

Spotlight on Switzerland



Photo of the Crypto Valley in Zug, Switzerland, one of the world's leading blockchain ecosystems, and Park-Tower a project developed by Peikert Immobilien AG and Peikert Projekte AG.

A Look Inside the World's Most Innovative Economy

The World Intellectual Property Organization analyzed 131 economies, and for the last ten years, Switzerland has ranked as the world's most innovative country. The nation specializes in offering innovative solutions to complex global challenges, and has a unique ecosystem for business and investment opportunities. International corporations value Switzerland as an efficient, stable and productive location to grow dynamic businesses. The nation has a liberal economy, political stability, international integration, outstanding infrastructure, focuses on sustainability, and provides a well-structured tax code. In addition, Switzerland consistently excels in advancing technology, fostering academia, and maintaining one of the world's highest standards of living. For a population of only 8.6 million, it is extraordinary the global impact Switzerland has had on the world.

As a base for operations

As a stable country with an open economy committed to free trade, it is an ideal base to manage international operations. The country actively fosters the development of global business operations, and therefore, the small landlocked nation has been able to attract an impressive quantity of multinational companies. Companies also benefit from Switzerland's iconic neutrality, and ability to build diplomatic relationships and excellent trade agreements.

Ambassador Christian Dussey, Director of the Geneva Center for Security Policy stated, "Geopolitics can affect organizations in unexpected and dramatic ways with new regulations, sanctions, disruptions of supply chains, and more. The pillars of Switzerland's competitiveness remain strong into the foreseeable future, including the country's political stability, security, predictability, prime location, world-leading research and academic institutions, innovation, and digital capabilities. For companies that are worried about continued economic and political upheaval, Switzerland's stability is attractive."

Another reason Switzerland excels as a location, is that it is exceptionally well integrated globally. It is not within the European Union (EU), but a free trade agreement with the EU allows for a seamless free movement of goods, services and people. In addition, Switzerland has thirty free trade agreements outside the EU, the capability to negotiate independently, and new agreements are continually being negotiated.

However, a free trade agreement with the USA remains elusive. Switzerland is the seventh-largest foreign investor in the USA, and according to a study by the Swiss think-tank Avenir Suisse, "A free trade agreement would contribute to mutual prosperity and mutual gains." Swiss-American relations are based on shared social values and historically strong economic interests. Switzerland has a federal government that uses a bicameral system, and the USA and Switzerland are often referred to as sister republics.

In addition to political and economic cooperation, the two republics share similar cultural values. Pro Helvetia Director, Philippe Bischof mentioned, "Swiss art, culture, and values can shift global societal perceptions and encourage diversity. Pro Helvetia seeks to have a role in fostering cross-cultural exchanges between the USA and Switzerland. We have ambitions to further develop bonds between the two sister republics. Swiss culture and virtues foment multilateralism, encourage political dialogue, foster bilateral exchanges, and encourage engagement opportunities across cultures."

Business friendly legal framework

Switzerland is known for its business-friendly legal and regulatory framework. Unlike many European countries, Switzerland has a liberal labor legislation that is similar to the USA's. Switzerland is one of the most federal and democratic countries. All citizens can contest decisions made by parliament. The system is slow, which at times can be problematic; however this process prevents hastily made decisions. This creates political stability, which combined with a positive business attitude, is a solid background for a business ecosystem.

Academic excellence

The exceptional Swiss education sector prepares the population to be lifelong learners. This contributes to attracting the best global talent, and aids in the country's overall attractiveness as a business and investment destination.

According to Professor Dr. Andrea Emilio Rizzoli, Director of IDSIA USI-SUPSI, an artificial intelligence research institute, "There are various reasons why this small country, nestled in the Alps, has consistently ranked as one of the most innovative. A key asset is the Swiss higher education system. Switzerland is home to ETH Zurich and EPF Lausanne, the Swiss federal institutes of technologies, which are among the world's top-ranked universities. Often unnoticed, in parallel to the traditional universities, there is a whole system of Universities of Applied Sciences offering tertiary education aimed at shaping future professionals. The Swiss system delivers highly skilled professionals capable of tackling every aspect of an innovative company."

The sector has faced unparalleled challenges in the last year due to COVID-19, but entities have quickly adapted. One example of excellence in the sector is the International Institute for Management Development (IMD). Professor Jean-François Manzoni, President of IMD stated, "Education's contribution to Switzerland's overall attractiveness is not to be underestimated. We are not just able to attract the best global talent, we continuously develop it within a unique ecosystem that foment lifelong learning. Swiss education develops resilient leaders who transform organizations, contribute to society, challenge what is, and inspire what could be. Particularly during a crisis like today's, academia needs to dramatically accelerate the use of technology mediated interactions. As a world leader in executive education, pioneer in corporate leadership development, strategy, and digital transformation, IMD is an ideal example of this transformation. We have adapted quickly, leveraging this opportunity to offer immersive, bespoke experiences."

Hub for R&D

Switzerland possesses a phenomenal regulatory environment, and remains a high spender for R&D. Innovation is partially financed by the nation through R&D grants given to universities, and used in collaboration with industry to improve products, services and processes. It has become an effective way of ensuring R&D translates into marketable products. In addition, the private sector outspends global averages and consistently churns out new inventions. For instance, the World Wide Web was invented at CERN near Geneva in 1989. This is only one of thousands of innovative Swiss solutions currently tackling global challenges.

Furthermore, Switzerland has more patents per capita than any other European country, with over 900 patents per million inhabitants. Several core compa-

nies support this development, including Roche and Novartis in the pharmaceutical and life science sector, ABB within industry, and Nestle in fast-moving consumer goods, in addition to many other multinationals and growing startups.

Growing clusters

Within this ecosystem, Switzerland has fostered the development of strong clusters in manufacturing, finance, life sciences, ICT, and advanced engineering. This has encouraged niche, highly specialized companies to thrive throughout the regions of Switzerland, while catering to high value-added sectors such as biotech, medtech, fintech, cybersecurity, robotics, and industrial design.

Billions of Swiss franc are invested to ensure emerging companies and SMEs grow and flourish within their clusters. In addition to new entrants, technology companies increasingly relocate to Switzerland. Disney, Microsoft and IBM are a few of the companies actively increasing their research operations in the country. Oracle already has its biggest R&D lab globally in Switzerland. Google has its biggest lab outside the USA in Switzerland, and is quickly growing its footprint.

Building a more sustainable world

Swiss companies are cognizant of their global footprints, and therefore are increasingly implementing strict sustainability measures to play their part in building a more sustainable world. For instance, Bracken Darrell, CEO of Logitech said, "Logitech is committed to being part of global efforts to co-create a more sustainable world. We've committed to a 1.5°C climate pledge, are working toward being powered exclusively by renewable electricity, and have neutralized the carbon across our gaming products. We're also communicating the carbon impact of every product in our portfolio. We were one of the first companies in the world to commit to these carbon transparency labels, and hope many others will follow suit. We are striving to completely neutralize the entire company's carbon footprint. We're focused on innovation, quality and sustainability. We know how important this is for generations to come."

Combating challenges

In the face of the global pandemic, Swiss companies have been able to push forward with new ideas to drive economic recovery, embrace digitalization and diversify. According to Barbara Dalibard CEO of SITA, an information technology services company to the air transport industry, "Switzerland plays a vital role in global mobility needs. Regaining passenger confidence, which is at an all time low due to the pandemic, is a core challenge for the aviation industry. The general public should remember Swiss solutions are being implemented to make global airports, aircraft and borders safer. We are contributing to the installation of disruptive technologies that benefit air transport, enabling mobility through low-touch operations, and offering biometrics for self-service, which automates the entire passenger journey. We aim for touch-less airports to re-install confidence in traveling during the pandemic."



Nicolas Bideau
Ambassador
Head of Presence
Switzerland

Forward thinking

Head of Presence Switzerland, Ambassador Bideau, stated, "Switzerland's image abroad is excellent. Switzerland is ranked number one in attracting global talent, as we are well known as an attractive destination to live, work and study. Switzerland is also ranked as the world's most innovative economy, a major hub for R&D, and placed number seven on the global competitiveness index. Switzerland has many strengths in rather unexpected innovation fields, for instance acting as a space nation and pioneer in drone technology. Our financial services sector is also creating more sustainable financing and green financing for future generations."

With innovation as the common denominator across all sectors in Switzerland, it is one of the world's most advanced free-market economies. Swiss innovation is legendary; it changed the world in the past, and will continue to do so in the future. ■

By Jennifer Jendusa

Swiss innovations tackling global challenges.
www.innosuisse.ch/innovations

Schweizerische Eidgenossenschaft
 Confédération suisse
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 Confederaziun svizra
 Swiss Confederation
Innosuisse – Swiss Innovation Agency

Strengthening Swiss-American Relations

With informal conversations surrounding a free trade agreement, the bilateral relationship has much to gain



Martin Naville
CEO
Swiss American
Chamber of Commerce

What are the Swiss economy's strengths?

Switzerland has proven itself very resilient in the face of multiple global economic downturns. Our federal government has been working with a budget surplus for the past 12 years, before COVID-19, and the debt-to-GDP ratio remains quite low. Switzerland has one of the most global economies in the world. It remains solid, with vast FDI, and is strongly diversified with nearly 20 percent represented by manufacturing.

What challenges do you see to Switzerland's macroeconomic stability?

Switzerland has three core challenges. The first is complacency. Having consistently been one of the best business locations, we increasingly see signs of complacency. Complacency is eroding Switzerland's attractiveness. Today there are a few elements on which we see evident weakening. While Switzerland remains top of its league, other nations have geared up, at a time Switzerland has become less proactive, and less amiable as a nation when attracting businesses. This is an important challenge that is reflected through anti-business initiatives leading to votes that could change the Swiss constitution, as well as a series of reform blockages in immigra-

tion, social systems, health care, and our relationship with the EU.

The second challenge for Switzerland is the great dependence on exports, and the third is a general exposure to global trade. As a small, open economy, should the skirmish between the USA and China turn into a full trade war, Swiss assets and the Swiss economy are heavily exposed.

“Swiss investments in the USA surpass USD 330 billion, while American investments in Switzerland reach USD 110 billion.”

What is your outlook for Swiss-American relations?

Trade and FDI figures in both directions have been growing at over 10 percent per year for the last 15 years, and the outlook for Swiss-American relations

remains fantastic. Cooperation between the two nations is very close, with Switzerland even representing the USA's interests in Iran and recently in Venezuela. Switzerland has all reasons to look positively to a new Biden administration.

Although Switzerland has a trade surplus of nearly USD 20 billion with the USA in goods, which is often highlighted, this does not tell the whole picture. The USA enjoys a substantial trade surplus in services. Swiss investments in the USA surpass USD 330 billion, while American investments in Switzerland reach USD 110 billion. Swiss companies employ half a million in the USA, while American companies have created 100,000 jobs in Switzerland. Swiss companies spend nearly USD 10 billion in R&D in the USA, while the USA only invests about USD 1.5 billion in Switzerland. So it is clearly a win-win relationship, with an advantage for the USA. The one big opportunity moving forward is to finally begin formal Free Trade Agreement negotiations. ■

Liberal Labor Legislation

Switzerland regularly leads international rankings as a location for highly qualified employees and is consistently one of the most sought-after work destinations. Expatriates enjoy an exceptionally high quality of life, personal safety, considerable social benefits, and substantial salaries.

With some of the most liberal labor laws globally, Switzerland is also an attractive location for employers. The labor market's flexibility facilitates a company to employ or dismiss staff as required with short notice, and termination indemnities are low compared with other European countries. Thanks to this flexibility, the nation has met corporations' fluctuating requirements, while developing and employ-

ing healthy, educated, and competent workers.



Luc Defferrard
Managing Partner
Walder Wyss

According to Luc Defferrard, Managing Partner of Walder Wyss, the largest Swiss law firm by number of employees, “One of the core pillars supporting Switzerland's ambitions to grow as an international base for innovative global corporations has been its human capital. The Swiss are hard workers, but they intuitively seek foreign talent to fill gaps if expertise is not locally available. Switzerland's

ability to attract highly knowledgeable foreign talent has helped the nation further its ambitions of developing innovative products. Such global talent has enabled local companies to market themselves internationally. Utilizing a Swiss tax advantage is no longer a motivation for American companies with Swiss operations. They instead seek to capitalize on the ecosystem to develop high-tech oriented research operations. An added benefit has been the geographical parity in human capital; qualified labor is found by corporations within every valley and every Canton. This enabled leading corporations to establish roots throughout any region of Switzerland. Walder Wyss strives to be close to its globally mind-

ed clients, whether large or small, and we have established one of the broadest footprints in Switzerland of any law firm. We are regionally diversified with offices in Zurich, Geneva, Lausanne, Bern, Basel, and Lugano.”

