

360°

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cases

Partners Group

«No professional company today can afford not to treat IT security as a priority» 2

USM U. Schärer Söhne AG

«We build on long-term partnerships» 6

Actelion Pharmaceuticals

«Growth is an important part of our corporate strategy» 12

insight

Bruno Durrer, Emergency Physician

«I'm a better family doctor if I go on occasional rescue missions» 16

mission control

Security Policy

With the right underlying plan, your implementation will also be effective 24

inside

Stefan Lampart

«Training and development is our biggest challenge – but the way to success» 28


Laurent Zimmerli

«Direct feedback about my work motivates me» 30



cases





**«No professional company
today can afford not to treat
IT security as a priority»**

Moritz Elmiger
Managing Director
Partners Group

Moritz Elmiger at the Lake of Zug,
near the Partners Group Headquarters.

Moritz Elmiger, Head of Technology and Infrastructure at Partners Group, the global private markets asset management specialist, is convinced that secure, reliable IT networks reinforce a company's reputation and can help to strengthen its brand.

«The switch to Mission Control Security Services was a real eye-opener for us! Thanks to the transparent monitoring data we were able to identify a few holes in our setup and close them very quickly.»

Moritz Elmiger, Managing Director, Partners Group

Mr. Elmiger, your team is responsible for the global IT networks at Partners Group. What is your opinion on developments in the field of IT security in recent years?

→ Moritz Elmiger: IT security has long been a key issue for the financial industry. But more recently I have been getting the distinct impression that the securing of networks is gaining much more relevance in other sectors too. The reasons for that are changes in the underlying conditions in which global companies operate today: with the expansion of internal and external networks, companies have become increasingly infrastructure-dependent; also the technologies deployed have become more complex and the outside threat scenario is different from what it was. In the early days, an attacker was motivated primarily by the technical challenge. Nowadays attacks are mostly financially motivated. It's clear: no professional company today can afford not to treat IT security as a priority.

Can you explain in a little more detail why IT security is such a key issue for the Partners Group? After all, you are neither a bank in the classical sense, nor are you directly involved in the stock market.

→ IT security means for us not only that our data and mission-critical applications are protected from unauthorized access. It is just as important that our data and applications are accessible by authorized users via reliable and trustworthy connections at all times and from anywhere. Only then can it be guaranteed that our staff, customers and partners are able to work with the information they need – around the globe, around the clock. If you ask me, this should be goal of every international company, regardless of the sector. But running a secure and reliable network also includes making provisions in the areas of disaster recovery and business continuity. In the present day and age, a trustworthy partner is expected to be prepared for emergency scenarios, so as to keep potential downtimes to a minimum.

Are you saying that IT security is critical to a company's credibility as a dependable partner?

→ No doubt about it. A secure, reliable IT infrastructure has a positive influence on a company's reputation and definitely helps strengthen the brand in the competitive environment. In fact, I observe that professionalism in IT is having an ever greater influence on the overall image of the company.

What do you mean by that?

→ Not only our employees but also our customers, partners and the regulatory authorities expect us to work in an absolutely professional and reliable manner with regard to our IT and communications infrastructure. Experience has shown that there is little tolerance for mistakes in this area: it can take years to build up a good brand and reputation, only for it to be severely damaged or even completely ruined by a single security failure. And if a glitch does occur, the way the company deals with it is absolutely crucial. In the early days, most efforts in the area of IT security were undertaken merely to comply with regulatory requirements. Today many companies are doing more than just meeting the standards set by the regulators. They have recognized the necessity of protecting their reputation – and with it their brand.

You say that people are not very tolerant of errors with regard to IT security. How does this manifest itself among your customers?

→ In our case it begins even before the actual start of any collaboration. Before a customer invests in our products and services, he goes over our company with a fine-toothed comb, as it were. This is called «due diligence», and is carried out by major independent auditors. The process appraises not only the range of products and services, but also whether a company is professionally managed in every respect. IT is a very important component of this audit. The Mission Control Security Services from Open Systems are known to the

auditors and qualify absolutely as professional protection.

The Partners Group did not opt for Mission Control Security Services to start with.

What was your situation like before you decided to collaborate with Open Systems?

→ We were pursuing the same concept, that is, we had been working with a partner in the area of security for quite some time. Then they underwent some restructuring, and certain products were not being developed further. We got the feeling that the service was stagnating, so we took another look around the market.

What was your first impression of Mission Control Security Services?

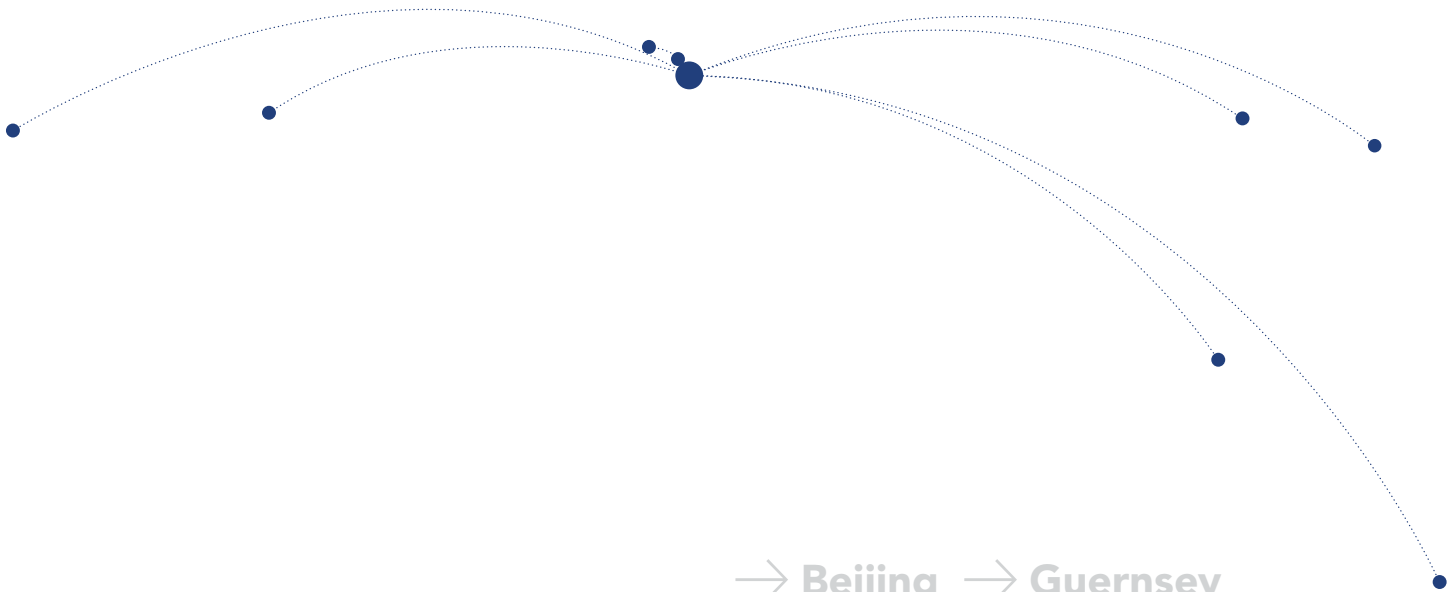
→ The switch to Mission Control Security Services was a real eye-opener for us! The quality of the services and of the flawless operation was everything we could have asked for. The changeover went without a hitch, and thanks to the transparent monitoring data that Mission Control supplies, we were also able to identify a few holes in our setup and close them very quickly.

That sounds interesting. Can you be a bit more specific?

→ The monitoring of ISPs, for example. The monitoring by Mission Control revealed that we were not getting the bandwidth specified in the Service Level Agreement. This meant we could confront the ISP with concrete numbers and insist on the performance we had agreed on – and paid for.

Which security services are you currently using?

→ We've implemented all services but one. That is the IDS Service, the Intrusion Detection System. We've now launched a pilot project and can't wait to see what insights we will gain through the service.



