A MATTER OF TRUST

A magazine about the reassuring feeling of having someone or something you can rely on.
DEAR
READERS,
Trust is essential if society is to function properly and if people are to live together in harmony. Trust is therefore also a foundation of the global economy: the worldwide exchange of goods and services can function only if business partners can depend on all parties, across different continents and legal systems, adhering to contractual agreements and meeting their obligations.

That being said, we should not trust others blindly. In our interview on page 5, academic Professor Reinhard Bachman describes how we can »trust intelligently« – by observing the behavior of our counterparts over a longer period and then considering how much trust we can place in them. In this case, trust means investing in the future behavior of another person. But while trust is good, verification is sometimes better.

We have devoted this magazine, which accompanies our current annual report, exclusively to the topic of trust. In it, we present matters of trust from all over the world: people whose belief in themselves and in others enables them to master difficult situations. We also address global developments, such as food safety and Industry 4.0, where the issue of trust plays a prominent role.

Trust is of immense importance for TÜV SÜD – and this is something we are well aware of. Thanks to the expertise of our engineers, people can rely on the safety of industrial plant and infrastructures, of consumer goods, medical devices and vehicles. As an independent third party, we help companies collaborate smoothly – across continents.

Our customers place their trust in us each and every day. They know that when it comes to our certification services, they can rely on neutrality and high standards of quality. They count on our inspections being performed objectively and in line with all relevant standards and guidelines.

Trust is a kind of advance payment. And trust always has to be earned again and again. This is an obligation we have to shoulder every day, with every new contract. This is because you bank on our 20,000 employees worldwide not only to increase safety but also to add economic value – for the good of our customers and consumers alike. I would like to take this opportunity to thank each and every one of you for placing your trust in our services.

Sincerely,

Dr. Axel Stepken
Chairman of the Board of Management of TÜV SÜD AG
**TAIKSI, TAISKI**
Two continents, one car, one night: Figen Dinekli is one of Istanbul's few female taxi drivers. A portrait of a very self-confident lady.

**MISSION: UNDER CONTROL**
Thomas Hüttner works for TÜV SÜD in Houston, Texas – and he relies on a network that extends all the way back to his home town of Munich.

**DELHICATESSEN**
The pinnacle of good taste: India’s prosperous middle class demands high-quality food. And the country's restaurants demand trustworthy certification.

**LOWRY GOES THE DISTANCE**
Pushing limits – for 42.195 kilometers. American Michelle Lowry is one of the frontrunners in the Hong Kong Marathon. Her secret? Her unshakable belief in herself and in her team behind the scenes.

**THE DIGITAL FACTORY**
The Internet of Things is converging with conventional production. But the fourth industrial revolution requires a new mindset when it comes to security.
What does trust mean to you?

»Trust is an economic factor«

Trust is a long-term investment in relationships:
»It functions like an interpersonal currency,« says trust researcher Professor Reinhard Bachmann. It can be learned, systematically developed and cultivated. But like a currency, it can also appreciate or dramatically depreciate in value. Those who learn to invest it wisely, however, stand only to gain.

»Trust, but verify – What is a trust researcher’s view on that?

Prof. Reinhard Bachmann Trust and verification don’t necessarily have to be opposites. Which of the two is better always depends on the social and economic environment in which we act. Contracts that have been defined down to the last detail, for example, often seem restrictive, like an inflexible verification tool. On the other hand, they set out a clearly defined framework, which is also quite capable of generating trust.

Because they minimize risks?
Because they make risks calculable. There’s no such thing as trust without risk, and if there were, then every form of trust would be senseless. What would be the sense of trusting someone if I can predict his future behavior? And conversely: if I know absolutely nothing about a person, a project, an idea, then no amount of trust will help me. That is, not unless you want to trust blindly and risk everything. But that would hardly be intelligent.

So how do I trust intelligently and not blindly?
Healthy trust has its place where there is a moderate level of risk. In other words, if I have certain indications of the future actions of the person I’m dealing and can roughly assess him. Of course, this also involves gaps in the information – and it is these that I fill my trust. So I invest my trust in the actions of the person I’m dealing with and have to weigh up just how much risk I want to enter into with this investment.