Although Swiss salaries are high, strikes are rare, and in terms of gross domestic product per hour worked, Switzerland comes out as one of the world's most productive countries, making the Swiss workforce one of the most productive workforces in the world. The combination of high productivity, modest taxes, and low capital costs results in employers fiscally saving by relocating to Switzerland. ■

By Fadrique Álvarez de Toledo

Science-Based Innovation: Increasing the Competitiveness of Swiss SMEs and Start-ups

Tackling global challenges requiring a multi-disciplinary solution

Switzerland is strengthening its approach to tackle some of the world's greatest challenges with innovation, and in its pursuits the Swiss government builds on Innosuisse. Initiatives by companies like Quantum Integrity (helping to detect fake photos and videos quickly with its software), ClearSpace (tackling failed satellites and the proliferation of debris in space), AlveolIX (reproducing the functions of the lung on a small scale), and Topadur Pharma (combating glaucoma, the second most common cause of blindness after cataracts, with eye drops) were made possible with the assistance of the Swiss Innovation Agency, Innosuisse.

Innosuisse is responsible for helping companies achieve breakthroughs and reach untapped market potential. When innovative ideas would otherwise not come to fruition, Innosuisse offers valuable assistance to help companies achieve their conceptualized ideas, launch innovative products or services, tap into new international markets, and help start-ups grow.



Annalise Eggimann
CEO
Innosuisse

Annalise Eggimann, CEO of Innosuisse, shared her vision for the entity, “Above all else, we strive to help Swiss innova-

tions tackle some of the world's largest challenges. Our role is to promote science-based innovation in the interests of industry and society, with the aim to increase the competitiveness of small and medium-sized enterprises (SMEs) in Switzerland. We promote partnership between academia and the market with innovation projects, networking, training, and coaching. When financing an innovation project, we fund the research group, and the industrial partner contributes the same amount with labor and cash contributions. We lay the groundwork for successful Swiss start-ups, products, and services by providing financial resources, professional advice, and networks. We do not intervene where the market can solve a challenge independently; we are only active where it needs support. Switzerland is a strong supporter of the bottom-up principle, which means that we mainly promote innovation by accepting the grassroots proposals that are submitted, checking their quality, and financing the best ones. However, we want actors to also take a more systemic approach and engage in specific topics that need cooperation between different disciplines.”

The agency also promotes transnational projects by bringing SMEs and research partners together, promoting cooperation between science and the market. Eggimann added, “We support knowledge transfer between academia and industry on not only a national level, but also on

an international level. We give companies access to international research networks and support innovation projects.”

Innosuisse also helps young enterprises emerge and prosper. “Our training courses encourage an entrepreneurial approach for the next generation of businesspeople and researchers. We help individuals who want to set up companies and achieve more growth. Furthermore, Switzerland is filled with ‘hidden champions,’ particularly in the technology sector, which is important for the global supply chain. While these entities may not be so obvious, they are in fact, one of the country's main success factors. For a small country, we have tremendous economic power. These SMEs also reflect that, small in nature, but large in strength. Recently there has also been a lot of activity in the start-up domain, as young people have become more excited about entrepreneurship, taking risks and becoming more adventurous,” stated Eggimann.

In addition to the increasing trend for entrepreneurship, the pandemic accelerated a long-standing digitalization trend. In January 2021, Innosuisse launched a new program focusing on finding solutions to current or future challenges relevant to a large part of the economy or society. This flagship initiative will help specific sectors cope with digital transformation and secure a more resilient economy and society, to face challenges such as COVID-19 and develop sustainable solutions for the

future. Eggimann stated, “We spoke with various stakeholders to find the most important topics, and one of the first topics will address how to enhance and accelerate digital transformation in the domains of education, tourism, healthcare, and urbanization. Another topic will focus on making a more resilient economy and society by tackling demographic change, the aging population, and all challenges associated with this issue such as supply chain, basic ICT infrastructure, decarbonization, and more.”

Innosuisse will continue to help start-ups grow their businesses, support innovation projects, and gain a foothold internationally. The agency encourages collaboration with American entities and looks forward to future international partnerships. Eggimann said, “It is our ambition to be an anchor for science-based innovation in Switzerland, conducting international cooperation and bringing forward the innovation ecosystem. We are a catalyst for the transformation of scientific knowledge into practice for economic and societal value. A conviction many Swiss people have is that research, development and innovation are pivotal for future success. There is a level of awareness that you must remain active and agile to prosper.”

Innosuisse actively advances the competitiveness of Swiss SMEs through science-based innovation. With an agency purely dedicated to innovation, Switzerland will continue to be at the forefront of finding solutions to tackle complex, global challenges that require a multi-disciplinary approach and international cooperation. ■

By Jennifer Jendusa



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Switzerland - a Nation of Inventors and Innovators

Switzerland Innovation Parks ensure the country remains the most innovative in the world



Photo: Abbildung | Source: Switzerland Innovation

For the last ten years, the World Intellectual Property Organization ranked Switzerland in the coveted top spot as the world's most innovative country on their Global Innovation Index. Switzerland remains the country of inventors and innovators, with a record number of patent applications per capita, consistently creating high-quality, innovative products and solutions. The government has one of the highest expenditures in R&D in relation to the gross domestic product, and combined with the private sector's expenditure in R&D, it equates to over CHF 22 billion. Switzerland has a superpower for turning conceptual ideas into innovative solutions, tackling some of the world's leading challenges.

At the heart of every successful innovation is a merger of innovative minds striving for a common goal and collaborating to conquer challenges along the way. Switzerland Innovation Parks catalyze innovation by fostering a collaborative environment intertwining academia with the leading public and private sector science-based companies, emerging startups, and globally competitive Small Medium Enterprises.

Raymond Cron, CEO of Switzerland Innovation, stated, "Switzerland offers ideal conditions for innovation, with its stable political and social environment, legal certainty, and an exceptional education system. Switzerland Innovation Parks further aid in this success by offering the infrastructure and network

critical for bringing ideas to reality. The parks give easy access to talent, knowledge, and expertise. It is the ideal place for technology-driven companies to create their next breakthrough or best-selling product."



Raymond Cron
CEO
Switzerland Innovation



With a population of only 8.6 million people, Switzerland continues to be home to some of the world's leading minds. Thanks to its exceptional academic institutions, its highly skilled workforce contributes to the national reputation for excellence in R&D and innovation. Swiss schools and universities are among the best in the world. Switzerland Innovation Parks gives its tenants access to world-leading research institutions such as the Swiss

Federal Institute of Technology Zurich (ETH Zurich) and the Swiss Federal Institute of Technology Lausanne (EPFL). The Parks offer universities and companies an ecosystem to network, exchange ideas, develop, and eventually market their products.

"Switzerland has a high proportion of foreign talent, in part thanks to the country's neutral, stable political and social environment. The government plays its part in supporting innovation and driving initiatives that nurture an ecosystem vital for future success. The collaboration between the private sector and Switzerland's superb universities is key. These partnerships directly result in tangible products and services. At Switzerland Innovation Parks, we offer easy access to the best talent and researchers to forge partnerships and share ideas with R&D teams from top international companies. Working together in a single space accelerates the development process. We form an ecosystem for companies to further their research, in partnership with universities and educational institutions, creating a breeding ground for innovation," added Raymond Cron.

Entities working within Switzerland Innovation Parks continuously lead the way in cutting-edge technologies and innovation across the fields of health and life sciences, computer and computational science, energy, natural resources and environment, mobility and transportation, and manufacturing and materials. Switzerland Innovation Parks' five sites are based in strategic locations. The nationwide presence includes Park Basel Area, Park InnoVaare, Park Zurich, Park Network West EPFL, and Park Biel/Bienne. The parks have over 200,000 square meters of high-end laboratories, offices, conference rooms, co-working spaces, and large accelerator-based research facilities. In addition, there are more than 40 hectares of area for development.

Leading global enterprises select Switzerland for their R&D centers. Raymond Cron mentioned, "Google has its largest R&D site outside of the USA in Switzerland, and other entities with R&D centers in Switzerland include ABB, Nestlé, Roche, and many other global players. Most recently, Yokogawa, the Japanese conglomerate, established their innovation center at Switzerland Innovation Park Basel Area. They will focus on driving forward innovation in the field of biotechnology. International cooperation remains a vital cornerstone for knowledge transfer, but Switzerland leads the way in technological breakthroughs, patent applications, intellectual property receipts, and high-tech manufacturing products."

Raymond Cron discussed the necessity for innovation, "Switzerland Innovation Parks are needed now more than ever. Innovation must be on the top of the agenda in times of crisis. We are currently building new infrastructure at three parks, highlighting the fact we believe in the future and are convinced our approach is the right way forward. Innovation is the basis for Switzerland's economic success, and the guarantee for future prosperity. Switzerland Innovation Parks allow entities to maximize their potential and opportunities, creating efficient cooperation where partners can turn ideas into reality. They ensure Switzerland will remain one of the most innovative countries in the world." ■

By Jennifer Jendusa

A Stable and Reliable Legal System

Switzerland's trusted neutral legal framework allowed the country to develop into an international arbitration hub

While Switzerland has a secure role as a gateway for American operations and foreign direct investment in Europe, the nation is going through a dramatic change in how it is perceived. While the tax regime is competitive at an international level, it is seldom a decisive factor for entities choosing the country as an operational base. Corporations place more value on national infrastructure, excellence in R&D, balanced quality of life, highly skilled and productive workforce, and trusted legal framework.

Local Swiss law is clearly defined, liberal, and predictable, making it easier for global players to depend on. In addition to a long-standing international reputation for offering excellent professional services, Switzerland is also home to a unique legal sector with an innate ability to provide quality legal services for large foreign corporations across their local and global operations.

Dr. Jodok Wicki, former Managing Partner of CMS Switzerland, who passed the baton in December 2020, said, "The pandemic reinforced the significant benefits of utilizing Swiss law for international contracts. We have great certainty in our legal system as it is very

stable and reliable. It is often relied on as a 'neutral' law that is predictable, and therefore attractive to many entities. In addition, Switzerland has a long-standing tradition of international arbitration. Due to its trusted and globally respected neutrality, Switzerland has become an international hub for mediation and arbitration."

Switzerland's reputation in diplomacy precedes it. For over a century, Switzerland has hosted international organizations and dispute settlement institutions as a politically neutral country, including the World Trade Organization (WTO), the World Intellectual Property Organization (WIPO), and the United Nations, amongst others.

When successful, mediation and arbitration proceedings are considerably faster, more efficient, flexible, and cheaper than litigation. Considering the nation's rich history in diplomacy, global public and private entities often solicit Swiss lawyers as reliable partners when seeking to reconcile differences with others. ■

By Fadique Álvarez de Toledo



Stefan Brunnschweiler
Managing Partner
CMS Switzerland

What is your outlook for CMS's future development?

CMS Switzerland has developed tremendously since having been founded in 1937. Our law and tax experts in Switzerland provide clients with advice in a wide range of matters. CMS has combined its local roots, knowledge, and business

connections with a global outlook. In addition to our offices in Zurich and Geneva, CMS is continuing to develop as a leading European firm and is expanding its global footprint. We now proudly advise nearly 500 merger and acquisition transactions per year across Europe, more than any other law firm.

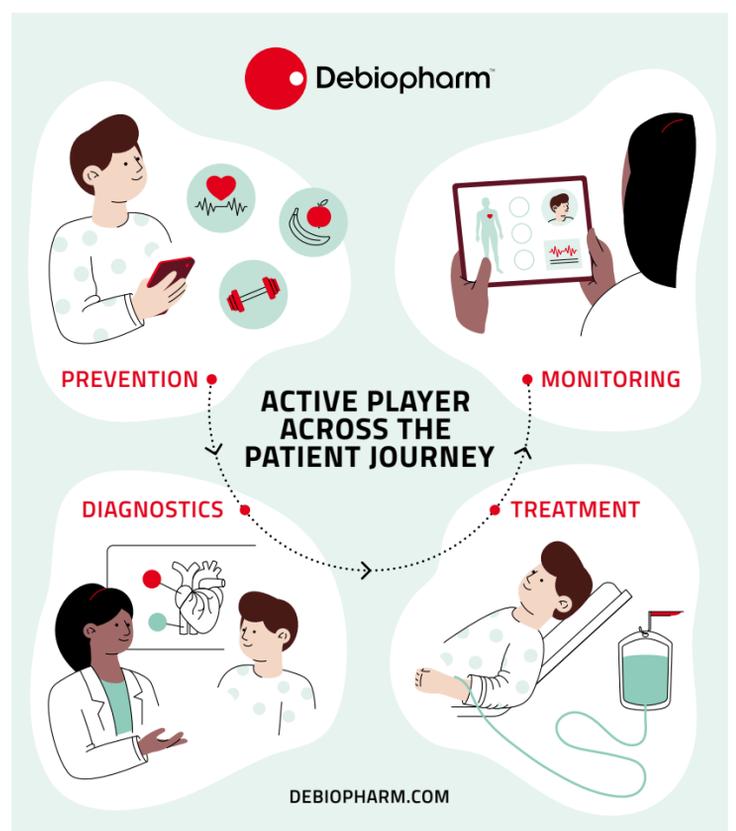
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Life Science Cluster Expands Biotech Hub

The Swiss capitalize on cross-border research to innovate



The pharmaceutical sector is the country's largest industry, representing 40 percent of exports. Exceptional leadership in research and development, combined with a robust education system, have derived impressive results. Switzerland attracts high-level talent, capital and partnerships from around the world. It has first-class technology, innovation park infrastructure, and the highest productivity level compared to other top international locations. These are some of the reasons that led pharmaceutical behemoths to choose Switzerland as their research and development (R&D) hub, to which global champions such as Novartis and Roche are native.

