084	0.2 %	57'313	4.4 %
Asia, Africa + Oceania	139'709	9.5 %	16'493	1.3 %
Japan	16'611	1.1 %	3'081	0.2 %
Singapore	24'793	1.7 %	N/A	N/A
China	22'931	1.6 %	N/A	N/A
Hong Kong	7'238	0.5 %	N/A	N/A
South Korea	3'836	0.3 %	N/A	N/A
India	6'246	0.4 %	N/A	N/A
Australia	6'556	0.4 %	N/A	N/A

Source: Swiss National Bank (SNB), 2020

2.3 IMPORTANT TECHNOLOGIES AND INDUSTRIES

Clusters are industry groups that are formed based on a degree of regional proximity and through a common area of activity along the value chain. When these conditions are in place, a growth pool can arise, which attracts suppliers and specialized service providers and creates competitive advantages for all companies involved. Ecosystems, by contrast, describe a dynamic structure of wide-ranging, loosely connected economic players. These form a network and interact through common technologies, languages, and institutions.

Switzerland has several of these industry clusters and technology ecosystems, which are also important on an international scale. Over the next few pages, five technology ecosystems and the most important industry clusters in Switzerland will be presented briefly. The figures provided are for reference purposes only, as the clusters sometimes overlap.

2.3.1 Artificial Intelligence

Switzerland has world-renowned universities and research institutes in the field of artificial intelligence (AI). The proximity to high-caliber research is a key reason for the establishment in Switzerland of major tech giants like Google, IBM, and Microsoft. Thanks to its traditional strength in the area of life sciences, Switzerland is also driving forward AI developments in the healthcare system. In relation to number of inhabitants, the country has the highest number of AI patents in the world, underlining its high innovation potential. Companies here benefit to a considerable degree from efficient technology transfer, sustainable software systems, and unbureaucratic support from cantons and the government. Startups like StarMind, Sophia Genetics, and Recapp work with universities and research institutes specializing in the field of AI, e.g. the IDSIA in Ticino, the IDIAP in Valais, and the Schaffhausen Institute of Technology (SIT). Global groups such as Novartis and Microsoft have also founded a joint AI lab with the goal of developing intelligent and personalized therapies with the help of digital technologies.

www.s-ge.com/artificial-intelligence
Facts and figures on artificial intelligence in Switzerland

2.3.2 Robotics

Switzerland is an international leader in the field of robotics and drones and is therefore often referred to as the “Silicon Valley of robotics”. On the one hand, this can be attributed to Switzerland’s long history and strengths in sectors such as mechanical engineering and watchmaking. On the other hand, key areas for robotics and drone innovations include artificial intelligence, sensor technology, photonics, information technology, and computer vision, fields in which Swiss business and research is prominently represented. In 2017, Switzerland took third place worldwide in terms of robotics patents in relation to the number of inhabitants and has doubled its share of global robotics patents since 2000. The most common area of application is in industry. The Swiss group ABB, headquartered in Zurich, is the world’s top performer in this respect (number one in the Robotics Business Review 2017 ranking). In the field of Unmanned Traffic Management (UTM), the company is also proving to be a pioneer: The air traffic control company Skyguide developed a completely digitized airspace management system (U-space), which was tested successfully for the first time in Europe in 2017 with international partners in Geneva.

www.s-ge.com/robotics
Facts and figures on robotics in Switzerland

2.3.3 Advanced Manufacturing

Thanks to the traditional watch, MEM, and medtech industries, a highly industrialized precision cluster has developed in Switzerland, which occupies a leading position in the field of advanced production processes in the digital age. As a production location, Switzerland allows companies to optimize their manufacturing processes by increasing efficiency and saving costs. Various international companies such as ABB, Oerlikon, Hamilton, Dätwyler, Swiss Smart Factory, and Schindler are optimizing their existing production processes with digital solutions in Switzerland; its dual education system enables them to find very well qualified staff who can operate highly specialized machines. Most companies focus on innovation and quality in order to compete with cheaper locations and maintain and expand their global market position. The World Economic Forum (WEF) has opened a center for cybersecurity in Geneva, with the aim of establishing a secure, global cyberspace. The independent institution is intended to optimize collaboration between private entities and authorities worldwide.

