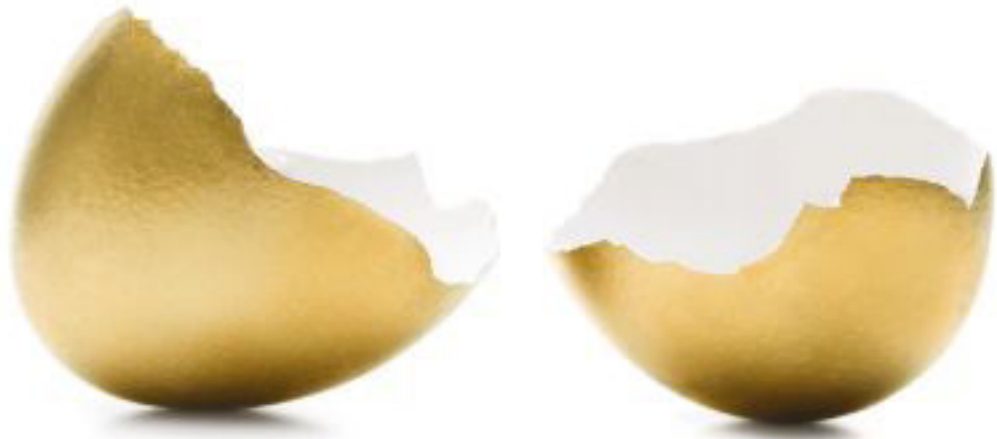


THE BEST SWISS STARTUPS OF 2011

TOP 100



EXCEPTIONAL The Top 100's recipe for success **ESTABLISHED** An interview with Sensirion's CEO, Felix Mayer **ADAPTABLE** More and more young engineers are taking the leap into entrepreneurship **ENTHUSIASTIC** Logitech founder Daniel Borel on true entrepreneurial spirit

Tiny Switzerland takes center stage once again



Claus Niedermann,
Project Manager
Top 100 Startups

For the first time in Switzerland, the 100 best startups of the year have been selected. The founders of these 100 entrepreneurial companies represent the future of our country because they are the young, dynamic firms that, with their power of innovation, are causing a sensation internationally and are creating jobs. With their innovations, they are bringing a breath of fresh air into Switzerland's industrial landscape.

When it comes to the startup scene, Switzerland can justifiably boast of its accomplishments – even though the country, with fewer than 8 million inhabitants, is not even half as large as cosmopolitan cities such as New York, London or Shanghai. “Each year, Switzerland creates 10 to 20 startups with world-class technologies,” says Alain Nicod, who has started multiple companies and is a close observer of the scene, in which he also invests as a business angel. Is Nicod's claim correct? It would seem so, based on what you can read on the following pages and on the Internet at www.startup.ch. That's because the best Swiss startups are indeed world class!

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THE SELECTION OF THE TOP 100 STARTUPS FOR 2011

Insiders and their "stars"

One hundred experts, all extremely well networked in the Swiss startup scene, have played the role of kingmaker and have selected the current **100 best startups in Switzerland**.

TEXT: CLAUD NIEDERMANN



The concept for the selection of the Top 100 Startups for 2011 is simple and transparent: 100 expert insiders vote for the 100 best recently formed companies in Switzerland. For this purpose, startups must be the result of people establishing their own companies; in other words, true pioneering efforts. Spinoffs from existing companies were excluded during the selection. In addition, the startups must have been established in 2006 or later. If a company changed its legal status during this time, such as by converting a GmbH into a stock corporation, it was also not considered for the Top 100 selection.

