



**berncapitalarea** 



**PORTRAIT OF A CEO**

Bernhard Emch, EMCH Aufzüge AG

**HIDDEN CHAMPION**

Gilgen Door Systems AG

**START-UP**

Four new, ambitious companies  
introduce themselves

**LIVING / CULTURE / TOURISM**

Switzerland's favorite sport goes  
from strength to strength

**Ingredients for the  
MEM industry: specialist staff  
and a good environment**

# Switzerland – your future business location

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## Dear reader,

I have great pleasure in presenting the first edition of *bernecapitalarea* in its new layout. The magazine has been given a makeover and now has a fresher, more modern look.

As before, our magazine aims to provide insights into the worlds of business, research, and living in the Canton of Bern in an entertaining, interesting, and easy-to-read way.

The Bernese business landscape is varied, vibrant and surprising – a great reason to take a closer look at this exciting environment. For their research, our editorial team headed out across the canton and spoke to people there who lead and drive forward their companies with passion and a clear vision.

We want this issue – as always – to send a clear signal that it is important to support companies that are true to their core values and are committed to pre-serving jobs in the Canton of Bern and helping to shape the Bernese economy. It is also a call to society and to entrepreneurs to look around within the canton's own four walls and take advantage of what we have to offer here.

I also have some news on my home front: on May 1, 2019 the Bern Economic Development Agency became a department of the Office of Economic Affairs (formerly beco). We will continue to pursue our citizen-oriented, transparent approach, and to reflect this we have created a brand-new column in our maga-zine: "Administration for Citizens".

We very much hope you will enjoy our stories and draw inspiration from them. Do you have any questions or suggestions for us, or any ideas for a story? If so, please do let us know. In the meantime, happy reading!

Yours truly,  
Dr. Sebastian Friess, President  
Bern Economic Development Agency





# Ingredients for the MEM industry: specialist staff and a good environment

It's the world-famous Swiss quality that sets Switzerland as an industrial center apart. And this is reflected in the numbers of orders, sales and exports in the MEM industry in 2018. There are two reasons underlying this: firstly, the expertise available here and, secondly, the technologies we use which ensure high productivity.

## MEM industry is export leader

For many years, this sector has been exporting more than three quarters of the products it produces. The domestic market is far too small to guarantee the survival of export-oriented companies and their jobs in their current size. More than half of MEM industry exports go to EU countries: besides the USA, our main trading partners are Germany, France, and Italy. Sales to the Asian region have also been growing strongly in recent years. In 2014, Switzerland signed a free trade agreement with China, followed one year later by a twinning agreement on economic cooperation between the Canton of Bern and the booming Chinese metropolis of Shenzhen.

The jobs created by these export-oriented companies and the added value they generate are crucial to the Bernese economy. Their contribution is significant: in 2018, Bernese companies in the MEM industry exported goods to the value of almost CHF 5 billion, representing more than one-third of all exports of goods from the Canton of Bern.

## Industry creates a broad economic structure

Industry, and manufacturing companies in particular, play a key role in the economic structure of a canton. Many services and jobs owe their very existence to the manufacturing companies that depend on logistics specialists, computer scientists, craftsmen, banking and insurance specialists, and so on.

With a working population of 80,000, Bern is Switzerland's largest industrial canton. More than half of these people work in the mechanical and electrical engineering (MEM) industry. This sector accounts for the largest share of the canton's exports, ahead even of watches and pharmaceutical products. Independently of one another, two MEM entrepreneurs and one economic geographer share their views with us.

## IN GOOD HANDS

Solid craftsmanship is key in the manufacturing industry. Metal is processed against a backdrop of flying sparks, spinning lathes and droning milling machines.



# Niche player EMCH Aufzüge AG



EMCH Aufzüge AG builds specialized elevators both for the international market and, predominantly, for domestic customers. EMCH is a traditional family-run company that has been based in the city of Bern for 140 years and is now run by the fourth generation of the family. It is fully committed to Switzerland as an industrial center, even though production costs are considerably higher here than elsewhere in Europe and the rest of the world. “Globalization and the relocation of manufacturing abroad were a big issue for my father’s generation. But he decided to stay put,” says Bernhard Emch, CEO. Instead of relocating production abroad to manufacture low-cost standard products, the company has focused on a niche market and now has customers all over the world.

“The combination of our expertise and Swiss innovativeness enables us to offer products of a quality you just won’t find in other countries,” the CEO explains. These have included a rotating glass elevator, exclusive designs for international boutiques, and special elevator solutions for amusement parks. By concentrating on and specializing in niche products, EMCH has managed to partially escape the price war affecting foreign-made products, especially in the standard elevator construction segment.

Proud of his highly specialized workforce, Bernhard Emch adds: “Our specialists will find a solution for even the trickiest orders. It is this capability that guarantees our dominance in an ever-smaller niche market.”

But Emch is also perfectly aware that finding and retaining high-skilled staff is a challenge these days. And that is why it is important to continue to expand centers of excellence in training such as academic universities and universities of applied sciences and strengthen the Swiss dual vocational education and training system – an important role for policymakers to fulfill in collaboration with industry and business.

“The image of Switzerland as an industrial center helps us to win customers worldwide.”

Bernhard Emch, EMCH Aufzüge AG

# Specialist staff are key



For Urs Breitmeier, CEO of RUAG Holding AG, specialist staff are one of the keys to success. RUAG is the largest MEM industry employer in the Canton of Bern. The technology group employs a total of 1,640 people in Bern. For Breitmeier, the dual vocational education and training system and the proximity to academic universities and universities of applied sciences are two key reasons why Swiss industry is so competitive. “Our ammunition factory in Thun regularly wins contracts, including from abroad. That is mainly thanks to our many well-trained staff who have

the knowledge and skills to improve processes and machines. Specialists – in other words, people with skills tailored specifically to the field – are in particularly high demand in semi-automated and fully automated manufacturing. This leads to higher productivity, which is essential for keeping Switzerland competitive,” he says. And this is a factor that is entirely independent of RUAG’s future legal structure.

What is it that keeps RUAG in the Canton of Bern? “It’s not the taxes, that’s for sure,” Urs Breitmeier says with a grin. Among other things, it’s the stable relations with social partners that make manufacturing in Switzerland competitive, even if rents and wages are high. In many industries, these relations are based on contracts; in the MEM industry, employment relationships are governed by a collective labor agreement which regulates conflict settlement, thereby precluding disruptions such as strikes.

“Thanks to our specialist staff, we are competitive right across the globe.”