www.s-ge.com/advanced-manufacturing
Facts and figures on advanced manufacturing (Industry 4.0) in Switzerland

2.3.4 Personalized Health

Thanks to its strength in the life sciences and ICT sector, Switzerland is the ideal location for innovative companies that want to quickly and easily bring new ideas in relation to personalized health to the market. The close collaboration between science and industry plays a key role in this. Cutting-edge research is being carried out at Swiss pharmaceutical groups as well as at world-class universities and state institutes; SMEs and startups are also providing important momentum. Thanks to Switzerland's innovativeness and its life sciences cluster, the country covers the entire value chain from drug development to production. The Swiss Institute of Bioinformatics (SIB) supports top-class performance in data science and, through around 70 groups of researchers, provides the national and international life sciences community with an ultramodern bioinformatics structure based around the topic of precision medicine.

The Swiss Personalized Health Network (SPHN) is the overarching initiative for the promotion of personalized health. It works with the National Support Initiative "Personalized Medicine" run by the Swiss Secretariat for Education, Research, and Innovation (SERI) with the goal of enabling the national and international exchange of data required for research. The institutes of technology ETH Zurich and EPF Lausanne support projects that are working, among other things, on open-source software permitting secure and decentralized access to health data with the help of blockchain technology.

www.s-ge.com/personalized-health
Facts and figures on personalized health in Switzerland

2.3.5 Blockchain

Alongside the traditional financial sector, crypto-based financial transactions have become increasingly important for Switzerland as a financial center. The country is globally recognized for its legislation supporting data protection, and the proactive stance of the national government has created extremely favorable conditions for blockchain companies. Through the decision of the Swiss Financial Market Supervisory Authority (Finma) to grant banking permits to two blockchain financial services providers, Switzerland has recognized the innovative potential of new technologies for the financial markets. Blockchain technology is also used in the fields of supply chain management, the insurance industry, energy provision, and logistics. At the University of St. Gallen's Institute for Supply Chain Management (ISCM), research is being carried out on blockchain applications in the foodstuffs and pharmaceutical sector. The Swiss Blockchain Federation (SBF) is also committed to creating legal certainty and favorable conditions in relation to blockchain technology. It promotes dialog and collaboration between the Confederation, cantons, business, academia, and society. In addition, the World Economic Forum (WEF) has opened a center for cybersecurity in Geneva, with the aim of establishing a secure, global cyberspace and fighting against cybercrime.

www.s-ge.com/blockchain
Facts and figures on Switzerland as a blockchain location

2.3.6 Life Sciences

Major groups that are extremely successful globally, such as Novartis, Roche, and Syngenta, as well as smaller companies form a unique industrial cluster that is concentrated in the regions of Basel, Zurich, Zug, and Lake Geneva. The Swiss chemical-pharmaceutical industry is virtually exclusively active in specialty chemicals and is very internationally orientated. Companies in the Swiss chemical-pharmaceutical industry have a leading worldwide position in many market sectors and employ around 77,000 people. The industry represents around 5% of the gross domestic product. Only the metal and mechanical engineering industry is larger in Switzerland.

Thanks to the momentum created by pharmaceutical giants Novartis and Roche, but also as a result of recent investments by international companies such as Indigo, Alnylam, Bluebird Bio, BeiGene, and Incyte, a unique biotech cluster has arisen. Switzerland is one of the strongest and most innovative locations in Europe for biotechnology, which is why these companies have moved their European headquarters to Switzerland. Over half of Swiss biotech firms are small companies with fewer than 20 employees. They profit from the geographical proximity to large companies both in Switzerland and in its neighboring countries. Switzerland has a high concentration of innovative and successful companies, research institutes, and universities along the entire value chain of the life sciences sector. Some well-known global players headquartered in Switzerland and which are industry leaders in Europe include Actelion, Amgen, Biogen, Crucell, and Merck Serono.