But who should have the task of selecting Switzerland's best 100 startups, especially considering that roughly 30,000 new companies are founded here each year? Not an easy undertaking at all! Nonetheless, there are indeed some high-flying young companies that, with their innovations and technological advances, have caused a sensation not only in domestic markets but internationally as well. These are frequently spinoffs from universities and technical colleges. In order to start marketing their innovations, which come

predominantly from the high-tech sector, these entrepreneurs often need the assistance of sector insiders, support agencies, technology transfer offices, business angels and professional investors. So it became clear that these very experts, who help emerging companies deal with their problems on a daily basis, would be the best people to determine the top 100 startups. Through their clients and activities, these 100 experts represent virtually every business angel network, investor platform, business incubator, technology park, training and coaching program for startups, and business plan competition (such as venture kick, venture, W.A. de Vigier, etc.). One concern during the selection was also that the experts needed to take into consideration a wide range of business sectors and regions of the country (see the list of all the experts on pages 32 and 33).

These 100 extremely well networked experts have voted and come to a common decision. Each of them put together and submitted a personal ranking of the 10 startups that impressed them the most. The list starting on page 14 presents the results of consolidating all of this input.

LISTING OF THE TOP 100

100 selected from more than 200,000

The experts who determined the Top 100 named a total of several hundred companies. Despite this large number, the firms on the experts' radar screens are only a small subset of the more than 200,000 companies that have sprung up in Switzerland since 2006.

Even so, there's a high probability that the next Logitech has made it on to the list since these investors, supporters and other experts focus on young technology companies with excellent management teams and exceptional products. Companies that slipped through this net are likely to be operated by entrepreneurs who have avoided contact with the community of Swiss supporters and investors.

This ranking represents a snapshot of the present moment. At the top are those companies that have been able to report significant recent successes. At the fast pace set by the founders of the top startups, this ranking would surely look somewhat different if compiled just two months later.

Multiple emerging companies are attempting to complete a round of financing or negotiate key contracts with sales partners or customers. For this reason, it will be worthwhile to keep tracking these 100 Top Startups – a few of them are sure to be making headlines soon.

THE TOP 100 STARTUPS PROJECT

The initiators

Thousands of startups struggle day after day to get capital, orders and customers. To make their daily efforts somewhat easier, these emerging companies need a platform that gives them higher visibility. One of the initiators of this project is Beat Schillig (top), Managing Partner of the IFJ Institut für Jungunternehmen (Institute for Startups), which has been actively supporting new companies since



the 1990s. Next is Jordi Montserrat (above), who together with Schillig is responsible for the venturlab training program conducted under the auspices of the Swiss Federal Commission for Technology and Innovation (CTI). In addition, Schillig and Montserrat also manage venture kick, an initiative to supply seed capital to university spin offs. A co-initiator is the businessman and journalist Claus Niedermann. The project's ideals and financing are supported by CTI, the Gebert RUF Foundation, the Swiss trade promotion organization OSEC and Ernst & Young.



IMAGES: PD

OUTSIDE THE EVALUATION

Top spinoffs

The list does not contain spinoffs from major corporations. You can't really consider these former departments that subsequently become independent entities as true newly established companies. Even so, because these young companies also have considerable potential, we would like to highlight three in particular that were named by the experts. They are CeQur (www.cequr-corp.com), a spinoff from Danfoss that has developed an insulin pump; Okairos (www.okairos.com), a spinoff from Merck that specializes in vaccines; and Selfrag (www.selfrag.com), a mechanical engineering company with roots in the Ammann Group in Langenthal.



Something to smile about:
Mark Blum (left) and Manuel Aschwanden.

Founded in 2008 24 employees

A bright outlook for Optotune

The adjustable lenses from **Optotune** represent a **revolution in optics**, and this startup has enormous potential: successful pilot projects are already underway in seven highly diverse application areas.

TEXT: STEFAN KYORA

Conditions were cramped when everyone crowded around the conference table at the former company headquarters in Dübendorf. Employees had to squeeze past each other uncomfortably to get to the coffee machine. Now that's just a distant memory. The startup left Empa's business incubator in early September and moved into a new facility in Dietikon that provides more than twice the space and much roomier offices.

The primary reason for the move, however, becomes clear only when you take a tour. Two production machines are located in a large cleanroom, surrounded by numerous work areas for manual or semi-automated manufacturing steps. "Starting in January we will be able to manufacture midsized orders right here," reveals CEO Manuel Aschwanden.