Urs Breitmeier, CEO RUAG Holding AG

# The ecosystem must be right



In what way, or to what extent, should the state intervene in industrial affairs? Economic geographer Professor Paul Messerli is clear: “A state-run industrial policy can’t help but fail. But the state can be a great facilitator if it uses its resources to create the right overall conditions.” The general environment is an essential success factor, he immediately adds. A properly functioning ecosystem is based on a network of manufacturers, suppliers, research institutes and service providers. Companies need a breeding ground so that they can cross-fertilize and support each other. So

wherein lies the main task of the state? Messerli sees the state’s role as that of promoting “ideas factories” such as the Switzerland Innovation Park Biel/Bienne, Empa (Swiss Federal Laboratories for Materials Science and Technology) and Bern University of Applied Sciences. “By doing so, policymakers facilitate the transfer of new expertise into the labor market,” he argues. “And that is ultimately the task of the state – namely to use government funds to provide relevant education, training and research infrastructure so that businesses, and industrial companies in particular, are properly equipped to meet the current challenges they face, such as Industry 4.0 and digitalization.”

“Acting as a trailblazer for industry is a task of the state.”

Professor emeritus Paul Messerli



## Crucial for the future of the MEM industry: a sound economic environment

The Swiss MEM industry is a multifaceted, innovative high-tech sector. It exports 80 percent of its products and is therefore constantly exposed to international competition. It depends on a sound economic environment to ensure it can continue to create value and jobs in Switzerland in the future.

A sound political and economic environment must enable companies to operate competitively on an international level from their Swiss base. Important elements are a liberal labor market, easy access to world markets, and an efficient education and training system.

### Maintaining a liberal labor market and promoting free trade

The liberal labor market in Switzerland is one of our country's great strengths. It preserves entrepreneurial freedom and, in doing so, strengthens the international competitiveness of the MEM industry. For

MEM companies to be able to sell successfully on the international markets, they need free access to those markets wherever possible. Switzerland has bilateral agreements with the EU that guarantee access to the European internal market. It also has 28 free trade agreements with 38 partner nations outside the EU. This network of agreements needs to be constantly expanded.

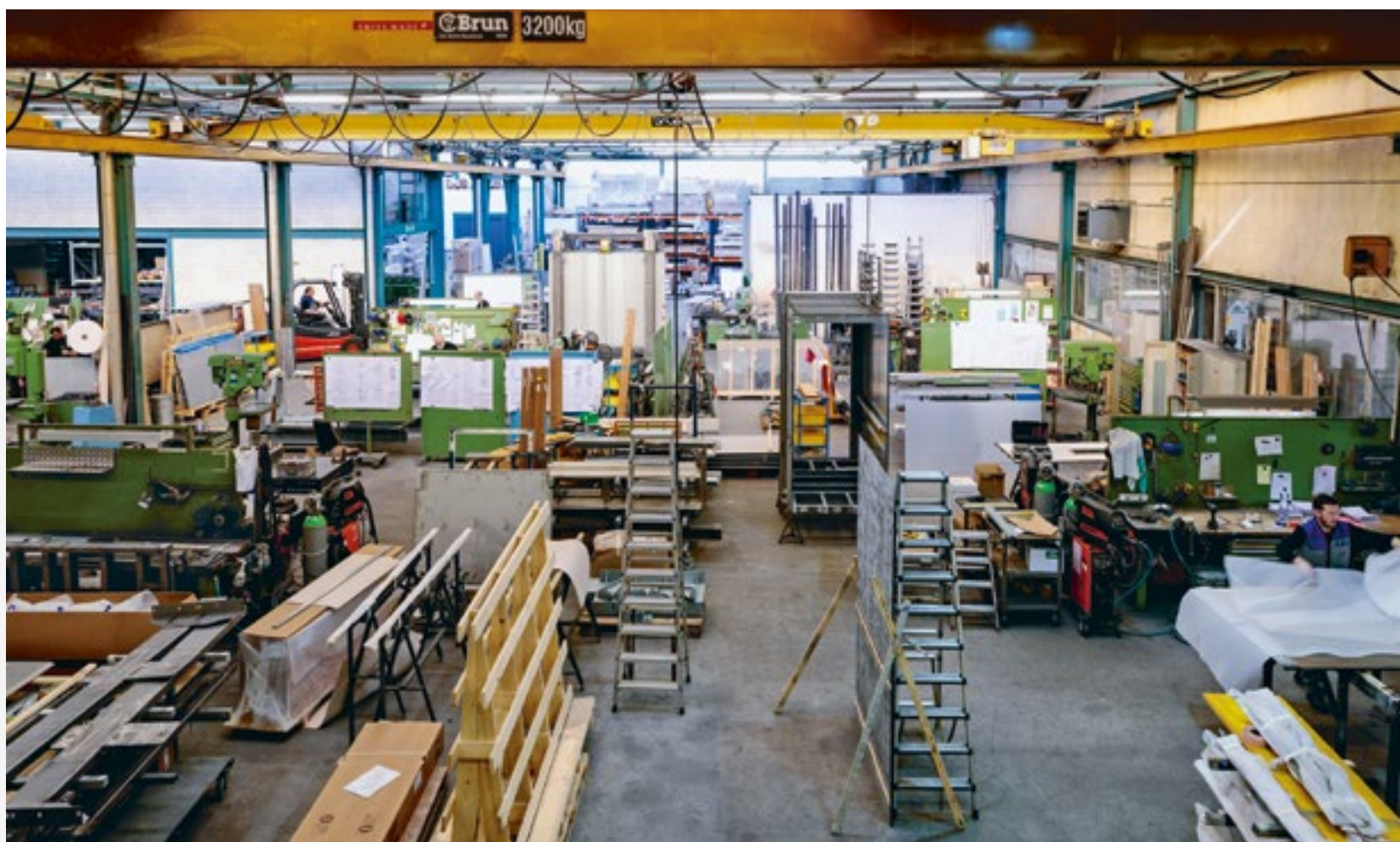
### Skills shortage – a major challenge

One of the biggest challenges facing the MEM industry is the shortage of skilled workers. This situation will be exacerbated even further by the large numbers of retirement because there are far fewer younger people coming through to replace them. At the same time, the Swiss labor market is subject to constant change. As digitalization progresses, job profiles change. Some skills are less in demand or no longer needed at all. New competencies and skills are called for. For these reasons, Swissmem is currently

working with social partners on a retraining initiative that will enable adults who have already gained a qualification to obtain a second one in a new field. The aim of this "MEM-Passerelle 4.0" is to facilitate job mobility and to put the domestic skilled manpower potential to the best possible use in the MEM industry.



