

Conversation

Yves Serra, CEO Georg Fischer AG

Business

“Industry 4.0 is powering productivity and innovative strength”

Cutting-edge automation solutions
from W. Althaus AG

Research & Development

“Bernese Jura: Joint forces to create technology expertise for Industry 4.0”

Innovative solutions for Industry 4.0
from TORNOS SA and HE-Arc

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Dear reader,

The expectations aroused by the term “Industry 4.0” are great: smart manufacturing is a driver of innovation, it supports resource-friendly production, it's the answer to competitiveness and higher customer demands. But there are also fears that the fourth industrial revolution could destroy jobs.

So where are we today? Studies conclude that well-prepared though Switzerland, a highly industrialized and innovative country, may be for Industry 4.0, the digital transformation has only just started in the Swiss workplace. The same can also be said of the Canton of Bern. The road to Industry 4.0 is long and digitization is just one of many factors influencing economic development and the job situation.

What is the Canton of Bern doing about it? With contributions to the University of Bern and the Bern University of Applied Sciences, the Canton of Bern is promoting research, teaching and knowledge transfer relating to Industry 4.0. Close cooperation between science and industry in applied research will be a central theme at the Switzerland Innovation Park Biel/Bienne, for example in the planned Smart Factory Lab.

The Canton of Bern is having to further boost its attractiveness in the international race to attract inward investment. And it is doing so through its commitment to promoting innovation. This commitment is helping us meet the challenges of Industry 4.0. Or, as CEO of Georg Fischer AG Yves Serra puts it: “The networking of different technologies and markets will gain increasingly in significance going forward. Countries with a high standard of education such as Switzerland can clearly benefit from this.”

In this issue of *bernecapitalarea*, you will find out how Bernese companies are facing up to the challenges of Industry 4.0. Enjoy this edition of *bernecapitalarea*.

Yours truly,

Andreas Rickenbacher
Member of the Government of the Canton of Bern
and Minister of Economic Affairs of the Canton of Bern

“Biel/Bienne is an excellent location for high-tech manufacturing”

An interview with Yves Serra

Georg Fischer AG has chosen Biel/Bienne as the new manufacturing base for one of its divisions. CEO Yves Serra explains why, and what opportunities the digital revolution is opening up for this well-known industrial company.

You have manufacturing bases in various countries across the world but you have chosen to manufacture your core components in Switzerland. Why do you need so many different production locations in order to remain competitive?

“We have to be where our customers are. And they are all over the world. But Switzerland is the heart of GF – it’s an excellent location for both high-tech manufacturing and R&D.”

Concentrating your operations in Biel/Bienne with the construction of a new building in the Bözingenfeld area is a strategic project. What prompted you to take this step?

“We have almost doubled sales of our milling machines over the past few years and are seeing continued strong growth. In addition, we are currently spread between three sites in Nidau, Ipsach and Luterbach. Our new building in Biel/Bienne, which involves a total investment of some CHF 100 million, brings these sites together under one roof and will greatly increase production capacity.”

What makes Biel/Bienne such an ideal place for a new production facility for your GF Machining Solutions division?

“GF Machining Solutions and its companies have been based in Biel/Bienne for many decades. What’s

more, the region is home to a cluster of machine tool manufacturers and major customers of ours. Its proximity to the Switzerland Innovation Park Biel/Bienne and the planned Bern University of Applied Sciences Technology Campus guarantees us a well-qualified workforce to choose from and enables us to share knowledge with these institutions to our mutual benefit. And last but not least, the region also offers a very

high quality of living for our staff.”

“Digitization requires specialists and highly skilled professionals.”

The manufacturing sector is in the throes of a digital revolution, which is being further accelerated by expanding technologies such as the Internet of Things and the Internet of Services. What opportunities does

smart manufacturing offer your company in terms of improving your international competitiveness?

“GF Machining Solutions is the only company to offer all related technologies such as EDM, milling, automation and machining under one roof. Industry 4.0 and smart manufacturing therefore present a great opportunity for GF Machining Solutions to profile itself even more intensively as a front runner in technology and innovation, especially as we make the transformation from a simple manufacturer of machine tools to a provider of solutions.”

Can you describe a specific example of an innovative solution produced by GF Machining Solutions in the context of Industry 4.0?

“Our customers expect their machines to be more and more ‘independent’ – in other words, they want them to be fully automated, self-learning and, where necessary, able to adjust processes automatically. This not only calls for complete automation but also high-end software. For example, if highly complex components need to be machined, the software should automatically select the best process and initiate the right programs. And if the component is well outside the permitted tolerance for some reason, the same software should be able to correct this automatically without the need for operator intervention.”

About the company

Georg Fischer AG consists of three divisions: GF Piping Systems, GF Automotive and GF Machining Solutions. Established in 1802, the Schaffhausen-based company operates more than 120 companies in over 30 countries. Its 14,000 employees generated sales of approximately CHF 3.8 billion in 2014. GF is known the world over for the safe transport of liquids and gases, lightweight casting components in vehicles, and high-precision manufacturing technologies.



To meet the strong demand for high-speed milling machines, GF Machining Solutions is building a brand new factory in the Bözingenfeld district of Biel/Bienne from autumn 2016. The factory is set to open in 2018 and will provide 460 jobs.

About the person

Yves Serra has been CEO of the Executive Committee of Georg Fischer AG since 2008. Prior to this, he was CEO of Serra GF Piping Systems. A Frenchman by birth, he studied Engineering Sciences in France and the USA, after which he took up a post as Deputy Trade Commissioner at the French Embassy in Manila, followed by executive positions with Sulzer and Agie-Charmilles in Japan, before being appointed President of Charmilles Technologies SA in Geneva in 1998. The father of one daughter lives with his family near Schaffhausen.

What role does additive manufacturing play at your company, and what is your vision for the kind of innovative solutions and products the GF Machining Solutions division will be producing in the future?

"3D printing, or additive manufacturing, is a technology of the future. In 2015 we set up a strategic partnership with the world market leader in additive manufacturing, the German company EOS. The combination of EOS and GF Machining Solutions technologies is opening up brand new opportunities for us. The first machines will be coming onto the market in 2016. This is only the beginning of an exciting new technology, but it is important to be there right from the start."

How do you think the digital revolution can be used to preserve and expand Switzerland as a hub of innovation?

"Digitization requires specialists and highly skilled professionals. In addition, the networking of different technologies and markets will gain in significance going forward. Countries with a high standard of education such as Switzerland can obviously benefit from this."

