

SwissTalents - The Knowledge Network Statistical Analysis

SwissTalents

«SwissTalents™ - The Knowledge Network, is the network of highly skilled people living outside Switzerland, whether they are Swiss nationals or friends of Switzerland.»

SwissTalents (cf. Annex 1 for more details) is first of all a database with often very detailed profiles of highly skilled specialists willing to share their professional experience and skills with others. This database can be accessed through the Web (www.swisstalents.org) and can be queried with a search engine. But SwissTalents is especially a networking tool for talent and information exchange. It was developed by the Swiss Science Counselor in San Francisco with the support of various partners.

Only a few months after being launched, SwissTalents already has more than 1,200 highly skilled members. The following indicators have been obtained through a first statistical analysis of the members (the methodology is described in Annex 2).

GEOGRAPHICAL DISTRIBUTION

Today, March 27, 2000, SwissTalents has 1,248 members distributed among 41 countries. It should be noted that the strong North American predominance does not necessarily reflect the global distribution of potential members. It is instead the result of a long-standing relationship between the Science Counselors and Swiss talent living in the United States and Canada.

The challenge for SwissTalents in the next few months will be to try to make contact with and then establish a relationship with the talent in the other regions of the world.

Argentina (1)	Australia (6)	Bosnia & Herzegovina (1)
Bulgaria (1)	Canada (72)	China (2)
Czech Republic (1)	Denmark (3)	Egypt (1)
Finland (2)	France (29)	Germany (108)
Greece (1)	Hungary (1)	Indonesia (1)
Israel (6)	Italy (2)	Japan (13)
Kuwait (1)	Lebanon (1)	Malaysia (1)
Mexico (1)	Morocco (2)	Netherlands (4)
New Zealand (2)	Norway (2)	Oman (1)
Peru (1)	Poland (1)	Singapore (6)
South Africa (1)	Spain (1)	Sweden (6)
Taiwan (2)	Thailand (2)	Ukraine (1)
United Arab Emirates (1)	United Kingdom (9)	USA (818)
Venezuela (1)	Vietnam (1)	

Figure 1 : Global distribution of SwissTalents members

Within the United States, it is interesting to observe the distribution of SwissTalents members according to some very distinct regions defined as follows :

- USA DC Washington, D.C. and the large region surrounding the capital
(Delaware, District of Columbia, Kentucky, Maryland, Virginia, West Virginia)
- USA NE New York, Boston and New England, among others
(Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont)
- USA SE Research Triangle, Florida and Texas, among others
(Alabama, Arkansas, Colorado, Florida, Georgia, Kansas, Louisiana, Mississippi, New Mexico, North/South Carolina, Oklahoma, Tennessee, Texas)
- USA Center Chicago (Great Lakes), Minneapolis and St. Louis, among others
(Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin, Wyoming)
- USA NW San Francisco, Silicon Valley, Seattle and Salt Lake City, among others
(Alaska, Northern California, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington)
- USA SW Los Angeles and San Diego, among others
(Arizona, Southern California)

USA total	USA DC	USA NE	USA SE	USA Center	USA NW	USA SW
813	67	167	122	104	238	115

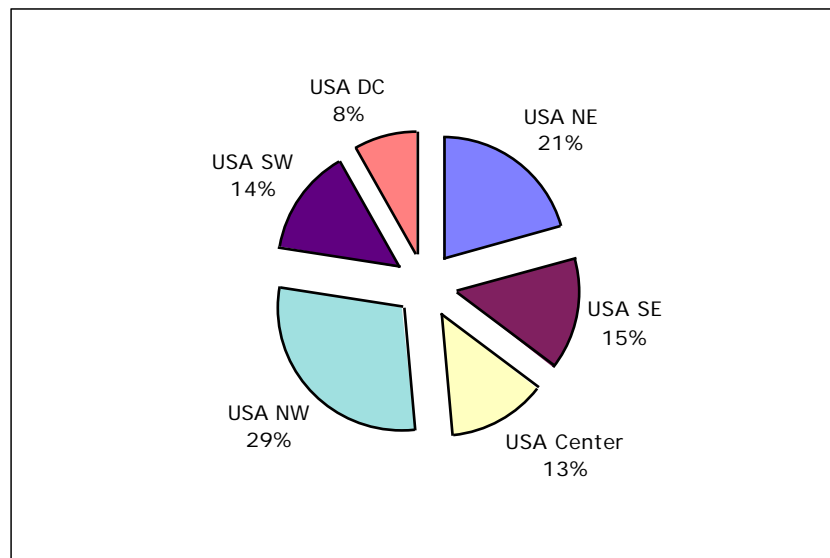


Figure 2 : Distribution of SwissTalents members in different regions of the United States, in absolute terms (table) and percentages (graph), March 24, 2000

MEN AND WOMEN

SwissTalents members have a university degree or equivalent. Therefore it is interesting to compare the distribution between women and men with the figures from the Federal Office of Statistics (Report No. 139-9701). In 1995 in Switzerland, the ratio of women to men was 6/10 among university graduates and 11/33 among graduates with university equivalent degrees.