[www.swissmem.ch](http://www.swissmem.ch)



### FACTORY HALL AT EMCH AUFZÜGE AG

All over the Canton of Bern, manufacturers are producing high-quality products that are exported all over the world – such as here at the Emch factory.

# New arrivals in the Canton of Bern

The Bern Economic Development Agency helps innovative international companies with their decisions to relocate and settle in the Canton of Bern – like SAGA NDT AG and WABCO Automotive.



## SAGA NDT SA

Biel/Bienne-based SAGA NDT SA, a subsidiary of Roch Service in France, provides lighting and signage services for the public sector. Its mechanical control technology is currently the only system of its kind on the Swiss market.

An essential service in the public lighting segment is non-destructive stability testing of street lamps and signage gantries in accordance with the applicable regulations and the wind load defined in SIA standard 261.

The SAGA Dynamic software developed by the group enables efficient management of lighting and signage structures. The aim of this software is to allow an existing lighting and signage system to be operated as fault-free as possible and ensure optimum safety for people.

Labeling solutions and photometric measurements and analyses of streets and dangerous passageways round off the company's portfolio of services.

SAGA NDT opened its Biel/Bienne office in February 2019. It provides its services throughout Switzerland and plans to create up to ten jobs. One of the key factors in its decision to locate in Biel/Bienne was the bilingualism prevalent in the area. The Greater Geneva Bern area and BEDA supported SAGA NDT SA throughout the entire relocation process.

[www.saga-ndt.ch](http://www.saga-ndt.ch)



## WABCO

WABCO Automotive is the world's leading supplier of braking and driving systems for commercial vehicles. With 16,000 employees in 40 countries and sales totaling US\$ 3.8 billion, WABCO has developed a unique culture of innovation and diversity that meets the needs of its customers worldwide. WABCO moved its global headquarters from Brussels to Giacomettistrasse in Bern in 2019.

WABCO's decision to establish its global headquarters in the Canton of Bern was the result of a several-month-long international search for a suitable location. The company was attracted to Switzerland as an innovation-friendly and politically stable country and looked at several cantons in the course of its negotiations. It ultimately picked Bern on the strength of its attractive total package, including proximity to specialized research institutes and industrial partners. Other key criteria were the availability of a high-skilled workforce and the outstanding quality of living enjoyed by workers in the Canton of Bern.

WABCO, which is listed on the New York stock exchange, will initially be relocating up to 40 members of its senior management team from Belgium to the Canton of Bern. It plans to expand its new site into a center of excellence for new technologies at a later date.

WABCO is currently involved in negotiations over a takeover by the German group ZF (Zahnradfabrik Friedrichshafen). This will basically have no impact on WABCO's recent relocation to the Canton of Bern.

[www.wabco-auto.com](http://www.wabco-auto.com)



# What's on in Bern in June

There's a lot going on in the Canton of Bern this June. Two racing highlights dominate the canton's sporting calendar for the month: the Tour de Suisse kicks off in Emmental, and a Formula E race in Bern puts Switzerland firmly back on the international racing calendar for the first time since the Formula 1 in 1954. And last but not least, the Bern Economic Development Agency invites Bernese companies to a business event in the guise of a summer party.



## Tour de Suisse 2019 – starting weekend in Langnau i. E.

The Tour de Suisse kicks off with two stages in Langnau im Emmental. The professionals will complete a time trial and a circuit race which takes in the Schallenberg and Chuderhüsi passes. And it won't just be sports fans who will get their money's worth at this grand Emmental cycling fest: there will also be a wide range of fringe events and activities away from the race locations, with a "pleasure mile" with food and drink and the Viehmarktplatz transformed into a festival venue.

Friday June 14 – Sunday June 16, 2019  
[www.tds-langnau.ch](http://www.tds-langnau.ch)



## Bern Economic Development Agency Summer Party

Bernese SMEs are cordially invited to the Bern Economic Development Agency's Summer Party. It's the perfect occasion to meet an exciting network of people and exchange views on working life, visions and trends in a relaxed setting. Our partners, who assist Bernese companies, start-ups and innovators on aspects such as digitalization, self-employment, and developing business ideas and prototypes, will also be there.

Monday June 17, 2019, 18:00

## Partners attending



## Julius Bär Swiss E-Prix 2019 in Bern

A Formula E race against the backdrop of the UNESCO World Heritage Site and the Alps: June 22 sees the streets of Bern come alive with e-cars competing for the coveted trophy. The supporting program gives visitors ample opportunity to find out about electromobility, sustainable mobility and new technologies.

Saturday June 22, 2019  
[www.swisseprix.com](http://www.swisseprix.com)

## Registration

If you are an SME in the Canton of Bern and would like to attend, please register with Caterina Hess by June 7 on +41 (0)31 633 45 43 or [caterina.hess@berninvest.be.ch](mailto:caterina.hess@berninvest.be.ch).

# CEO Bernhard Emch

## The entrepreneur

In 2003 I became the fourth generation to take over at the helm of the company from my father. Many of our employees have known me since I was a boy, as I used to do odd jobs in the EMCH workshops during school vacation. When I became their new boss, they started addressing me as Mr. Emch, but I told them I would prefer them to carry on calling me Bernhard. So we have remained on familiar terms ever since, and as a result our relationship has been close and more like that of colleagues. My father favored the traditional company boss style of leadership, making his decisions largely on his own. He was the only one who knew how the company was doing and saw this as a way of relieving his employees of the burden of existential worries. A paradigm shift in our corporate culture took place when I joined the company, which was growing steadily. Our senior management is now fully involved in operational and strategic matters and we pursue an open, team-oriented management style. Besides myself, our board of directors is made up of my brother and three non-family members.

## The risk taker

Risk must be calculable – in sports as well as in business. My brother Hansjürg, who is six years my senior, and I support and inspire each other, both professionally and in our private lives. On the sports front, he used to challenge me to do better in windsurfing, and I acted as his guide in the mountains. This has also created a solid basis for the way we do business, allowing the two of us to discuss corporate goals, new strategies, and risks with great passion, with my brother in the role of the demanding board member and me with my responsibilities as CEO.