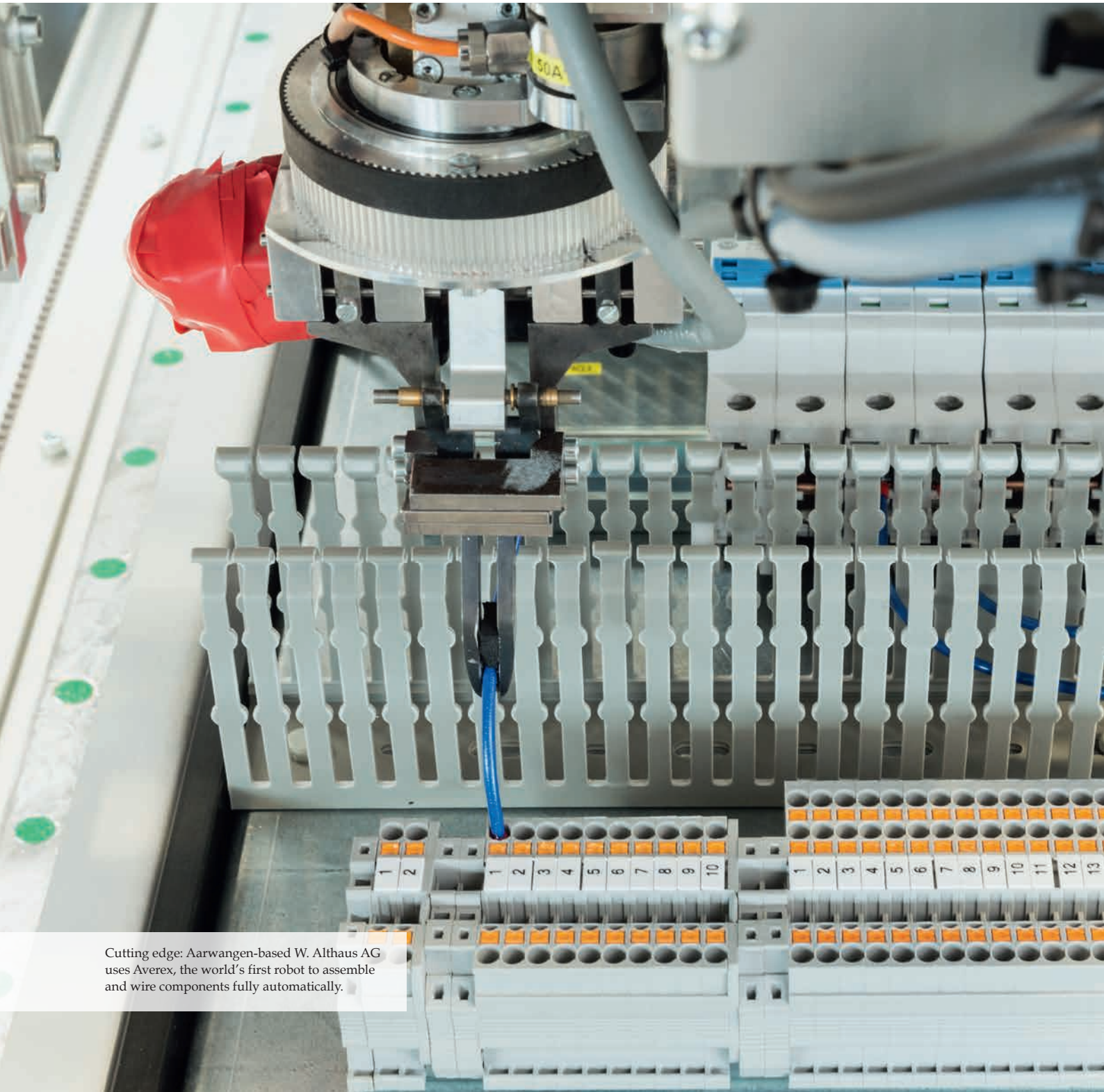
Information

www.georgfischer.com

“Industry 4.0 is powering productivity and innovative strength”

Cutting-edge automation solutions from W. Althaus AG

On a tour of this innovative mid-sized family enterprise, CEO Walter Althaus demonstrates how the tools and knowledge of Industry 4.0 are already gearing companies up for success.



Cutting edge: Aarwangen-based W. Althaus AG uses Averex, the world's first robot to assemble and wire components fully automatically.



“We have already largely automated all our processes, from hardware engineering and electrical design to manufacturing and testing,” CEO Walter Althaus reveals. Among the core competences of the Aarwangen-based electrical control and switching system manufacturer are custom industrial solutions such as an automatic terminal mounting system which clamps metal terminals onto top hat rails. “Besides efficiency and cost benefits, a major advantage of automating manufacturing processes is the improvement in quality you can achieve. Automatically labeled cables, top hat rails and terminals reduce the likelihood of errors occurring during wiring, for example. In addition, our control systems are automatically tested before they go out to the customer,” says Althaus, who is the second generation to run the company.

Industry 4.0 boosts efficiency and quality

Over the past few years W. Althaus AG has been gearing up all its production processes for Industry 4.0. “This includes digitizing our manufacturing documents and optimizing our storage and logistics processes, data acquisition, and work processes and systems. We have also managed to increase the degree of automation in our manufacturing department – in sheet metal working, cable and stranded wire manufacturing, and component assembly, for example.

About the company

W. Althaus AG has been developing and manufacturing industrial automation solutions since 1968 and is today regarded as one of the most modern electrical control system manufacturers in Switzerland and in Europe as a whole. The family-run business was established in Aarwangen by Walter Althaus Senior and employs more than 100 people. As a full-service company it offers a wide range of custom services for the industrial sector, from consultancy and development to system supply and cabinet assembly through to assembly support, commissioning, testing and training.



"To achieve consistent, multidisciplinary engineering, it is essential to have your automation and IT seamlessly networked." CEO Walter Althaus

About the person

Walter Althaus joined his father's company 26 years ago. A machinery mechanic and electrical engineer by trade, he took over as CEO in 1996. Althaus has lived in Aarwangen his whole life and appreciates its rural yet conveniently located position in the Canton of Bern both in his working and private life. The father of one son and one daughter spends his leisure time mountain biking, playing golf, skiing or walking with his wife, the Beatenberg region being their particular favorite.

This optimization exercise throughout the process chain has brought us efficiency gains of 20% in our manufacturing department over the past three years alone." In order to achieve this high degree of efficiency, data needs to be consistently available along the entire process chain, from engineering to manufacturing to testing. Consistent data availability has also enabled the company to optimize the integration of their commercial processes such as calculation, ordering, and logistics. "In order to improve our efficiency and quality, we have always relied on the latest developments and it goes without saying that we will continue to do so going forward," Althaus explains. "For example, our Averex robot, which wires mounting plates fully automatically, is a world first that has enabled us to significantly reduce manual processes and massively boost our productivity."