- Beijing → Guernsey
- London → Luxembourg
- New York → San Francisco
- Singapore → Sydney
- Tokyo → Zug

Passion for private markets

Partners Group is a global private markets asset management firm with over CHF 25 billion in investment programs under management in private equity, private debt, private real estate and private infrastructure. The firm manages a broad range of funds, structured products and customized portfolios for an international clientele of institutional investors, private banks and other financial institutions. Partners Group is headquartered in Zug, Switzerland and has offices in San Francisco, New York, London, Guernsey, Luxembourg, Singapore, Beijing, Tokyo and Sydney. The firm employs over 360 people, is listed on the SIX Swiss Exchange (symbol: PGHN) with a market capitalization of over CHF 3.5 billion, and is majority owned by its 36 Partners and all employees.





**«We build on long-term
partnerships»**

Christoph Kläy
Deputy Head of IT
USM U. Schärer Söhne AG

Christoph Kläy in the
production facilities in Münsingen.

USM U. Schärer Söhne AG is writing the kind of success story enjoyed by very few Swiss companies. Today they sell their furniture systems in their own showrooms and, through a distribution network, all around the world. USM is committed to being a reliable partner to this network with a stable and above all available IT infrastructure. Which is why, says deputy Head of IT Christoph Kläy, USM banks on Mission Control Security Services.

«Open Systems cultivates the partnership, delivers on what they promise and never ceases to amaze us with their expertise and the outstanding service they offer the customer.»

Christoph Kläy, Deputy Head of IT, USM U. Schärer Söhne AG

- **1885**
Ulrich Schärer founds a hardware store and locksmith's business in Münsingen near Bern, Switzerland.
- **1961**
Paul Schärer, jr, Dipl. Ing. ETHZ, joins USM. Swiss architect Fritz Haller commissioned to build new manufacturing and administration buildings.
- **1963**
The USM Haller modular furniture system is developed in collaboration with Fritz Haller.
- **1975**
Expansion to Germany with the founding of a branch in Bühl near Baden-Baden.
- **1993**
With Alexander Schärer, Dipl. Ing. EPFL, the fourth generation enters the family business.

As the man in charge of the IT networks, your job takes you round the world. Hamburg, Paris, New York, Tokyo. And in the evening a mountain bike tour through the Emmental valley?

→ Christoph Kläy: Of course, that's precisely the combination that makes our company so interesting! And it's not only like that in my area, which is IT. Just look at the development of our USM Haller furniture system. Although the system has been based on the same underlying principles for more than 40 years, it is constantly being adapted to new conditions and market-specific requirements. For the Japanese market, for instance, here in Münsingen we have developed earthquake-proof catches for flap doors.

What importance does IT security have at USM?

→ IT security is a high priority for USM. Our management insists that our networks be secure, stable and user-friendly. No room for compromise there. Not only do we have an interest in protecting our intellectual property. It is just as important to us to be a reliable partner to our global network of company showrooms and external distributors, in that we provide a stable and above all available infrastructure. They all need access to our «virtual.USM» application, for example, when advising clients and planning the USM modular furniture systems. With this application, the solutions developed with the customer can be visualized three-dimensionally. «virtual.USM» examines all conceivable combinations in real time as to their technical feasibility. This allows feasible and ergonomically correct configurations to be planned, making it possible and

simple to add to or modify the system at a later date. And that guarantees its long-term usefulness, which in turn means the best possible value for money.

You trust Mission Control Security Services to protect and monitor the networks. Why?

→ Because of our geographical and employee situation and because of the expertise behind it.

That sounds interesting. Can you expand on these points in a little more detail?

→ With our branches in Europe, USA and Japan, we have round-the-clock operations with a good 400 staff in five countries. Besides our internal ERP system, we also maintain the «virtual.USM» configuration and ordering system, a light version of which is also directly available to our customers on the Web site.

This is looked after by an IT department comprised of a team of six people here in Münsingen and a team of four in Bühl, Germany. Alongside clearly assigned competencies, each of us also assumes the management of projects, where we bring in external experts to reinforce the teams. This means we gain not only extra manpower to get things done at the various sites, but also bring on board precisely the specialist expertise we need.

Doesn't the collaboration with external companies make more work for you?

→ Not if you build on long-term partnerships. We're not interested in constantly introducing new people to our company and our IT. When we collaborate with external companies, it is

only on the condition that we can establish a long-term relationship with each other – that's what a partnership is. Basically we assess external partners as if we were recruiting them for our own internal team. The crucial qualification for a collaboration is the specialist know-how and the right «chemistry» between us. The relationship has to be founded on trust from the word go.

And how did the collaboration with Open Systems come about?

→ The first contact took place here at the company. We were looking for a suitable solution and were checking out various providers. The guy from Open Systems asked us all the right questions and then presented the services. In the end, everything just fit perfectly.

And what ultimately tipped the scales in favor of the partnership?

→ From my point of view, the decisive things were the two points that I already mentioned: the solution that was presented to us and the feeling of trust, which made us feel that we were in good hands with Open Systems right from the start. Our contacts are technically very accomplished, and when they're advising us, they focus precisely on what we need. In terms of quality and precision, Mission Control maintains the same high standards as USM. The Open Systems staff cultivate the partnership, deliver on what they promise and never cease to amaze us with their expertise and the outstanding service they offer the customer. And those, I am convinced, are the most important elements of a partnership that will work in the long term. •

Do you have any questions concerning this article?
→ sven.brueelisauer@open.ch

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- **1994**
Founding of USM France in Paris.
 - **1995**
Founding of USM USA in New York.
 - **1998**
Opening of the first permanent USM showroom in Hamburg, Germany.
 - **2001**
The USM Haller furniture system is accepted into the permanent collection of the Museum of Modern Art (MoMA) in New York.
 - **2002**
Opening of the new US headquarters and showroom in SoHo, New York.
 - **2007**
USM achieves GREENGUARD certification for its USM Haller and USM Kitos furniture systems.
 - **2009**
Opening of the USM showroom in Tokyo, Japan.

20 million ball joints in over 40 countries

Today USM modular furniture systems can be found in public buildings, private homes and offices throughout the world. But it all came from very small beginnings, with the founding of a locksmith's business in Münsingen, a picturesque village in the canton of Bern, 125 years ago.

It was here that in 1885 Ulrich Schärer opened a locksmith's business in the house in which his wife Rosalie already ran a hardware store. Up to and during World War II, the small firm manufactured mainly espagnolette window locks for apartments and military barracks. With the boom of the post-war years, they were able to expand into the fields of metal construction and sheet-metal forming.

Industrialization of a sound artisanal trade

In 1961, Paul Schärer, the grandson of the company founder, joined the company that was then being run by his parents. Schärer, who studied engineering and had spent some time as a research assistant at ETH Zurich before returning Münsingen, was a great fan of Ludwig Mies van der Rohe. Even as a student he had been fascinated by publications about the German architect's buildings. Schärer had already acquired a taste for beautiful things, buying Mies van der Rohe furniture, a Braun radio and television as well as a Le Corbusier armchair for his first apartment from his modest assistant's salary. As a new junior manager he had big plans: he proposed taking the solid artisanal trade of his forefathers a step towards industrialization by relocating the window fittings factory to an attractive new building on a greenfield site in Münsingen.

Making a future out of necessity

Then in 1963 Schärer hit upon a brilliant idea that would transform the company's future. Working with Swiss architect Fritz Haller, he designed USM's Haller furniture system. The furniture was virtually born out of a necessity, because after completing the new office pavilion, Haller was unable to find suitable furniture that would do justice to the ultramodern building. Without further ado, Schärer and Haller set to work. Together they translated the design of the new pavilion into a furniture system: a basic structure consisting of ball joints and connecting tubes, that can be fleshed out with side elements and organizer elements in line with needs, function and taste. The proprietary development which was manufactured in their own factory very soon caught the attention of the specialist community. From an article in the magazine *Bauen & Wohnen* (Building & Home), the French private bank Rothschild heard about the USM modular furniture system and ordered 600 workplaces for their headquarters on Rue Laffitte in Paris. The rest – as they say so aptly – is history.

Form follows function

The USM modular furniture systems are based on the principle of an open system. With virtually endless configuration possibilities, the furniture caters extremely flexibly to individual needs in organization and layout in the work and home environment. Reduced to the essential, all product lines are a statement of belief in aesthetic minimalism and

functional precision. For USM, furnishing is not a state, but a process. That is why the form of a piece of furniture should follow its function – and not the other way round. As spatial and functional requirements change, it must be possible for the system to be modified and extended at any time, true to the maxim «form follows function». Evidently a lot of people had been waiting for this kind of furniture: the USM Haller modular furniture system was such a success that in 1969 the Schärers transitioned to an industrial manufacturing process.

