



## SWITZERLAND – YOUR RESEARCH AND DEVELOPMENT HUB

### R+D EXPENDITURE WORLDWIDE

As % of GDP, 2015

Country	percent
 Israel	4.25
 Switzerland	3.37
 Japan	3.29
 Sweden	3.28
 Germany	2.93
 Finland	2.90
 USA	2.79
 The Netherlands	1.99
 EU28	1.96
 United Kingdom	1.70

Source: BFS, 2018

### INTRODUCTION

If you are looking for new products, services and technologies to fuel corporate growth, you need R+D. By taking advantage of R+D credits to drive innovation, you could enhance your investment returns and help create long-term value and competitive advantage for your business and the wider economy.

In today's globalized business world you may face competition from efficient, well-capitalized foreign companies as well as from local competitors. It is increasingly apparent that R+D-driven innovation is vital to achieving sustainable success for almost any business.

By relocating R+D activities to Switzerland, you may utilize Switzerland's trump card: Switzerland has well-developed and globally networked educational research and innovation centers that continually increase the quality of the country as a business location.

Switzerland is generally recognized as having a sophisticated business culture and an educated and adaptable international labor force. As a result, it regularly tops the ranks of global competitiveness reports. A significant contributor to this is the country's capacity for innovation. As it also provides a very competitive tax environment, it is the perfect Intellectual Property (IP) location.

### WHY SHOULD YOU CONSIDER SWITZERLAND?

**Switzerland can offer multiple advantages if you:**

- Focus on Life Sciences and ICT and wish to attract top research personnel
- Are a knowledge industry business looking for higher returns on R+D investments
- Are looking to partner with academia and attract top researchers

## KEY TRENDS IN R+D

### Trend 1: Integrating R+D into financial and business strategy

Improving your return on investment by integrating R+D into your financial and business strategy is a key challenge for knowledge-based businesses. Put differently, stand-alone R+D efforts that are not incorporated into financial and fiscal planning models risk producing low – or even negative – returns, even if the programs might be successful from a scientific perspective.

#### The challenges:

- Efficiently exploiting capital from intellectual property
- Reducing time-to-market through efficient registration and patenting procedures
- Keeping up the pace of innovation to avoid loss of competitiveness

#### Why Switzerland:

##### 1. Efficient exploitation of IP

Several attractive tax planning models are available for IP in Switzerland, including an IP Box that can help reduce tax on patent and trademark royalties. The Canton of Nidwalden, for example, applies a flat 1.2% tax rate on net licensing income derived from IP licenses. The definition of the income from qualifying intellectual property rights (IP) corresponds to the (current) formulation proposed under corporate tax reform III as well as the international standards (OECD).

Swiss IP branch taxation is also available. Switzerland applies a unilateral branch exemption under its domestic law – this means that profits attributable to foreign branches of Swiss companies are not taxable in Switzerland. This in principle leads to a 0% effective tax rate, although a head office allocation of between 0% and 10% is customary. In a low tax branch jurisdiction, there is generally no or very low taxation of income. Sufficient substance is, however, required in the branch jurisdiction in order to constitute a qualifying branch. Such a setup may result in an effective tax rate of less than 1% if 1%-10% of the branch profit (head office allocation) is taxable in Switzerland.

#### Centralizing IP management functions in one Swiss company or Swiss branch may not only result in tax advantages but also in numerous non-tax advantages:

- Keeping IP registered only as long as necessary
- Avoiding unnecessary duplicate registration and associated costs
- Lower administration costs
- Centralized knowledge and one-stop-shop for other departments
- Enhanced transferability in case of restructuring

#### The IP can be transferred by:

- Sale or pledge of IP
- Relocation of IP company
- Contribution without consideration
- Allocation to a branch

##### 2. Depreciation of IP

Depreciation is tax deductible if considered commercially justified by the Swiss tax authorities, i.e. in line with the safe harbor depreciation rates or at a rate justified in a particular case. The safe harbor rates for IP are 20% (straight-line) or 40% (reducing-balance), which is in line with the general five-year depreciation period set out in the accounting principles. Depending on the nature of the IP, other depreciation regimes may be commercially justified, which can result in lower tax rates.

##### 3. Efficient patenting procedures for inventions and trademarks

Switzerland's patent and drug registration authorities are efficient and experienced. According to the World Intellectual Property Association (WIPO), Switzerland enjoys Europe's highest number of patent applications per capita.

#### Patent registrations

As part of the European Patent Convention and the International Patent System (PCT), Switzerland can apply patent protection for 148 countries worldwide, including 38 in Europe. This means that by filing a single international patent application with the International Bureau of WIPO in Geneva, under the PCT you can simultaneously seek protection for an invention in all 148 covered countries.

A further benefit is Switzerland's cost-saving registration procedure. Unlike other countries, Switzerland does not carry out an in-depth examination of novelty. An invention must be novel in order to qualify for the patent registration.

#### Registration of medical products and devices

Swissmedic grants sales licenses to introduce new therapeutic products in Switzerland in a process that takes around 330 days. Fast track procedures are possible for certain therapeutic products. Swissmedic collaborates with the European Medicines Agency and industry and is highly regarded for its efficiency. Price setting is undertaken by the Federal Office for Health, which generally applies pricing models that take into account Switzerland's higher development costs compared to other countries. Drug manufacturers applying for a sales license in Switzerland first thereby obtain a typically attractive price.