"Industry 4.0 is boosting the competitiveness of the manufacturing sector."

Individuality ever more in demand

It is innovations and optimizations such as these that do so much to help W. Althaus AG remain internationally competitive despite the relatively high wage costs in Switzerland. "Demand from customers for individuality – and by that I mean order quantities of one – is soaring," CEO Althaus points out. "Smart manufacturing helps us incorporate more of our customers' individual wants and needs into our development and production processes. The ever larger volumes of data we have available create more and more opportunities for networking, enabling us to work ever more efficiently and to a higher quality standard and, as a result, come up with new services, products, and business models." Walter Althaus sees smart manufacturing as a great opportunity for SMEs in particular to make the transition from contract manufacturers that are dispen-

sable and easily replaced to intelligent partners in the value chain. "Industry 4.0 is indisputably powering productivity and innovative strength. And in doing so it is boosting the competitiveness of the manufacturing sector and securing the Canton of Bern's and Switzerland's position as a center of manufacturing for the long term," the CEO believes. "Innovations like Averex prove that manufacturing certainly doesn't have to be moved abroad in order for it to be cost-effective and efficient."

Information

www.althaus-ag.ch

Robotic Revolution in Biel/Bienne

KUKA Roboter Schweiz AG is working closely with Swisslog and the Smart Factory Lab Biel

What will the cooperation between KUKA Roboter Schweiz AG, Swisslog and the Smart Factory Lab Biel/Bienne (SFLB) deliver in terms of added value, and what does the future hold for robotics in general? Dominik Bösl, Corporate Innovation Manager at KUKA AG Germany, and CEO Francesco Bocale of KUKA Roboter Schweiz AG, gaze into the crystal ball.

As a pioneer in robotics and automation technology, KUKA Roboter is one of the world's leading manufacturers of industrial robots. What role will robots play in companies in the future?

Dominik Bösl: "The KUKA '4 Robotic Revolutions' model describes four phases of automation technology. The kind of robot-based automation that has been around in the car industry for decades was the first phase. At the moment we are in the second phase, in which sensitive, safe robots can collaborate directly with humans for the first time. The third revolution involves combining this safe automation technology with mobility: robots will be able to move around freely on the factory floor, leading to completely new, flexible manufacturing concepts – the cornerstone of modern service robotics. The fourth phase in the evolution of robots will be achieved in tandem with artificial intelligence (AI): robotic systems that can identify objects and learn. But it will be a few years or even decades yet before we get to the 'Rosie' stage – the robot housekeeper from the futuristic cartoon series *The Jetsons*.

"The biggest driving factor in automation is demographic change."

What direction do you envisage robotics developing in?

Dominik Bösl: "The biggest driving factor in automation is demographic change: the aging of the population and the resulting worldwide shortage of labor. So taking tasks off people's hands to enable them to continue to work for longer will be key. But it's not only in manufacturing that we will encounter automation going forward, we will be coming across it in the home too. For as life expectancy increases, so too will the need for support systems, for example to maintain mobility in the home for the elderly."

What role can KUKA robots play in the digitization of your customers' supply chain management?

Dominik Bösl: "We're still quite a way away from off-the-shelf Industry 4.0 products, for various reasons.



"The switch to smart manufacturing is an evolutionary process. Its full potential can and will only be realized once the various partners and links in the value chain can be fully networked – including beyond corporate boundaries."
KUKA Innovation Manager Dominik Bösl

About the company

KUKA Roboter Schweiz AG is a subsidiary of KUKA Roboter GmbH based in Augsburg, Germany. KUKA Roboter specializes in developing, manufacturing, and selling industrial robots and automated manufacturing solutions for the automotive, medical technology, solar technology, and aerospace industries the world over. Besides the KUKA Robotics division, the KUKA Group consists of KUKA Industries, KUKA Systems, and Swisslog, which is headquartered in Nidau in the Canton of Bern. The parent company is KUKA AG, a global automation corporation whose 12,000-strong international workforce generate sales of around € 2.1 billion.

Global Automation Powerhouse: as one of the world's leading providers of intelligent automation solutions, KUKA is a one-stop shop supplying everything from robots to cells to fully automated systems (from left to right: CEO Francesco Bocale with sales managers Markus Schwarz, Loïc Rochat and Gary Saretzki).



About the Smart Factory Lab Biel

The Smart Factory Lab Biel/Bienne (SFLB) will open for business at the Switzerland Innovation Park Biel/Bienne in mid-2016. Working closely with industrial and research partners such as the Bern University of Applied Sciences, KUKA Roboter Schweiz, and its subsidiary Swisslog, it will be developing, implementing and field testing strategies and solutions for Industry 4.0 on an area of approximately 500 m² (to be extended to 1,000 m² by 2018), working with its own machinery pool and IT infrastructure. In addition, training partners will deliver training for SMEs in the latest research and field results, and innovation experts will provide advice and coaching for SMEs looking to develop smart factory business models.

One is a lack of communication standards. IT companies are nurturing a somewhat distorted image of reality in this area. But we are already able to work with our customers to develop networked and digitized solutions right across the supply chain that are tailored precisely to their needs. And our customers benefit from the fact that KUKA has been committed to open interfaces, mainstream PC architectures, and Ethernet-based network communication – interoperability, in other words – since as long ago as the mid-1990s. We believe in putting added value for the customer at the heart of everything we do. Digitization should not be declared an end in itself.”



KUKA Roboter Schweiz is launching a new cooperation with the Smart Factory Lab Biel/Bienne (SFLB) and Swisslog this year. What are you hoping to gain from this partnership?

Francesco Bocale: "Through Swisslog, KUKA has gained access to the warehouse logistics and health care markets. At the same time, this partnership is boosting our sales and our bottom line. But Swisslog and KUKA are a good match on the technology front as well: with our robots and systems, Swisslog will be able to offer its customers a range of attractive new products and enhanced functionalities for completely new applications, such as mobility, at competitive prices. Both we and Swisslog see huge potential in this new collaboration with the Smart Factory Lab

Biel/Bienne. The SFLB is close to the users on the ground and to a range of research institutions, it will have a positive impact on an international level, and it will enable us to approach all the target groups for KUKA robots directly. So it ticks all the boxes in terms of offering innovative and impressive solutions on the Swiss market."

