



INNOVATION AND TECHNOLOGY

World-renowned research institutions, strong technological expertise, a highly qualified and productive workforce: it is not surprising that Switzerland is regularly positioned at the top of the list of the world's most innovative nations. In the Greater Geneva Bern area, collaborations and synergies between the academic world and economic players enable innovative projects and ideas to be turned into high-value-added marketable products.

Image
Liebherr Machines Bulle SA, Bulle



The World Leader in Innovation

Image
Swiss Center for Electronics and
Microtechnology (CSEM), Neuchâtel
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WORLD-CLASS UNIVERSITIES AND RESEARCH INSTITUTIONS

Switzerland is the undisputed leader when it comes to innovation: for years now it has featured at the top of the Global Innovation Index as well as the World Economic Forum competitiveness and innovation ranking. The secret of Switzerland's success lies in its long-standing policy for attracting investment in high-value-added sectors, a goal that is reflected in the considerable spending invested in basic and applied research. R&D funding represents 3% of the GDP, a figure considerably higher than the OECD average of 2.4%. In 2014, Switzerland impressively filed the largest number of patent applications per million inhabitants; i.e., 848, of any country in the world. Another strong indicator of the quality of a country's research is recognition of its national publications by researchers in other countries, and Switzerland has the highest percentage of papers cited worldwide. The country also has the highest proportion of PhDs within the working-age population, thanks notably to the presence of numerous foreign graduates; indeed, a good quarter of students and 40% of researchers in Swiss universities come from other countries. This percentage even reaches 50% in the case of the Federal Institute of Technology Lausanne (EPFL), which, with over 120 nationalities on campus, claims to be Europe's most cosmopolitan technical university.

UNIQUE R&D PARTNERSHIPS

The Greater Geneva Bern area has long been reputed for its technical expertise and spirit of innovation, and is credited with a wealth of revolutionary inventions including the World Wide Web, Velcro, Swatch plastic watches, and coffee-machine capsules. Today, international giants including SGS, Celgene, Michelin, eBay and BASF are prospering in this region alongside start-ups and innovative SMEs. Cutting-edge companies choose the GGBa because of the potential for synergies with academic and research structures offering state-of-the-art resources. All of the region's universities are attached to institutes with which they collaborate on a multitude of highly specialized projects. These include CERN, the largest research center for particle physics in the world; the Idiap Research Institute, one of the most active research institutes in information technology; the Swiss Center for Electronics and Microtechnology (CSEM); and the Adolphe Merkle Institute (AMI), which specializes in the nanoscience field. Switzerland's system of knowledge and technology transfer between universities and businesses is the most advanced and efficient in the world.



Dynamic Poles of Excellence

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- Information and communication technologies (ICT)
- Pharmaceuticals and biotechnology
- Medtech
- Cleantech
- Micro-nanotechnology and precision engineering
- Nutrition and FMCG
- Banking, finance and trading

THE IDEAL LOCATION FOR CUTTING-EDGE BUSINESSES

The GGBa offers an ideal location for companies wanting to expand their activities throughout Europe and beyond. Its strategic position, at the crossroads of several major transport routes, means that it offers easy access to Europe's 500 million consumers. The expertise that originated with the region's watchmaking tradition has today evolved and been honed into superior skills in automation, micromechanics and microelectronics – competences that are applied to medtech, pharmaceutical and cosmetic products, biotech, chemistry, cleantech, semiconductors and information and communication technologies (ICT). With its dynamic knowledge-based economy and highly qualified, multilingual workforce, the GGBa has been attracting businesses and institutions active in very high-value-added sectors for several decades.

A UNIQUE COMBINATION OF BUSINESS CLUSTERS

With its share of Switzerland's GDP at around 4.5%, and representing CHF 28 billion in value added, the ICT sector is a pillar of the Swiss economy. Growth has been further stimulated in the GGBa by the need for secure data transfer by the numerous multinationals, banks and international organizations located here. The region is today home to an impressively large number of start-ups in the bioinformatics, encryption and Internet and network security fields, as well as to major international players such as Cisco, VeriSign, HP, Autodesk and Huawei. Switzerland's life sciences sector boasts the highest labor productivity levels worldwide. In terms of attractiveness, the Western Switzerland Health Valley is ranked just behind Cambridge and ahead of most European regions, which explains why global giants such as Merck, UCB, Baxalta and CSL Behring have chosen the GGBa to locate some of the world's most cutting-edge production sites. With investments in R&D of up to about 4.4% of its GDP, the region is a major player in the research arena and is home to renowned centers of excellence such as the ARTORG Center at Bern University, which provides translational research in the field of biomedical engineering, and Campus Biotech, which focuses on biotechnology and neuroscience. The GGBa is also home to a multitude of international companies from the nutrition and consumer goods sectors, including giants such as Nestlé, General Mills, Chiquita, Philip Morris and Procter & Gamble, which benefit from a dynamic network of research centers and technology parks. The Integrative Food and Nutrition Center of the EPFL, for example, acts as an interface between researchers and industry to promote the development of interdisciplinary projects at all levels of the food value chain. PhytoArk is a unique technology site that provides support to start-ups and companies throughout the process of mass-producing products based on natural ingredients, from conceptualization to marketing.



An Efficient Educational System

Image
University of Applied Sciences and Arts
Western Switzerland (HES-SO), Sierre
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A HIGHLY SKILLED WORKFORCE

Combining practical vocational training and superb university education, the Swiss education system ranks highly in international comparisons, and is often cited as the best suited for today's competitive market. Upon completion of compulsory education, two-thirds of Switzerland's students opt for an apprenticeship, which leads to a Federal Certificate of Capacity and can be complemented by further education in the form of a professional maturity that grants access to universities of applied sciences. The apprenticeship system covers 230 occupations and provides training and professional qualifications for precisely the skills that the ever-changing market demands – one of the factors behind Switzerland having one of the lowest unemployment rates in Europe.

At the tertiary level, the GGBa offers an impressive number of superior-level educational institutions, including the Federal Institute of Technology Lausanne (EPFL), the Swiss Federal Laboratories for Materials Science and Technology (EMPA) in Thun, five cantonal universities and two major networks of universities: the University of Applied Sciences and Arts Western Switzerland (HES-SO) and Bern University of Applied Sciences (BFH). As such, the GGBa is home to a comprehensive range of outstanding higher education institutions, which gives it a comparative advantage in the sectors of international trade and management, international relations, finance, medical and climatic research, engineering and other high-value-added industries – all originally inspired by the region's watchmaking expertise. For major international companies located here, this proximity to universities at the forefront of basic and applied research means that they have a pool of highly skilled talent right on their doorstep.

INTERNATIONALLY RENOWNED PUBLIC AND PRIVATE SCHOOLS

Swiss public and private schools have a well-deserved reputation for excellence. Swiss students regularly achieve very good scores in the PISA international surveys (Program for International Student Assessment) and regularly outperform their European Union peers in math. Swiss universities frequently feature at the top of international higher education rankings. The EPFL was even voted the best university in the world ranking of universities under 50 years old by Times Higher Education magazine.

The GGBa offers by far the highest concentration of international schools per million inhabitants, ahead of London, New York, and the Swiss average. Children of expatriate employees have the possibility of following an international curriculum or one in their native language, all compatible with the examinations in their home countries – for example, the International Baccalaureate (IB), the German Abitur, the French Baccalaureate, or with the admission requirements for American universities.