Münsingen as the center of the USM world

Today – more than 40 years later – USM is still building furniture. To date, there are a good 20 million balls in use in over 40 countries and the classic USM Haller system has been brought up to date with contemporary colors and innovative additional features. Paul Schärer, now chairman of the board of directors, has handed over the running of the company to his son Alexander. Alexander Schärer, who gained his engineering degree at ETH Lausanne and then gathered some initial experience in the area of brand management at Procter & Gamble, also holds all the shares of the family's holding company along with his younger sister. Despite its now global operations, the company remains committed to Switzerland as the production location, and continues to manufacture in Münsingen. From this sole production site, the individual parts are shipped to their assembly centers worldwide by the most economical and environmentally friendly method. In Münsingen, Bühl, Paris and New York, as well as at over 33 other locations around the world, the furniture is pre-assembled into small transportable units, before being fully assembled on-site at the customer's premises.

More than just balls and tubes

The durability of the USM Haller furniture system is equaled by the flexibility of the company when it comes to asserting itself in a hotly contested market. It can clearly be felt that Alexander Schärer would like it to be not just the products, but increasingly a «USM way of thinking» that distinguishes USM and anchors it in the minds of potential customers. A decisive success factor and at the same time one of the main differences to the competition is in the corporate culture. Thus USM today takes a leading role in key issues – for instance, by applying the same principles of safety and precision in the area of logistics as to their products. Alexander Schärer is convinced that the service behind the USM furniture systems must be recognizable as added value. The company does not ignore issues like facility management, reorganization, «new work» and outsourcing. For one thing is clear for the manufacturers of the USM modular furniture systems: it's not furniture the customer wants, it's a workplace – in other words, a solution that works 24 hours a day and 365 days a year.







**«Growth is an important part
of our corporate strategy»**

Tomas Jan

IT Team Leader Collaboration Services
Actelion Pharmaceuticals

Tomas Jan in the new building
for Actelion by Herzog & de Meuron.

Since its founding in 1997, the biopharmaceutical company Actelion has brought three successful drugs to market, developed an extensive pipeline and established a worldwide network of branches in 28 countries with more than 2000 employees. Yet according to Tomas Jan, who heads up the global collaboration and communication infrastructure, that is just the beginning.

«The speed of response and reliability of Mission Control is really impressive.»

Tomas Jan, IT Team Leader Collaboration Services, Actelion Pharmaceuticals

Mr. Jan, Actelion's company premises is currently one huge construction site, with work under way on various new buildings. Is business booming?

→ Tomas Jan: I would say the new buildings are the fruit of the success and hard work of recent years and are founded on the vision that the company has for the future. We have a clearly defined goal, which is why we are also very motivated to push ahead.

What is the corporate vision, and what makes Actelion so successful?

→ We are all committed to the goal of improving patients' lives through innovative, groundbreaking drugs. What makes us successful? Industry experts confirm our ability to combine the innovative power, speed and flexibility of a biotechnology company with the operational expertise of a major pharmaceutical corporation.

So is Actelion set for growth?

→ Definitely. Growth is an important part of our corporate strategy and so a very key issue for us in spite of the difficult economic situation.

How is Actelion planning to grow?

→ We aim to expand our existing business by developing or acquiring suitable products. We concentrate on growth-oriented projects from our own R&D or – where it makes sense – we establish partnerships with selected companies. And finally we sound out the possibilities of licensing agreements or acquisitions that are reconcilable with our existing business. To reach our growth goals, we need experts from all kinds of specialist fields who work together over many years to develop innovative drugs.

You are responsible for Actelion's global collaboration platform. What does growth mean in IT terms?

→ From the IT perspective, there are always

two sides to growth: we have to ensure that we are able to adapt our infrastructure very flexibly and quickly to new situations, such as new markets, for instance. At the same time, of course, we have to make sure we have the capacity to «digest» our global growth and deliver a consistently stable and secure infrastructure to our users. These two requirements are not always easy to reconcile.

Your team relies on Mission Control Security Services. Are there particular reasons for that?

→ The dynamism that characterizes Actelion places great demands on IT. What began 13 years ago in Basel has now spread around the entire globe. Each Actelion business unit has its own IT department which grapples with very specific IT solutions. As the Group-wide function, we provide the global collaboration platform, i.e. the tools and applications with which we communicate internally at Actelion and to the outside. So our job, as it were, is to cultivate the company's communication skills.

Our lean team takes a very goal-oriented approach to our work, and we are continually asking ourselves how we can best reach our goals with the human and financial resources at our disposal. We concentrate on the core processes; other tasks we solve in collaboration with partners. Using Mission Control Security Services relieves us of specific problem areas that we could only perform ourselves internally with a disproportionate amount of effort.

What services do you use and what is your experience of them?

→ Currently we are using E-Mail Shield and Application Shield. Our experience with both services is utterly positive. With E-Mail Shield we were very surprised how effectively the service reduces the volume of spam. From the first day on, users reported that they were getting a lot less unwanted mail in their

inbox. Of course that kind of feedback is very pleasing. With Application Shield the effect was similarly impressive.

How do you rate the cooperation with the security engineers?

→ This is where I think Mission Control is particularly impressive. It begins with the advice offered by the consultants: it's just patently obvious that these people have in-depth technical knowledge and their position of independence lets them take a different approach to consulting. They don't just offer what they have in their portfolio, but what the customer needs. The security engineers tackle their work with a lot of passion and personal dedication. The service quality is also excellent as far as the human touch is concerned.

And in everyday business?

→ Offhand I would almost have said that the services work so well that we actually have very little to do with Mission Control. But if I think about it a bit, of course there are certain points of contact. Every now and again, for example, Mission Control solves a problem in our infrastructure before we even have it on our radar. Or when we post change requests via the Mission Control Cockpit, the speed of response and reliability of Mission Control is really impressive.

But besides the excellent operating performance, the budgetability of the services is enormously important for us. I know right down to the user how much I have to budget for the service and so I can supply management with transparent and reliable forecasts of the cost consequences of growth. Likewise of great importance to planning is the fact that the service means that we don't have to take any risks into account at all – whether for software or hardware. There are simply no unpleasant surprises.

Drug Hunters – The story of Actelion’s genesis and the driving force behind its success

In 1996, a small group of researchers and managers at F. Hoffmann-La Roche began to explore the idea of creating a new biopharmaceutical company. They were drawn together not only by the belief in their scientific work, but also by a proven track record in collaboration and a remarkable complementarity of skills.

In the summer of 1987, Dr. Martine Clozel, a French researcher in the Cardiovascular Department of F. Hoffmann-La Roche in Basel, came across scientific data that triggered a cascade of events leading to a remarkable discovery. A previously published research paper on porcine cells had suggested that the endothelium, a thin layer of cells lining the inside of blood vessels, did not play a passive role as previously thought, but secreted an active substance with far-reaching consequences. «The data suggested this was the most potent vasoconstrictor known to science,» explained Martine Clozel. «I absolutely wanted to find out more about this substance and see if it was the missing link in heart failure, pulmonary arterial hypertension and a number of other diseases.»

A long and arduous process

Martine went to a colleague at Roche, the experienced Swiss biochemist Walter Fischli, who immediately shared her enthusiasm for the project. In 1989, Walter Fischli and Dr. Martine Clozel became the first scientists to identify the substance, later named endothelin, in human tissue and successfully locate its receptors in human tissue. Their priority then shifted to searching for a molecule that would block these receptors and thus the potent effects of endothelin in constricting blood vessels. New screening approaches quickly identified such a compound. Step by step, more effective molecules were synthesized, with Martine Clozel exploring the pharmacological effects of each candidate drug. Her husband, Dr. Jean-Paul Clozel, heading a Drug Discovery group in the Cardiovascular Department at Roche, lent his experience in testing new compounds in disease models and his insights as a cardiologist. Finally, in December 1991, the first milligrams of bosentan were synthesized by Prof. Henri Ramuz at Roche, but moving this potential drug forward to clinical trials was a long and arduous process. After years of work, in 1996, bosentan was ready to be tested in clinical studies. When Roche decided not to pursue clinical trials, the idea of founding a new company began to grow. Martine Clozel then knew: «To realize our vision, we had to become entrepreneurs.»