Information

www.kuka-roboter.ch

“Raising awareness of cyber security”

RUAG Defence's cyber security activities

There are many challenges facing SMEs in terms of cyber security these days. CEO Dr. Markus A. Zoller explains what these are and how the RUAG Holding AG Defence Division is helping companies in the era of Industry 4.0.

To what extent has security become more of an issue, now that more and more companies are using smart manufacturing?

“The fourth industrial revolution is leading to production processes and supply chains becoming ever more digitized and networked. What's more, with the rise in made-to-order products, companies' customers and partners are becoming increasingly involved in their business processes. This gives rise to new challenges in terms of cyber security, such as ensuring integrated software security, safeguarding the chain of trust between the numerous communicating partners, and protecting production plans and processes. Operating and maintaining the necessary IT infrastructure is a complex and expensive business. These costs can be mitigated to a significant extent with cloud computing, for instance. Some SMEs already use cloud computing but many are reluctant to do so as they are concerned about losing control of their data. Most SMEs can't afford their own cyber security specialist, so it is vital to have an understanding of the latent threats and to be able to evaluate the risks to the business properly.”

“SMEs often have an inadequate understanding of cyber security.”

What cyber security solutions and services do you offer SMEs at the moment?

“Our cyber security portfolio includes security system design, protection services for IT infrastructures, including industrial controls, and products that detect, analyze and control cyber attacks. We monitor ITC systems for cyber security during operation and check their robustness with systematic assessments or simulated attacks commissioned by the customer. We also have a Cyber Training Range – the only one of its kind in Switzerland – where we provide training for specialists and technical operators, but also for executives and support organizations.”

On the first course you held in Bern in October, you trained cyber security specialists as trainers. What prompted you to offer this innovative training program?

“The more training we provided, the more we realized that people often have an inadequate understanding of cyber security. But this understanding is vital if we are to bring about efficient and effective improvements in security. So our cyber security specialists, whom we trained as trainers, pass on their knowledge in modular courses. We also have attractive deals for SMEs, not unlike gym membership. The aim of our training is to improve operational behavior in order to optimize security, but also to boost knowledge and raise awareness of cyber security. Our training courses are highly practice based as we map out our customers' own systems in the Range.”

About the company

RUAG Holding AG develops and sells internationally sought-after technological applications for the aerospace sector as well as security and defense technology for use on land, in the air and in space. Its 8,100 strong workforce produces cutting-edge technologies at its production sites in Switzerland, Germany, Sweden, Finland, France, Austria, Hungary, Australia and the USA. As one of the largest industrial corporations in the Canton of Bern, RUAG Holding AG is a shareholder in the Switzerland Innovation Park Biel/Bienne and is currently planning to work with the Smart Factory Lab Biel as a cyber security partner.

Are you planning any other specific activities on cyber security in the Canton of Bern?

“As one of the largest industrial companies in the Bern region, we have a stake in INNOCAMPUS AG, the operating company of the Switzerland Innovation Park Biel/Bienne. We are also currently applying for the role of cyber security partner to the Smart Factory Lab Biel/Bienne (see also p. 10). In addition, we work closely with various universities in Switzerland and abroad, for example by providing support for term papers and dissertations or participating in research programs. Our collaboration with the Bern University



Up to now, it has been all about defending borders or securing homes against intruders. In the future, cyber security will be the no. 1 priority. I am very excited to be playing an important role in this fast-paced paradigm shift in my job at the helm of one of Switzerland's leading cyber security providers."

Dr. Markus A. Zoller, CEO of the RUAG Defence Division in Thun

of Applied Sciences and the University of Bern is something we are particularly keen to step up. We have been conducting applied research and development for many years and are committed to improving and further enhancing our products and services with new processes and methods stemming from fundamental research."

Information

www.ruag.com

About the person

Dr. Markus A. Zoller has been CEO of the Defence Division and a member of the RUAG group management board since 2013. Before joining RUAG, Zoller was a project director, board member and CEO of several large international business units of technology companies including ABB, Alstom, Continental, and Siemens and has run and grown a number of small businesses as an independent entrepreneur. He graduated in mechanical engineering at Federal Institute of Technology Zurich and was awarded his doctorate in Business Administration and Marketing at the University of St. Gallen. Zoller, who was born in Basel, likes to spend his leisure time with his partner and two daughters, traveling, rowing and playing golf.

“Bernese Jura: Joint forces to create technology expertise for Industry 4.0”

Innovative solutions for Industry 4.0 from TORNOS SA and HE-Arc

TORNOS SA can already supply interested customers with software solutions designed specifically for the 4th Industrial Revolution. The Bernese-Jura-based machine tool manufacturer has developed and launched the innovative TISIS software in close collaboration with Haute Ecole Arc Ingénierie (HE-Arc).

Following the invention of the steam engine and mechanization in the 18th century, electrification in the late 19th century and automation in the 20th century, digitization is currently bringing about the fourth major revolution in industrial processes. TORNOS SA has already made great strides in this area, as demonstrated by its TISIS software. “Since we launched TISIS in 2013, it has been undergoing constant improvement, providing the user with more and more functions and additional interactive production monitoring and control tools,” says TORNOS Software Manager Patrick Neuenschwander. “TISIS i4.0 features a touch panel on which all machine information and production monitoring data can be transmitted in real time. TISIS Tab enables iPhone, iPad and Android users to precision monitor anything from a single machine to their entire machine pool and view alarms or error messages and even a complete alarm history on their tablet. This makes TISIS i4.0 a valuable tool for any factory manager and the first software package designed specifically for Industry 4.0.”

Bernese Jura – a hotbed of innovation

In the Bernese Jura, a region known the world over for its tradition, quality and expertise in precision engineering and micromechanics, TORNOS SA has found the perfect breeding ground for its ideas and innovations. Just 30 minutes away from its Moutier headquarters, TORNOS SA has been running the Tornos Research Center at St-Imier together with the Haute Ecole Arc Ingénierie since 2011 (see box).

“The expansion of Industry 4.0 is essential for the Canton of Bern and the whole of Switzerland.”

Both the company and the university benefit from the synergies generated there. “For example, our team was given the unique opportunity to apply the latest

data analysis processes to TISIS i4.0 in practice,” Prof. Hatem Ghorbel tells us. The HE-Arc teams also played a major role in the development of TISIS SetUpCam. “TISIS SetUpCam enables tools to be set up with a Plug & Play camera that is very easy to install in the machining zone,” Senior Assistant Stéphane Beurret explains.

