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“ Most companies will wait until new technologies have been tested abroad and first proof of benefit can be shown. Thereafter businesses seem quite open for implementing the new technology.”

—*Swiss e-commerce executive*

“ Even though Switzerland is not generally associated with IT innovation, we can claim that Geneva is the birthplace of the World Wide Web.”

—*IT researcher, Switzerland*

Switzerland's highly educated population and well developed infrastructure are two strengths evident in the nation's overall Networked Readiness ranking of sixteen.

As early as 1987, the Swiss Confederation, in conjunction with eight Swiss universities, launched the SWITCH Foundation, which promotes the use of modern methods of information transfer, specifically as they relate to facilitation of research and development. This group has established itself as an ICT pioneer within Switzerland, testing new technologies well in advance of mainstream adoption.

In 1998, the Swiss telecommunications market was liberalized, first for data traffic and then for voice. Telecom PTT, the state-owned telecommunications company, was also privatized. While these changes reduced government control over the country's communications industry, the government continues to control almost 66 percent of Swisscom (formerly Telecom PTT). The government further influences the market through the state regulatory body, OFCOM, which is criticized as being slow-moving and lacking true independence.

Although the fixed-line market has been legally open to competition since 1998, Swisscom's refusal to unbundle the local loop has dampened the competitive dynamic within the telecommunications environment. Yet, in absolute terms, the government's reforms have brought prices down for both residential and business communications since liberalization (Ranking in Effect of Telecommunications Competition: 13).

In 1998, the Swiss government also launched the Information Society Coordination Group (ISCG) to monitor and execute national ICT development through training and education (Ranking in Effectiveness of Government ICT Programs: 20). The ISCG is also working to promote e-commerce, e-government, and new forms

of online culture. Of particular concern to the government is the growing digital marginalization of groups such as the disabled and elderly populations within Switzerland. Further integration of ICT into the national education system is a priority for the Swiss government, but because of the nation's decentralized government structure, it has limited control over primary and secondary school curriculum design.

The Swiss population's approach to technology adoption has been measured and thoughtful, even hesitant. Business and individual users alike have shown skepticism of the Internet's viability as a sales channel or retail outlet. Recent strides have been made, however, in developing electronic commerce in Switzerland (Ranking in e-Commerce micro-index: 10).

Moreover, the high-technology sector has yet to become a significant influence within the Swiss economy. Swiss banks have been reluctant to fund domestic high-technology ventures that fall outside their risk portfolio. Entrepreneurs must rely on their own funds to start businesses and often have to look to partnerships for growth opportunities (Ranking in Prevalence of Internet Start-ups: 22). The bureaucratic complexities of establishing a new business in Switzerland have also discouraged ICT entrepreneurs from moving forward with business plans.

The ICT sector has not let these roadblocks impede all progress, however, and businesses have sprung up to help entrepreneurs navigate these obstacles. The Swiss university system is playing a role as well, using the classroom as a vehicle to develop concepts and launch new companies (Ranking in Quality of Local IT Education: 13).

Key Facts

Population	7,164,400
Rural population (% of total population) 1999	32.30 %
GDP per capita (PPP)	US\$28,518
Global Competitiveness Index Ranking, 2001–2002	15
UNDP Human Development Index Ranking, 2001 (adjusted to GTR sample)	11
Main telephone lines per 100 inhabitants	71.99
Telephone faults per 100 main telephone lines	18.47
Internet hosts per 10,000 inhabitants	366.41
Personal computers per 100 inhabitants	50.25
Piracy rate	34.00 %
Percent of PCs connected to Internet	7.29 %
Internet users per host	9.14
Internet users per 100 inhabitants	33.50
Cell phone subscribers per 100 inhabitants	64.45
Average monthly cost for 20 hours of Internet access	US\$16.12

RANK

Networked Readiness Index **16**

Network Use component index **17**

Enabling Factors component index **12**

■ Network Access **9**

Information Infrastructure 11

Hardware, Software, and Support 7

■ Network Policy **11**

Business and Economic Environment 5

ICT Policy 17

■ Networked Society **10**

Networked Learning 14

ICT Opportunities 12

Social Capital 3

■ Networked Economy **14**

e-Commerce 10

e-Government 22

General Infrastructure 11