That means trust becomes a kind of interpersonal currency?
Yes, that’s right. And just as there are the most diverse forms of payment, so there are the most diverse types of trust. Two broad directions can be distinguished here: one when I trust that the person I’m dealing with is actually in a position to fulfill my expectations; and one when I assume that he is also willing to fulfill them.

Can we learn to trust – the way we learn to handle money?
Certainly, through experiences with a particular person or group of people. In a company, for example, new employees first have to win the trust of their colleagues. In trust research, we call this knowledge-based trust. Or to put it another way, people have to get to know each other in order to assess each other’s abilities. Sometimes – and this is the highest degree of trust – I notice that the person I trust includes my interests in his decisions systematically and puts his own interests second. Every good partnership – whether professional or personal – is based on this principle.

Can trust also be lost?
You can lose your trust, and this often happens incredibly quickly, with very serious consequences not only for individuals but also for entire economies. The best and most often cited example was the global financial crisis, which abruptly called into question the trust of many investors in their banks and financial advisors. The economic damage caused by such events can be immense: the global financial crisis, which was essentially a crisis of trust, plunged many countries into enormous sovereign debt and continues to hinder their growth even today.

So trust is an important economic factor?
Yes, because it helps to reduce transaction costs. Anyone who establishes and continues to maintain long-term, trusting relationships with their suppliers, customers and banks saves himself the search for suitable new partners. He doesn’t have to repeatedly negotiate new agreements and conditions from scratch and can clear up misunderstandings quickly and with no red tape. And this applies not only to individual companies; it also applies to entire economic regions.

Which regions?
Wherever there is a lack of contractual frameworks or where such frameworks are simply ignored – in many developing markets, for example. Wherever there is corruption and, consequently, a high level of distrust. This pushes up transaction costs and has an adverse effect on opportunities for economic development. Not least because trust is worth its weight in gold when it comes to a country’s ability to innovate.

Why?
Because being innovative often entails having to exchange ideas with my competitors and perhaps even cooperating with them for a while. That’s not without risks, and it calls for a great deal of trust in my temporary partner – and, not least, in my own abilities. Then it’s a matter of trusting in oneself, or self-confidence.

Prof. Dr. Reinhard Bachmann
is Professor of Strategy at the University of Surrey, UK. He is considered one of the pioneers of trust research, founded the Centre for Trust Research in 2012 and regularly publishes on the subject of trust, particularly as it concerns intercompany relationships.
Taksi, Taksi //
Yellow taxis are as distinctive a feature of Istanbul as the Hagia Sophia or the Blue Mosque. But the person behind the wheel is unlikely to be a woman. Female taxi drivers are still a rare sight in Istanbul. And any woman who ventures into this male domain needs a lot of self-confidence.
Skeptical or self-assured? Figen Dinekli may appear out of place among her male colleagues – but she’s a member of a close-knit community.

If a person’s stature were measured merely in centimeters, then Figen Dinekli wouldn’t be very special. The 48-year-old can hardly see over the roof of her yellow Fiat Siena – even when she’s wearing her elegant high-heeled shoes. But stature can also be measured in other ways. Figen Dinekli may not be tall but she is a person of considerable stature – because day in, day out, she shoulders responsibility for herself and for her customers; and because, as a woman, she has carved herself a niche in a profession that is otherwise reserved solely for men.

Dinekli is a taxi driver in Istanbul, and anyone who sees her, and knows what she does for a living, has to wonder how she intends to make it through the night – here, in the heart of Istanbul, a metropolis with 15 million inhabitants and 2,666 people per square kilometer.

She gets into her car, which even after a quick airing, still holds faint traces of cigarette smoke. She slips her smartphone snugly into its holder. Throughout the day, she will use it to call and text her children. Then she straightens the photo of her ten-year-old daughter on the rearview mirror and turns on the radio. She always drives to music, she says, and then casts a critical glance in the mirror to check that her makeup is still presentable. She always wears makeup when she drives and is never happier than when driving at night: «I like the night. The night hides the bad sides of the city.»