The nation is increasingly becoming one of the most important centers of pharmaceutical research worldwide. It provides bespoke pharmaceutical solutions, and is well-positioned to make significant healthcare contributions. Switzerland registers an impressive 48 pharmaceutical research patents per million inhabitants each year (in some cases stemming from international innovation), and is home to the highest number of Nobel Prize winners in medicine per capita. Unparalleled access to global talent and R&D opportunities result in an increased understanding of rare diseases. Perhaps not surprisingly, Switzerland provides the technology behind 50 percent of the oncology treatments worldwide.

Switzerland's success in the pharmaceutical sector stems from a profoundly ingrained cooperative mentality. Large and small companies contribute their areas of expertise to an increasingly robust ecosystem that merges with research

institutions to form a highly specialized production location.

An ideal example of the specialized niche players driving the sector forward is Debiopharm, which focuses on oncology and infectious diseases, and acts as a catalyst within Switzerland's pharmaceutical industry. Debiopharm is an independent biopharmaceutical company that in-licenses promising compounds, develops them into viable treatments, and finally, through an out-licensing deal, partners with pharmaceutical marketing powerhouses such as Sanofi, Pfizer, and Ipsen to reach consumers.

As a private company in the industry, it can plan long-term investments, something more difficult for a public company unable to risk short-term losses. Thierry Mauvernay, President of Debiopharm, stated, "Debiopharm is a challenge-driven company propelled by its ability to adapt to a fast-moving marketplace and focus on new ideas."



Thierry Mauvernay
President & Delegate
of the Board
Debiopharm

So far, it has been a successful venture, with Debiopharm recently awarded the 2020 Swiss Biotech Success Story Award for its strong pipeline of oncology and bacterial infection therapies. This includes its promising drug xevinapant, a phase III compound that received the FDA approval process designation of "Breakthrough Therapy." The company exemplifies the value-added research

undertaken in Switzerland and demonstrates the benefits of cross-border collaborations to improve patient outcomes.

A grassroots convergence of biotechnology becomes Health Valley

Switzerland provides unparalleled access to scientific knowledge and funding for innovative companies. This has led to a grassroots convergence of biotechnology and medical technology companies that formed a fast-growing cluster nestled in the valley between the Western Alps of Valais and the Jura Mountains, and stretches from Geneva to Bern. Switzerland is now recognized as one of the fastest-growing biotech hubs, and the cluster ranks high for biotech and medtech research in Europe. This Lemanic region, also endearingly referred to as the Lake Geneva region, appropriately branded itself in recognition as the Swiss Health Valley.

Mauvernay envisions it, "Following in Boston's footsteps, which became the biotech capital of the world in a mere decade. The Swiss ecosystem can capitalize on its world-class quality hospitals, great scientific research, and cutting-edge industrial know-how. If able to bridge certain gaps, the Lemanic Health Valley could become a dominant global healthcare cluster."

With a vision of fostering stronger relationships in the region's supply chain, Debiopharm is working on launching Innovation Debiopharm Academia Lemanic (IDEAL). The program seeks to strengthen the vibrant network between academic researchers and the pharmaceutical industry which can bring innova-

tion in oncology and antibiotics closer to benefiting patients.

Solving the next pandemic before it begins

The COVID-19 pandemic has uncovered how tragically ill-prepared some countries are. As nations scramble to cover immediate needs, Mauvernay pondered a troubling question, "What if, instead of a virus, the current pandemic had been caused by bacteria?"

Mauvernay worried, "A bacterial pandemic could wreak havoc if persistent weaknesses in research are not addressed. In particular, a new collaborative business model promoting antibiotic research is needed to prepare. Drug companies are abandoning antibiotic research at a worrying pace citing costs, and only two new classes of antibiotics have been discovered since the year 2000."

Debiopharm discovered one of the few new antibiotic classes in development, known as 'Fabiotics' (FabI inhibitors), and is currently continuing to develop antibiotics targeting three of the nine pathogens defined by the World Health Organization as posing critical threat to human health. Mauvernay stressed, "A whole ecosystem is needed to tackle the full scale of the problem. As nations rush to manage the current pandemic, they should preemptively strategize for the next. This will require an ambitious collaborative business model that encourages continuous private sector involvement in finding a solution."

Mauvernay envisions additional collaboration between Switzerland and the USA, with innovation inspired by each other's successes. ■

By *Fadrique Álvarez de Toledo*

Developing a Holistic Approach to Healthcare Through Oral Care

In the 18th century, before modern dentistry, the population relied on a local blacksmith or barber for teeth extraction. Since then, the field drastically evolved, and in no small part thanks to Zurich University, which was the first state institution in the world to offer a doctoral degree in dental medicine. Switzerland continues to contribute to advancing global medicine in the 21st century, and Swiss healthcare providers offer remarkably insightful solutions.

As our understanding of the field increases, the debate over the role of oral health in healthcare is growing in parallel. The dental profession has evolved independently from the rest of the medical system, and conflicts of interest abound. The industry revolves around expensive treatments alleviating pain or restoring crooked, yellow teeth. Therefore, dental care is often perceived by society as a luxury associated with beauty more than basic healthcare.

While tooth decay naturally occurs as we age, society deeply judges teeth aesthetics and stigmatizes those with dental problems. Sociologists have long studied the social implications and economic effects of poor oral health. They find tooth decay has profound consequences for how an individual is perceived. Studies show that hiring managers associate individuals suffering from dental problems with low socioeconomic status and lower intelligence. It has a direct long-term impact on careers and remuneration.

Beyond aesthetics, mouth and teeth maintenance play an essential role in human health. Oral complications cascade into a range of health problems. Periodontal disease can lead to cancer or cardiovascular diseases, amongst other complications. There is a causal explanation of how oral health issues lead to other illnesses. When minor wounds cause gingival bleeding in the mouth, bacteria originating from oral infections enter the bloodstream and are transported to the brain, heart, lungs, and other organs, leading to severe repercussions.

Ueli Breitschmid, CEO of Swiss dental company Curaden, is a passionate supporter of prophylaxis and supports preemptive action to prevent disease. He has long advocated that basic preventive care can resolve most problems before they start.



Ueli Breitschmid
CEO
Curaden

"Simple prophylaxis measures in oral care designed to preserve oral health, such as effective non-traumatic brushing of critical areas, also prevent the spread of disease. While being affordable, easily accessible, and effective, preventive measures can have an outsized impact on national healthcare spending. They reduce sickness and long term non-communicable diseases (NCDs). Such basic disease-preventing care can even lower federal healthcare costs by 30 percent in the long run," stated Breitschmid.

Breitschmid has been on a mission

to improve well-being through the family-owned company his father founded in 1954. Curaden is a fast-growing dental health company, which under the brand Curaprox, develops oral care products and services to improve lifelong oral health.

Ueli Breitschmid highlighted how, "Better hygiene, education, and simple follow-up care is all that is needed to avoid expensive procedures like periodontal treatments later in life, which even require long-term lifetime aftercare. People often underestimate the importance of cleaning hard-to-access interdental spaces, and neglecting vulnerable parts of the mouth, which leads to non-dental health issues. Changing one's oral hygiene routine can reduce illnesses, including some related to nutrition. The future of healthcare is in prevention, and Curaden is becoming a major player of preventive thinking in the medical community, and an active partner for consumers. The ambition is to empower consumers through a range of preventive care products and support dental professionals in establishing ways to ensure that the prophylaxis services they offer are profitable and effective."

A simple yet effective dental prophylaxis tool manufactured in Switzerland by Curaden and exported globally is its range of colorful manual toothbrushes. They have become an unmistakable Swiss design icon. The timeless classic design incorporates a tremendous number of modern bristles made of ultra-thin filaments with soft rounded ends that prevent common brushing damage.

A more contemporary approach is the electric toothbrush, which was invented in Switzerland. Modern electric toothbrushes are effective at removing plaque through vibration and oscillation. The newest developments in this field are ultrasonic toothbrushes, which create micro-bubbles that gently remove bacteria biofilm through sonic vibrations. Curaden recommends their Hydrosonic electric toothbrush to people with periodontal disease, bacterial plaque, or a history of dental decay.



Christine Breitschmid
Sales Manager
Curaprox Switzerland

According to Christine Breitschmid, Sales Manager Curaprox Switzerland, "Switzerland can continuously innovate thanks to an impressive ecosystem that encourages knowledge transfer between academia and the private sector. In addition, the national apprenticeship arrangement benefits the ecosystem tremendously by instilling practical knowledge that enables future generations to succeed. When it comes to Curaden, we proudly mentor several apprentices and try to contribute to Switzerland's innovative ecosystem. While the Pentagon's state-of-the-art hypersonic missile technology is more advanced than our Hydrosonic toothbrush, Curaden strives for Switzerland to bring new levels of know-how to oral health." ■

By *Fadrique Álvarez de Toledo*

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Switzerland - a Medical Technology Hub

Enabling Innovation for Medtech Worldwide



Switzerland's medical technology sector has a global footprint, impacting patients around the world. The country tops the rankings for the sector's contribution to gross domestic product (GDP), with 2.6 percent of Swiss GDP stemming from medtech. With a rich history and reputation for precision technology expertise, Switzerland is well-poised to further R&D and production in medical technologies. Companies such as Johnson & Johnson Medical, Roche Diagnostics, Medtronic, Ypsomed, Medacta, Straumann, and Valtronic selected Switzerland as their base for operations, and continue to value Switzerland for fostering innovation, research, development, and production in the sector.

Switzerland has a combination of first-class research institutions and unparalleled productivity within the medtech sector. The country is the most attractive destination globally for highly qualified foreign workers. Rainer Platz,

CEO of Valtronic, a full-service medical device contract manufacturer headquartered in Switzerland, stated, "Our highly skilled employees are the backbone of our company, and our passionate technical experts truly understand the needs of the medical industry. They are dedicated to producing the highest quality devices for our clients."



Rainer Platz
CEO
Valtronic

Platz also mentioned the benefits of being based within Switzerland's medtech cluster, "The ability to successfully collaborate and cooperate with other players in the industry in Switzerland is a critical piece to promoting innovation. Manufacturers outside Switzerland would have a difficult time finding the same level of expertise and high densi-

ty of industry-specific suppliers, service providers, and manufacturers. There is a strong medtech cluster and thriving ecosystem, beneficial to not only the large-scale companies like Roche, but also to small, medium-sized enterprises (SMEs), like Valtronic."

The vast majority of companies within the sector are considered SMEs, with up to 93 percent of companies employing less than 250 people. Although the company sizes may be deemed SMEs, Switzerland's life science industry has the highest level of productivity per employee, further encouraging international companies to base operations in Switzerland.

Exceptional productivity and an innovative mind-set are particularly essential when developing techniques and medical technologies that enable trends such as minimally invasive surgery. When going under the knife, fear can be crippling for patients. The ability to have minimally invasive surgery (surgery performed through tiny incisions instead of large openings), is not only beneficial for the patient's psychological health, but also rapid recovery times, smaller scarring areas, and less pain than a traditional open surgery.

Valtronic has more than 35 years of experience in turnkey devices, micro-electronic assemblies, and miniaturization. It dedicates 90 percent of activities to medical devices with expertise in extreme electronic miniaturization and complete manufacturing and assembly of box builds and complex mechatronic equipment. It enables solutions to further push the boundaries of miniaturization and to follow necessary societal trends such as patient care at home. The company is full-service, offering research and development on behalf of clients' customized solutions, as well as industrialization, manufacturing, and full supply chain management. Platz said, "We enable our clients to innovate and improve their products for next-generation solutions, particularly with device size reduction and miniaturization. These solutions are cutting-edge, at the forefront of innovation, and not standard off-the-shelf technology. Clients come to us with specific needs, and we offer them solutions. With the infrastructure of SMEs, Switzerland is a good place to find the right

people to assist with micro-machinery and micro-mechanics. Switzerland is the birthplace of watchmaking, the original industry dedicated to extreme miniaturization and precision technology. Valtronic, and medical technology in general, is all about making things smaller and less invasive – in every sense of the word. For instance, implants can never be small enough. The expertise found in Switzerland simply cannot be compared to anywhere else in the world. We are able to fully utilize Switzerland's excellent ecosystem to form dedicated solutions and convert them into final products for our customers. Our expertise allows our clients to launch their next innovative product."

Switzerland is among the highest spenders on its healthcare system per capita, and the domestic market is receptive to innovative technologies increasing the effectiveness and efficiency of care. Although the local market is important, the medtech sector is predominately export-driven. The top export market for Swiss medtech is the USA, with over CHF 3.3 billion in 2019. Valtronic has a global footprint and continues to invest heavily. The company already has global manufacturing facilities in Switzerland, the USA (Cleveland, Ohio), and Morocco. Platz mentioned, "As an SME, we have huge potential for organic growth. We will continue to leverage our multiple sites and further expand in the USA, aiming to attract additional American clients."