## The elevator builder

I live and breathe elevators. I find the mechanics involved absolutely fascinating – in fact, I'd go so far as to say that I think elevators are sexy. My family and I even like to look at elevator construction and design on our travels – be they elevators from the competition or our own models. We want to hear how quietly the elevator runs or whether there are any knocking or rattling noises. For us, an elevator is more than just a means of transport. It is a design object that has been created to match its surroundings. In an old building refurbishment project, for example, we will produce a custom elevator solution that fits perfectly in the extremely tight space available. If we trigger a feeling of well-being and safety in the passengers, then that fills me as an elevator builder with a deep sense of pride.



Bernhard and Hansjürg Emch are passionate about water sports, be it windsurfing, sailing or wakeboarding. The brothers are not only partners in the family business but also best mates in their favorite sports.



Bernhard Emch also loves the mountains. To him, they are an ideal place to go on sporting adventures to balance out the stresses and strains of work.

“I had an eye for business even as a young boy; I used to do odd jobs in the EMCH factories for a bit of pocket money.”





#### CEO Bernhard Emch

Bernard heads the Bern-based family business EMCH Aufzüge AG together with his brother – the fourth generation to do so. EMCH, which celebrates its 140th anniversary next year, currently employs 220 people. Bernhard Emch is 45 and is married with three small children.

## The team player

There is always an entire team behind my endeavors. People are very important to me; they play an important role in my professional life. Having people around me who can compensate for my weaknesses and encourage me in my strengths is extremely valuable to me. Making progress together is my life motto – not just in my personal life but in business too. A long-time employee once intimated to me that when HR decisions needed to be made, my father would probably have been better off as a pastor than a businessman. I can see this tendency in myself as well sometimes.

## The enthusiast

As president of the Bern Chamber of Commerce and Industry, and especially as president of the Jobtimal work integration association, I am committed to a social economy. It is important that the long-term unemployed are given a new opportunity that brings joy and meaning to their lives. We want to make sure companies don't simply outsource all their low-threshold jobs abroad or have them done by robots, but that they also bring in long-term unemployed people to do them. For several years now we have been employing a person with a functional impairment under what we call the *"Teillohnmodell"* (partial wage model) and have never regretted doing so.

## The innovator

It was a passenger elevator at the 1889 World Exhibition in Paris that inspired my great-grandfather to join the industry. The first EMCH passenger elevator was showcased at the national exhibition in Bern in 1914. Today, the elevator is no longer considered an innovative product in its own right. Although we can continue to reduce the footprint of elevator technology, we can't reinvent the wheel. The innovations happen when the technology is integrated into the overall building automation or in terms of aesthetics: we were one of the first companies to manufacture elevators from transparent glass, for example. In addition, in 1914 EMCH was the first elevator manufacturer to use ball bearings instead of plain bearings, which massively reduced the elevator's energy consumption.

# START-UP

## BREATH OF FRESH AIR



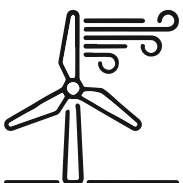
**enolyst.com**

### enolyst – the data collector

enolyst is an AI-based platform that processes public-domain information on Swiss companies using artificial intelligence.

The information is sourced automatically and made available free of charge on the big data platform enolyst.com, where community members can add to it and improve it. Missing data is easy to add using the edit function. This allows users to actively help enrich the database and enables others to benefit from the information they add, similarly to Wikipedia.

For corporate customers, enolyst offers the highly flexible and customizable data service eno|lytics on the AI-based data pool. This service allows corporate customers to have their own business logic implemented so that they obtain exactly the information they need or are looking for. Countless processes and tasks can be automated or made more efficient this way. enolyst implements the necessary algorithms, allowing even complex tasks to be automated with the appropriate data. For the insurance industry, there's the add-on eno|risk, which enables AI-based risk assessments.



## FACTS

Ideas, new technologies and inquiring minds constantly inspire new business ideas that give rise to start-ups. We present four examples in each edition of our Start-up Parade.

**Number of employees: 4**

**trivo systems GmbH in Bern**

**Year founded: 2015**

**[www.enolyst.com](http://www.enolyst.com)**





**Jamie & I – the shopping assistant**

No time to browse the shops and explore the latest on-trend fashion labels? No problem! Jamie will do the groundwork for you and take you on a virtual shopping trip that only takes in stores selling clothes you like. So who is this all-knowing Jamie? She (or he) is a virtual stylist who uses artificial intelligence to get to know your personal style and searches through the myriad possibilities in online stores to curate the perfect outfit or shopping trip for you. The system is based on the playlist concept used by music providers such as Spotify, which create personalized playlists based on the user's favorite songs.

The driving force behind Jamie & I is Bern-born Antonia, whose love for Australia has turned her into a commuter between these two worlds. In creating Jamie, Antonia not only wants to dress her customers well but also aims to boost the ecosystem of small, independent designers and fashion labels by having Jamie prioritize them in searches.



**Stimidget – the respiratory muscle trainer**

The diaphragm is the most important respiratory muscle. In intensive care patients connected to a ventilator, this muscle starts wasting away very quickly. The start-up Stimidget aims to remedy this.

The diaphragm can be stimulated with electromagnetic fields. Diaphragm stimulation, known as pacing, can be useful for various groups of patients, for whom Stimidget is developing a product portfolio. Stimidget AG and its research partners at the Switzerland Innovation Park Biel/Bienne plan to launch their first diaphragm pacing product as early as 2020.

Stimidget's stated aim is to stimulate the diaphragm in intensive care patients and reduce the risk of muscle wastage, thus opening up the opportunity to save lives, shorten hospital stays and avoid life-threatening complications. At present the patient's ability to breathe independently post-ventilation has to be supported by weaning patients off their artificial respiration devices in a controlled process. Stimidget is convinced that the results of its innovative work will be of substantial benefit to patients, hospitals and health insurance companies, from both a health and a financial point of view.



**Pricenow – the price makers**

Airlines have been working with dynamic pricing for many years. Now the start-up Pricenow is adapting this interesting business model to other industries.

Pricenow was founded in 2017 by Judith Noerpel-Schneider, Reto Trachsel and Jonas Meuli. Long established in the airline industry, dynamic pricing is gradually making its way into other industries. Dynamic pricing is nothing more than the practice of prices changing daily or even hourly. These price fluctuations can be subject to various factors, and it is these factors that Pricenow examines. The company analyzes the market, calculates pricing models and offers its customers a complete IT solution which can be easily integrated into a website or an offline POS system in order to offer consumers an attractive range of prices. Over the past two years, Pricenow has mainly focused on the mountain railway sector, as it is subject to strong fluctuations. Now the system is being extended to other businesses facing similar circumstances.