What Figen Dinekli, who was born in the Istanbul district of Gıneşli, does is nothing out of the ordinary: she drives a car. That would hardly be worth mentioning if she were not in Istanbul, if her car were not a taxi and if Dinekli were not a woman. There are only a handful of women taxi drivers on the Golden Horn. Most people here consider the job to be exclusively for real men – and far too stressful and dangerous for women. As Turkish traditionalists see it, says Dinekli, a woman’s place is in the home and not on the road. She shakes her head: «Find yourself a man who will look after you – that mindset was never a real option for me, neither in my personal nor in my professional life.»

From an early age, Dinekli had to learn to fight her way through life and never give in. After her father died, she worked in a textile factory at the tender age of twelve, operated heavy ironing machines and lugged around bolts of fabric. It was during this period of her life, that she developed the self-confidence required to make her way in a sector dominated by men.

In her early 20s, she became a driving instructor, had kids, and then earned a good living chauffeuring VIPs from the worlds of business and politics. She got divorced and switched from driving company cars to ambulances. For the past five
Officially, there are 35,000 taxi drivers in Istanbul, including perhaps half a dozen women. The big city and working in a man’s world are not for everyone.

Figen Dinekli has been earning her living driving cars for more than 25 years. The 48-year-old calls her taxi «my living room».

A night scene before the Blue Mosque in the center of the city: «I like the night. The night hides the bad sides of the city.»
Taksi, Taksi //

Proud that she has fought her corner alone among men? Figen Dinekli is throughout her life.

Group for Women as Business atTarget the Taxi I such a thing before. Thanks or because he has never seen clear whether he is doing this to say thumbs-up, and it is not entirely of-way. He smiles back, gives her a know that she is giving him right-and merely to let a male colleague does she sound her horn today – focused. Only once and very briefly Galata Bridge in the heart of the city. As she steers her taxi over the men. «She says this quite serenely as she steers her taxi over the Galata Bridge in the heart of the city. Her driving is calm, economical and focused. Only once and very briefly does she sound her horn today – and merely to let a male colleague know that she is giving him right-of-way. He smiles back, gives her a thumbs-up, and it is not entirely clear whether he is doing this to say thanks or because he has never seen such a thing before.

Women as A Target Group for The Taxi Business

However, a lot has happened since 2009, he says. Road traffic is much safer and the taxi association has begun targeting women – in the driver’s seat as well as the passenger seats. «Unfortunately, there are currently only half a dozen women among the 35,000 drivers,» says Ugur. «We initiated a project aimed at attracting more female drivers to the profession, but without success.» The city, the night, working alone and at one’s own initiative: «It’s not for everyone.»

Work Twice as Hard – and No Mistakes, If You Please

Meanwhile, at Ugur Özden’s taxi rank in the Istanbul district of Başçılarcı, Figen Dinekli is moving space by space toward the head of the line of waiting colleagues. A woman gets into her cab. Her name is Hande Hincal, 30. She is an internist at Medipol Hospital and very tired from her last shift. «That’s why I’m treating myself to a taxi today,» she says. Dinekli greets the doctor with the word şahinefendî, which translates as madame. That’s something you don’t hear very often among Istanbul’s taxi drivers.

Hincal says she knew that a woman worked here at the rank. But she has never had one as a driver. So this is a first, but today she doesn’t have the energy to really appreciate it. Much she does she say, though: «If you want to get on in a profession as a woman, then you have to work twice as hard as a man.» It doesn’t matter whether you’re a doctor or a taxi driver, she says: «People are simply waiting for you to make mistakes.»

Dinekli is an impeccable driver and has been for more than 25 years. This is something she is proud of. But it’s not the only thing: she’s also proud of her regular customers, of her car, which she calls «my living room», and of her work. She is proud that she, a woman who has jokingly called herself half a man, is increasingly able to tell men openly how they should behave – for example, that it’s time they had a shave or that they should mind their language. «Yes, all of that makes me proud. And it makes me increasingly self-confident from day to day and from night to night.»

Now, with night long since fallen in Istanbul, she swiftly dons a cap. She only recently had her hair cut a lot shorter, she says. This and the cap mean she no longer attracts so much attention at night. They make it harder to see that she’s a woman.

Trust in TÜV SÜD

When it comes to a wide variety of mobility-related questions, millions of people place their trust in TÜV SÜD: whether for driving tests, services for vehicle owners or as a partner of the automobile industry. Vehicle roadworthiness tests are just one example: the company ensures greater road safety not only in Germany, but also in other European countries, and in South Africa and Asia.