Passion at work

«There is only one real strategy in the pharmaceutical industry,» says

Jean-Paul Clozel. «Find as many good drugs as possible and bring them to market as quickly as possible. Everything else follows.» One of the reasons Jean-Paul Clozel believes that Actelion can compete in the biopharmaceutical industry is the shared focus of the employees. «We are all on the same wavelength about our goals and scientific approach – that saves us an incredible amount of time and energy», he explained. «There is no head of research here. We take those decisions as a team. That way, we also avoid creating layers of bureaucracy. There are no administrators at Actelion. This is a hands-on company.» While seeing himself as a facilitator in helping the company make key business decisions, Jean-Paul Clozel has never lost his passion as a drug hunter. «There has always been something magic about discovering new drugs, about developing a small pill that can change someone’s life,» he explained. «Being a medical doctor helps me better understand the impact. It’s not an anonymous disease we are treating – it’s a person with a face».



Actelion is a biopharmaceutical company with its corporate headquarters in Allschwil/Basel, Switzerland. Actelion was founded in 1997 and its shares have been listed on the SWX Swiss Exchange (ticker symbol ALTN) since 2000. The company is focused on the discovery, development, and commercialization of synthetic, small-molecule drugs as innovative treatments to serve high unmet medical needs. Actelion employs approximately 2300 people worldwide and has subsidiaries in more than 25 countries, including the United States, Canada, Brazil, Australia, Japan, Switzerland and a number of EU Member States. These subsidiaries provide distribution, sales, and marketing services.

insight





«I'm a better family doctor if I go on occasional rescue missions»

Dr. med. Bruno Durrer
General Practitioner FMH,
SGNOR Emergency Physician

Dr. Bruno Durrer in action
surrounded by Eiger, Mönch and Jungfrau.

Bruno Durrer is the village doctor in Lauterbrunnen and an emergency physician with Air Glaciers. He and his colleagues always step up when people have to be rescued from particularly precarious and very often life-threatening situations.

«Mountain rescue is always teamwork. And that is why ultimately one of the most crucial factors is the team I work and fly missions with.»

Dr. med. Bruno Durrer, General Practitioner FMH, SGNOR Emergency Physician

«As an emergency physician, you never know when you will be called out on the next mission. All of a sudden the phone rings. Then everything has to go very fast. It's easy when I'm in the practice. My assistants know exactly what is to be done. Our patients know the situation too, and are gracious about sometimes having to wait longer. They get a cup of coffee and a croissant or arrange a new appointment.

Mountain rescuers have to be physically and professionally fit, and keep their knowledge constantly up to date. As a rescuer you have to be always prepared for emergency situations such as crevasses, avalanches or risky big wall rescues using the long line. Whether summer or winter, whether rescues in flat countryside or high in the mountains: each mission has its particular qualities and challenges. Air Glaciers and the SAC rescue center make roughly 200 helicopter rescue sorties from Lauterbrunnen every year. Between 120 and 150 missions come via my practice, some others via a colleague's practice in Wengen. If none of the people in distress is injured, the mountain guides from our base often go without us.

Sports undergoing maturing process

Over recent years a lot of new mountain sports have evolved. Summer is the season for sport climbing, bouldering, mountain biking, paragliding, in-line skating and slalom boarding on mountain roads, canyoning, river rafting or base jumping. In the winter, some of the most popular new sports are ice and waterfall climbing, speed flying and free riding with skis and snowboard. Naturally I keep a very close eye on the public debate about whether these sports should be allowed – and if so, under what conditions. Interestingly, the same arguments being invoked today in favor of a general ban on these kinds of high-risk sports were also being used against mountain climbing half a century ago. I am certain that it would never occur to anyone nowadays to want to ban mountain climbing.

Sports keep on evolving. Sportspeople work on polishing their technique, and manufacturers keep perfecting the equipment. Take base jumpers, for example, with their new wing suits, a kind of bat suit that causes aerodynamic

drag, allowing them to fly well away from the walls before the parachute opens. This substantially reduces the risk of a collision with the rock face. The most important factor in the development of a sport seems to me to be the people who actually practice the sport discussing their experiences. Of course this type of experience is unfortunately often gained through mistakes that have led to accidents with injuries or even fatalities. Thanks to these experiences, though, the maturing process of a sport is accelerated. These experiences have a major influence on training and on heightening risk awareness among sportspeople. For that reason I consider it extremely important that sportspeople should be involved in continuous training, as it enables them to live out their passion responsibly.

But I would like to make it very clear that it is not only the new trend sports that claim lives in the mountains. The statistics tell us that mountaineers also lose their lives every year on classic high-altitude mountain tours or on skiing tours. There is less chance of surviving being buried by an avalanche, for instance, than other accidents. So the avalanche risk always poses a risk to life.

The right to total freedom

Most sportspeople observe the rules of the game laid down by nature and in some cases by the specific terrain. They find out about the weather, listen to the latest avalanche bulletin, and know how to behave correctly on the glacier. And they know that the laws of gravity apply without exception to their own skull and the bones and fibers they are made from.

And then, of course, there are always those who think that the rules do not apply to them. Keyed up by sensational reports and video sequences in the mass media, they are out to imitate the pros. Sometimes with fatal consequences: they endlessly overrate their abilities, are physically and mentally out of their depth and reckless with it. With 'pushing the limits' as their motto, they play Russian roulette on the mountainside or in the snow and only wake up from their natural high – if at all – in the nearest hospital.

As long as they don't endanger anyone else in their sport, that's fine by me. After all, everyone is responsible for their own actions and there is no law against being dumb. That is my deepest conviction and I never tire of repeating it when I am asked about the wisdom – or idiocy – of these sports. As long as nobody else is endangered, for me all people have total freedom to do what they like. Banning things is a waste of time.

The lives of the rescuers

We are often asked why we risk our own lives to rescue foolish adrenaline junkies from emergency situations. Actually there are few really dangerous missions, and experience helps you manage the risks responsibly. As a physician you feel duty bound to help people in need. Fighting pain is a humanitarian obligation and is possible almost everywhere. It has always been my goal to work in the mountains. With my supplementary training as an emergency physician and having earned the Mountain Rescue Team Leader Diploma, I consider it my duty to be actively involved in mountain rescue and with the Air Glaciers. Nonetheless, for me the survival instinct is always stronger than the rescue instinct. Heroic rescues are only heroic as long as no secondary accidents occur. That is why for us it is always a matter of not only helping the patients, but also paying enough attention to the safety of the rescuers.

Management of subjective risks

Every rescue mission is based on professional risk management, by which we seek to weigh the risks of a mission against the medical urgency. We distinguish between subjective and objective risks. Subjective risks are understood as the moments of danger that essentially depend on the personal behavior of the rescuers involved. The subjective moment has such a great influence that the unlucky coincidence of several adverse subjective risks can considerably hamper or even prevent the rescue.

Subjective risks are always weaknesses, be it one's own or those of the team. These include a lack of experience, skill, strength or stamina and above all the overestimation of one's own capabilities. Each person is personally responsible for minimizing these subjective risks through

training and experience. It is also important to be absolutely honest to your team buddies. A cold that weakens you, for example, puts the whole team in danger when you're out on a mission, not to mention the person you are trying to rescue. Apart from one's own physical and mental condition, there is another important subjective risk: the correct use of technical equipment.

The quality of rescue we achieve nowadays would be impossible without our modern equipment. Land-based rescues used to take days, and the chances of survival for severely injured patients were low. Nowadays high-performance helicopters mean that initial medical treatment can be given quickly right at the scene of the accident. And patients can be efficiently rescued from even the most difficult terrain with the rescue winch or the long-line technique.

High-tech appliances are available for initial medical treatment in open country. One important focus in our training is on the correct use of these resources. Only by continuous training are we equipped to make the right moves in the right place at the right time even under the most adverse circumstances. Let's take a closer look at the helicopters and the long-line technique:

In the mountains, the helicopter is the ideal mode of transport for our job. But to have the helicopter properly under control calls for a lot of talent, sound training with years of flight experience, and regular training. The high standard of our mountain air rescue is dependent on the expertise of the commercial helicopter pilots. Thanks to their breadth of experience in commercial flying, our Air Glaciers pilots command a very extensive knowledge of mountain flying and external loads operations. Particularly when the weather is bad, that is an important factor to minimize the risk.