1 employee / 4 freelancers
Bern
Year founded: 2018
www.jamieandi.com

Team members: 5
Nidau
Year founded: 2018
www.stimidget.com

6 employees
Reichenbach im Kandertal / Bern / Zurich
Year founded: 2017
www.pricenow.ch

# Come in! We open doors for you

"The project at the World Expo in Dubai is a show-piece in a place where the whole world will be coming and going and where we will attract a lot of attention," says Martin Plüss, CEO of Gilgen Door Systems. The Schwarzenburg-based company is executing a US\$ 20 million contract in Dubai. The Emirate is extending its metro line specially for EXPO 2020. Seven new stations are being built along the line, all of which will be equipped with doors from Gilgen Door Systems. "For Gilgen, this contract is an endorsement of the outstanding work we do," Martin Plüss explains.

## Swiss quality

In addition to platform screen doors, Gilgen produces drive mechanisms and entire automatic door and gate systems. Today, the company employs more than 1,100 people worldwide. With its sales and service partners, Gilgen Door Systems is represented in more than 70 countries across the globe and has 8 subsidiaries and its own service centers in Europe and Asia. Recently, it has made acquisitions in Germany, France and Australia with a view to strengthening its position in the international market.

To ensure that its automatic drive systems work perfectly, Gilgen needs high-skilled specialists. And that's something the company doesn't leave to chance. At present there are 40 apprentices about to qualify in 8 professions in Schwarzenburg, with the option of gaining at least another year's work experience after they complete their apprenticeships. "Thanks to our employees' expertise, we are able to meet customer requirements that often extend beyond the usual industry standards – ranging from development to production and assembly through to servicing,"



## MARTIN PLÜSS, CEO

"To be the Swiss market leader is not good enough for us. We guide our customers worldwide through the entire process of commissioning and installing the very best automatic door and gate systems. And that means we also export precision, quality and reliability."

Anyone taking the metro to the World Expo in Dubai in October 2020 will get to see for themselves just how safe the automatic railway platform screen doors from Gilgen Door Systems are. Having started out in a garage in the Bernese town of Schwarzenburg in 1961, this company has long since established itself on the international stage – thanks to Swiss precision and a high degree of engineering perfection. CEO Martin Plüss tells us about this success story from the Canton of Bern.

Martin Plüss explains. "This is what made us market leaders in Switzerland first and then brought us success on an international level."

## Part of Nabtesco Group Japan since 2011

Gilgen Door Systems AG is part of the Nabtesco Group, a global systems and components supplier listed on the Japanese stock exchange and headquartered in Tokyo. As a successful traditional Bernese company, it goes without saying that its development, production and administration departments are located in Switzerland. "We are a Bernese company that relies on our employees in Schwarzenburg," Martin Plüss says with pride.

## Technology you barely notice

"The drive is the main focus of our development work. It really comes into its own when you barely notice that it's there," Plüss says. "Besides comfort, safety and accessibility, another factor that is very important to us is energy efficiency. Doors and gates that close tightly and quickly make a significant contribution to cutting energy costs." The company's product range extends from standardized modular units to fully customized products. The best solutions are the ones that blend seamlessly into the architecture and can be easily integrated into existing systems. Even though functionality is its top priority, Swiss design also ranks highly.

## Looking to the future

"In order to ensure a successful future for ourselves, we want to strengthen our position as a provider of automatic door and gate solutions across the globe," Martin Plüss explains. To achieve this goal, Gilgen is planning to further augment its international sales organization and expand its pool with strategic partners, as recent examples in China and Russia show.

The company also intends to grow its service business in platform screen doors for the public rail transport sector. With mobility increasing in the many expanding urban centers across the globe and hundreds of millions of people using public transport systems every day, regular preventive maintenance is vital to keep these systems running safely.

The company's future is bright, Martin Plüss believes. "The architectural projects we work on are becoming increasingly demanding and complex. This requires us to come up with tailor-made solutions. We see great potential for our products and we intend to expand this business segment," he says.

[www.gilgendoorssystems.com](http://www.gilgendoorssystems.com)

# "The drive is the main focus of our development work."





**HONG KONG**  
Gilgen sliding door at Hong Kong International Airport. The door opens for over 200,000 travelers every day.



Gilgen Door Systems at a glance

**+70 COUNTRIES**  
Our products can be found in more than 70 countries.

**+50 YEARS**  
Gilgen Door Systems' outstanding track record in quality and experience dates back to 1961.

**+1100 EMPLOYEES**  
work tirelessly for our customers across the globe every day.

Examples of projects

- International**
- Eiffel Tower, Paris, France
  - Louvre, Abu Dhabi, UAE
  - St. Petersburg Passenger Port, Moscow
  - JFK Airport, New York, USA
  - Shanghai Metro, China

- Switzerland**
- Parliament Building, Bern
  - Inselspital, Bern
  - Sihlcity, Zurich
  - Nestlé Museum, Vevey
  - Gotthard Base Tunnel

# Switzerland's favorite sport goes from strength to strength



## **FRESH AIR, NATURE AND FUN GALORE IN A SUMMER OF HIKING**

There are 10,000 km of hiking trails leading through the unbelievably diverse landscape of the Canton of Bern. BWW volunteers regularly check the signage to ensure no one gets lost.



Hiking is the most popular leisure activity in Switzerland, and it's also a big trend among young people. Fresh air and taking exercise and time out in natural surroundings are a great antidote to the stresses and strains of everyday life. The Canton of Bern's unique landscapes make it a top destination for a summer of hiking.

It's hardly surprising. Travel through the Bernese countryside with your eyes open and you can't help but be fascinated by the diversity and beauty of the landscape. After a hectic working week there's nothing to beat donning your hiking boots, immersing yourself in nature, finding your own rhythm and enjoying a little peace and quiet.

Social media abounds with stunning pictures of rugged rock faces, lakes shimmering in the sunshine and views of sunsets shot from remote hills. With the cool wind of freedom in your hair and your smartphone stowed away in your windbreaker, loaded with all kinds of handy apps and ready to record your adventures, hiking is modern and fun.

#### Hiking is amazingly rewarding

But it's not just the health of the 400,000 or so active hikers in the Canton of Bern that this popular leisure activity benefits. This seemingly free sport actually boosts the bottom line of more industries than you might think – including transport, mountain railways, hotels and restaurants, as well as food, clothing, and shoe retailers. In fact, hikers in the Canton of Bern spend around CHF 270 million, with a total sales effect of CHF 400 million.