“The video streaming function of this TISIS application displays the center of the machining zone. With its

About the company

The TORNOS Group is one of the world’s leading companies developing, producing and distributing Swiss-type automatic lathes and multispindle machines. TORNOS primarily manufactures CNC Swiss type (sliding headstock) turning machines, multispindle machines with numerical or cam control, and machining centers for complex parts requiring high precision (Almac). Through a global sales and service network, unique solutions are supplied to customers in market segments such as automotive, medical and dental technology, micro-mechanics, and electronics. With its approximately 660 employees, Tornos Group generated sales of CHF 164 million in 2015.





"We are convinced that by pooling our ideas and experience, we can develop cutting-edge technological solutions for Industry 4.0 and can therefore remain competitive on the international market." From left to right: Prof. Hatem Ghorbel, Senior Assistant Stéphane Beurret, and TORNOS Software Manager Patrick Neuenschwander



TISIS Tab, the innovative software solution from TORNOS SA in Moutier, delivers an immediate operating convenience, productivity and efficiency boost.

monitoring function and precalibration sequence, this camera can also be used for measuring purposes, thus greatly reducing the risk of errors."

The TORNOS software manager and the HE-Arc team agree that the demands placed on industry in the global market are becoming ever tougher – a market in which countless companies are competing for customers and that is being flooded with ever more complex products with an ever shorter shelf life. "Compa-

nies need to respond more flexibly to business and economic trends," Patrick Neuenschwander says. "Industry 4.0 is an obvious and very promising solution to this challenge as it enables production to be immediately optimized in terms of ease of operation, productivity and efficiency." According to a European study carried out in late 2014, Industry 4.0 may not be garnering much attention at present but its subjective significance is set to increase over the next five years and will ultimately be seen as "extremely important." "I see the further development of Industry 4.0 in the near future as something that is elementary to all business partners in the Canton of Bern and in the whole of Switzerland," Neuenschwander adds. "In our country, which is known the world over for its innovative strength, it is essential to embrace promising developments promptly and drive them forward quickly and actively."

About the Tornos Research Center (TRC)

The strategic partnership between **TORNOS SA** and the **Haute Ecole Arc Ingénierie (HE-Arc)** dates back a number of years. The two organizations have been working together at the Tornos Research Center at the Parc Technologique in St-Imier since early 2011, where all partners have access to efficient machines and are able to optimize them constantly with the technologies they develop and adapt together. Long-term focal points of the collaboration are mechanical design, machining processes, advanced controls and mechatronics, along with modeling and simulation.

Information

www.tornos.com

www.he-arc.ch

Showcasing the best of Bern

Exploring the Canton of Bern on the Grand Tour of Switzerland

Since April 2015, visitors to Switzerland have been able to discover the very best of what the country has to offer on a panoramic circular route around the country. The Grand Tour of Switzerland packs in a great number of natural, cultural, and sightseeing highlights in the Canton of Bern.

This spectacular and varied route guarantees visitors several sightseeing highlights a day and an excellent road infrastructure to take them there. As an added bonus, there are more than 160 tips for excursions within just a short drive of the actual Grand Tour route.

The very best of Switzerland's landscapes, sights and culture

Just like Route 66 in America, the aim is to make the Grand Tour of Switzerland the no. 1 Swiss tourism brand that is recognized the world over. The Grand Tour of Switzerland association is run jointly by Switzerland Tourism and partner organizations and representatives of various Swiss regions and destinations. The inspiration behind this new offering is the legendary Grand Tour which members of the Euro-

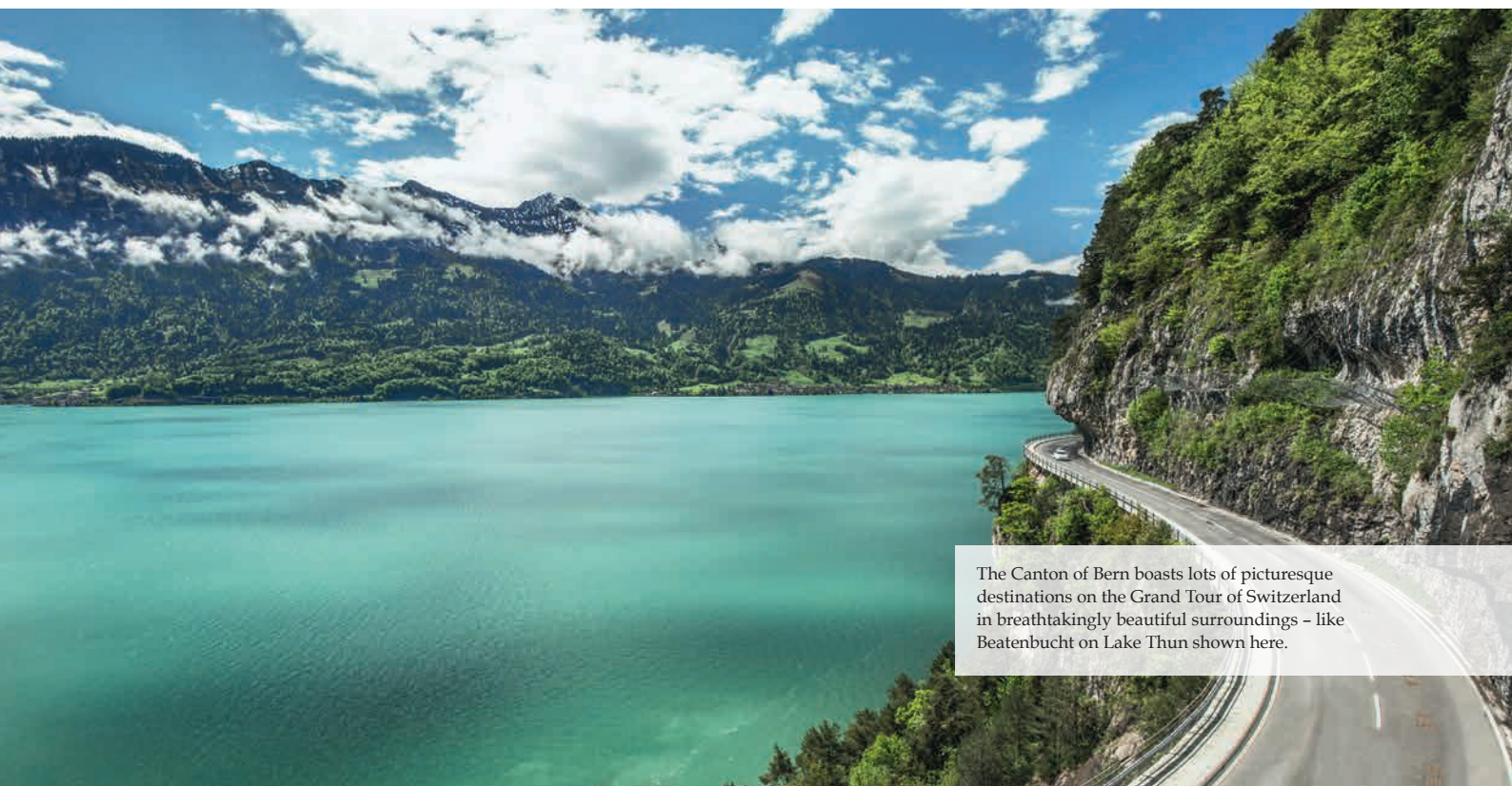
pean upper classes would take through Switzerland and many other countries of cultural interest in Europe from the 16th century onwards, on what was, at the time, a very time-consuming and arduous journey. Today the Grand Tour of Switzerland is an easy way to explore the whole country from the comfort of your own car, motorbike or mobile home. And for those who prefer to take this spectacular round trip with its many breathtaking panoramas