Air rescue gains much from our commercial pilots' considerable experience of external load flights using the long-line technique. This technique allows the rescuers to get right in close to the person they want to rescue, while keeping the rescue helicopter outside the danger

zone. The long line is a 50 to 240 meter length of 7mm PVC-coated steel cable. Normally two people are suspended from the line: two rescuers, or one rescuer and a doctor. One rescuer is responsible for briefing the helicopter and stays in permanent radio contact with the pilot. In this situation the helicopter hovers some 150 meters above the target – that is equivalent to a 42-floor skyscraper – and the pilot himself cannot see what is going on down below. He has to place blind trust (in the truest sense of the word) in the guy with the walkie-talkie on the line below. While he is giving instructions to the pilot, the second rescuer or the doctor can focus on rescuing and caring for the patient. The long line can bear the weight of up to five people, which means we can also carry out large-scale evacuations of groups in a short space of time.

Do not take the objective risks lightly

Unlike the subjective risks, the objective risks comprise above all the external circumstances, which may change or develop at any time, and which cannot be influenced. In fact the objective risks, which include the weather, the risk of avalanches or rockfall and ice debris, are unpredictable. A lot of experience is generally helpful, but can also be dangerous on occasions, because one underestimates the forces of nature. When we rescue a base jumper whose parachute has got snagged on a rock spur, from a vertical or overhanging rock face in good weather, for a well-rehearsed team that is like a fitness drill. But when we have to rescue a badly injured person who is trapped 30 meters down in the ice in a glacier crevasse that is still half covered with ice balconies, that is a different matter. However careful we are, avalanche, crevasse and long line rescues always entail a certain element of risk, as do all bad-weather and night missions.

The team is crucial

And this residual risk is something you cannot escape from. Everyone must decide for him- or herself whether he or she is prepared to face it. Mountain rescue is always teamwork. And that is why ultimately one of the most crucial factors is the team I work and fly missions with. I have great confidence in my colleagues from Air Glaciers and the Lauterbrunnen SAC rescue

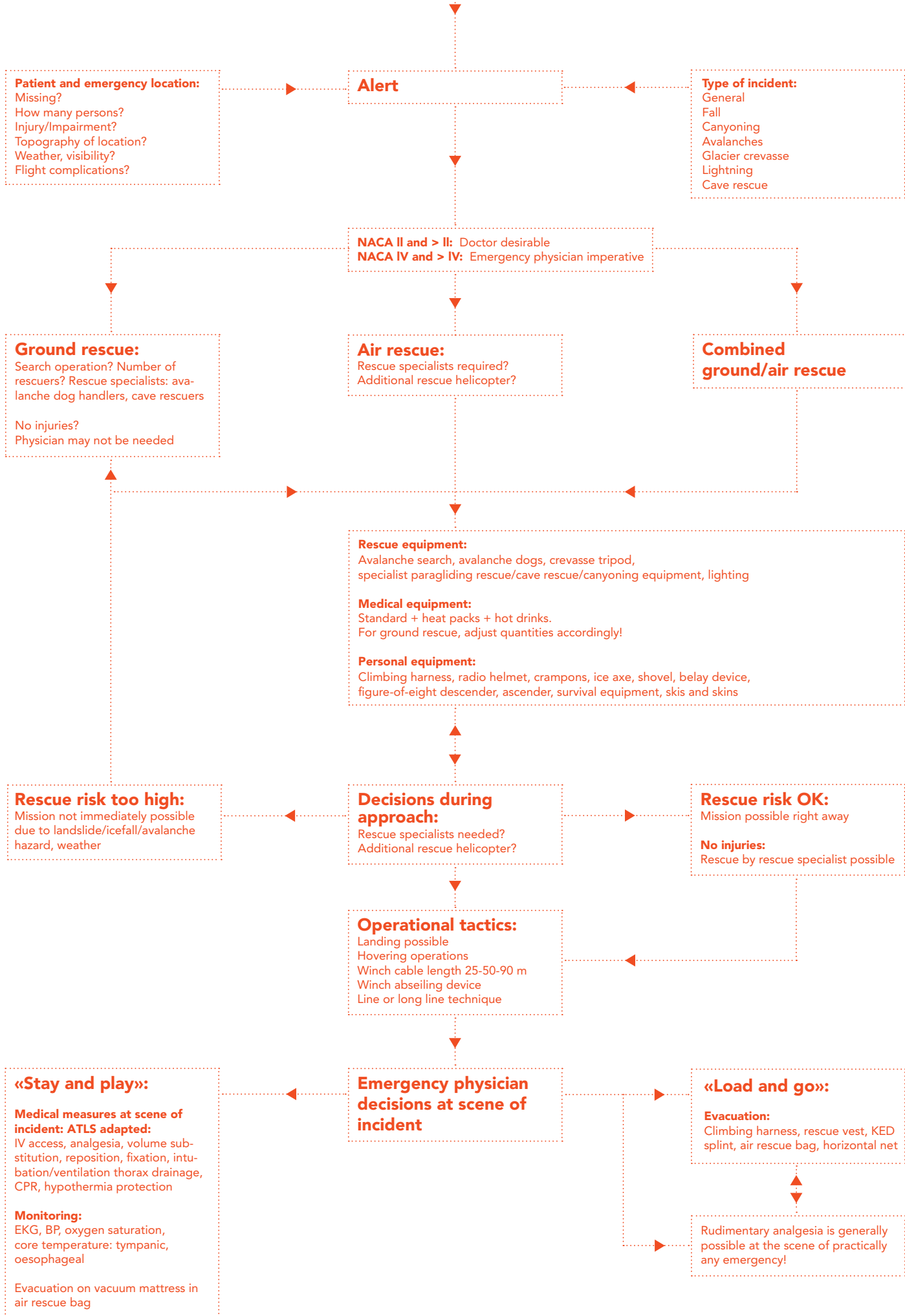
base. The personal devotion of these people – whether they are pilots, flight assistants, paramedics, mountain guides, SAC mountain rescuers or physicians – is what motivates me, when the next emergency call comes in, to pull on my red coat again and hurry for the helicopter.

With our service we all contribute to people being able to enjoy nature. Nature can destroy – but also fascinate. In any case, I cannot imagine anything more beautiful than watching the sunrise from the top of a mountain ...» •