%	World	Germany	Canada	USA total	USA NE	USA SE	USA Center	USA NW	USA SW	USA DC
Male	89.0	88.0	92.5	88.8	90.4	91.8	92.3	89.5	85.2	77.6
Female	11.0	12.0	7.5	11.2	9.6	8.2	7.7	10.5	14.8	22.4

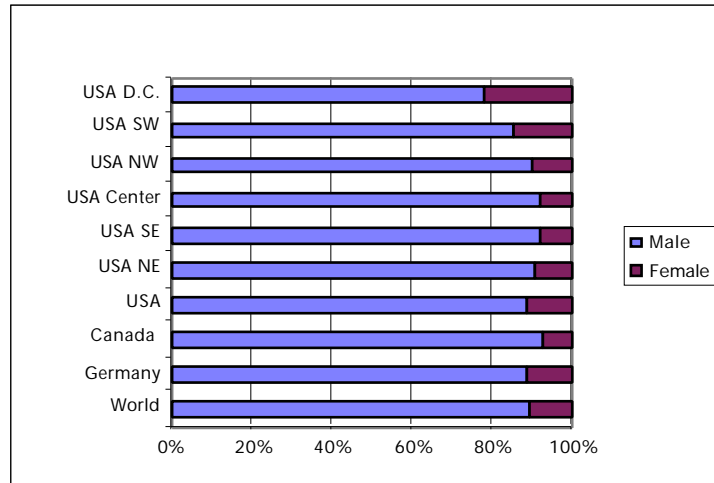


Figure 3 : Distribution of SwissTalents members between women and men

AGE PROFILE

In various regions of the world and North America, the age profile of SwissTalents members is as follows :

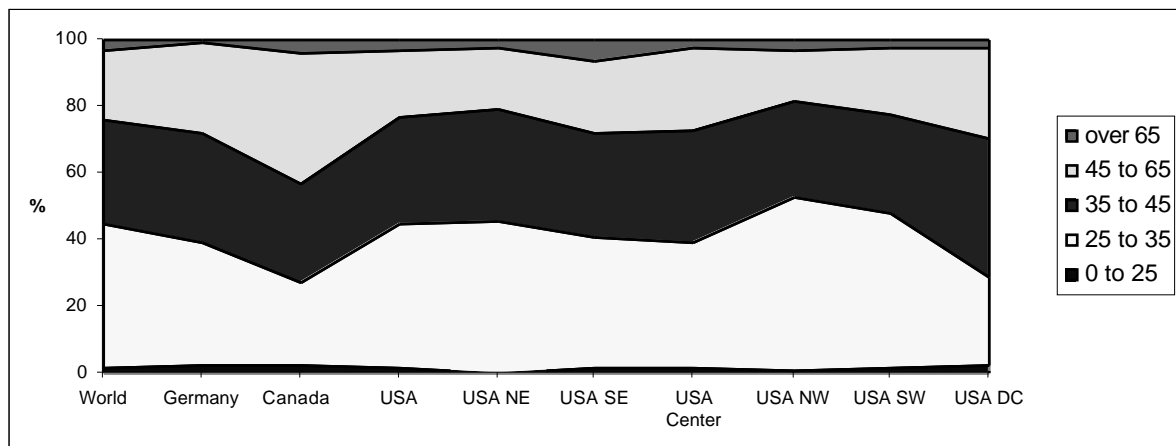


Figure 4 : Distribution of SwissTalents members by age categories

PROFESSIONAL ACTIVITY

When they register for SwissTalents, the members describe their occupation by a free-form text as well as one numerical code according to the ISCO88 (*International Standard Classification of Occupations*, cf. Annex 3). The occupations of the members are classified below according to four general categories, then analyzed in greater detail by subcategories.