The concentration of medical technology companies in Switzerland is also unusually high with around 1,350 companies. 75% of all products manufactured in Switzerland are then exported, which makes up 5.2% of all Swiss exports. Investment in research and development, growth rates, and profitability are all above average. In total, around 54,500 people are employed in medical technology. At 1% relative to the working population, this is more than any other country. Global Swiss companies include Ypsomed, Sonova, and Straumann. Some major foreign corporations worth mentioning are Zimmer Biomet, Medtronic, B. Braun, and Stryker.

www.s-ge.com/invest-lifesciences
Facts and figures on Switzerland as a life sciences location

www.s-ge.com/invest-pharma
Facts and figures on Switzerland as a pharma location

www.s-ge.com/biotech
Facts and figures on Switzerland as a biotech location

www.s-ge.com/medtech
Facts and figures on Switzerland as a medical technology location

www.scienceindustries.ch
Swiss industry association for chemicals, pharma, biotech

www.swiss-medtech.ch
Swiss medical technology association

www.interpharma.ch
Umbrella organization of Swiss pharmaceutical companies

2.3.7 Engineering

The mechanical, electrical engineering, and metal industry (MEM) is the largest industrial sector and holds a key position in the Swiss economy, with around 320,000 employees: In 2019, the MEM industry's share of value creation amounted to about 7%. Almost 20% of jobs in the MEM industry are in the field of research and development. Countless companies of the Swiss MEM industry have a leading international role in their sub-sectors. Almost 80% of products from the MEM industry are exported. Global companies in the metal and mechanical industry with well-known names such as OC Oerlikon, Rieter, Schindler, and ABB are present in Switzerland.

The Swiss watch industry is primarily located in the Jura region stretching from Geneva to Schaffhausen (called the "watchmaker belt"). Companies such as the Swatch Group, IWC Schaffhausen, Rolex SA, Richemont SA, and the LVMH Group are headquartered here. The Swiss watch industry makes products whose high degree of mechanization is reflected in a very considerable division of labor. As a result, the sector generally comprises small and medium enterprises, averaging around 70 employees per company. Around 700 companies employ 59,000 people (as of 2017). 95% of all employees and businesses are located in the nine cantons of the Jura region, resulting in a watch industry cluster. Particularly in the luxury segment, the world market position of Swiss watchmakers is excellent. 95% of all watches are exported. The total value of Swiss watch exports was 21.7 billion Swiss francs in 2019.

The availability of highly qualified staff with professional know-how has resulted in the relocation to this area of more and more companies outside the watchmaking industry which require similar technology for their production. In particular, this "precision cluster", which has developed over the course of years, includes medical technology, which has significantly expanded its presence in the region in recent years. Today, this precision cluster features production technologies from the fields of robotics and additive manufacturing especially. A cluster strongly orientated to micromechanics, optics, and photonics has also formed in Eastern Switzerland and the Bern region.

www.s-ge.com/invest-mem
Facts and figures on Switzerland as an MEM location

www.swissmem.ch
Association of the Swiss mechanical, electrical engineering and metal industry (MEM)

www.fhs.swiss
Federation of the Swiss Watch Industry (FH)

2.3.8 Information and Communication Technology (ICT)

Switzerland leads the way with respect to the expansion of infrastructure for the information society. According to the OECD, over 50% of the population has a fixed high-speed Internet connection, putting Switzerland in first place worldwide ahead of Denmark and France. In 2017, 93% of Swiss households had an Internet connection. The World Economic Forum "Networked Readiness Index 2019" placed Switzerland in fifth place behind Sweden, Singapore, the Netherlands, and Norway. With around 200,000 working in the field of information and communication technology (ICT), the ICT field is the seventh largest area in Switzerland (2017).