This makes the services of the many volunteers who keep the network of hiking trails maintained and the routes clearly signposted all the more valuable. In the Canton of Bern, there are about 85 district leaders

who regularly walk the trails on behalf of the Bernese Hiking Trails Association (BWW). One of those is retired forester Michel von Fischer.

#### Army of volunteers keeps trails well signposted

In two hours you can walk from the oldest wooden bridge in the canton, the inappropriately named *Neubrügg* (New Bridge), to the village of Meikirch along the historic post road. The walking time is displayed on the yellow sign pointing up a set of steep steps. Despite the cool, milky sunlight this morning, it stands out from afar: Michel von Fischer has cleaned it with his spray and buffed it up.

This BWW volunteer walks every trail in his district of Frienisberg Ost once a year. It takes him about 30 half-days to complete the roughly 120 kilometers on his patch. Accompanying him on all his walks is a bag with tools for makeshift repairs, cleaning products, and a pot of RAL 1007 yellow paint – the standard color used on hiking trails throughout Switzerland. He also carries with him a lightweight, rather flimsy-looking ladder.

"Once you have passed a junction with a hiking trail sign, you'll see a yellow diamond-shaped sign that tells you you're going the right way," he explains. Everything is fine at the first junction, but at the second one the familiar yellow sign is nowhere to be seen. Trees have been felled or rotten posts have

#### Well prepared for the hike

Anyone can hike, but anyone can also overestimate their abilities – especially if they don't have the right skills and knowledge. This can lead to unpleasant surprises, with around 22,000 people injured while hiking every year.

It's all about proper preparation: make sure you have the right equipment for the route you choose and always check the weather conditions along it. There are three categories of hiking trails in Switzerland. Yellow (T1) indicates easily accessible terrain; white-red-white (T2 and T3) indicates mountain trails with rough terrain and exposed areas suitable for sure-footed hikers with plenty of stamina; and white-blue-white indicates alpine hiking trails (T4 to T6) without paths in places and involving some climbing, suitable for completely sure-footed, fit mountain hikers only.

There are countless books, maps and apps available that can help you identify a tour that's right for you. The Canton of Bern's hiking association (BWW) has a website ([wanderplaner.ch](http://wanderplaner.ch)) and app with information on hundreds of trails, with access to maps for BWW members. So there's nothing standing in the way of a glorious summer of hiking in the Canton of Bern!





Michel's stencil and yellow paint accompany him on all his inspections.

been replaced, so the sign is gone – but Michel von Fischer is used to that. It's one of the reasons why he checks the paths regularly. A new sign needs to go up here. Where should it go? "If possible, it should be to the right of the path. I can fix a metal sign to a post, but I can only put paint on a tree," he says, opting for tree and paint pot. Looks like new, the next hiker will say, grateful for the excellent and reliable signage along the Canton of Bern's hiking trails. Here you don't need a map to get to your destination: you simply follow the yellow signs. And it's all thanks to the outstanding work of the volunteers.

The majority of people who put their names down for this unpaid job are retired men – and there is no shortage of them. In fact, there are even waiting lists in some districts. Michel von Fischer has been doing this for five years. He loves the combination of being outdoors in nature, working with his hands, and coming into contact with people. These encounters are usually friendly, and he often receives praise and thanks for his efforts. But if the conversation takes an awkward turn – if a landowner doesn't want people on his land, for example, or there is a problem with a sign, or hikers alert him to a fierce dog – he can bring

in a BWW employee. And if he comes across subsidence, potholes or rotten steps, he doesn't have to do the repairs himself but reports the locations to the municipality concerned.

Then he's back up his ladder to clean the next signs or leaning over railings to get to them from above. You do need to be fit and agile for this work. Sometimes it can be tough if he has to replace newly installed signs that have been sprayed over or bent or are no longer legible. Occasionally there are posts that need replacing and undergrowth to trim. "The best time to check the paths is when the woods are in leaf; then you can see what needs cutting back," he explains. And he does it all with so much enthusiasm that you hope he will go on keeping the yellow arrows pointing in the right direction for a long time to come.

[www.bernerwanderwege.ch](http://www.bernerwanderwege.ch)  
[info@bernerwanderwege.ch](mailto:info@bernerwanderwege.ch)

“Sometimes people come up to me and thank me for my efforts.”

Michel von Fischer



For Michel von Fischer, legibility and quality are key, so he cleans every sign in his area once a year.



# Competition: a summer of hiking

**Bern's hiking trails**

There are 10,000 km of trails to explore in the Canton of Bern. The Bernese hiking trail network is one of the most diverse in Switzerland. Membership of the association supports us in the important work we do to ensure you can enjoy your leisure activities safely and worry-free. We plan and signpost all the hiking trails for you. You will even find signposted snowshoe tours and winter hiking trails – all completely free of charge to use. Our planning tool wanderplaner.ch offers a selection of the most attractive hiking suggestions in the Canton of Bern and helps you plan your own tours, now extending to the whole of Switzerland, Germany, Austria, South Tyrol and Liechtenstein. You will find lots of useful information and countless hiking suggestions in our magazine and books or on our website. Or why not join us on one of our guided hikes.

**The BWW**

The BWW is a non-profit organization founded in 1937, with a current membership of 14,300. The association also undertakes semi-public tasks under the Federal Act on Footpaths and Hiking Trails (FWG) and the Canton of Bern Roads Act. These tasks are assigned to the BWW by the Canton of Bern and are set out in a service agreement.

Win great prizes from the Berne Hiking Association (BWW) shop!



**1** Question 1:  
Who said “The image of Switzerland as an industrial center helps us to win customers worldwide”?

- ☐ Bernhard Emch, CEO EMCH Aufzüge AG
- ☐ Urs Breitmeier, CEO RUAG Holding AG
- ☐ Professor emeritus Paul Messerli

**2** Question 2:  
Behind every start-up there are some resourceful minds. Which start-up would you go on a virtual shopping trip with?

- ☐ Stimidget AG
- ☐ enolyst
- ☐ Jamie & I
- ☐ Pricenow

**3** Question 3:  
Some of our new columns have identifying graphics. Which of these represents the “Administration for citizens” column?



**Competition prizes:**

- 1st prize:** Hiking backpack packed with goodies for a picnic in the countryside
- 2nd prize:** New hiking book
- 3rd prize:** Hiking cushion for well-deserved rests in between

The winner will be drawn by lots and notified in writing. Employees of the Office of Economic Affairs are excluded from entering the competition. The judges' decision is final. There is no cash alternative to the prize.