**"A new
Swiss tourism
brand."**

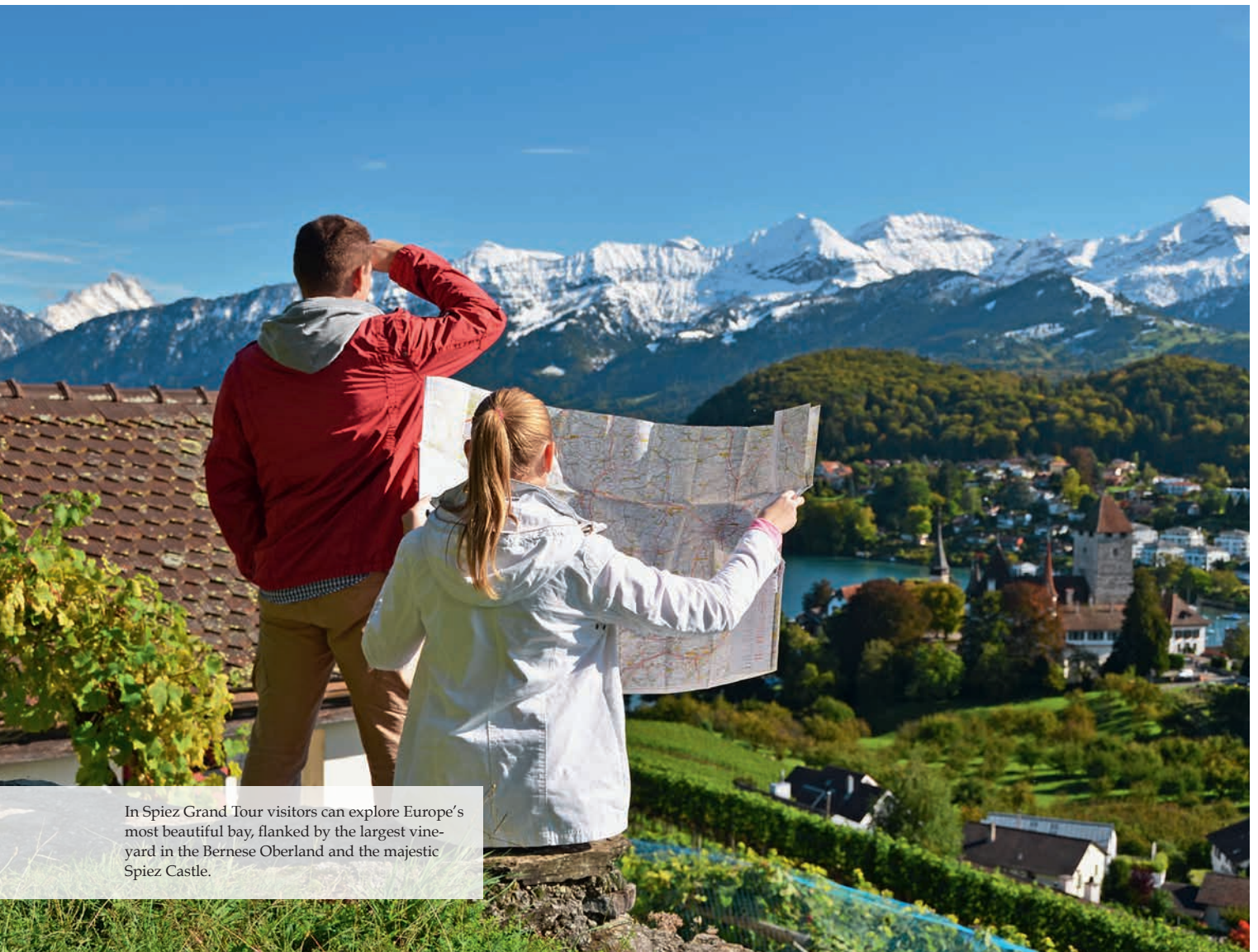
by train, there is the Grand Train Tour of Switzerland. You can start at any point along the route and follow eight different itineraries on which you'll enjoy not just Switzerland's magnificent scenery but also its first-class public transport system.

About the Grand Tour of Switzerland

Since its launch in April 2015, the **Grand Tour of Switzerland** has been shining the spotlight on the very best Switzerland has to offer along the country's most magnificent route. Stretching over 1,600 km, the journey of discovery crosses 4 language regions and 5 Alpine passes, runs past 22 lakes and takes in 44 top attractions, of which 11 are UNESCO world heritage sites. Besides the Grand Tour of Switzerland, which can be followed by car, motorbike or mobile home, Switzerland's highlights can also be explored on the 1,280 km **Grand Train Tour of Switzerland** with its 8 different train itineraries.



The Canton of Bern boasts lots of picturesque destinations on the Grand Tour of Switzerland in breathtakingly beautiful surroundings – like Beatenbucht on Lake Thun shown here.



In Spiez Grand Tour visitors can explore Europe's most beautiful bay, flanked by the largest vineyard in the Bernese Oberland and the majestic Spiez Castle.