Platz continued, "We enable our partners to improve patients' quality of life through medical device innovation, development, and manufacturing at the highest quality standards. We develop and manufacture devices to be smaller, lighter, better performing, and innovative. As a complete solutions provider, we can offer our clients optimized production costs, on-time delivery, and reduced time-to-market. Valtronic makes contributions to cutting-edge medical technology, and this is something we are extremely proud of, helping hundreds of thousands of patients with state-of-the-art advanced therapies." ■

By Jennifer Jendusa

Innovative Swiss Medtech Solutions Reduce Complications

Just two decades ago patients undergoing medical procedures would face a long recovery period fraught with potential complications, associated pain, and a lengthy hospital stay. The medtech industry emerged from the union of medicine and technology and is a driving force of change and innovation. Healthcare has drastically transformed and evolved since the turn of the century, with modern medical procedures incurring minimal complications, and previously risky operations are now routine outpatient surgeries.

Switzerland has grown to become an established global leader providing healthcare solutions and nurturing an active cluster of medical technology, pharmaceutical, biotechnology, and diagnostic industries. The vast network of manufacturers, suppliers, research and training institutions, service providers, and investors collaborate in solving worldwide healthcare challenges.

First-class research facilities, cross-sector knowledge transfer, and a developed healthcare system make Switzerland an extremely attractive location for the medtech sector. According to the Swiss Medtech Association, 1,400 companies within the industry represent USD 15.8 billion in revenue and contribute 2.3 percent of Switzerland's GDP. The sector has the highest contribution to GDP in Switzerland relative to any other country in the world, establishing Switzerland as one of the most critical locations for the global medtech industry. While well-known global mammoths, including Roche Diagnostics, Straumann, and Sonova, play a core role, more importantly, they compete constructively alongside a swarm of agile small and medium enterprises that represent 93 percent of companies in the sector.



Francesco Siccardi
CEO
Medacta

According to Francesco Siccardi, CEO of international orthopedics company Medacta, "Switzerland has a vibrant and competitive ecosystem. The active network collaborates closely in the development of innovative solutions. However, only companies that deliver value-added products survive." Speaking of innovations within Swiss medtech, Siccardi stressed, "For generations, global healthcare treated patients identically, thereby unnecessarily leading to systemic over-treatment and under-treatment. The next generation of treatments will deliver highly personalized medicine solutions, improving patient experiences and creating added-value surrounding the procedures." He emphasized Swiss values and how his own company's culture intuitively seeks to identify problems and turn them into opportunities that can improve patient outcomes while simultaneously boosting the overall healthcare system's sustainability.

Medacta, based in Ticino, specializes in the design and production of innovative orthopedic products and the development of accompanying surgical techniques. Medacta's solutions create

highly personalized preoperative planning and implant placement methodologies, including personalized kinematic models and 3D-planning tools for use in hip, knee, shoulder, and spine procedures. Their pioneering techniques, such as the Anterior Minimally Invasive Surgery (AMIS) technique for hip replacement, not only reduces surgical skin incisions but preserves the nerves, muscles, and tendons surrounding joints. The AMIS technique reduces commonly associated risks of the traditional approach and promotes swift recovery by respecting tissue. According to Siccardi, it represents a teachable and reproducible technique that can improve patient well-being while optimizing costs and efficiency for the surgeon. Siccardi was gratified when another one of Medacta's pioneering developments, the MIS MySpine Midline Cortical platform allowing posterior lumbar fusion to be carried out in minimally invasive and muscle-sparing spine surgery, was recognized in 2019 as the "Best Healthcare Navigation and Robotics Solution" by industry organization *MedTech Breakthrough*.

Swiss medtech companies offering value-added solutions, such as Medacta, have an added advantage being Swiss-based. The Swiss stock exchange represents nearly 40 percent of European life sciences market capitalization in Europe. Therefore, companies can efficiently raise capital in Europe's leading exchange in life sciences. Medacta's yearly sales surpassed EUR 310 million within two decades, and the company continues to grow its global presence rapidly. In 2019, Medacta successfully issued its IPO and used it to raise funds while increasing its global awareness and visibility.

Medacta has a new USD 2.5 million North American headquarters in Franklin, Tennessee, housing the total joint (hip, knee, and shoulder), spine, and sports medicine units serving the local market. As Medacta's philosophy is based on the belief that "innovation requires education," the company organizes hundreds of surgical learning center courses to teach and support the adoption of innovation around the world.

Siccardi is confident about the Swiss medtech sector's potential, and for good reason. According to the Medtech Association, the sector has grown 6 percent annually since 2012, faster than any other Swiss industry, and even the national GDP. Switzerland's medtech industry exports USD 11.3 billion and contributes 13.5 percent to the national trade surplus. The largest export markets are the USA and Germany, representing USD 3 billion and USD 2.2 billion respectively. The future looks bright for Swiss medtech, and patients are positioned to benefit the most.

Swiss medtech innovations quietly revolutionized treatment outcomes, and continue to offer innovative solutions in the global healthcare industry. As current patients prepare for medical procedures, modern practices are set to improve their patient experience. ■

By Fadrique Álvarez de Toledo

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Industry: The Backbone of the Economy

Switzerland is one of the biggest industrial exporters per capita



Manufacturing facility of Curaden.

For a small independent country with a population of 8.6 million, Switzerland has become a surprisingly strong industrial player with an ecosystem that is robust and competitive. Swiss industry represents over 25 percent of the country's GDP, and is an important central component of the economy. A highly vigorous global production and research network compliments the strengths of neighboring countries.

Switzerland is home to global companies that represent nearly one-third of the country's value creation, but it truly is small and medium enterprises (SMEs) that dominate. Over 99 percent of Swiss industrial companies employ less than

250 people. They remain competitive by becoming the indisputable global leaders of extremely innovative products catering to niche fields.

According to Hans Hess, former President of Swissmem, the association for Switzerland's mechanical and electrical engineering industries (MEM industries), "Innovation is not a top-down mandate, but rather a grassroots, market-driven force that is part of our culture and led by the population's entrepreneurial spirit. Swiss companies strive to find technical solutions to complex challenges."

The small national market size encourages companies to expand abroad. The Swiss economy is primarily ex-

port-oriented, with the ratio of export trade to GDP being one of the highest in the world. While nearly 60 percent of Swiss industrial exports go to the EU, the USA is the second most important export market and has increased from 9 percent to 14 percent over the past ten years. Swiss companies have opened numerous USA subsidiaries and on the ground research and development premises.

According to Hess, "Swiss industry has proven itself a valuable supplier to American industry. A joining of forces through a free trade agreement (FTA) will foster further cooperation. There is increasing interest from both sides, and we all believe the FTA will be a win-win scenario."

Bracken Darrell, CEO of Logitech, highlighted this strong relationship, "Logitech is a design company that connects people to digital experiences so they can create, achieve, and enjoy more. We're Swiss-American, with key offices in Lausanne, Switzerland and Newark, California. Switzerland is the site of our global headquarters and a key R&D location where we focus on innovation, quality, and designing products experiences that impact people's everyday lives across the world."

As a production location, Switzerland is expensive, but remains a leading base for advanced manufacturing. In addition to further developing experimental robotics and digital solutions, companies already possess high-performance

production facilities and are optimizing their manufacturing processes. These highly automated production facilities rely on an extensive network of existing suppliers that not only understand the advanced production processes of Industry 4.0, but have been installing tried and tested technologies to increase efficiency and cost savings for years.

According to Marco Zavalloni, CEO of Curaplast, the manufacturing subsidiary factory of Swiss oral healthcare company Curaden, "A big part of our company's success is manufacturing in Switzerland. Although labor costs are high, we benefit from a low cost of capital, precision and high quality. Switzerland's rich culture in automation and expertise with special tooling is a huge asset for companies seeking solutions for complex problems. We once developed a local solution that increased the number of products we could fit in a mold from eight to thirty-two, something suppliers abroad said was impossible. It was a game-changer for our company's productivity. We manufacture within the Canton of St.Gallen. Our factory is full of automated technologies, robotic arms, and conveyor belts. We can produce our toothbrushes with flawless Swiss precision, fitting 5,460 bristles into a toothbrush head in just two and a half seconds."

Such close-knit collaborations have been essential for Swiss companies. According to Dr. Oliver Pabst, CEO of Mammot, a Swiss brand, "Swiss technological innovations are applied by

CONTINUED ON PAGE 12...

Innovative Swiss Businesses Tackle Global Challenges

Few Americans recognize the name Oerlikon, yet millions benefit from the Swiss powerhouse's innovative global technology and engineering solutions. Oerlikon is one of the leading providers of advanced materials, surface engineering, and polymer processing for the automotive, aerospace, energy, tooling, and additive manufacturing sectors. Every time an individual gets into a car or boards an aircraft, they are likely relying on the advanced technology and solutions created by Oerlikon.

All major aeroengine makers utilize the company's advanced materials technology to control emissions and improve safety and fuel efficiency.

Many car and aircraft surfaces, including interiors and vital equipment, such as landing gear, benefit from the company's advanced surface coatings. Indeed Oerlikon, whose name comes from the district in Zurich where the group originated, creates groundbreaking solutions for some of the world's greatest challenges.

The Swiss business has a strong international presence in the USA, where it already employs 1,300 personnel. Recently, it has invested in its additive manufacturing (AM) capabilities, more commonly known as 3-D printing. Oerlikon's state-of-the-art Innovation Hub and Advanced Component Production

facility in Huntersville, North Carolina, reflects the vast potential Oerlikon sees in the use of AM in the USA.

The company's strategists believe AM, which allows 3-D objects of all kinds to be manufactured in a completely new way, can play a decisive role in transforming industrial designs and will spur the next industrial revolution, often called Industry 4.0. AM allows the creation of new components that otherwise could not be achieved. The clear benefits of AM also include weight reduction, material cost savings, greater service life of a product, and increased strength. Manufacturing costs can be reduced, while enhancing product performance and durability. American businesses are not yet fully exploiting the technology's potential, but as knowledge of the advantages of AM spreads in the USA, Oerlikon will be well-placed to meet the predicted explosion in demand for the new technology.

ters an inquisitive ecosystem where innovation thrives, and this is particularly true of the machine building, chemicals and pharmaceutical sectors, in which Switzerland has a strong base," added Fischer.

Building a more sustainable future is critical. Oerlikon is committed to developing innovative solutions to improve sustainability. "We help cars and airplanes use less fuel, ensure tools last longer, and improve the manufacturing of textiles. In essence, Oerlikon technologies create products that make more out of less, increasing performance and longevity while simultaneously consuming less energy, reducing costs, and using fewer resources," explained Flötner.

Oerlikon operates its business in two divisions: surface solutions and man-made fibers. It employs 11,100 personnel at 182 locations in 37 countries. In 2019, the company generated USD 2.7 billion in sales. Its products are targeted at growth markets such as AM, aerospace, energy, tooling, and automotive industries.

Investing in the future

Innovative research and development are essential to Oerlikon and Switzerland given the country's relatively high cost base and strong currency. "Oerlikon invests heavily in R&D, and constantly seeks to improve its products and services to retain existing customers and attract new ones," added Fischer.

Oerlikon's strength in manmade fibers provides a good example of the company's ability to innovate and produce sustainable solutions. The increase in global population and rise in living standards are boosting demand for clothes and industrial textiles. Manmade fibers require a fraction of the water compared to cotton production and can provide a long-term solution. Oerlikon is working on some ground-breaking innovations in this area, including digitally networked smart factories for fast-tracking and early corrective intervention.

Oerlikon has also played a considerable role in fighting COVID-19. The company's patented electrostatic charging technology (ecuTEC+ electro-charging unit) is used in the manufacturing of high-efficiency air filters from nonwoven fabric. These provide respiratory protection and are utilized in face masks and protective wear. Most of the protective mask capacities available in Europe are produced on Oerlikon nonwoven textile manufacturing equipment, and demand for Oerlikon's technology has soared across the globe this year.

Oerlikon's successful response to the global pandemic underscores its success in developing technology that meets people's needs. This, in part, explains how the company, first established in 1853, has survived and thrived for the past 168 years. Oerlikon has demonstrated a chameleon-like ability to adapt to change over the decades. Since the global financial crisis, which negatively affected the company's core businesses, Oerlikon has successfully restructured with a renewed focus on the technologies to power tomorrow's economies. ■

By Anthony Beachey

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America ready to bounce back

Chief Executive Officer of Oerlikon, Roland Fischer, is aware of the significant challenges facing the USA today, but is convinced that the world's biggest economy and technological powerhouse has a bright future.

"The USA is currently divided politically, but eventually I believe the wounds will heal. People will come together just as they do in Switzerland, where we have various referendums every year on sometimes contentious issues. In the end, the Swiss agree to disagree, and I think ultimately the Republicans and Democrats will also come to an understanding for the good of the country," said Fischer.

Kerstin Flötner, Head of Corporate Communications, Investor Relations and Marketing at Oerlikon, also believes the current skepticism about the use of new technology, particularly in the aerospace and automotive sectors, will fade. "The Boeing 737 Max debacle, and the Volkswagen diesel emissions scandal, 'Dieselgate,' certainly had a negative impact and rightly so," said Flötner. However, she added, "Industry is learning from those mistakes and ultimately technological solutions are required to overcome the main challenges facing the globe, such as climate change and population growth."

"In some technological areas, such as digitization, the USA and Europe are falling behind Asia," added Fischer. Cashless mobile payments are an example. The most important challenge of digitization, he says, is to ensure the population adapts to the new trend and starts embracing it.

"We need to carefully identify the areas where western societies can remain competitive, and ensure we maintain this competitive advantage by implementing digitization across society," Fischer stated.