%	World	D	CAN	USA total	USA NE	USA SE	USA Center	USA NW	USA SW	USA DC
Physics, maths, engineering	46.5	36.1	38.8	48.9	38.9	45.9	45.2	61.4	52.2	32.8
Life sciences, health	27.1	22.2	37.4	28.5	32.9	30.3	24.0	24.0	31.3	32.8
Teaching	8.7	24.1	8.9	6.8	8.4	9.0	12.5	3.7	5.2	4.5
Business, law & others	17.7	17.6	14.9	15.8	19.8	14.8	18.3	10.9	11.3	29.9

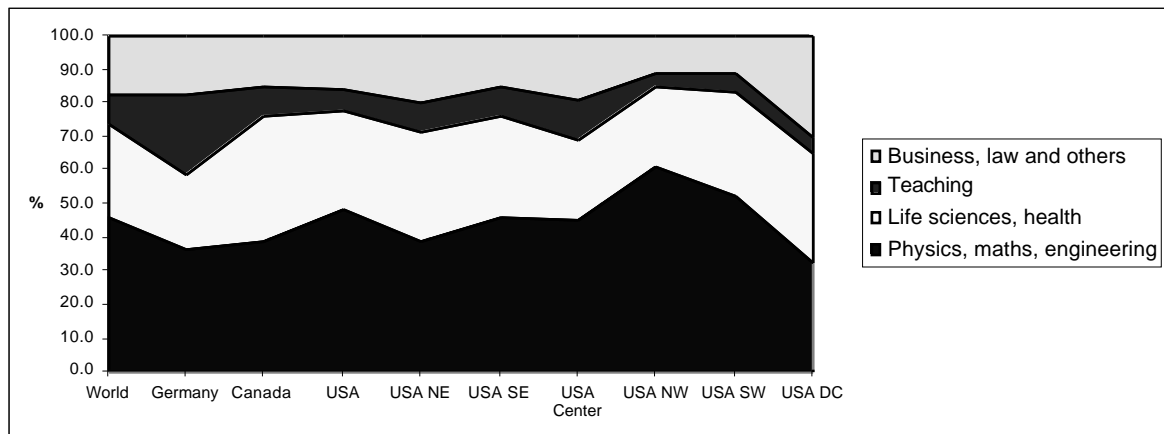


Figure 5 : Distribution of SwissTalents members by occupation

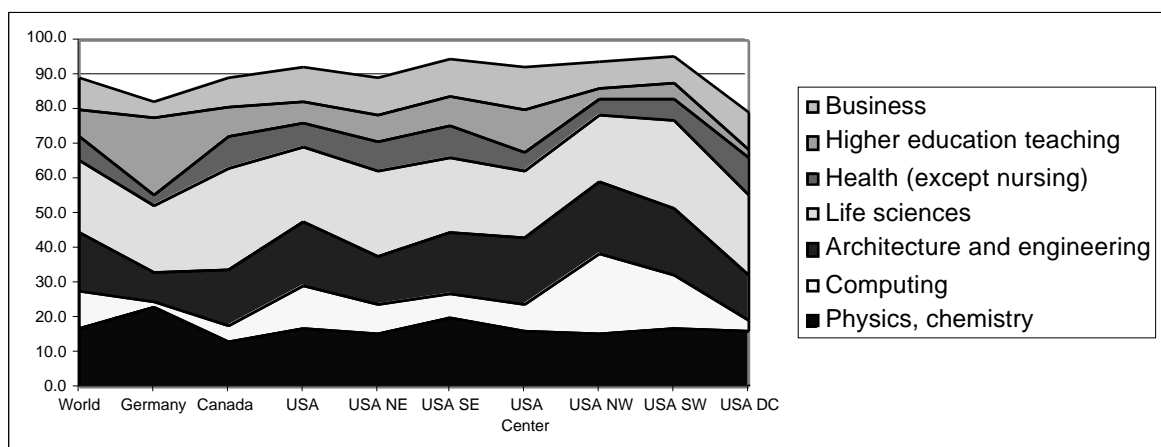


Figure 6 : More detailed analysis of occupations according to various subcategories

CONCLUSIONS

Within the United States, the regions preferred by SwissTalents members are clearly the „Silicon Coast“ from San Francisco to Seattle, followed by New York and New England in the East.

On the average, only 11% of the members are women, a percentage which increases significantly only in the Southwest (Los Angeles and San Diego) --possibly because of the importance of its biotechnology center-- and in the greater Washington, D.C. area.

The average age of the members is the highest in Canada. It is the lowest in the Northwest, where the Silicon Valley and the Seattle region, in particular, attract a great number of young information technology and biotechnology specialists. The young age of these members completely corresponds with that of the local population, in a region of pioneers without ties often devoted body and soul to their mission.

While there are many physicists, chemists and teachers in Germany, the other centers which stand out are :

- Washington, D.C. for lawyers, business and the life sciences (probably because of the National Institutes of Health and other institutions of that type)
- The Northwest for information technologies, engineering and basic sciences
- The Southwest and the Northeast for life sciences

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ANNEX 1 : Details on SwissTalents

Purpose : To create a „Knowledge Network“ for Switzerland based on the talent, professional skills and international experience of Swiss living abroad and friends of Switzerland abroad. The anchor of SwissTalents is a Web site (www.swisstalents.org) which uses the latest Internet tools (full text database, mailing lists, etc.).