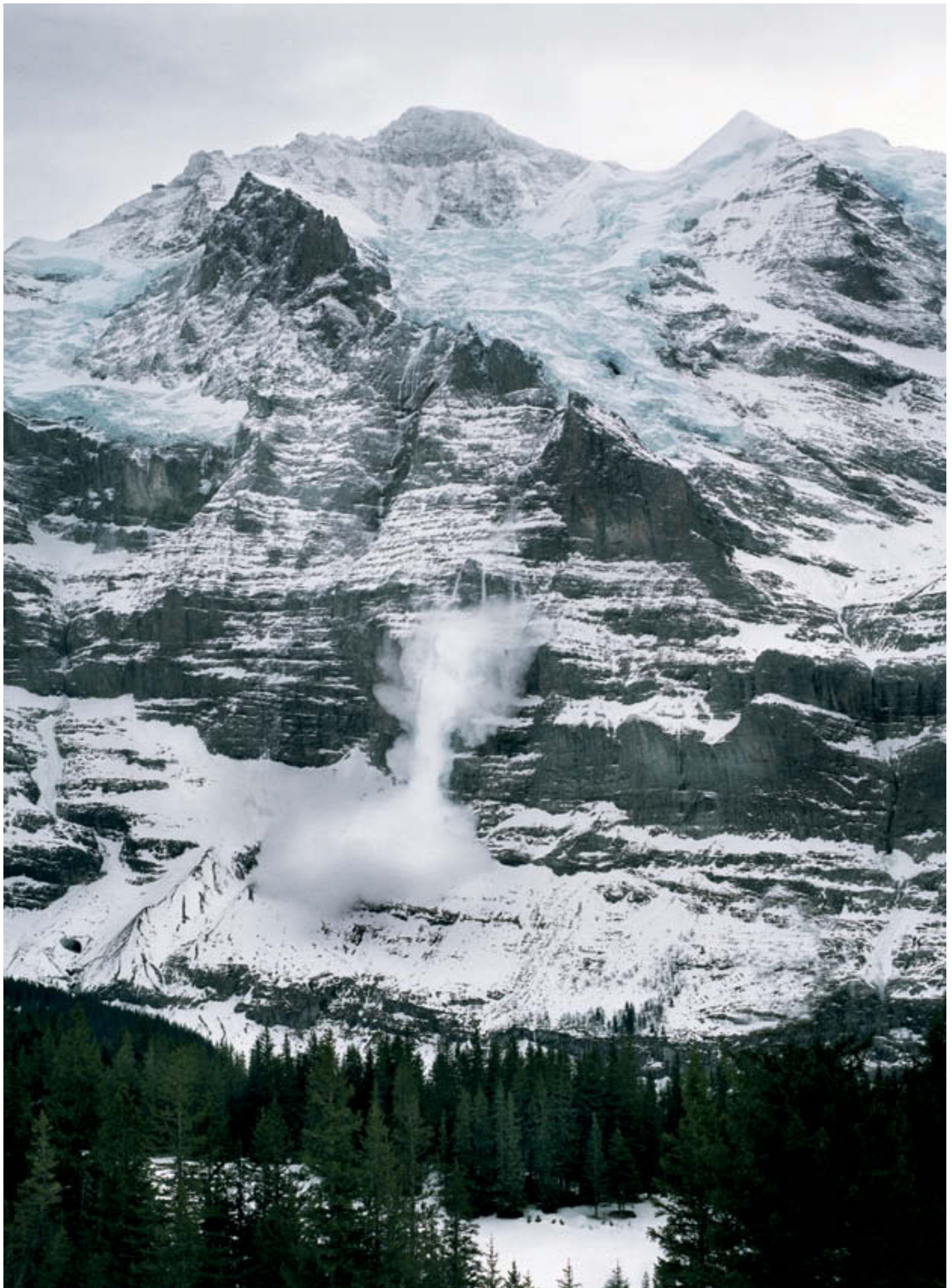
Rescue medicine specialist internationally in demand

Bruno Durrer has been the village doctor in Lauterbrunnen in the Bernese Oberland since 1987. Apart from his workload as a general practitioner, the 56-year-old is an emergency rescue physician with Air Glaciers. He is one of the few physicians in Switzerland who maintains a general medical practice at the same time as being permanently assigned to a helicopter base as an emergency physician. In the course of his 27-year rescue career, Durrer has taken part in over 3000 air rescue missions. He is the initiator and cofounder of the Swiss Society for Mountain Medicine (SGGM), an active emergency physician in the Swiss Society for Emergency and Rescue Medicine (SGNOR) and board member of the International Society for Mountain Medicine. As a rescue medicine expert, he has taught courses in rescue medicine and organized conferences on mountain rescue medicine for many years, and is much in demand on the international scene. He has won many awards for his dedication in the field of mountain safety. Bruno Durrer is married and has three children.

Mountain rescue algorithm

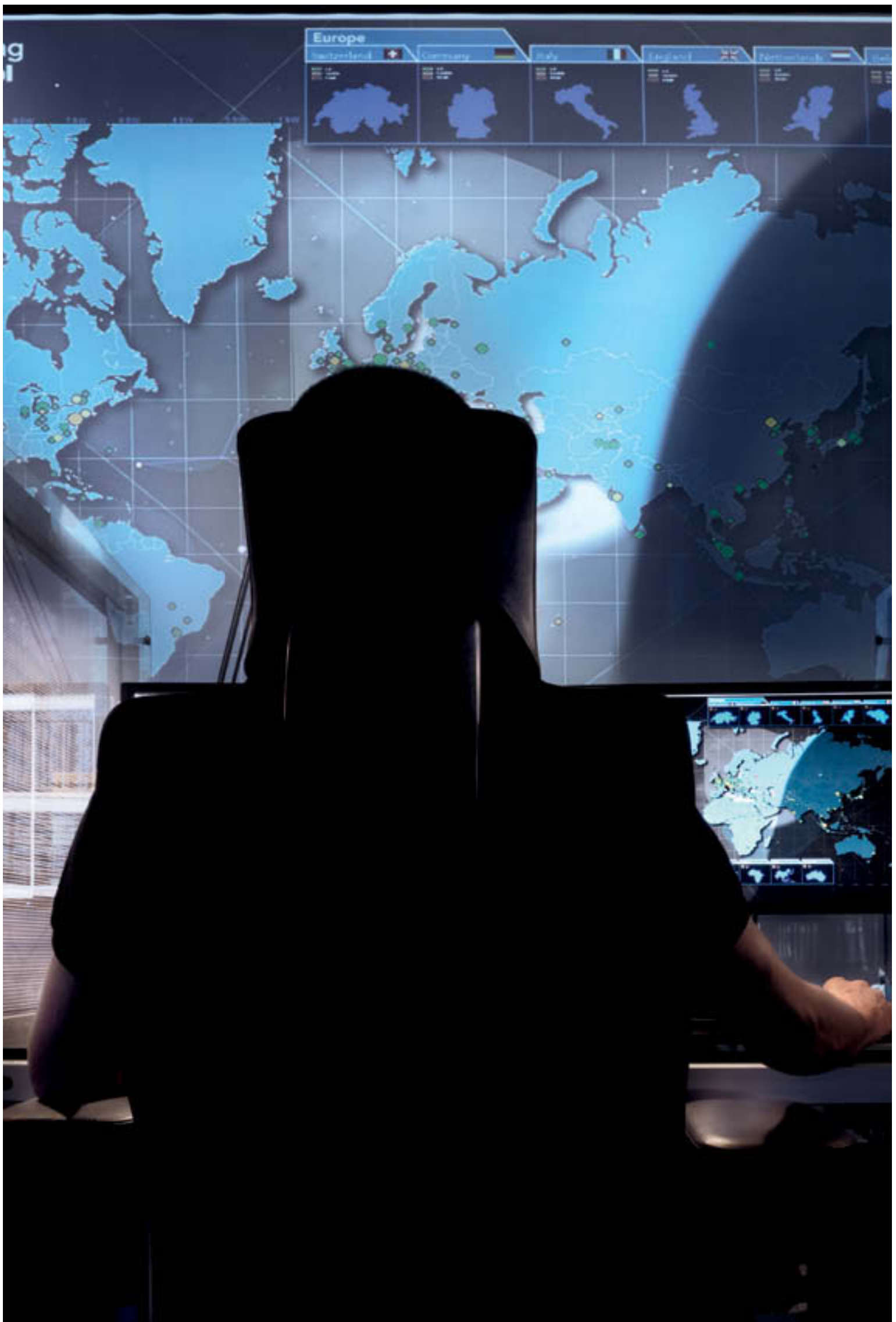








mission control



With the right underlying plan, your implementation will also be effective

Many organizations define clear mandatory guidelines to ensure the security and availability of their IT networks. But if these security guidelines are also to be enforced successfully, certain key points must be observed even during their development.

Just having an IT security policy does not automatically make a network secure or guarantee its availability. As the saying goes, «the proof of the pudding is in the eating» – in other words, even if a lot of money and effort is invested in drafting security guidelines, they will only be effective and prove their true value when they are implemented globally and lived out by the organization. A closer analysis of successful implementation and enforcement reveals four factors for success:

1. The members of top management are involved in the process of formulating and implementing the security policy; responsibilities are clearly defined and relevant competencies assigned.
2. Allowances are made for the weakest link in the chain, that is, the guidelines are drafted in such a way that they take into account the particular characteristics and weak points of certain locations or operational entities, most of which are known.
3. The guidelines are flexible and offer sufficient leeway to allow a quick and efficient response to new demands arising from business developments – for example, the integration of new units in mergers and acquisitions.
4. A system is in place to ensure the constant monitoring and ongoing evolution of the guidelines; their implementation is tracked around the clock and systematically evaluated as to their effectiveness.