He thinks Switzerland has an advantage in this respect. "The Swiss have a strong awareness of their strengths and a deep intrinsic interest in finding solutions to global questions," explained Fischer. "This cultural dimension fos-

Industry 4.0

The Future of Manufacturing, Digitalization and Automation

Industry 4.0 technologies were on the rise prior to the unprecedented impact of COVID-19. The crisis has accelerated long-established trends towards automation and data exchange in manufacturing, and rapidly pushed companies to adapt and evolve at a record pace. Factories, in particular, have been hotbeds of COVID-19 outbreaks, and entities are continuously encouraged to further digitalize their production facilities for enhanced safety and efficiency, leveraging this unfortunate event to transform production. The Industry 4.0 surge in “smart factories” incorporates cyber-physical systems, the Internet of Things, cloud computing, connectivity, advanced analytics, automation, and advanced-manufacturing technologies. Utilizing smart technology and automation allows for improved communication, self-monitoring, and smart machines capable of analyzing issues without human input. Automating factories enables production facilities to remain operational regardless of worker availability and assist in social distancing, which has become the new norm. Prof. Dr. Gut, CEO of Güdel Group said, “With the pandemic in full force, automation in factories is more important now than ever, and Güdel Group’s innovative solutions are digitalizing factory automation around the world.”

Industry leaders continue to incorporate Industry 4.0 solutions and fast-track automation programs to minimize

the impact of worker shortages occurring from COVID-19 and become better poised to face setbacks. With the demand for digital solutions in factories increasing, Güdel Group’s unique solutions bring industrial automation flow. Gut discussed the company’s value proposition, “Our brand of ‘Feel the FlowMotion’, brings flow to industrial automation by delivering intelligent technologies for motion solutions. The result is measurable added value, fewer stoppages, more output in a shorter period of time, absolute reliability, and maximum efficiency.”



Hans Gut
CEO
Güdel



Güdel Group, headquartered in Langenthal, Switzerland, creates high-precision machine components and intelligent automation solutions. The Group has over twenty locations worldwide and is family-owned for three generations. Their automated processes in-

clude linear guideways, racks, pinions, gears, linear and rotary axes, and gantry robots with intelligent technologies for motion. The Group specializes in helping their clients’ production processes flow, which adds value to the entire manufacturing process through automated solutions for the following industries: automotive, building materials, energy, fiber-reinforced composites, food, intralogistics, machine tooling, plastics, railways, and tire.

Gut added, “Güdel Group AG is an innovative, Swiss-based, worldwide-oriented solution provider. We invest approximately 5 percent of our returns into R&D. In cooperation with Heinrich Georg Maschinenfabrik GmbH in Germany, we developed a system for automated stacking of transformer cores. In fact, we are the only company in the world able to do transformers with metal sheet handling. This stacking process was typically carried out by hand, requiring up to eight people to stack sheets simultaneously. Güdel and Georg created the first ‘autostack 1000 motion’ an offline system stacking the pre-cut sheets to form a core. It creates precision of up to 0.5mm in positioning and has a 75 percent improvement in laying time compared to manual processes. We are also the market leader in Seventh Axis, which about 10 percent of robots require.”

The Group offers condition monitoring for linear tracks and gantries, allowing for an increase in the equip-

ment’s effectiveness. Gut mentioned, “The condition monitoring package increases the machine availability by anticipating unexpected production breakdowns proactively. The system gathers data, evaluates it, and computes the information on a dashboard, while also storing the gathered data to provide insights on the historical operational data. This allows companies to avoid unexpected production failure, ensure production quality, and improve maintenance performance.”

He went on to discuss the Group’s operations abroad, “It is absolutely vital to have a global footprint. We have operations around the world, and Güdel Inc. is our USA subsidiary located in Ann Arbor, Michigan. It provides our North American customers with engineering, design, production, and customer service support. The USA has a strong market in car manufacturing with GM, Ford, and Chrysler; each of their production sites in the USA utilizes Güdel automation.”

Automation is on the rise as labor costs increase in emerging markets, remain high in developed countries, and decreased speed-to-market gives companies a competitive edge. COVID-19 further showcased the need for additional automation as players already utilizing digital solutions have been more resilient to COVID-19 drawbacks. Güdel Group helps entities around the world digitalize and automate production to remain competitive. The Group promises to continue to create new, innovative applications for years to come. ■

By Jennifer Jendusa

Switzerland Plays a Decisive Role in the Coffee Sector

Ancient legends from the 6th-century may shed light on coffee’s origins. As folklore would have us believe, Ethiopian goat herder Kaldi first noticed the benefits of coffee beans after his herd consumed coffee berries and became exceptionally energetic. News quickly spread regarding the beans, and various concoctions began to spread across the globe. Techniques for its preparation have evolved since then, and in modern times the art of coffee making has fascinated connoisseurs for half a millennium. Coffee has become a central pillar of social gatherings, and humankind has found an ever-increasing number of ways to prepare the beans.

Over the years, convenient methods of preparation have increasingly prevailed. Techniques such as dehydrated instant coffee initially filtered in their early historical attempts. During the mid-1800s, an instant coffee paste attempt failed as its consumers abhorred the taste during the American Civil War. A decade later, Max Morgenthaler, a Swiss chemist working at Nestlé in 1929, contributed to perfecting the dehydrated technique. Through his private research, he cracked the code to prepare a decent tasting cup of instant coffee. The result was the iconic soluble powder-coffee, Nescafé.

While techniques have continued to develop over the years, a simple truth prevailed; additional convenience is desired, but all coffee tastes better when fresh beans are ground right before brewing. This basic concept has become a cornerstone of modern habits and created a culture surrounding coffee-serving establishments.

Similar to Morgenthaler in the 1930s with his powdery discovery, the Swiss have continued to transform coffee habits. Switzerland plays a decisive role in the coffee sector. It has become an integral part of the whole value chain, as the largest green coffee bean trader, the largest global roaster, and a leading provider of coffee making machines, among other roles. Coffee making machines, in particular, represent the epitome of modern state-of-the-art quality coffee making techniques.

Contemporary machines merge convenience and long preferred fresh ingredients. Therefore, coffee shops, offices, convenience stores, and an expanding number of global chains are increasingly procuring premium coffee machines from renowned international suppliers based in Switzerland; particularly, those able to deliver a fresh bean-to-cup coffee as they reduce labor and decrease food waste.

A collection of Swiss mechanical, electrical and software engineers dedicate their lives to customizing systems that quench the drinking habits of an ever-growing cross-cultural global consumer base.



Jörg Schwartze
CEO
Schaerer

Jörg Schwartze, CEO of Schaerer, the leading Swiss specialist in fully automatic coffee machines, highlighted Swiss engineers’ excellence as one reason behind Switzerland’s continued

success in becoming a distinguished global supplier of high-quality coffee machines. In particular, he emphasized clients can always turn to Switzerland if they face a challenge requiring an elaborate technical solution that should be executed in a quick, pragmatic, and customer-oriented manner. At Schaerer, Schwartze mentioned proudly working alongside clients by combining their local market know-how with Schaerer’s expertise in customizing machines that can meet emerging trends.

“In-house R&D as well as our own coffee competence center have been the core success behind Schaerer, and collaborations with clients help drive some of Schaerer’s innovations. We continuously reinvest in R&D, which allows us to set new benchmarks in the segment and develop forward-thinking solutions to drive drink quality to perfection, increase drink variety and to facilitate tasks for coffee machine users. We are very proud of working alongside our clients, and our self-service concept can adapt the coffee machine technology to fit their needs. Such market knowledge enables us to push new boundaries in our machines, and some cold beverage solutions stemmed from such cooperations. Our new Schaerer Coffee Soul machine also embodies these values and ensures our clients continuously get the outstanding high-quality coffee they expect from their individual machine,” stated Schwartze.

Going further alongside current digitization trends and capitalizing on the Internet of Things movement, Schaerer launched an innovative digital platform solution that benefits professional coffee businesses. As a free-standing, self-service concept, the new Schaerer Premium Coffee Corner machines combine fresh beans, on-the-spot coffee bean grinding, and fresh milk. These machines are not a powder-filled machine that can sit idle for over a week. They require routine care and conditioning. Through a high degree of digitization, the latest machines communicate the required maintenance to ensure optimal operation. The machine itself coordinates after-sales services, including condition monitoring, cleaning, and preemptive alerts if a component needs replacing.

Schwartze highlighted, “Digital checks result in reduced downtime and fewer technician visits. In addition, these digital accessories bring a variety of customizable benefits for users, such as a mobile payment solutions, interactive screens, and other advantages.”

Schaerer, headquartered in Zuchwil, Switzerland, is the number one provider of fully automatic bean-to-cup coffee machines to the USA market, and according to Schwartze, continuously strives to provide next-generation machines. For its American clients, Schaerer adapted one of its fully automatic espresso machines to transform into a single-serve option for providing a freshly brewed American long black coffee.

Schwartze affirmed, “Schaerer is a driver behind next-generation coffee machines. Our company has been renovating its product portfolio with a focus on customization and customer-cen-

tricity. In addition, Schaerer’s long-lasting Swiss quality and innovative product lines can decrease waste by 15 percent, and are examples of how tech innovation is shaping coffee consumption. Schaerer’s upcoming lines will continue to solidify our position in the USA as the partner of choice for high-quality automatic coffee machines.”

Over a millennium after Kaldi’s discovery, in 2021, the current global pandemic highlights the risks behind social gatherings. The population is coming to terms with a new reality of social distancing and self-isolation. Coffee making tech-

niques continue to evolve, and thanks to Swiss engineers’ ingenuity, another fact is emerging - coffee machines are increasingly able to merge convenience and taste. They offer a convenient cup of joe made with fresh ingredients and no human interaction. Baristas are aware technology relieves them from tedious, repetitive work so they can increasingly focus their value-added service to ensure quality coffee and concentrate on the consumer. ■

By Fadrique Álvarez de Toledo





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Swiss Packaging Pioneer Can Help the USA Overcome an Environmental Challenge

Environmental concerns are likely to return to the top of the USA's political agenda following the election of Joe Biden as president. Biden pledged the USA would re-enter the Paris Climate Agreement, the global pact forged five years ago among nearly 200 nations to avoid the worst impacts of climate change, on "Day One" of his administration. The President has embedded climate-minded officials throughout his team and new environmentally-friendly legislation across the Federal Government is expected in the coming years. The Biden administration will likely implement new laws to tackle the scourge of plastic packaging. It is one of the key environmental threats facing the globe, but sadly the USA is lagging behind other countries in tackling the problem. Recycling is the best waste management treatment of plastic

from an environmental perspective, according to the World Economic Forum's International Report. Yet currently the USA recycles just 30 percent of the plastic used in polyethylene terephthalate (PET) bottles, for example, according to the Environmental Protection Agency (EPA). In contrast, Europe recycles 60 percent. In Switzerland, that figure rises to 82 percent, home to a leading global player in sustainable logistics packaging, the Utz Group. This company has been creating and manufacturing suitable, sustainable, reusable logistics packaging, and technical parts made from plastic for over 70 years.



Axel Ritzberger
CEO
Utz

Utz spearheads the revolution in environmentally-friendly industrial packaging

Utz has been a pioneer in terms of championing sustainability and corporate responsibility. Chief Executive Officer Axel Ritzberger recounts, "Georg Utz, who founded the company in Zurich in 1947, was a great believer in the importance of corporate responsibility. When plastics first began to come into the market in the 1950s, he recognized that oil, where polymers come from, was a finite resource, and that recycling would be key to making the most efficient use of the commodity."

Ritzberger added, "Our founder said the company should commit to the production of recycled packaging and avoid one-way packaging. That basic idea is even more important today than when George Utz first outlined it in the 1950s." Today, Utz serves a worldwide market

and employs 1200 personnel across eight locations on three continents. Utz focuses on the development, manufacturing, and distribution of plastic-made reusable packaging systems for transport, warehousing, and intralogistics, as well as technical parts for professional applications. Its bespoke approach results in customized packaging solutions that adapt to changing needs in automated manufacturing and logistical processes.

Utz supplies a wide range of industries, including the automotive sector, food manufacturing and supply, home shopping, as well as the retail and pharmaceutical sectors.

In every case, Utz works with customers to develop packaging solutions that meet their individual needs. However, sustainability is the central and common theme applicable to all of the company's products, as Ritzberger underlined.

CONTINUED ON PAGE 10...

A Swiss Company Plows its Way to the Top of North American Markets

The ambitious growth plans of Aebi Schmidt Group



As a leading provider of snow clearance and de-icing equipment at airports, the Aebi Schmidt Group is at the forefront to offer autonomous operations and connectivity based digitalization.

The global powerhouse Aebi Schmidt Group sprang from humble beginnings in 1883 as a mechanical workshop in Burgdorf, Switzerland. Nearly 140 years later, Aebi Schmidt is now a leader in smart product systems and services for the treatment of mission-critical infrastructural and agricultural areas. Throughout the years, Aebi Schmidt continued to innovate, becoming best in its class, and expanding internationally. The business remains a pioneer in the

fields of snow clearing and de-icing, and for the first time ever, the Group achieved a net turnover of more than USD 600 million in 2019. Today, the Aebi Schmidt Group maintains the same pioneering spirit as its founders. The company heavily invests in R&D, relentlessly innovating municipal and special-purpose vehicles, focusing on autonomous driving, utilizing the Internet of Things, and adding value for customers. Barend Fruithof, CEO of Aebi Schmidt Group, is committed to

having the company further evolve, innovate and grow, with lofty ambitions for the North American market in particular.