Members : The members have a university degree or equivalent and work or have worked outside of Switzerland. By registering, they indicate their interest in and their availability for Swiss science, technology, education and innovation. They register their profile themselves and often very precisely describe their education, their activities and their professional experience, sometimes even including their résumé. They can choose the parts of their profile which are publicly accessible.

Privileges : The members have access to an electronic discussion forum and receive the quarterly magazine *Vision - Science and Innovation Made in Switzerland* free of charge. They have privileged access to the services of SwissTalents (see below).

Services : The other SwissTalents services (pages of links and references, a list of Swiss Science Counselors throughout the world, etc.) are accessible to the public. People especially use various electronic newsletters, to which any interested person can subscribe (www.swisstalents.org/eLists) :

- *eScience-Switzerland* tries to fill the information gap encountered by interested persons abroad by providing news about what is happening in Switzerland in science, technology, education and innovation. It is a free bimonthly electronic newsletter. Each issue contains 8-10 news items consisting of 2-3 descriptive lines and the Web link for complete information.
- the other three *eScience* newsletters have the same editorial principle and address the same four topics as *eScience-Switzerland*, but aim to reverse the flow of information, i.e., from the world to Switzerland. They cover Europe, Asia and North America, respectively.

The information distributed through these newsletters is archived on a Web site which can be consulted and used with a search engine (www.swisstalents.org/eLists).

Research : SwissTalents has a full text search engine which allows one to identify talent, contacts, and potential partners according to very precise criteria (for example, one can use the key words „Jay Trouvé“ to access the sample profile of the imaginary inventor of the same name).

Concept and support: The design, management and leadership of SwissTalents are the initiatives of the Swiss Science Counselor in San Francisco within the framework of the Swiss Science Counselors global network. SwissTalents was launched with the support of Nestlé and the Council of the Swiss Federal Institutes of Technology. The development and operation of SwissTalents are made possible by partnerships with McKinsey, MediaMind, Swissair, Swisscom and UBS.

ANNEX 2 : Methodology of the analysis

In order to allow each member to best describe his or her occupational activity and skills, SwissTalents gave greater importance to the free-form fields in the registration procedure. On the other hand, that limits the statistical use of this data, by definition making it more difficult to compare.

SwissTalents is a directory in which interested persons register on a voluntary basis. It is therefore not necessarily representative of all the talent, but in any case it is representative of those who are well motivated. To guarantee a representative sample, only the countries and regions with about a hundred members or more were analyzed.

ANNEXE 3 : ISCO88 codes

International Standard Classification of Occupations

- 21 **Physical, mathematical and engineering science professionals**
 - 211 Physicists, chemists and related professionals
 - 2111 *Physicists and astronomers*
 - 2112 *Meteorologists*
 - 2113 *Chemists*
 - 2114 *Geologists and geophysicists*
 - 2119 *Environmental professionals*
 - 212 Mathematicians, statisticians and related professionals
 - 2121 *Mathematicians and related professionals*
 - 2122 *Statisticians*
 - 213 Computing professionals
 - 2131 *Computer systems designers, analysts and programmers*
 - 2139 *Other computing professionals*
 - 214 Architects, engineers and related professionals
 - 2141 *Architects, town and traffic planners*
 - 2142 *Civil engineers*
 - 2143 *Electrical engineers*
 - 2144 *Electronics and telecommunications engineers*
 - 2145 *Mechanical engineers*
 - 2146 *Chemical engineers*
 - 2147 *Mining engineers, metallurgists, material scientists and related professionals*
 - 2149 *Other architects, engineers and related professionals*
- 22 **Life science and health professionals**
 - 221 Life science professionals
 - 2211 *Biologists, biotechnology professionals, botanists, zoologists and related professionals,*
 - 2212 *Pharmacologists, pathologists and related professionals*
 - 2213 *Agronomists, food engineers and related professionals*
 - 2219 *Other life science professionnals*
 - 222 Health professionals (except nursing)
 - 2221 *Medical doctors*
 - 2222 *Dentists*
 - 2223 *Veterinarians*
 - 2224 *Pharmacists*
 - 2229 *Other health professionals (except nursing)*
 - 223 Nursing professionals
- 23 **Teaching professionals**
 - 231 College, university and higher education teaching professionals
 - 239 Other teaching professionals
- 24 **Other professionals**
 - 241 Business professionals
 - 242 Legal professionals
 - 243 Information management professionals
 - 244 Social science and related professionals
 - 2441 *Economists*
 - 2442 *Sociologists, anthropologists and related professionals*
 - 2443 *Philosophers, historians and political scientists*
 - 2444 *Linguists, philologists, literature professionals, translators and interpreters*
 - 2445 *Psychologists*
 - 2449 *Other social science and related professionals*
 - 245 Writers and artists
 - 246 Religious professionals
 - 247 Public service administrative professionals