From Neuchâtel to Bern

One of the highlights of the Grand Tour of Switzerland is the Bern/Bernese Oberland region. From Neuchâtel the tour runs via Haut-Vully to Murten and Fribourg, followed by Broc where you can take a break and sample the sweet delights of Maison Cailler. After Gruyères and Rossinière you head over to the holiday region of Gstaad-Saanenland, where the nine Alpine villages perching 1,000-1,400 meters up in the mountains boast leisure facilities galore and more than a thousand different sporting and cultural events per year, including many world class events like the Gstaad Menuhin Festival. The stylish ambience of the village of Gstaad adds a touch of chic charm and discrete luxury to this traditional Alpine setting with its 200

farms, 80 Alpine meadows and around 7,000 cows. Facilities include top-class hotels, excellent shopping along the pedestrianized promenade and even an airport in Saanen. This leg of the route then leads through the picturesque Simmental valley to Interlaken, where you can make a quick detour to the Jungfrauoch Top of Europe before heading onwards to Thun, Lake Thun and Lake Brienz, the Gantrisch Nature Park in Riggisberg, and, finally, the canton's eponymous capital city with its unique UNESCO historic city center backdrop. The next leg of the route from Bern to Zurich also showcases a host of fascinating places of interest in the Canton of Bern, such as the Emmental Show Dairy in Affoltern and the Kambly Experience in Trubschachen.

As the numbers reveal, this new journey of discovery through Switzerland has been a hit right from the start: the myswitzerland.com website had registered 630,000 visitors, and more than 23,000 Grand Tour guides and road maps had been sold. According to an initial survey of 4,618 road users along the route, the Grand Tour of Switzerland is already familiar to 27% of respondents. Just in time for the summer season, the tour is being further optimized this year with the provision of around 650 signposts right across the country to help drivers navigate the route.

Information

www.myswitzerland.com

A virtual trip through the Canton of Bern

The Grand Tour of Switzerland online

You don't have to be there in person in Switzerland to explore the pick of the Grand Tour of Switzerland. There is an app and a wide range of online platforms such as blogs, e-brochures and interactive maps available for exploring them virtually from anywhere in the world.

Bern Tourism offers a digital map showing the leg of the tour from Wattenwil via Bern to Trubschachen. "We have a series of posts describing people's own experiences on the Grand Tour of Switzerland on our blog," Director of BE! Tourism Ltd. Harry John explains. "And we are planning to launch a microsite on the Grand Tour of Switzerland on our website in summer 2016. Also available on our website is an all-in package for the tour that can be booked at any time of the year."

www.bern.com

www.madeinbern.com

Interlaken Tourism has an interactive map of the Grand Tour of Switzerland with general information, tour tips and regional highlights.

www.interlaken.ch

Gstaad Saanenland Tourism: "Visitors will find our offerings and special recommendations for the Gstaad-Saanenland leg of the Grand Tour of Switzerland on our website and on the Switzerland Tourism Grand Tour website," Head of Public Relations Kerstin Sonnekalb tells us. Gstaad Saanenland Tourism also showcases the region via Facebook, Twitter, Instagram, and on its *Mr. Gstaad* and *Me in Gstaad* blogs.

www.gstaad.ch



Swiss Mag, the free Switzerland Tourism iPad app, contains breathtaking 360° panoramic views, hotel recommendations, videos, exciting discoveries, and special offers linked to the Grand Tour of Switzerland, along with its e-brochures *Tales of the City*, *Swiss Summer* and *Swiss Winter*.



The Gstaad-Saanenland region is one of the highlights of the Grand Tour of Switzerland: this leg passes through Pays d'Enhaut, taking in Saanen, Gstaad, Schönried, Saanenmöser, and Zweisimmen, and ends in the Simmental valley.

Through Emmental by app and e-bike

The Emmental Cheese Route App

Tourists and locals alike can explore Emmental – the Emme valley – with a new app. As you follow the Emmental Cheese Route the app tells you exciting stories and information about the centuries-old tradition of Emmental cheese.



The Emmental Cheese Route app tells you all about how Emmental cheese is made, stored and transported and where it was traded in days gone by. The route also includes a stop-off at the Emmental Show Dairy in Affoltern.

**"Tour guide
and route finder
in an app."**

At the heart of the Emmental Cheese Route lies an app for iPhone and Android that acts as a virtual guide to the 21 points of interest along the route. Fascinating stories about this famous cheese and all the sights along the route come to life in the attractive smartphone guide with spoken content, images and videos. The Emmental Cheese Route, which is available either as a one-day tour (35 km) or a two-day tour (78 km), starts and ends at Burgdorf station. The app-based themed trail is a comfortable ride on a FLYER e-bike available for hire from the rental stations at Burgdorf and Langnau, and of course there are plenty of battery replacement and recharging stations for e-bikes along the route.

An interactive introduction to Emmental and its cheese

Among the highlights of the interactive e-bike tour are the home of Swiss novelist Jeremias Gotthelf, Burgdorf Castle and, of course, the Emmental Show Dairy in Affoltern, where visitors can roll up their sleeves and join in when Emmental cheese is made in the centuries-old tradition. What's more, all visitors can benefit from the new Emmental Tourism voucher booklet entitling them

to special discounts and free gifts. The vouchers can be downloaded and used at any of the points of interest along the Emmental Cheese Route. Every visitor to the Burgdorf Tourist Office can also pick up a free smartphone holder for their e-bike handlebars.

Information

www.kaeseroute.ch

About the Emmental Cheese Route App

The **Emmental Cheese Route App** can be downloaded free from www.kaeseroute.ch. Smartphones with the app pre-installed can be hired from the Burgdorf Tourist Office for CHF 20, and Burgdorf station has a free Wi-Fi hotspot. The app contains stories and information about Emmental Cheese and the 21 points of interest along the Emmental Cheese Route in four languages: Swiss German, German, English and French.

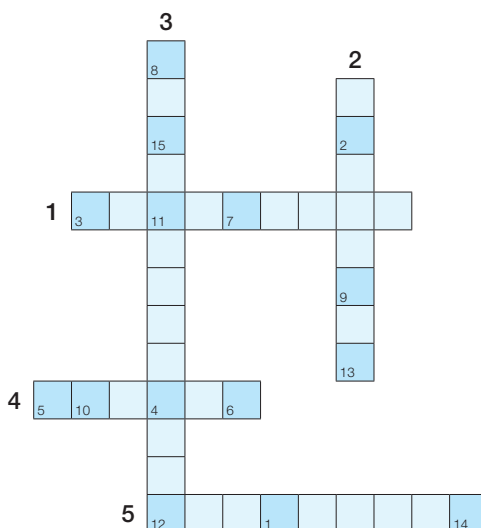
Win a weekend of pampering in Emmental

Enjoy a warm welcome at Hotel Moosegg in Emmenmatt: www.moosegg.ch

Take part in our prize draw and win a wonderful weekend break for two (one night in a Superior class double room, including a sumptuous breakfast buffet) at Hotel Moosegg in the picturesque Emmental. Welcoming, warm and easy-going hospitality in a stylish ambience is paramount at Hotel Moosegg. At Hotel Moosegg you'll enjoy innovative dining, a cozy, welcoming atmosphere, and plenty of peace and quiet to relax in.