Barend Fruithof
CEO
Aebi Schmidt

According to Fruithof, the company's Swiss roots have been instrumental to the overall success of Aebi Schmidt. "Industrial companies sometimes forget how critical it is to have streamlined access to reliable financing. Switzerland's accessibility for financial sources from banks, private investors and private equity companies has allowed us to finance the entire company out of Zurich. The efficient financial system is one of the many reasons we are based out of Switzerland today. The country offers high caliber talent and great technology, and it is easy to develop strong connections and partnerships. Switzerland has a globally unique industrial manufacturing ecosystem, where Swiss brands equate to high-quality products. Being a Swiss company has opened doors for us and allowed us to collaborate with influential companies and entities around the globe. Due to Swiss pragmatism, we have successfully grown. We are proud of our Swiss roots with a global reach," stated Fruithof. Aebi Schmidt has decades of international experience and acquired valuable knowledge through the acquisition of various individual regional brands. The group is globally positioned and includes acquisitions such as M-B, founded in 1907 in New Holstein, Wisconsin; Schmidt, founded in 1920 in St. Blasien, Germany; Meyer, founded in 1926 in Newburgh, New York; Swenson, founded in 1937 in rural Northern Illinois, amongst others around the world.

Aebi Schmidt Group's product range has a commendable reputation for high-quality manufacturing of purpose vehicles for winter service, street and surface cleaning, and agriculture. The Group has a wide range of products from vehicles to innovative attachable and demountable devices. The Group ensures clean and safe traffic routes and airfields throughout the world and offers innovative agricultural machines in challenging terrain. It includes a portfolio of brands such as Aebi, the world's leading brand for vehicles enabling the safe mechanical cultivation and maintenance of extreme slopes and demanding terrain. Schmidt, another brand under the Group, has been at the forefront of winter maintenance equipment for the last 100 years. Schmidt has innovation ingrained in its DNA, and is a pivotal partner for airports, service providers and authorities around the world.

Aebi Schmidt has an impressive presence in sixteen countries with sales and service organizations. It also has eleven production facilities across the world, with six located in the USA, based in Wisconsin, Ohio, Illinois, and Pennsylvania. While discussing operations in the USA, Fruithof mentioned, "The USA and Canada are strategic markets for us. We have ambitions to continue to gain market share and could reach revenue from the USA up to 40 percent for the Group. Agriculture machinery makes up about 11 percent of our business, and aviation has the biggest potential for the USA market and our growth in particular. We are the leading provider in the airport sector for snow clearance, de-icing equipment and control systems technology in the USA. We recently won a contract for both Chicago airports, which is one of the largest contracts a company could win regarding snow removal at airports. We also see huge potential in our sweeper business in the USA, which is why we recently invested in the expansion of our factory in Wisconsin. Furthermore, we acquired ELP, a leading winter equipment producer in Quebec, to further expand operations in Canada."

Fruithof went on to discuss how the company ensures it will continue to break new ground and continuously improve its products and services. He stated, "This year, we have invested roughly CHF 14.5 million into R&D. We are involved in autonomous driving and have partnerships with Mercedes-Benz and CPAC."

Another area of heavy investment in R&D for the Group is advancement in electrification of machines. Fruithof stated, "We delivered the first fully electric sweeper. The eSwing 200+ works emission-free for up to ten hours on a single charge. We continue to collaborate with other companies and universities on various R&D projects, and look forward to developing more sustainable, innovative solutions. Sustainability is an essential part of our business activities, and our economic, social, and environmental targets are implemented along the entire value chain. We use resources sparingly, and continuously invest in sustainable technologies."

He added, "Hallmarks of the Aebi Schmidt brand include Swiss quality, service, innovative technology, continuous enhancements, sustainability, and reliability. Our goal with all relevant products in respective markets is to become one of the top three players in that market. With regards to airport business, it is clear our goal is to be the number one player in the USA and Canada. In order to achieve this, it will require more acquisitions. We have a clear plan for the next five years and will continue to grow our share of revenue in North America. We build sustainable partnerships, which is typical of a Swiss company."

Looking into the future, Fruithof has ambitions to further transform Aebi Schmidt Group's business model, "We are currently a product driven company, but it is our vision to transition into a solution provider, offering service contracts, connectivity based on digitalization, and after sales services. Over the next five years, we will continue to evolve, and this will be one of our big game changers. For instance, when municipalities create tenders, they are usually not mentioning the total cost of ownership of a particular machine over a period of ten years. We would like to offer proposals on a basis of total cost of ownership. This will allow for greater sustainability of the machines, higher quality of the machines, and better service due to the connectivity. If we remain connected to the machine digitally, we can inform the owner of any issues, help optimize routes, and improve the way the machines drive through cities to become more efficient. The machines will then require less fuel, electricity, and labor. If machines can become twenty percent more efficient, clients will need less machines, fewer drivers, and pay less for fuel consumption. This will benefit not only the environment, but also the economy."

With an already large foothold in the North American market, Fruithof reflected on the Group's presence and future opportunities. He stated, "Aebi Schmidt Group sees tremendous value in our presence in the North American market, not only for balancing our portfolio. We are really happy with our North American workforce since values closely align with the Swiss. We also receive excellent support through local government agencies and embassies. As a group, we are proud of our activities in the USA, and look forward to continuing to develop strong, sustainable relationships in North America." ■

By Jennifer Jendusa



Redefining Better
in Orthopaedics and Spine Surgery



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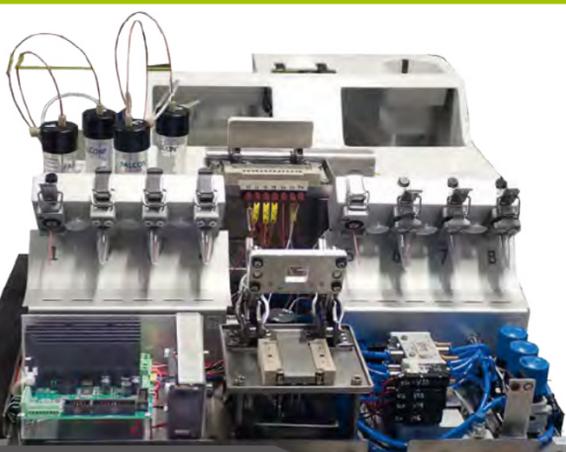
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Swiss Ingenuity is Reshaping the Packaging Industry to Ensure Sustainability

Innovative solutions foster new frontiers in digitalization, automation and sustainability



Consumers worldwide have been challenging major corporations to “go green” and become more sustainable. The increasing pressure from influencers has encouraged major global brands to collaborate with their trusted suppliers and create sustainable products to reduce their companies’ environmental footprint. Through large investments in R&D, industry champions are creating solutions to meet eco-friendly ambitions of brands including Coca-Cola, Unilever, Walmart, Aldi, and Nestlé, who have targets to exclusively use 100 percent reusable, recyclable or compostable packaging by 2025. Social pressure and fierce competition are indirectly pushing the packaging industry into a deep transformation, one that requires digitalization and automation to meet objectives.



Jean-Pascal Bobst
CEO
Bobst Group

Jean-Pascal Bobst, CEO of Bobst Group, a global market-leading manufacturer of packaging and labeling machines, stated, “As a supplier to major multi-national brands including Nestlé in the food sector and Procter & Gamble in the fast-moving consumer goods sector, the Bobst Group is at the forefront of supplying environmentally friendly packaging solutions. We aim to satisfy customers’ continuous ecological shift. As a group, we aim to break boundaries and offer genuine innovations for brands that stand the test of time. The Bobst Group puts sustainability at the forefront and strives to

create environmentally friendly packaging solutions and zero-fault production processes that allow for up to a 30 percent waste reduction. For instance, the multiple layers in plastic packaging cause some current plastic packaging to be non-recyclable. We recently developed, in collaboration with suppliers, a new recyclable duo-layer flexible material. We aim in the near future to offer a monolayer polymer material that is equally as durable as today’s packaging. It will offer excellent oxygen and water barriers and ensure food shelf-life, all while being easier for recycling plants to process. In addition, we are incorporating vacuum and state-of-the-art aluminum oxide barrier technology. These solutions cost only a fraction of a cent more per packaged item. Furthermore, through new ink formulations and machine technology, our engineers created a water-based ink, which is far better for the environment. We are currently developing our own ink for our machines and striving to master the chemistry in order to offer a robust solution that guarantees nanoparticle migration quality. Our in-house experts are continuously developing and re-designing equipment to reduce processing waste and energy use. For instance, this is exemplified with Bobst’s inline inspection system, ACCUCHECK. Our ambition is to support companies around the world in decreasing their environmental footprint - and this is possible.”

Bobst, great-grandson of the company’s founder, fosters the group’s forward-thinking initiatives and ensures the company continues to innovate. Founded in 1890, Bobst Group has grown tremendously from its early days of supplying commercial printers within the Swiss city of Lausanne. In 2021, it has a presence in more than 50 countries, employs 5,500 people worldwide, and has a turnover of nearly USD 1.8 billion.

As the next generation leading the Bobst Group, Jean-Pascal Bobst stresses how well he, “Understands the pressure clients experience. Brands will need to make significant investments in new packaging machines to meet customer demands in quality, while lowering costs and ensuring sustainability. As

a global market leader in manufacturing packaging and labeling machines, we continue to support this vision by developing machines that are gradually becoming more digitally interconnected. In order to achieve this, we invest nearly 6 percent of our turnover in research and development.”

Digitizing production floors

The ongoing pandemic and related surge in e-commerce has reinforced the long-established trend of the Internet of Things (IoT), embedding sensors, software and technologies to connect systems. According to Bobst, “IoT brings unparalleled levels of automation and digital transformation to operations. IoT is optimizing entire production floors, and the group developed ‘BOBST Connect’ to take a central role supporting clients during their digitization rollout.”

BOBST Connect is an open architecture cloud-based platform that can deliver pre-press, production, process optimization, maintenance, and market access solutions. Fully optimized machines consume fewer resources, including water, ink and board. Therefore, it increases the system’s usage while allowing for close control, ensuring lower waste.

According to Bobst, “The group is digitizing label printing, films, and folding box equipment by adding connectivity and automation across the production cycle. Connecting all packaging stakeholders throughout a new value chain enables quality, efficiency, control, sustainability, and proximity. To add value and create synergy across the value chain, Bobst Group aims to shape the future of the packaging world.”

As the new Biden administration gears up efforts to combat climate change, and environmentally conscious consumer decisions drive brands to further their sustainability initiatives, plastic packaging will continue to be at the forefront. Swiss industry and hidden champions’ research, development and manufacturing will continue to be exported globally, and have an enormous impact on global value chains. ■

By *Fadrique Álvarez de Toledo*

World Leader in Isolator Technology Stays One Step Ahead of the Innovation Curve

Swiss technology continues to improve safety in pharmaceutical production

The manufacturing of pharmaceuticals is a complex and high-stakes undertaking. Patient safety and product quality are of paramount importance. To mitigate manufacturing risks and improve safety, pharmaceutical manufacturers are opting for isolators instead of classic cleanrooms for aseptic production activities such as filling and formulation. An isolator’s enclosed environment is easier to control than that of a whole cleanroom, and it provides superior sterility and better operator safety.

At the forefront of isolator technology is Skan, a Swiss innovation pioneer that delivers unique solutions to the global isolator market. During its 50-year history, the company has grown from a handful of employees to more than 900 worldwide and is the market leader in its niche.

Isolator technology pioneer

Since its founding in 1968, Skan has pioneered state-of-the-art, client-specific solutions to protect the aseptic process from human operators, and operators from any toxic products. One of Skan’s innovative milestones was the first filling line isolator with a hydrogen peroxide decontamination cycle of fewer than two hours, and many other improvements ensuring aseptic production complies with the highest FDA standards.

Driving the company forward is a mindset seeking to actively push new boundaries. Adopting this disruptive outlook allows Skan to meet current and future pharmaceutical industry challenges and opportunities.



Thomas Huber
CEO
Skan

As economies grow and healthcare provision expands, the demand for pharmaceutical products is on the rise. The diversity of pharmaceutical needs is also increasing, and consequently, the need for isolator technology is greater. At the same time, regulations are becoming more stringent. To develop customized solutions, Skan works closely with its customers in line with regulatory bodies such as the FDA to ensure its products meet the highest standards.

“Our goal is to get closer to the customer’s needs,” says Thomas Huber, CEO of Skan. “We don’t just want to merely sell clients machines. We have an abundance of know-how and can support the customer in how to ramp up their products quickly and have machines FDA compliant. This is beneficial not only for our customers, but also for patients around the globe. As regulatory bodies approve pharmaceutical products, companies are able to roll out products and begin production on a shorter timeline. We are improving our services to make sure we can help our customers accelerate their time-to-market.” It is a lofty goal, but one that Skan is determined to achieve.