TÜV SÜD performs some seven million vehicle inspections every year, including through its subsidiary TÜV Türkei in Turkey. And the results speak for themselves: since the start of 2009, the number of road accident fatalities between Mount Ararat and the Bosporus has fallen by 40 percent.
What does trust mean to you?

»TRUST INVOLVES GIVE AND TAKE«

»As an artist and photographer who works very closely and directly with his subjects, I have to be able to establish the greatest possible intimacy through honesty and trust. That’s not always easy. At the same time, you have to have a strong personality and be sincere if you are to demonstrate that you believe in your own work. You also have to be willing to spend time with the people you’re interested in and develop genuine relationships with them. For example, I’d never seen the women I portrayed in my »Intimate Light« project before. Ultimately, I had to spend several days with them and promise to show them my work repeatedly during that time – after all, trust always involves give and take.

Sometimes this gives rise to connections that continue after the job is over. Sometimes the relationships that develop during my work collapse afterwards, like a house of cards. But I always reach a point when I notice: »Now we’ve created a working atmosphere based on trust, now I can get down to work.« For some people, photography and art may well function without trust and proximity. But I’m certain that the outcome for me would be a total disaster. In this respect, every artist has a different, personal approach. Mine involves overcoming distance by means of trust.«

MARCELO GRECO

One could say that trust is the most important tool of his trade: Brazilian photographer Marcelo Greco specializes in highly personal and intimate work: evocative, atmospheric everyday images that often appear to have emerged from a hidden realm. »In order to reach this vantage point, I need the absolute trust of the people I portray,« says Greco, born 1966. His uncompromising approach helps him achieve this: »There’s no difference between professional and private trust – either you’re a trustworthy person or you’re not.«
MISSION: UNDER CONTROL

Global players like TÜV SÜD systematically encourage their employees to pursue international careers and broaden their horizons. The good thing about this is that those who relocate abroad for their company can usually count on having an effective network at a large corporate site. The exciting thing is that moving abroad always confronts them with their own limits and requires a great deal of courage and faith in their own abilities.

In some ways Houston, Texas, is a pretty ordinary place. The city is not quite as clean as Munich, not as fashionable as Paris, not as cosmopolitan as London, and not as vast as Tokyo. It’s a place where people like to go fishing on the weekend, or hunting, and where they sport wide-brimmed cowboy hats at the barbecue afterwards. The city is represented in the NBA by local basketball team the Houston Rockets, and Houston came to international prominence through the Lyndon B. Johnson Space Center. 

This is one small step for man, one giant leap for mankind – a historic sentence, which was transmitted from the moon to Mission Control in Houston, and from there to the whole world. That was 45 years ago.

Thomas Hüttner touched down in Houston just 18 months ago. When he left the arrivals hall at George Bush Intercontinental Airport in November 2012, it was certainly no giant leap for mankind. But it was a big step for one man. For Thomas Hüttner, it marked the start of an adventure that he continues to experience as such almost every day. It was an adventure because he started out here alone, without ever really having been alone before; and so it was good that he could depend on a behind-the-scenes network that helped him get off on the right foot.

The 28-year-old engineer and subject matter expert is one of more than 20,000 TÜV SÜD employees who work for the Group worldwide. Like him, some 6,500 of his colleagues from the INDUSTRY Segment offer services for industrial plant, buildings and infrastructure facilities – more than 1,200 of them in North America, at 20-plus locations from Boston to San Diego. In Texas alone, TÜV SÜD subsidiary PetroChem Inspection Services operates five sites – a vast network, you might think. And it is – at least, in theory. However, Thomas Hüttner, whose job is to inspect pressure vessels that are exported to Asia and Europe, initially had to fend pretty much for himself on his overseas mission.

Of course, he has always had his supervisor, with whom he is in regular contact and also frequently visits. Of course, he has close ties to TÜV SÜD America, headquartered in Peabody, Massachusetts. But because Hüttner offers a service that only few of his TÜV colleagues in Texas have in their portfolio, he was a one-man operations from the get-go.