### Top 10 Countries for PCT Patent Applications

Number of patent applications and percentage change in total quantity according to available annual figures

Country	2016	2017	Change (%) from previous year
 USA	56,594	56,624	↗ 0.1
 China	43,091	48,882	↗ 13.4
 Japan	45,209	48,208	↗ 6.6
 Germany	18,307	18,982	↗ 3.7
 South Korea	15,555	15,763	↗ 1.3
 France	8,210	8,012	↘ 2.4
 United Kingdom	5,502	5,567	↗ 1.2
 Switzerland	4,367	4,491	↗ 2.8
 The Netherlands	4,676	4,431	↘ 5.2
 Sweden	3,720	3,981	↗ 7.0

Source: PCT, 2018

#### Case Study:

The Canton of Nidwalden is the only Canton that applies a flat tax rate of 1.2% on net licensing income derived from IP licenses. It is home to about 60 IP companies, of which around 50 are foreign IP companies.

#### Trend 2: Collaborative research

Collaborative research refers to a system of close cooperation between academia, research institutes and the private sector. It relates in particular to the pharmaceutical and biotech sector as well as technology and the industrial sector. Such cooperation is often established in a particular geography to network and benefit from physical proximity, core competencies, skilled workforce and specialists, activity base, specialized (physical and intellectual) infrastructure, and industrial organization. A cluster's geographic concentration provides a unique environment for accelerating technological innovation, stimulating new start-up firms and attracting investments as well as creating a pool of skilled labor.

#### The challenges:

- Finding academic or research partners with whom to collaborate
- Financing collaboration with academia

#### Why Switzerland:

1. All Swiss universities have well-developed Knowhow Transfer Organizations which are staffed by experts. They generally use one of two models when working with industry: a contract agreement or a transfer agreement. There are specialized service providers such as Unitetra, which coordinate technology transfer activities for several universities and offer one-stop-shop solutions for companies seeking collaboration with academia.

2. The Swiss Innovation Agency (Innosuisse) offers funding for R+D for up to 50% of the costs of collaborative projects between the private sector and academia. Companies do not need to be Swiss owned but are required to have significant value-added activities in Switzerland to be eligible for such funding.

#### Case Studies:

**Nestlé SA** is a Swiss-based multinational food and beverage company headquartered in Vevey. Eight out of its 34 research centers are in Switzerland. The centers research ingredients, food sciences and technology, quality, safety and health science as well as clinical development. 55% of the company's R+D expenditure is in Switzerland. The Nestlé Institute of Health Science research center is situated next to the Federal Institute of Technology in Lausanne. This allows both the university and the research center to actively research health issues and chronic disease in conjunction with individual nutrition.

**Biogen** is building a state-of-the-art biopharmaceutical production facility in Luterbach near Solothurn. The plant combines the latest biogen ideas on fed-batch cell culture technology and protein purification. This allows the production of biopharmaceuticals on a large scale. When operations commence in 2019, up to 400 new jobs will be created.

**The Walt Disney Company (Switzerland) GmbH** runs an innovation lab in Zurich that is responsible for computer graphics, stereo and displays, animation and capture and effects. It enjoys easy access to the Swiss Federal Institute of Technology Zurich (ETH). With strong ties to the ETH's computer graphics lab, Walt Disney's Zurich lab is involved in video of the future (video manipulation, video coding, 3D, and perceptual studies), computational cinematography, human and facial animation, and capture technologies. Additional strengths include wireless networking and computational materials. In spite of the distance, the Zurich researchers are in frequent contact with The Walt Disney Company business units.

The **Blue Brain project** is a Swiss initiative at the EPFL Lausanne and aims to create a biological-digital reconstruction and simulation of the human brain. With the supercomputer-based simulation, a new tool will be available to investigate the complex interactions within different organizational levels of the brain.

### Trend 3: Attracting qualified scientists and researchers

Your know-how is one of your key competitive advantages, and innovation one of your growth drivers. A highly skilled, flexible workforce is essential if you are to maintain competitiveness and deliver innovative new product solutions.

#### The challenge:

- Attracting highly qualified scientists through an attractive work/life environment

#### Why Switzerland:

- Switzerland offers an excellent living and working environment.
- Switzerland offers high salaries for scientists.
- Swiss-based researchers publish several publications per year – the highest number relative to population in the entire OECD region.
- Switzerland ranks first in the Shanghai University Ranking in terms of top universities per capita.

#### Mighty Minds

Number of universities in the Shanghai ranking top 100, 2017

Country	Top20	Top100
 USA	16	48
 United Kingdom	3	9
 Switzerland	1	5
 Australia	0	6
 Germany	0	4
 The Netherlands	0	4
 Canada	0	4
 France	0	3
 Japan	0	3
 Ireland	0	1

Source: Shanghai Ranking, 2018

#### Case Studies:

**Novartis Stiftung für medizinisch-biologische Forschung** (Novartis Institute for Biomedical Research) is the biggest research center at Novartis, a leading global pharmaceutical company. The Basel-based institute develops new medicines, focusing on autoimmunity, transplantation, inflammation, musculoskeletal diseases, neuroscience and oncology. Part of the group's success is due to its location in Switzerland, which allows it to collaborate with specialists across academia, research institutes, other biotech and pharmaceuticals companies and hospitals.

**ABB Ltd.** is a global leader in power and automation technologies. The company employs more than 140,000 staff and operates in over 100 countries. Its research center is based in Baden-Dättwil, Switzerland, where it employs 220 staff from 40 different countries. The research center can count on an additional 110 scientists from nearby universities and research institutes.

**Hyundai Electric Switzerland** recently opened a leading R&D service center for power solutions at Hyundai Electric in Zurich. The research center promotes technology developments for high-voltage products, relies on highly-skilled workers and know-how in high-voltage technologies in Europe and offers a modern work environment for around 50 highly qualified engineers. The center was opened in Switzerland to benefit from its favorable and stable labor market conditions.

#### Further information on Swiss Innovation

[www.s-ge.com/innovation](http://www.s-ge.com/innovation) > Innovation Factsheet