One step ahead

This world leader in aseptic isolators is based in Basel, one of Switzerland’s most populous cities and a chemical and pharmaceutical industry hub. It also has subsidiaries in Japan, Germany, Switzerland, Belgium, and the United States, and representations around the globe. Ambitious growth plans are on the horizon as it seeks to expand its international footprint, particularly in the USA. The company is making significant investments in manpower and equipment to ensure prompt maintenance for clients’ isolator machines.

“We are working with highly talented engineers in the USA and around the world to bring them up-to-speed on our specific equipment and technology. Currently, since our technology is very specific, it takes about six to twelve months of training for an engineer to become an expert, and we offer extensive on-the-job training. In addition, we have our own academy, which also expanded to the USA,” stated Huber.

In the coming year, Skan’s workforce is set to expand to more than 1,000 global employees to help the company stay ahead of the innovation curve.

Huber added, “Skan is a typical Swiss company. We value innovation, and our mission is always to be one step ahead. We have followed this method for many years, and it has allowed us to achieve the success we see today and continue to scale our business into the future.” ■

By *Paul Arnold*



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The Future of Finance

Impact investing, blockchain, fintech, and cryptocurrencies



The Swiss financial services sector continues to evolve as a new wave of financial institutions and trends are transforming the field. In addition to the adaptation of traditional Swiss financial services now ensuring transparency at the forefront, there has been a surge in socially responsible investing, blockchain technology, fintech, and cryptocurrencies, all of which are revolutionizing the field.

Although the absolute contribution of financial services in Switzerland has fallen over the last ten years in relation to the country's GDP, the financial and banking sectors remain key elements of the Swiss economy. Switzerland has sustained its position as a world leader in wealth and asset management, and the sector plays a vital role in contributing to Switzerland's international top competitiveness ranking, serving as a catalyst for both economic and sustainable development.

Investing for a better world

For centuries, socially conscious investors avoided investing in "sin industries," but in the 1960s there was a shift to not only actively avoiding, but rather investing towards positive initiatives, such as civil rights and equality. Over the decades, there has been phenomenal growth in impact investing, including a 270 percent increase in ESG (environmental, social and governance) assets since 2012.

Impact investments in particular have rapidly grown and continue to attract investors opting for both solid financial returns and the promise for positive change with their investments going towards measurable impact for society and the environment. The Global Impact Investing Network estimates the current market to be worth USD 715 billion. These targeted investments have a massive impact on the globe, helping to tackle some of the world's foremost challenges, such as climate change and poverty. The International Finance Corporation, a member of the World Bank Group, estimates this field has the potential to grow to USD 26 trillion. The Swiss Sustainable Finance Association stated that impact investing is worth nearly CHF 55 billion in Switzerland, which is quite small relative to the CHF 1.16 trillion Swiss market for sustainable finance, but likely to increase moving forward.



Patrick Odier
Managing Partner
Lombard Odier Group

According to Patrick Odier, Managing Partner of Lombard Odier Group, one of the biggest players in the Swiss banking sector, "The Swiss live by several golden rules. One of them is not to spend more than you earn. This has

ensured the nation developed a solid financial base to grow. Switzerland remains the world's largest financial center for cross-border private wealth management, and continues to evolve as trends are changing. The power of investing and traditional charitable giving are strategically combined to achieve the highest impact possible. The lines between philanthropy and investing for impact are becoming increasingly blurred."

Renaud de Planta, Senior Partner of Pictet Group, a Swiss multinational private bank and financial services company founded in Switzerland, and now one of the leading European independent wealth and asset managers, said, "The next generation of Swiss financial services will build on Switzerland's existing strengths of financial solidity and services mindset. A rising number of young investors seek socially responsible investments, and they should trust Swiss providers who have a track record in creating new asset classes and pioneering complex products. The new generation of Swiss providers are building new products with sustainable and responsible investment strategies in fields including micro-financing and clean water."

Demystifying blockchain, fintech and cryptocurrencies

Institutional and personal investors are seeking to diversify their portfolios not only through impact investing, but also revamp their portfolios and join the growing trend for blockchain technologies, fintech and cryptocurrencies. Switzerland is well-known as a vital hub for innovation in the financial services sector. Switzerland's fintech sector is flourishing as transformative developments are on the rise from the emerging digitalization of banking and finance. The crypto and blockchain industries are Switzerland's most developed fintech segments, and continue to develop new models, enhance efficiency, and in some categories, reposition traditional banking all together.

The Canton of Zug, nicknamed "Crypto Valley," is a hotbed for cryptocurrencies and blockchain technologies. Zug has ambitions to become the global capital of cryptocurrencies and fintech, and establish itself as the world's leading blockchain ecosystem. The Swiss fintech sector has several hundred companies, and a significant proportion of them are working within the field of Distributed Ledger Technology.



Päivi Rekonen
Chair to the Board
of Directors
SEBA Bank

Päivi Rekonen, Chair of the Board of Directors of SEBA Bank stated,

"Switzerland has positioned itself as a thought leader in the fields of digital assets and digital currencies. Switzerland's regulatory framework is crypto friendly, and we have an excellent ecosystem for blockchain technologies to thrive, grow and take shape. Swiss companies utilize technology as an enabler for business transformation. In order to achieve transformation, it requires a certain skill set, competency, attitude, and strength. Switzerland has an exceptional talent pool well equipped with the skills necessary to innovative."



Guido Bühler
CEO
SEBA Bank

Guido Bühler, CEO of SEBA Bank added, "A lot of innovation is driven out of Switzerland. On the digital currency side, this segment has been growing year-on-year by 350 percent. With regards to digital assets, Swiss Parliament approved new regulations for Blockchain and Distributed Ledger Technology, with the goal for the new legal framework to increase Switzerland's reputation as a leading, innovative and sustainable location for fintech and blockchain companies. This will go into effect on February 1, 2021, and become fully implemented by August, 2021."

SEBA Bank is a trailblazer in the field, and bridges the gap between old and new, merging the worlds of traditional banking with crypto banking. The entity is setting new standards for transparency, performance and safety. As a fully licensed and regulated Swiss bank, it provides secure and user-friendly methods for managing traditional assets and digital assets. It allows clients to secure, trade and manage cryptocurrencies, digital assets and conventional securities under the same roof. Their services include custody storage, trading and liquidity management, asset and wealth management, transaction banking, and tokenization. The company is redefining finance, and ensuring Switzerland maintains its footing as an innovative powerhouse.

"Investors want to have someone they trust taking care of their assets. As a fully regulated bank, SEBA Bank is reliable and trustworthy. If there is a token issued by SEBA Bank, you know that this token is representing a real asset, such as real estate or gold, and the execution of that token is guaranteed," stated Rekonen.

Bühler stated, "We are the first bank with such a comprehensive service range combining traditional, digital and crypto assets worldwide. SEBA Crypto Asset Select Index (SEBAX®), is our next generation index. It addresses common pitfalls of traditional market-weighted indices and improves diversification significantly by representing between five to eight main cryptocurrencies at once and balances them. Our index has beaten all of the main benchmarks. It was introduced on July 4, 2019, and we are incredibly proud of its performance thus far. Compared to competitors, SEBAX® has a fifty percent lower cost ratio. It is a smart and reliable gateway into the crypto market."

CONTINUED FROM PAGE 8...

"Our most important principle is the careful use of natural resources. Modern plastics technology enables creative and sustainable solutions. The plastics we utilize are 100 percent recyclable."

Utz focuses on the use of plastic for its excellent technical properties, which enable the production of lightweight yet robust products. All of their products are designed for long-term reusable use of up to 20 years, in addition to being fully recyclable. Once the lifecycle of Utz's packaging products comes to an end, they are designed to be recycled to enable the company to extract high-quality raw materials with proven characteristics. Utz refers to these recycled raw materials as Utz Industrial Compound, or UIC, which is used to create new premium quality products. It calls this process its "cycle of sustainability". This process allows Utz to reduce its CO2 emissions by up to 50 percent. Furthermore, by focusing on local production, Utz ensures short transport routes on three continents. Utz's goal is to offer its customers long-term climate-neutral recyclable packaging.

Utz targets major expansion in North America

Utz has manufacturing plants in Switzerland, Germany, France, the United Kingdom, Poland, China, Mexico, and the USA, where it has a plant in Indiana. In 2021, Utz will be opening a new plant in Mexico. North America accounts for around 15 percent of the

He continued, "In Switzerland, there is currently not a specific digital asset exchange, and this is something lagging. However, SEBA Bank's tokenization platform can make liquidity available from its services and products until there is an exchange in Switzerland. We will launch the Swiss Franc Stablecoin, which is linked one-to-one to the Swiss franc. Currently, if you hold Swiss franc in a bank, you have to pay negative interest rates. SEBA Bank will offer an alternative. We will pay approximately half a percent in interest for our holders. We will be launching several new innovative tokens next year, watch this space! People across the world will soon start to realize that blockchain technologies allow for a new toolset, creating value for investors and those seeking liquidity."

SEBA Bank has hit a frontier, and is closing the gap between the digital asset world and traditional banking. With growth plans, Rekonen and Bühler envision SEBA Bank becoming a global leader in integrated digital banking, and offering people across the world access to their financial instruments to improve daily lives, acting as an amplifier of wealth and knowledge.

Rekonen mentioned, "At SEBA Bank, we have innovative ideas in the pipeline, and are gathering partners to further develop these initiatives, but it is also important to make sure the market is ready for these new ideas. As of now, the mass market isn't quite there yet. However, we are working to demystify this and help society at large understand this new trend through SEBAversity, an integral part of SEBA Bank whose mission is to educate, increase awareness and understanding of the digital economy. With Switzerland's historic financial services industry and innovative mindset, and the growth of digital assets and currencies, SEBA Bank is playing an important role in the middle of these two worlds."



Bühler added, "We are funneling macroeconomic and social trends into products, with the end goal to make the world a better place." SEBA Bank is well poised to capture more growth and enable individuals, companies and institutional clients to invest safely, keep, trade and borrow against digital and traditional assets.

The future of finance is here with a new generation of financial services, banking and investing. Being one of the most predominant disruptors, SEBA Bank is recognized as the new bank for the new economy. With booming fintech, blockchain and cryptocurrencies emerging, and with impact investments on the rise, traditional portfolios are continuously being diversified to both better the world and improve investor's risk-return ratios. ■

By Jennifer Jendusa

Digital Assets The Future of Banking

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SEBA, the Bank for the New Economy

By Fadrique Álvarez de Toledo

Switzerland Employs Half a Million Across the USA

Swiss industry continuously brings high-quality jobs and the 'Swiss spirit' to even the most remote regions

Although the USA is one of the most powerful countries globally, it still has its share of unemployed, impoverished citizens, and is keen on attracting foreign investment to boost local economies.

The past decade's economic growth bypassed many rural areas, including Barnwell County in South Carolina, where the poverty rate reaches an above-average 17 percent and unemployment surpasses 14 percent. Swiss Krono Group, one of the world's leading manufacturers of wood-based materials, invested heavily in Barnwell, and its footprint has directly tackled local joblessness and poverty.

Swiss Krono began distributing its products in the USA in 2000 and opened its current manufacturing facility in Barnwell in 2005. In 2019, Swiss Krono completed a major expansion of its Barnwell manufacturing facility. The plant can now supply laminate flooring, medium-density fiberboard (MDF), high-density fiberboard (HDF), laminated panels for the furniture industry, and treated paper for use in laminate applications. The expansion also included the construction of an energy plant and waste treatment facilities.

Critically for the area, the new investment created 105 permanent jobs and 500 construction jobs. The permanent jobs pay an average salary of USD 56,000 per year, with health insurance, and 401(k) matching funds. In addition, while Swiss Krono previously sourced fiberboard from outside the state, the company then chose to locally manufacture this base material for its laminate flooring production, bolstering the local timber industry through this backward integration.

According to Dakotas America, a nation-

al rural Community Development Entity (CDE), the move reduced Swiss Krono USA's carbon dioxide emission by 2,500 tons annually.

Moreover, The Innovate Fund, another CDE involved in the transaction, estimates the expansion will create 375 indirect and induced permanent jobs with an aim to benefit the low-income population in the region. Swiss Krono USA also runs an apprenticeship program in partnership with the "Apprenticeship Carolina" division of the South Carolina Technical College System and local high schools.

According to The Innovate Fund, Swiss Krono has a college co-op program, where it collaborates with local and surrounding technical schools to provide programs that align with the skills and trades utilized in their operations. Such workforce development programs are critical to enhancing the quality and accessibility of jobs to local community residents.

But who exactly is Swiss Krono, the company bringing jobs and hope to rural South Carolina? Founded in 1966 by an Austrian entrepreneur, with its head office in Lucerne, Switzerland, Swiss Krono is the world's largest laminate flooring manufacturer with a global market share of around 15 percent. It supplies an extensive range of wood-based products in the interiors, flooring, and building materials sectors. Despite the difficult conditions due to COVID-19, Swiss Krono generated sales of USD 2 billion in its latest business year and employs around 5,000 employees at ten production sites across the globe: in Switzerland, France, Germany, Poland, Hungary, Ukraine, Russia, and the USA. Swiss Krono distributes products in 120 countries.