The ICT landscape is characterized by extremely specialized SMEs such as Abacus, Opacc, Elca, and Netcetera. Renowned companies, for instance IBM, Google, and Microsoft, have also established premises close to research institutes like ETH Zurich, EPF Lausanne, and their research establishments. Some of the largest employers in the sector are foreign companies such as Siemens, Dell, HP, and Reuters. One important criterion encouraging foreign IT firms to settle in Switzerland is the extremely well educated, technically experienced, and often multilingual workforce.

www.s-ge.com/invest-ict
Facts and figures on Switzerland as an ICT location

www.s-ge.com/data-centers
Facts and figures on data centers in Switzerland

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

www.ictswitzerland.ch
Umbrella association of the Swiss ICT industry

www.digitalswitzerland.com
National initiative for making Switzerland a leading digital innovation hub

2.3.9 Finance

The Swiss financial center is an important element of the economy as well as a world-class cluster. In Switzerland there are some 250 banks, 200 insurance companies, and 1,800 pension funds. The majority of the financial institutions are located in Zurich, Geneva, Basel, and Lugano. In 2018, direct value creation by banks and insurance companies amounted to around 60 billion Swiss francs, with banks and insurance companies each contributing 30 billion Swiss francs. This corresponds to about 9.4% of the entire Swiss gross domestic product. Nearly 214,000 employees work in the financial sector (full-time equivalent), which is about 5.3% of the entire working population in Switzerland. Around 144,000 of these employees work at banks, while roughly 74,400 work in the insurance industry. The importance of the financial industry is also reflected in the courses offered by universities. Thanks to the “Swiss Finance Institute” – a collaborative effort between financial institutions and leading Swiss universities – education and financial research are guaranteed.

From an international perspective, the Swiss banking center is regarded very highly and is extremely competitive. Innovativeness, professionalism, and quality set Swiss banks apart. Their core competency is asset management. With a fourth of the world’s global cross-border investments, Switzerland is the market leader in cross-border private banking. In addition to the two major globally active banks, UBS and Credit Suisse, there are numerous regional and specialized institutions. This diversity is one of Switzerland’s major strengths as a banking center, because it guarantees that every customer will find the right Swiss bank for every need.

The key factors for success and the basic conditions for the insurance industry include a high per capita income, a strong need for security, a solidly structured old-age pension system, an open and internationally networked insurance center, a credible regulatory environment, and international know-how in the reinsurance business.

For more information and links relating to banking, see page 88 onward.

www.s-ge.com/financial-center

Facts and figures on Switzerland as a financial center

www.swissbanking.org

Swiss Bankers Association

www.svv.ch

Swiss Insurance Association

2.3.10 Headquarters in Switzerland

Switzerland is a vital center for the global and regional headquarters of foreign companies. While European firms have their global headquarters in Switzerland, U.S. companies tend to open their regional headquarters here. Prominent examples such as Unilever, Bombardier, Nissan, Sony, Google, Procter & Gamble, VF Corporation or Adidas demonstrate the attractiveness of Switzerland as a location for company headquarters.

Switzerland offers a multitude of benefits for businesses locating their company headquarters in the country. On the one hand, thanks to a high standard of education and excellent working conditions, there is a very large number of highly qualified workers available. On the other hand, Switzerland makes an excellent test market as it is a stronghold of political stability and legal certainty, has close proximity to research, and is home to important decision-makers. The country offers a strategically favorable location in the heart of Europe, providing direct access to the European market, excellent infrastructure, and an attractive tax system with a reliable double taxation treaty.

www.s-ge.com/headquarters

Facts and figures on headquarters in Switzerland

Upwards of 850 international companies have headquarters in Switzerland.