Commission for Technology and Innovation, Switzerland

CTI President Walter Steinlin discusses how the organisation strives to bring innovation, entrepreneurial thinking and knowledge transfer into businesses in Switzerland.
What are the Commission for Technology and Innovation (CTI)’s core activities?

The CTI promotes science-based innovation in Switzerland, based on three pillars. First, we help innovators to achieve their breakthrough by co-funding R&D projects run jointly by companies, public agencies or non-profit organisations with entitled research institutions. Second, we promote entrepreneurial thinking among young scientists and business people by providing training and coaching programmes to young entrepreneurs. Third, the CTI developed a new knowledge and technology transfer (KTT) strategy in 2012 that helps provide an efficient network for businesses – especially SMEs – and public research institutions in order to generate new opportunities for innovative cooperation. This strategy is based on three key areas: innovation mentors (IMs) provide information on funding opportunities and support in drawing up project applications; the national thematic networks help to form links between companies and public research institutions in thematic areas which are of particular interest to Switzerland; and interactive and physical KTT platforms provide an opportunity to form contacts and share experiences.

Could you elucidate the responsibilities of your role as President of the CTI? What aspects of this position do you find most rewarding?

As President, I am responsible for the activities of the Commission. I supervise the operations of the Secretariat and represent the organisation – in consultation with the Director and the six Vice-Presidents – to the public and stakeholders.

It is inspiring and eye opening to be at the intersection of academia and business, learning which scientific findings are of practical applicability and then helping turn them into economic value. It is like taking the role of a midwife: helping in a crucial metamorphosis from knowledge to know-how, with a wealth of connections to brilliant people.

Switzerland is a leading knowledge creator and innovator in Europe. How does the Swiss Government create the conditions necessary for innovation and a knowledge-based economy to thrive?

Our participatory direct democratic system emerged from an already firmly established and successful model of free trade, economic freedom, low government spending ratios and moderate tax burdens. These favourable conditions also enabled the expression of a strong, innovative and entrepreneurial spirit. The benefits of this pioneering period of formation are still felt today: our country has become a highly competitive location for production and services, and has earned a reputation for innovation, precision and quality.

In 2013, the CTI received a special task from the Swiss Parliament: energy innovation. In the years ahead, it is predicted that the energy revolution will present considerable challenges requiring radical innovations in various fields, many of which have yet to be scientifically developed.

The Swiss Parliament therefore adopted an action plan on ‘Coordinated Energy Research in Switzerland’. The CTI plays a key role in implementing this action plan, tasked with the responsibility of establishing a network of inter-university energy competence centres – the Swiss Competence Centers for Energy Research (SCCER). Although fundamentally different to the CTI’s normal methods of facilitating innovation, which do not prescribe themes but solely assess a project’s innovativeness and chances of success, the initiative is well on track, with all eight selected centres up and running.

These achievements have been made possible thanks to a large number of dynamic SMEs, established large-sized companies, a healthy mix of economic branches and – last but not least – an outstanding higher education sector, which draws students from near and far and produces a fresh flow of innovative talents.

What are the challenges in transforming research into economic value? How does the CTI facilitate this transfer in the Swiss context?

Successful innovation not only determines creativity but also resources, and that’s exactly the problem for a lot of SMEs. Often they have neither the personnel nor financial resources to conduct R&D on their own, and some are entirely absorbed by their daily business – this is where the CTI comes into play.

We operate on the principle of subsidiarity, helping when innovations cannot be launched or their market potential remains untapped. Only those who can quickly bring brilliant ideas to market will succeed in the modern globally competitive world. Each year, the CTI supports several hundred joint R&D projects and helps companies – especially SMEs – leverage the R&D resources of higher education institutions to develop their innovative ideas into marketable products and services.

How do you encourage businesses and research institutions to work together on joint R&D projects?

Where necessary, the CTI facilitates the initiation and execution of research projects through IMs. Since 2013, these mentors have been informing SMEs about innovation funding opportunities in Switzerland and helping them to develop their innovation projects.

IMs provide support during the starting phase of a science-based innovation partnership of national or international importance between
Another project focused on navigation systems. A Swiss company developed receiver modules that form the core of navigation systems, allowing systems to be located. Together with a research institution, they succeeded in developing the most economical GPS module in the world.

Could you discuss the CTI entrepreneurship programme? What do you aim to achieve through this?

For about two decades the CTI has, with great success, offered training programmes and coaching in an effort to promote entrepreneurship as an alternative to encouraging innovation in existing companies. Since 1996, more than 330 startup companies have earned the CTI Start-up Label – a seal of quality and maturity.

In addition, the CTI is involved at a much earlier stage through raising awareness among science and business majors of the potential of entrepreneurial thinking. We show them the challenging and exciting alternatives to traditional corporate careers in order to stimulate their entrepreneurial spirit and encourage them to pursue the path of company formation.

For this, the CTI offers a modular support programme: under the brand ‘CTI Entrepreneurship’, awareness events and semester courses are offered at Swiss higher education institutions (modules 1 and 2), as well as five-day courses on the subjects ‘Business Creation’ and ‘Business Development’ (modules 3 and 4). This ensures young people are aware of the various options available and receive assistance with the development of their business ideas.

What are the CTI’s key goals for the next five years?

Switzerland’s regular top ranking in the European Innovation Scoreboard shows that it has leading economic and innovative capacities. The number of patents filed increases with each passing year: with 186 triadic patents per CHF 1 billion in private sector R&D expenditure, Switzerland ranks second among the OECD countries.

Switzerland has the highest patent density and the highest number of scientific papers per capita. In other words, we are very well on track. Still, it remains our goal to steadily improve our promotional instruments according to the needs of SMEs and research institutions, and to be part of the world’s top countries in innovation – now and in five years’ time.