You can enter the solution at [www.berninvest.be.ch/chance](http://www.berninvest.be.ch/chance) by **September 1, 2019**. Or send it by postcard to the Bern Economic Development Agency, BCA Competition, Münsterplatz 3a, Postfach, 3000 Bern 8, Switzerland.

Congratulations to Saskia Sennhauser, Im Hinderacher 4, 8181 Hôri (ZH), the winner of our competition in “bernecapitalarea” 2/2018.

# Cutting-edge Bernese technology in self-driving cars

The automotive industry is undergoing fundamental change: networked electric self-driving vehicles will one day dominate our roads. The technology involved comes in part from three highly specialized, innovative Bernese companies that are world leaders in their field: Schleuniger, Asetronics and Feintool.

“At present, the idea that in just a few years’ time you could be chauffeured to the office by your own car and spend the journey reading business documents or writing e-mails may still seem like a pipe dream,” explains Christoph Schüpbach, CEO of Schleuniger, a Thun-based company specializing in cable/wire processing. But the trend is already very much in evidence: cars are being equipped with more and more driver assistance systems. “The technology for automating controls, so that the driver doesn’t have to keep a constant eye on the system, already exists,” Schüpbach explains (see graph, stage 3). Theoretically, a driver stuck in a traffic jam on the highway could read a book – although Swiss road traffic laws don’t yet allow that.

It will be some time before fully autonomous driving becomes a reality in complex environments such as a city, Peter Affolter, Professor of Vehicle Electronics at Bern University of Applied Sciences, believes. Most experts don’t expect it to happen for another 10 to 15 years. “The intuition and experience of a person who makes snap decisions when a ball rolls onto the road and reacts accordingly can’t yet be replaced by artificial intelligence,” Professor Affolter says. Nevertheless, at Bern University of Applied Sciences they are already preparing the specialists of the future. Affolter and his students have converted a Renault Twizy into a teaching platform and equipped it with a large number of sensors. It is now being used for research and teaching. Within this field, the university is focusing in particular on niche markets such as municipal vehicles.



## THE 5 LEVELS OF AUTOMATED DRIVING: ASSISTED, PARTIALLY AUTOMATED, HIGHLY AUTOMATED, FULLY AUTOMATED, AUTONOMOUS

Vehicle manufacturers are currently working on level 3, “highly automated”, where the driver no longer has to constantly monitor the system. But he or she must be in a position to take control of the vehicle.

### Under the hood in driver assist

Various radar, lidar (laser-based technology) and ultrasonic sensors and video cameras continuously record the environment around the car, recognizing other road users, obstacles and traffic signals. GPS systems supply information on the vehicle’s position. Powerful computers continuously analyze millions of bytes of data and process them into control commands using artificial intelligence. What is not directly necessary, on the other hand, is mobile communication technology, as Sepp Huber, Head of Media Relations at Swisscom, notes. But this technology – especially the new 5G standard – is becoming increasingly important for networking cars. Examples of its use include vehicle location, Wi-Fi hotspots, parking guidance systems and car sharing. Swisscom is already working on this with its autoSense platform.

There are four megatrends driving the automotive industry, all of which are interlinked: electromobility, autonomous driving, digitization and networking, and Shared Services. Suppliers that operate directly or indirectly in the automotive industry can also benefit from this development, as the following examples show. All of them are intensively involved in these megatrends, they are among the world’s market leaders in their fields, and they use the opportunities provided by digitization in highly automated production processes.

“Cutting-edge Bernese technology will continue to feature in the self-driving cars of the future.”

André Michel



### World-class technology from Thun

"We want to be the company best placed in our market segment to deal with emerging disruptive technologies in the industry," Schleuniger CEO Schüpbach says with confidence. With two-thirds of the company's business dominated by the automotive sector, it is benefiting strongly from the current megatrends: "Autonomous vehicles require an ever-increasing proportion of electronics, as more and more technology has to be installed," he explains, a viewpoint shared by André Maurer, Chairman of the Board of Asetronics in Bern. "Schleuniger is a world leader in the assembly of data transmission cables and sensor cables for vision, radar and lidar systems, laser scanners and ultrasonic sensors in the auto-

mated driving sector." Schüpbach also sets great store by 5G mobile technology, which plays a key role in the Internet of Things and Shared Mobility.

### Smart cars need smart lights

As far as Asetronics Board chairman Maurer is concerned, whether a car drives autonomously or not is not the key issue to begin with. His motto is: "Smart cars need smart lights." With the advent of LED light modules with integrated electronic controls, front headlights are becoming safer. Headlights equipped with the latest Asetronics LED modules are designed to recognize other cars and pedestrians. They don't dazzle road users in front or in oncoming vehicles but still keep the surroundings fully illuminated, as the individual LEDs have high-precision controls and are processed and mounted with absolute precision. Asetronics technology, which is used by the world's leading car manufacturers, therefore contributes to greater comfort and safety – aspects that are becoming increasingly important for self-driving cars in particular, as they don't have a considerate driver who regulates the intensity of the light. This in turn will be crucial for safety and acceptance. Maurer expects the market for LED systems to continue to grow by 10 to 15 percent annually.

### Autonomous driving makes tougher demands

As a manufacturer of fineblanked, formed and stamped electro sheet components and tools – which are used by most premium manufacturers, by the way – Feintool would seem at first glance to have little to do with automated driving. But appearances are deceptive. According to Stefan Walther, Head of Strategic Planning, highly automated vehicles usually have automatic transmissions. What is more, they increasingly feature four-wheel drive, as this system allows the vehicle to be steered with greater precision. More Feintool components are used in these vehicles, Walther says. The same is true of hybrid vehicles. The components for the electric drive train, in which the Seeland-based company has invested heavily, are bringing in extra orders for Feintool. On the electromobility front, they are also driving forward a project involving the complete production of metallic bipolar plates for fuel cells.

Another important element is comfort: the less the driver needs to be involved in piloting the vehicle, the more important comfort becomes. Seats with mechanisms manufactured with high-precision Feintool technology can be infinitely adjusted to the desired working or even sleeping position.



### BERNMOBIL TESTS SELF-DRIVING BUS

Bernmobil – the Bern municipal transport company – is testing a self-driving minibus on its own grounds. It is expected to start carrying passengers in Bern's Mattequartier as early as this summer – provided the federal government authorizes it.

## The developments towards fully autonomous driving involve a complex interaction of sensors, data processing, and legal and ethical questions.