Switzerland's constant focus on competitiveness

As an international manufacturer of highly efficient wood-based materials, Swiss Krono has successfully expanded its global operations while increasing efficiency. Manufacturing products locally helps Swiss Krono remain competitive, offsetting the strong Swiss franc and high production costs in Switzerland. But like many other Swiss companies, Swiss Krono's constant focus on day-to-day improvements in efficiency and productivity, and investment in research and development, helps the company's Swiss operation remain competitive. As Martin Brettenhaler, CEO of Swiss Krono Group, explained, "Swiss businesses focus on incremental gains that work, rather than spectacular, headline-grabbing breakthroughs that often promise more than they can deliver."

Brettenhaler added that Swiss Krono's strong position in the Chinese market highlights the ability of the company to remain competitive, "Domestically produced goods account for around 90 percent of the Chinese market. Laminate flooring produced by our Swiss-based plant accounts for much of the remaining 10 percent of the market. Even though Swiss goods are transported from the European Alps down to the sea and travel as ocean freight halfway across the world, they remain competitive in China. It helps that we can charge a premium due to the high-quality reputation of Swiss-designed goods."

This competitive edge also helps Swiss Krono in the North American market. The company's ambition is to increase its market share in the USA, and become the primary partner for its customers, including nationwide chains like Lowe's and Home Depot. Brettenhaler argues that the USA is somewhat lagging behind Europe in terms of design, variety, and quality. He added, "Swiss Krono can bring European-style laminate flooring to the USA. Our partners should know that our floors are American-made products with a 'Swiss spirit,' in terms of attention to detail, price efficiency and excellence of design."

Innovative products

Swiss Krono knows that it must innovate and respond to changing consumer demand to stay ahead of the market. Against the background of COVID-19, the

company recently developed a product that is anti-bacterial and anti-viral, and is currently bringing it to the market.

Moreover, it is taking on the Chinese suppliers who dominate the market for Design Floors or Luxury Vinyl Tiles (LVT), by developing a water-resistant laminate flooring, a product that Brettenhaler believes could prove a "game-changer." The new flooring will overcome one of the main advantages of plastic-based LVT floorings, which carry a price premium over laminate flooring, namely their ability to withstand water damage. Yet the new product will still offer the environmentally friendly qualities of a flooring made from sustainable, potentially-recyclable wood resources.

Environmentally-friendly competitive edge

With the world's eye on climate change and CO2-reduction, Swiss Krono's dedication to environmental issues should prove an added attraction. Due to its leading role in the engineered wood industry, Swiss Krono believes it has a special responsibility to protect the environment. It is committed to preventing environmental burdens and continuing to improve the environmental compatibility of its manufacturing activities.

Eco-efficiency is defined as one of Swiss Krono's corporate goals, and all employees are thoroughly informed, trained and educated about environmental matters.

Every product that leaves one of its plants not only has an excellent price-performance ratio, but also exhibits a high level of environmental friendliness. Swiss Krono only uses legal, certified raw materials from sustainably managed forests. The manufactured products are rigorously monitored during their lifetime to ensure they are long-lasting and are disposed of in an eco-friendly manner.

Swiss Krono endeavors to minimize the consumption of raw materials, water and energy. The company takes advantage of wastewater, energy and thermal cycles, and burns production waste to minimize its dependency on fossil fuels.

Swiss investments within the USA generate a considerable economic benefit for the regions they operate within. Environmental efforts by Swiss Krono and other companies safeguard future generations' resources. For a nation with 8.5 million people, Switzerland has an oversized footprint in the USA, contributing to rural communities and employing half a million people across the states. ■

By Anthony Beachey

The Rising European Hub for Data Centers

Zurich is quickly becoming one of Europe's leading information technology hubs

Rising demand for online services has driven new large-scale investments in data center infrastructure around the world, and generated the need for additional sophisticated cloud services. Several global hubs have continuously developed to meet evolving requirements. Switzerland is becoming increasingly interesting as a cloud region, that ensures both information security and fast data access.

Remote working, home entertainment, and online learning, among other driving forces, are behind a recent rush for additional online storage, including the demand for data centers. With this trend ever increasing, demand is projected to continuously rise. Legislation across the globe pertaining to data sovereignty and stricter security protocols are emerging, and in some cases, there is even legislation requiring entities to store data locally rather than abroad. The European General Data Protection Regulation (GDPR), is a regulation in EU law on data protection and privacy in the European Union and the European Economic Area, and is one of many such global legislations. Switzerland operates under its own Federal Act on Data Protection (FADP), while meeting the requirements of the GDPR. Companies see this as an advantage to operate compliantly and securely.

COVID-19 accelerated long-standing trends for global cloud infrastructure requirements, and a growing number of international businesses are already storing data in Europe. Increasingly companies are choosing to store data within the secure borders of neutral Switzerland, the country with a long history of safe-keeping valued assets.

Zurich in particular has a thriving data center market. There are numerous hyper-scale campuses (facilities owned and operated by the company it supports) complementing each other. These campuses have high rates of availability, in order to accommodate the emerging needs for ever-growing core digital services. A mix of international cloud operators, such as Google, Amazon and Microsoft, are building their operations in Switzerland.

According to Roger Süess, CEO of Green, a leading Swiss data center provider, "Excellent Swiss IT infrastructure plays a central role in rapidly advancing digitalization. Switzerland offers a first-class, future-oriented infrastructure that allows secure optimization for global players."

Green is a full-service provider of next-generation data centers and network services in Switzerland that are increasingly being used by medium-sized and large-scale companies from around the world. Green operates five data centers in the Zurich region, which are interconnected by a dedicated fiber-optic ring and networked with over 45 carriers of choice.

Süess emphasized, "Green continues to build state-of-the-art infrastructure utilizing

highly innovative large scale technologies, and with our specialization in data center network services and expertise, we have become a leading data center provider. Our efforts and innovative character were recognized with an Information Services Group (ISG) award as the leading data center provider for Switzerland."

Green can provide tailor-made solutions for companies worldwide and be the partner of choice for American enterprises seeking to optimize their European operations. Its experience and data center infrastructure make it a preferred partner for IT infrastructure solutions, particularly because their data centers have established themselves as true networking platforms between enterprise customers, content providers, integrators and cloud providers. They all benefit from the proximity to each other and thus from the fast interchange of data.

Süess highlighted, "As a full-service provider Green can help entities modernize their IT infrastructure, including the planning or running of day-to-day operations of major data centers, and even carry out any needed networking requests. Our name is a commitment, and sustainability is an integral part of the DNA. We continuously increase our IT infrastructure to remain a high-security data center, boost internal efficiency, enhance performance, enable automation, and strive to lead in energy efficiency, all while being price competitive. Utilizing sustainable energy is a core value we keep pushing. Since 2020, our energy consumption has been derived 100 percent from renewable sources, predominantly from hydropower and solar."

Power usage effectiveness (PUE) is a ratio describing how efficiently a computer data center uses energy. Data centers tend to have a PUE of 1.5. Green is driving innovation in energy efficiency through numerous initiatives, which culminated with operations having an impressive PUE of 1.13.

Süess stated, "With a new fully redundant high-performance campus on the outskirts of Zurich, Green is expanding its offering yet again. This will make the company a one-stop store for all those who want to use Switzerland and neighboring Europe for their digital initiatives. Companies can complete all their digital business needs for Switzerland from the Zurich area. In particular, customers value Green's Swiss punctuality in delivering planned services. It is ingrained in the way we deliver, and a core corporate trait."

As global companies race to meet the growing requirements of a newly digitalized society, Switzerland's value-added proposition will continue to captivate global marketshare. The Zurich area will continue to develop as a data center hub, and further safeguard data within its state-of-the-art facilities. ■

By Jennifer Jendusa

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Thurgau: An Industrious Canton

All the high-quality advantages of Switzerland, but with greater affordability



In Northeastern Switzerland, bordering Zurich and within St.GallenBodenseeArea, lies the canton of Thurgau, one of the most cost-efficient business locations in the Swiss Confederation. The canton respects its agricultural history and capitalizes on its location in one of Europe's strongest economic regions. Excellent transport links connect the capital Frauenfeld to Zurich Airport by rail in 25 minutes.

“One of the most cost-efficient business locations.”

Companies based in the canton of Thurgau benefit from all the high-quality advantages of Switzerland, but with greater affordability. Businesses benefit from the canton's competitively priced real estate offerings, which are 30 percent more affordable than in Zurich, and ample land reserves support growth and expansion. With appealing real estate opportunities, the region lies within one of Switzerland's most attractive economic areas.



Walter Schönholzer
Head of the Department of Economics and Home Affairs
Canton Thurgau

According to Walter Schönholzer, Head of the Department of Economics and Home Affairs of Canton Thurgau, “Local government is small and efficient. We take great pride in ensuring civil service has short official channels so decisions can be made swiftly. Building permits, for example, can be obtained systematically without difficulty. An environment of dialogue has been fostered locally between stakeholders which has been beneficial for businesses and makes it easy to retain happy residents. Companies find qualified employees and an active apprenticeship system which delivers a constant stream of youthful applicants.”



Industry is well established in Thurgau and represents nearly 35 percent of the economy. A wide variety of machine, electrical engineering, and metals companies corroborate Thurgau's many advantages with its quality of life, breathtaking landscape, qualified labor force, liberal labor laws, favorable tax system, and low wage and production costs.

According to Daniel Wessner, head of the Thurgau Office for Economy and Labor, the manufacturing and processing sectors have an outstanding local footprint. He asserts “Several well-known, internationally active enterprises have large ongoing investments in Thurgau that are growing. The worldwide leader in high-tech transportation systems Stadler Rail is continuously expanding its local operations, household appliance manufacturer V-Zug is expanding with a CHF 250 million plant, and the Finnish marine engine manufacturer Wärtsilä relocated its Swiss research, development, and service headquarter location to Frauenfeld in 2020.”

While business is thriving thanks to favorable conditions, it is the exemplary quality of life that attracts and retains employers, residents, and most importantly, youth.

The canton of Thurgau is known for its sublime agricultural produce. It is characterized by vineyards, orchards, and hills. It has become the number one fruit growing area in Switzerland. Exemplary wine is produced in the Thur valley. Strawberry and raspberry farms abound, ranking it the second largest canton by production. It grows a third of Switzerland's apples and pears, and nearly half of nationally consumed sugar originates from sugar beets grown in Frauenfeld. Its apples are fermented into sweet cider and baked into delicious desserts such as the celebrated apple juice “Thurgauer Süssmost Creme” and the locally renowned apple tart “Arenenberger Apfeltorte.”

Beyond its orchards, whitefish and European perch are fished from Lake Constance, the third-largest freshwater lake in Central and Western Europe. Thurgau is also the home of Thurgauer Rahmkäse, a popular semi-hard cheese. The cheese's creamy texture, rich aroma, mild spicy notes and delicate melting have conquered connoisseurs around the world.

With softly rolling landscape at the foothills of the Alps that beckon cyclists



and 62km of shoreline along Lake Constance and the River Rhine, it is no surprise MICE tourism is thriving.

“Congress, conference, and workshop facilities are readily available within an assortment of historic castles, monasteries, and hotels.”

Congress, conference, and workshop facilities are readily available within an assortment of historic castles, monasteries, and hotels. Karthause Ittingen, one of the most stunning venues in Thurgau, offers MICE events beautiful gardens and historic huts on the grounds of the former monastery, while the most recent addition, the Wolfenberg Conference Center, offers state-of-the-art infrastructure.

It is no surprise Thurgau retains its happy residents; they can work where others vacation. ■

By Fadrique Álvarez de Toledo

CONTINUED FROM PAGE 6...

manufacturers in many products that are shaping global brands. It is thanks to continuous collaborations in innovation that Swiss companies can maintain the iconic Swiss long-lasting quality reputation.”

These optimal conditions create an ideal environment for globally-minded companies to set up high-performance production facilities, and as a result, important clusters have emerged. For instance, the Swiss life science industry has capitalized on this valuable environment and nurtured the highest level of productivity worldwide. Players such as Roche, Novartis, Johnson and Johnson and Syngenta built specialized production facilities, and contributed to increasing Switzerland's outstanding reputation worldwide. For example, Johnson & Johnson, which has a long history in Switzerland, employs 4,400 people, and is developing digital, data and advanced analytics capabilities while driving research in their internal pulmonary hypertension therapeutic area.

The MEM industry cluster, led by internationally-oriented Swiss SMEs, has become the biggest industrial employer, and turned the nation into one of the biggest industrial exporters per capita.

ICT is another widespread cluster. Switzerland has excellent server infrastructure, fast internet connections, and

a stable cost power supply. Swiss companies confidently turn to state-of-the-art technologies and become early adopters of advanced ICT solutions.

Research and development (R&D) centers are another niche cluster. Cutting edge startups and global corporations such as Apple, Disney, Google, Facebook, IBM, Microsoft, Oracle, and Samsung are actively expanding R&D operations in Switzerland.

Frank Ziemer, CEO of Ziemer Group, underlined another important value, “The Swiss have deeply ingrained social values, and when it comes to acquiring goods, we will often avoid products that are not responsibly sourced. The social values ingrained within our society help drive innovation towards more socially and environmentally sustainable products. At Ziemer Group, we work on fundamentally changing the ophthalmology market by creating technology that improves the quality of eye care. While advancing our purpose, we also ensure to act responsibly and implement sustainability practices where possible.”

In the face of these developments, Swiss industrial companies have a clear vision. Innovation and sustainability remain key elements to remaining competitive. ■

By Fadrique Álvarez de Toledo

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