Know what you need to protect

But what is the ideal approach to ensure the successful development and the effective, sustainable implementation of security guidelines? The most important thing first: It is crucial that the responsible management, the specialists for IT security and those in charge of the operational implementation are all involved in the design of the life cycle of security guidelines. This integrative approach is an essential foundation for a common understanding of the vital nature of the topic, on the basis of which a goal can then be defined that is acceptable to everyone. Once roles and responsibilities have been clarified, the next step is to identify business-critical services that are offered and used via the IT infrastructure. The core services, such as ERP and CRM applications, mail and other communication and collaboration tools, for example, are then assessed with respect to their importance and their hazard potential for the company, and grouped in categories. Lastly, the locations are classified by which categories of services, if any, are offered and/or used. Once this analysis of current status and real needs has been completed, it is now possible to elaborate security guidelines that are tailored perfectly to the organization. By classifying and grouping the services and

locations, you can ensure that all organizational entities are not treated with a one-size-fits-all approach, but instead are graded in line with their security-related requirements and needs. Since the security guidelines are applied in the various categories to varying degrees, it is possible to show clearly how much effort will be required at each location to achieve the defined security standards.

Clear separation of execution and monitoring

Once the security guidelines have been implemented, they have to be continuously monitored, examined and – if necessary – updated. One aspect crucial to their successful implementation in the long term is the separation of powers of execution and monitoring functions. This clear distinction between the «executive» and the «legislative» complies with accepted principles of professional corporate governance: while the executive function takes care of the operational aspects and the 7x24 monitoring of the security measures, the legislative bears the overall responsibility for IT security and therefore also for reviewing the security guidelines. This separation of powers has a number of advantages: implementation is carried out with a high level of process discipline, strictly in line with the defined security guidelines. Orders by the executive function are given the go-ahead by the legislative function only after careful authentication of the source of the order and a review in line with the principle of dual control (a second set of eyes), which minimizes the risk of errors and conflicts of interests. Each process step is documented immediately, so that changes in the security guidelines can be followed in real time or reconstructed at a later date, meaning that they can be audited even years later.

Transparency and traceability are essential

One important prerequisite for the documentation and thus the transparency of the development of safety measures is that all parties involved use the same platform for their work. Then it can be guaranteed that everybody works in compliance with the defined processes and has the relevant information at their disposal at all times – in real time, in management reports or archived chronologically. Adapted to match users' access rights, the platform also assumes a further important function: it makes the process more efficient, for example, as a ticketing system for operational tasks, by sending a notification of changes in status or by automatically involving those responsible in sign-off actions.

There is nothing mystical about enforcing and implementing security guidelines that are successful in the long term. It is the simple result of the ongoing maintenance of a structured life cycle, supported by clear roles and responsibilities and shared tools.

Maximal protection with lower costs

Well-known enterprises, institutions and NGOs rely on Mission Control Security Services from Open Systems AG to sustainably secure the availability and smooth running of their ICT infrastructure. Around the clock. 365 days a year. In over 100 countries.

application shield

Mission Control Application Shield

Protect your Internet applications with secure access and fend off attacks and threats from the Internet.

firewall

Mission Control Firewall

Separate multiple security zones, define authorized connections and transparently implement security policy with a centralized auditable relay station.

internet proxy

Mission Control Internet Proxy

Separate and organize web access and protect users from direct attacks on their browsers.

security gateway

Mission Control Security Gateway

Provide your branch offices with efficient site and communication protection to meet global objectives and local needs.

passport

Mission Control Passport

Implement strong authentication and manage access authorization centrally. Reliably prevent misuse of passwords and eliminate the dangers of key logger phishing or specific attacks.

ids/ips

Mission Control Intrusion Detection

Scan the network continuously to detect and prevent intrusions and security breaches.

e-mail shield

Mission Control E-Mail Shield

Protect your e-mail infrastructure effectively from overloading, spam, malware (viruses) and attacks from the Internet.

client vpn

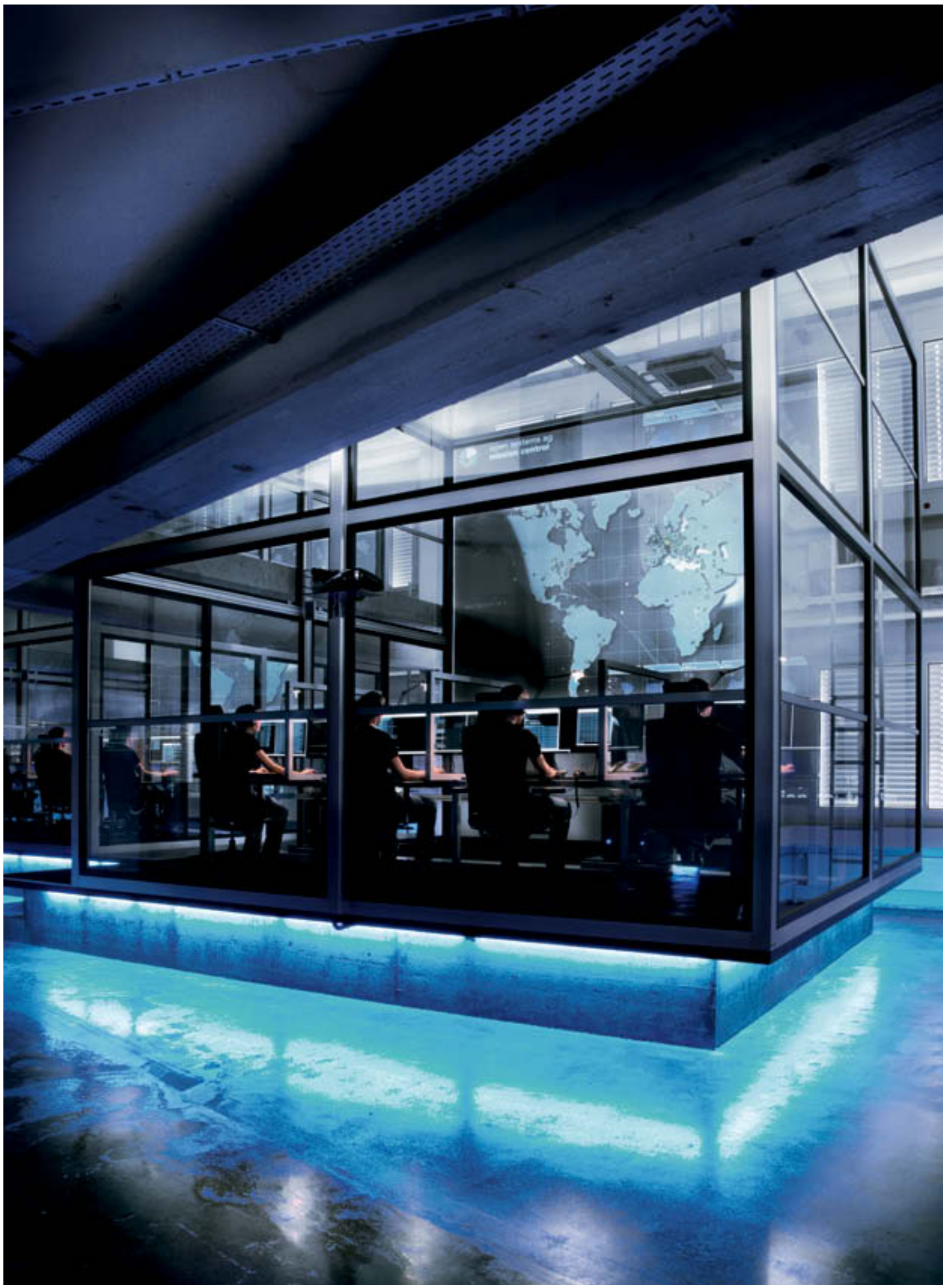
Mission Control Client VPN

Work with the same comfort and security as in the office – at home or on the road.

wan management

Mission Control WAN Management

Use a single point of contact to evaluate, operate and continuously benchmark providers in 335 cities in over 100 countries.



inside



Name Stefan Lampart
Education Electrical Engineer, ETH Zurich
Function Vice President Mission Control Academy
With Open Systems since September 1997

«Training and development is our biggest challenge – but the way to success»

With its newly created Mission Control Academy, Open Systems is concentrating and formalizing its activities in the area of employee training and development. Stefan Lampart, Academy director designate, gives some background information on the launch.

Mr. Lampart, you've been with Open Systems for 13 years. Looking back, what has been your biggest achievement?

→ Stefan Lampart: That I succeeded in motivating colleagues over and over again to make our services unique.

What do you mean by that?