Beginning high-volume production just four years after the company was founded is no easy feat. Optotune is based on a groundbreaking new technology that normally requires quite a long time to make the transition from the laboratory to high-volume production.

Optotune lenses need less space and energy

The fundamental principles come from the dissertation co-founder Aschwanden wrote for his PhD. Obtaining a sharp image with a still camera, microscope or video camera currently requires a system made up of multiple lenses. Aschwanden came up with a radically different concept. His lenses consist of special plastics, known as elastic polymers, and a liquid. They are focused by deforming them, and thus they operate similar to the human eye.

Whereas previously multiple lenses and complex mechanics were necessary, Optotune needs fewer lenses and minimal bending. This not only saves space, the deformable lenses also focus more quickly and need less energy to do so. These advantages make Optotune lenses ideal for came-

ras in mobile phones – a fact that gave the company a big boost coming out of the starting gate. Before the company was a year old, Aschwanden had already signed a contract with a US telecommunications supplier. This supplier provided the startup with millions of dollars so it could develop lenses for mobile phone cameras. Thanks to these funds, Aschwanden and his co-founders Mark Blum and David Niederer were able to grow the firm without a single cent of venture capital.

Customers for pilot projects bring first revenues

Today development of the mobile phone lens is progressing nicely. "We have working prototypes, and now we're working on achieving consistently good image quality," explains Aschwanden. At the same time, the technology transfer to the American partner company has already begun; it will manufacture and market the lens for the mobile phone market on its own.

In 2010 the team faced the question of what to do following that transfer to the partner company, and they started looking for new business opportunities. To find suitable application areas, they left the confines of the office and headed out to visit trade shows and seek out customers for pilot projects. Besides bringing them closer to the marketplace, this approach also resulted in significant sales. As a result, the company's staff has been gradually increased to more than 20 people.

As a demonstration of the company's potential, Blum points to six industrial sectors beyond mobile phone cameras that appear to have considerable promise. These include industrial cameras for tasks such as automated inspection in manufacturing, barcode scanning and microscopes as well as other, totally unrelated markets. These range from medical technology to laser projectors or even laser processing machines, such as for cutting or welding.

"In the short term we see the biggest demand for our lenses in LED lamps," remarks Blum, and it's quite easy for him to demonstrate why. He picks up an LED bulb that has an Optotune lens mounted in front of it. With a slight turn of his hand he changes the illumination pattern from a spotlight into a floodlight. This can't be done nearly as easily or elegantly with any other system.

Such LED lamps should find applications especially in museums, stores or build-

ings with special architectural features. Blum is convinced that "there's a trend here toward LED lamps that we can take full advantage of."











For the lighting industry, Optotune will manufacture lenses that can be integrated quite easily into various designs. It's a typical decision for this startup. Being close to the market is also a very important element for the technology. In his dissertation, Aschwanden developed the concept of an adjustment mechanism that works like an artificial muscle – an idea that attracted a good deal of interest at the time.

These days, though, Optotune is working on a different, more cost-effective electromagnetic adjustment mechanism. Many company founders would probably find it hard to abandon a highly praised idea they developed themselves, but Aschwanden views it pragmatically. "If a technology can't meet customer requirements at the desired price point, then you have to start looking for another solution. It's a purely rational decision."

www.optotune.com

The 10 industrial sectors in the rankings

The Top 100 list is characterized by technology companies, but there are startups with great potential in other sectors as well. A large selection of them can be found at www.startup.ch.

-  **Microtechnology, test & measurement, equipment design**
-  **Software/IT services**
-  **Internet**
-  **Software and services for mobile devices such as mobile phones and iPads**
-  **Medical technology**
-  **Biotech, pharmaceuticals**
-  **Green technologies**
-  **Entertainment**
-  **Consumer products (clothing, sporting goods)**
-  **Financial management**