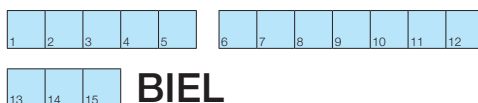
Recently awarded 16 Gault-Millau points, the stylish restaurant serves creative cuisine made with the very best regional ingredients. Enjoy exceptional gourmet dining, the breathtaking view over the Emmental, free Wi-Fi, free parking and comfortable facilities including banqueting and seminar rooms, a restaurant and lounge, and individually appointed en-suite rooms. Enjoy a warm welcome at Hotel Moosegg in the Emmental!

Taking part couldn't be easier. Simply find the answers to the clues and enter them in the appropriate places in the grid to find the mystery word. Send the mystery word along with your completed entry form to the address below by September 15, 2016. You can also enter online at www.berneinvest.com/chance. Tip: every word relates to a subject covered in this issue of *bernecapitalarea*. Good luck!



1. Location of W. Althaus AG
2. Cheese Route App
3. One of RUAG Defence's specialist fields
4. New panoramic tourist route through Switzerland
GRAND SWITZERLAND
5. CEO of Georg Fischer AG

Answer



Name: _____ Address: _____

Telephone number: _____ E-mail: _____

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

Tear out this page and send it to this address by September 15, 2016.

Bern Economic Development Agency, Münsterplatz 3, CH-3011 Bern, fax +41 31 633 40 88, or enter the competition via www.berneinvest.be.ch/chance.

Congratulations to Erika Ohl-Spielmann of Kloten, the winner of our competition in *bernecapitalarea* 2/2015.

New arrivals in the Canton of Bern

New companies in the region

The Bern Economic Development Agency helps innovative international companies with their decisions to establish operations in the Canton of Bern – like Pharmidex Pharmaceutical Services Ltd and Energy Logistik Switzerland (ELS) AG in Bern.



Energie Logistik Schweiz (ELS) AG started trading on Bärenplatz in Bern on May 18, 2015. On October 2, 2015 this innovative company launched the first electronic marketplace for Swiss energy companies, offering them quick, easy and efficient access to all the materials they need to operate and expand their energy networks, such as electricity, water, gas, and communications. This unique business model, which is based on direct market access via a web portal, enables energy supply companies to compare and select more than 250,000 items from a wide range of suppliers and order them at discounts of up to 40%.

Swiss Post has partnered ELS AG since it was established in February 2015 and became co-owner in mid-October that year. It provides ELS AG with support across the entire value chain, assisting in areas such as the operation of the e-shop and in logistics. Over the next three years ELS AG aims to offer its services to more than 100 small and mid-sized energy suppliers, employ 10 people in Bern and achieve procurement volumes in excess of CHF 300 million. Key to the company's choice of Bern as its base were the proximity to its partner PostLogistics AG and the Berner Kantonalbank AG (BEKB) as well as the excellent traffic links that make doing business across Switzerland that much easier.

Information

www.e-logistik.ch

P&G MedChem AG was established in Köniz in the Canton of Bern in November 2015 with the aim of serving the European market from this new location at the heart of Europe and driving forward the development, manufacture and sales of its services, technologies and products. The company came about as a result of the merger of the Swiss chemicals company Gibbs Chemie AG and the British Pharmidex Pharmaceutical Services Ltd, the world market leader in solutions and technologies for the central nervous system (CNS). Founded in London in 2002, the pharmaceuticals company's portfolio includes research, development, manufacturing and marketing of drugs and medicinal appliances in areas including in vitro/in vivo pharmacology (PK/PD) and health care.

Key factors in the company's choice of Köniz as its base were its convenient location in the center of Switzerland and Europe, the excellent traffic links, the highly skilled, multilingual workforce in the MedTech sector, its proximity to the many major pharmaceuticals companies already established in the Bern region, and the first-class support offered by the Bern Economic Development Agency throughout the process of choosing a location and establishing operations there.

Information

www.pharmidex.com

“Career prospects for talented young people”

The Canton of Bern as a hub of education and training

No other Swiss canton has as diverse a range of education and training opportunities as the Canton of Bern. Here companies will find highly qualified professionals who are in great demand both at home and abroad because of their excellent education, Denis Grisel explains.

What educational opportunities are there for talented young people in the Canton of Bern?

“The Canton of Bern is what you might call an Eldorado for young talent. We have a university with a teaching hospital, universities of applied sciences across four campuses, a Federal Institute of Technology research center at Empa Thun, the Switzerland Innovation Park Biel/Bienne, and a Haute Ecole Arc campus. And from 2021 we will also have the Bern University of Applied Sciences (BFH) Technology Campus Biel/Bienne. Most of our educational institutions carry out applied research in close collaboration with local businesses, which is not only extremely interesting for the students but also gives them their first experience in the workplace.”

What impact does the education system here have on the labor market in the Canton of Bern?

“There is a lot of demand for well-qualified professionals in the labor market, so we need to promote talented young people and help steer them towards quality and innovation: after all, the manufacturing industry and the SME sector in the canton depend on them. In general terms this makes for a fully-functional, well-balanced labor market that also impacts positively on the willingness of companies in the canton to invest and on their innovative strength. A well-qualified workforce and the availability of know-how within businesses are key factors in ensuring a strong economy. This is why top-class educational institutions play an important role in the training and continuing professional development of our current and future workers.”

How important is the education system in the era of Industry 4.0?

“The education and training opportunities available here are not only geared towards the needs of businesses and the labor market. Importantly, they also facilitate the transfer of knowledge and technology directly between universities and companies. The close proximity between theoretical knowledge and the specific needs of businesses is an important breeding ground for innovation. And innovation is in great demand in the era of Industry 4.0 – in the form of new processes, services and system solutions.”

What specific steps does the Canton of Bern take to ensure it remains a top-class center for education and training?

“The Canton of Bern provides the legal framework within which research and innovation projects can be supported financially. These include major innovation projects such as the Swiss Institute for Translational and Entrepreneurial Medicine (sitem-insel) and the Switzerland Innovation Park Biel/Bienne, in which the canton also has a stake. Innovation projects are the most important part of the interface between companies and educational institutions and between employers and skilled professionals. Other projects include the BFH TecLab Burgdorf and the Burgdorf Health Hub, and the Canton of Bern is planning to rapidly implement the BFH Technology Campus through its Economic Strategy 2025. This dynamic environment is bound to attract both foreign and Swiss companies to Bern.”



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Denis Grisel, Director,
Bern Economic Development Agency



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