#### GPS system

The GPS system receives satellite signals to determine the exact position of the vehicle.

#### On-board computer

The on-board computer evaluates all the data and brakes, accelerates, and steers the car, following the rules of the road.

#### Cameras

These recognize traffic signs and register other road users or objects on the road, providing a 360° view of the surroundings.

#### Ultrasonic sensors

These sensors monitor the immediate surroundings (approx. 5 m).

#### Radar (short-, mid- and long-range)

These systems measure and monitor the vehicle's distance from other road users and objects.

#### Lidar (Light Detection And Ranging)

Lidar scanners capture the vehicle's spatial environment and the motion profiles of other road users and convert the reflected laser pulses into high-resolution 3D maps of the surroundings – all at a speed 50 times faster than a blink of the eye.

### Legal situation

The law currently requires a driver to be able to control the vehicle at all times. There are many legal questions to be answered before the advent of the fully autonomous, driverless car, such as how to resolve an ethical dilemma in which the lives of the vehicle's occupants need to be weighed up against those of other road users. Such decisions would need to be taken by a system. It remains to be seen who would be authorized to program the software for these situations and whether it would even be legally permissible to use technology to map an ethical consideration.

### IT security

In-car software is a sensitive aspect of vehicle safety, as hacker attacks have demonstrated in the past. IT security will be yet another important element in autonomous driving.

# Feel free to ask the Office of Economic Affairs

The administration is the body responsible for implementing decisions and requirements of the Bernese government, the Bernese parliament and also, to a certain extent, the federal government. Its employees make every effort to fulfill their duties in a transparent, approachable way. Administrative guidelines are not always self-explanatory, so we regularly receive enquiries from citizens, which we are more than happy to answer.

We asked Renate Gusset and Alessandro Pecchio, two experts in **working, rest and store opening hours**, about the kinds of questions they receive.

**Question:** In the spring and autumn, car showrooms often hold special shows on Sundays. Do they need a permit for these shows?

**Answer:** Yes, anyone employing people to work on a Sunday must apply for a permit for Sunday work.

**Question:** There are people working on Sundays at a company in our neighborhood. Are Sunday working permits issued by the Canton available for inspection?

**Answer:** Yes, they are posted on the Department of Economic Affairs' website and are updated weekly.

**Question:** "I commute to and from work, so I am hardly ever able to go shopping before 7 p.m. Why don't you allow shops to stay open longer than 7 p.m.? It would benefit the shops as well. Bricks-and-mortar retailers are already suffering enough with competition from online stores as it is."

**Answer:** In the Canton of Bern, retail shops and market stalls are permitted by law to stay open until 8 p.m. and to open from as early as 6 a.m. However, many shops choose not to make full use of this statutory flexibility. Late opening until 10 p.m. is also permitted on one evening per week, but most stores close earlier than that.



**Answer:** The shop in Adelboden benefits from the fact that it is located in one of the areas designated as a tourist area by the Bernese government. The canton's Commerce and Trading Act allows businesses in towns depending largely on tourism to open from 6 a.m. to 10:30 p.m. daily.

**Question:** An actress employed by the theater who recently had a baby wants to return to work straight away so that she can accept an interesting role. She asked us whether she could do that.

**Answer:** No, because her employer is not permitted to offer her work during the eight weeks following the birth (maternity leave).

**Question:** My staff want to work through their lunch break. Are they allowed to do that?

**Answer:** No, breaks are regulated by the Labor Act. As a rule of thumb, they should be provided half way through the working day. Breaks from work are beneficial to health. They give people a chance to have something to eat, rest, and re-energize, and they do actually boost productivity.

**Question:** "I spent a wonderful day hiking in Adelboden last Sunday. I noticed that the local shop was open. But the same retail shop in my hometown has to stay closed on a Sunday. Aren't the rules on shop opening hours the same throughout the canton?"

The Safety and Health at Work Section at the Office of Economic Affairs is tasked with visiting companies to check that they are complying with the law. But the section staff also see themselves as specialist prevention advisers, helping companies minimize absences due to illness and accidents.

More information on working and rest times:  
[www.be.ch/arbeitszeit](http://www.be.ch/arbeitszeit)

More information on shop opening hours:  
[www.be.ch/verkauf](http://www.be.ch/verkauf)

“Employers wanting their staff to work Sundays and nights must obtain their consent.”



# #cantonofbern

## Beauty spots and sights in the Canton of Bern

### Burgäschisee

Burgäschisee, which is also known locally as Aeschisee, is in a nature reserve area on the border between the cantons of Bern and Solothurn. This natural lake is just under 700 m long and 500 m wide and is surrounded by woods and reed beds.

Rowboats can be hired on the north-eastern shore. For those who prefer to stay on dry land, there is a one-hour walk around this idyllic lake. In cold winters the waters of Burgäschisee partially freeze over, and skating is sometimes officially allowed, conditions permitting.

On the eastern shore of Aeschisee is a lido which is open in the summer from May to September.

To get to the lake by public transport, take the bus to the Burgäschi stop in the village center. From there a 400 m walk will take you to the lake. Visitors travelling by car can park in the car park outside Restaurant Seeblick.



### Arnensee

Arnensee is situated above the village of Feutersoey near Gsteig-Gstaad, surrounded by a magnificent alpine world.

Dotted with shady fir trees around its shores, this lake is around 1.5 km in length and 1,542 m above sea level. A circular walk around Arnensee is fun for the whole family and takes about one hour to complete.

In summer there are plenty of water sports on offer, with stand-up paddles, rowboats and pedalos available for hire at the restaurant Huus am Arnensee. The lake's beach is also very popular and is a great place for bathers to cool off in the summer.

**Motorists please note:** the road from Feutersoey to the reservoir is a toll road. Tickets can be purchased at the beginning of the mountain road.



### Hinterstockensee

Hinterstockensee (also known as Hinderstockensee) is in the municipality of Erlenbach in Simmental (BE). The lake, which is situated at 1,595 m above sea level, is just five minutes away from Chrindi mid-station on the Stockhorn cableway. Regarded as one of the most beautiful mountain lakes in Switzerland, it lies in a hollow below the Stockhorn. A densely wooded, rocky peninsula juts out into the lake from the western shore. A circular, family-friendly path takes visitors right round the lake in around 45 minutes. The lake is a perfect spot for picnics and fishing.

**Source:** [www.schweizersee.ch/kanton/bern](http://www.schweizersee.ch/kanton/bern)



Elegance is an attitude

*Simon Baker*  
Simon Baker

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