→ Open Systems was, is and will always be a provider of services. After all, we stand out on the market ultimately only through the service we provide the customer and not through the technologies that we use. When employees are motivated, they perform well. This performance is felt and appreciated by our customers. Which in turn motivates the team and spurs them on to even better performance. In the best case, then, an upward spiral.

Sounds good. But let's get practical: How do you motivate your colleagues?

→ As I see it, there are two main factors that have a motivating effect and which we particularly have to cultivate. Firstly: the corporate culture. It is motivating to work in a company in which everyone is pulling together in unison because they all have their sights fixed on a common goal. It is motivating when you can contribute your abilities and ideas and, whenever you need it, count on the support of the team. It is motivating when you sense that your work is valued and rewarded accordingly. I don't just mean financial reward, but also with mutual respect, in regular personal meetings and also with great working conditions. And it is motivating when you notice that «your» company is positively moving ahead, in other words continually improving their services to wow existing customers and grow by winning new ones.

And secondly?

→ Employee training and development, which I see as our biggest challenge – but also the way to success. You've probably been through it yourself: When you start a new job somewhere, it is crucial to be able to settle into the new work environment and familiarize yourself with the complex subject

matter. Everyone who comes to work for us already has a sound technical training under their belt. The challenge is to kindle the passion for the topic of IT security in the new colleagues. Once we manage to do that, the modular Certified Mission Control Engineer training ensures that all the necessary processes and tools are provided to become completely immersed in the exciting world of IT security, our services and our customers.

After the certification there follows a period in which employees gain experience in Mission Control as well as deepening their knowledge in the area of IT security. Besides their work as Mission Control Security Engineers, everybody also works in their own specialist fields – be it in the labs, in our Professional Service or in consulting. It is at this stage that we begin individual supervision of the employee. As I see it, dealing with each individual personally is a crucial factor that allows each person to develop in line with their own skills and interests.

You have looked after the area of training over the past few years «on the side», as it were. Now you are assuming responsibility for the newly created Mission Control Academy. What tipped the balance for the founding of this Academy?

→ We have grown continuously in recent years. This growth is very positive for our customers, because the more companies use Mission Control Security Services, the more benefit is passed on to each individual customer from the operational experience gained by our Mission Control in issues that affect all customers, regardless of sector. Open Systems has a responsibility to offer existing and future customers a continual increase in service quality as well as the potential to exploit synergies through growth – whether in Technology Cycle Management, in the assessment of vulnerabilities and general threat situations, or in a proficient, rapid response to customers' escalations.

The impetus for the founding of the Mission Control Academy came from a discussion with our Advisory Board. We already have

everything we need to be able to fulfil this responsibility: the necessary organisational structure, clearly defined processes and a scalable technology platform. With the founding of the Mission Control Academy, we are now simply taking the logical step of professionalizing the training and development of our staff.

What form is the Academy taking?

What are the first concrete measures?

→ It's not like we are planning to do everything completely differently than before. On the contrary: The experience that we have gathered over the past few years confirms that we are on the right track. All the same, in consultation with the management and the people in charge of our services, Anja Knapp, Head of HR, and I have identified for the first phase some focus issues where we see a need for immediate action. One important issue for us is to redouble our efforts in our search for new staff, especially systems engineers, security engineers and systems administrators. In addition to the usual recruitment measures, we will step up our long-standing collaborations with ETH, EPFL and other universities and colleges, to spark the enthusiasm of the right young talents for our company right at the «source», with guest lectures, for example, or internships and the supervision of master's theses.

Another emphasis is helping new colleagues familiarize themselves with their new job. The foremost priority is that our training courses enable young engineers to translate into practice their theoretical knowledge and thus their full potential as efficiently as possible. Our aim is for them to gain their certification as quickly as possible, so that they can quickly assume operational responsibility, often for the first time in their career. But it is just as much about nurturing their enthusiasm and enquiring attitude in the long term and, as I said before, to ignite a passion for the subject area as a whole. Only then can we guarantee that we will maintain our extremely low employee turnover rate at Open Systems, which is a major factor for the quality of our operations, in the future as well. •

«Direct feedback about my work motivates me»

Laurent Zimmerli, Security Engineer

Mr. Zimmerli, congratulations! Your paper, Rating Autonomous Systems, won the Best Paper Award at the International Conference on Internet Monitoring and Protection in Venice.

What does this award mean to you?

→ Laurent Zimmerli: Naturally I'm proud of the award, no question. The paper grew out of my master's thesis at ETH, which I wrote in collaboration with Open Systems. Bernhard Tellenbach from the Communication Systems Group at ETH supported me during the writing of the thesis under the supervision of Prof. Plattner. He also encouraged me to write an article and supported me in my application to speak at the conference in Venice.

What exactly is your thesis about?

→ The Internet is made up of independent sub-networks mostly operated by ISPs, known as «autonomous systems» in the jargon. When you send a data packet from A to B, it traverses a number of such autonomous systems, which are connected to each other by what is termed «peering.» The quality of a connection from A to B can be reliably measured. It depends very much on the quality of the individual networks, of course. Now the question was whether one can measure the quality of the individual networks – and if so, how – in order to send the data only via the highest-quality networks from the start.

That sounds exciting.

What is your conclusion?

→ Put very concisely, independent third parties can only examine the quality of autonomous systems to a limited extent. This is because from the outside you don't have direct access to the infrastructure of the individual autonomous systems. As a result, there are only a very few analysis tools you can use to measure the quality. And even then they don't always measure precisely what you need. So in my paper I describe statistical approaches that enable you to assess the quality of the systems. By the way, the

paper was published by the IEEE Computer Society and can be ordered from their portal.

You studied IT at ETH. What brought you to Open Systems?

→ I attended a lecture by our CEO Martin Bosshardt. It was one of a series of lectures organized by VIS, the Association of IT Students. Back then I wanted to write my master's thesis in the field of specialist security and knew of the cooperation between ETH and Open Systems that has existed for many years. That was a stroke of luck, because the support I got from the colleagues at Open Systems was really exceptional. My supervisor's personal dedication was huge and made a significant difference to the quality of my thesis.

You are a security engineer at Mission Control Labs. What exactly is your job?

→ Our labs are organized in teams that are responsible for various areas of Mission Control Security Services. One of the things our team is responsible for is the front end of the Mission Control Cockpit, with which our customers control and monitor their services. We work in the area of technology and product evaluation as well as maintaining and expanding the services. In addition, like all security engineers at Open Systems, I spend one day a week at the Mission Control Operation Center and look after the running of our services.

Does working in operations at Mission Control influence your work as a security engineer?

→ Definitely – very much, in fact. Because my assignment involves me using the front end just like our clients, I experience first-hand how valuable it is proving to be in practice and also find out where there is potential for improvement. During these assignments I get valuable feedback from colleagues and of course directly from customers too. This unfiltered user feedback, which is actually pretty unusual in classic

software development, motivates me and from the word go has always been a powerful argument for my professional commitment at Open Systems.

What would you say distinguishes Mission Control Security Services from other security systems?

→ From the customer's point of view, the excellent service quality certainly makes a significant difference. As I see it, two main factors are responsible for that: firstly, the expertise that is available to the customer from our security engineers. Anyone who has ever battled his way through first- or second-level support, knows how efficient and effective it is if you can talk directly to an expert. Everyone who contacts our Operation Center always talks to a certified Mission Control security engineer, with no exceptions.

The second factor that I would call unusual is the way the staff at Open Systems identify with their work. We identify strongly with the company and our services and are conscious of our responsibility towards our customers. No one here is a «clock-puncher.» I am convinced that our customers are very much aware of both these factors in their daily work with Mission Control.

What do you do in your free time?

→ In the spring and summer, you will often find me out on my motorbike on weekends. Apart from that I have started to do sports again regularly: I play a lot of squash and, thanks to a regular training regime, was able to run a marathon in Florence last summer in under four hours. In the winter I normally spend a lot of time on my snowboard. But this year I have not yet managed to do any boarding, since I spent the turn of the year on my first three-month deployment to Mission Control in Sydney, Australia. To make up for that, I managed to surf almost every day during my stay «down under.» That's not bad for an alternative, isn't it?



Name Laurent Zimmerli
Education BSc and MSc in computer science
at ETH Zurich
Function Security Engineer
With Open Systems since October 2008

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