Life as an expat is generally mapped out in advance. Almost every large international company has a dedicated program for this purpose. Employees receive comprehensive
support before, during and after their assignments abroad. After all, a different, unfamiliar country with a different, unfamiliar culture is exciting enough in itself. There are checklists, events providing information on the host country, internet and intranet platforms, additional payments for regular trips home, informal expat get-togethers and alumni meetings after employees return. In short, there’s a whole network of people and opportunities that make working abroad easier and more straightforward.

A network of this kind fosters relationships between like-minded individuals abroad. When employees are thousands of kilometers from company HQ, it’s important that they do not feel lost. Distance ultimately draws people closer to one another: it forges strong bonds, brings together the most disparate individuals, who would otherwise never have met or hit it off. Expats find each other easily when they are far from home. »That was quite different in my case,« says Hüttner, who feels he was very lucky in this respect. When he first arrived in Houston 18 months ago, he was alone. »As a result, I had to get more heavily involved in the local culture.«

»Sure, the months immediately following November 2012 were exhilarating and exhausting. Everything was new and unfamiliar: living in a motel until a suitable apartment had been found; driving even the shortest distances.« But there were other aspects: »For example, it’s surprising just how quickly you get talking to total strangers.« In any case, he had never really believed there would be a major culture shock, seeing this as something experienced by travelers to India or China, the Middle East or Africa. But all the same: »I wouldn’t have thought I’d find my feet quite so fast.« Of course, he adds, it was a bit like jumping in at the deep end, »but after six months, I was swimming with confidence.«

CUSTOMERS NOTICE HIS NEW SELF-CONFIDENCE

And things are still going swimmingly for Hüttner, who can rely on the support of the TÜV SÜD network – a network that was already in place long before his overseas assignment took him from Munich to Texas. »The TÜV SÜD HR departments in Germany and the USA prepared everything down to the last detail,« he says. He spent time in various specialist departments and received the additional training required to gain official approval for his work in the USA.

However, he also took advantage of the time to do some personal networking in the run-up to his placement abroad. »When I said goodbye to everyone, I always asked if I could contact them if there are any difficulties. Of course, nobody said no.« This network, which extends from his home country to the host country and back, is much more than a safety net for occasional emergencies; it is also a knowledge base that Hüttner can tap into time and again: »I send any questions that we can’t conclusively answer here to the specialist departments in Munich. And I have the answer in my inbox the next day.«

This might all sound commonplace, as commonplace as traveling abroad, these days. But every assignment is unique. Every expat has his or her special story. Thomas Hüttner’s began that November when he arrived alone in Houston. Today, it is the story of a man who has established a firm circle of 15 friends, almost all of them Americans, and not one of them German. It is the story of someone who has settled in, who could depend on his network and as a result is starting to put down roots.

This is something that makes him self-confident, strengthens his
Belief in his own abilities and finds its way into his work: “I tell people precisely what I want to see from them and when, examine every screw and every document. I’m always on time and always like to have everything under control.”

He has, he says, a “rather German” approach to his work. By this he means that he is punctual, precise and highly organized – someone who would rather inspect every weld twice or three times than risk overlooking anything. “Anyone looking for typically Texan qualities in me will be disappointed,” he says, without wanting to say just what these typically Texan qualities might be. He simply remarks: “German virtues are valued highly here.” He remembers one assignment in Mexico, a pressure-vessel inspection, which ended with the customer saying: “That was quite different to working with an American expert.” Admittedly, it was just one sentence but, says Hüttenr: “It was also a moment when I realized that I had found my feet.”

There’s another famous sentence that Houston transmitted to the world: “Houston, we have a problem.” That was 44 years ago. It’s a sentence that Thomas Hüttenr has heard so often that it merely evokes a quiet smile: “Well, what are problems anyway? You can’t specialize in everything. You also have to be able to rely on getting help.”

People like Thomas Hüttenr represent TÜV SÜD’s global presence, the highly specialized expertise of the company’s employees – and their willingness to find solutions to customers’ problems, no matter how difficult the circumstances and how unfamiliar the situation.

Take the field of services for industrial goods and infrastructure facilities, for example: whether ensuring the safety of power plants, refineries and pressure vessels or the smooth functioning of elevators and rail vehicles – TÜV SÜD’s experts are on hand for customers worldwide. You can rely on that.
In emerging markets like India, expectations regarding food quality and safety are on the rise. A burgeoning middle class with considerable purchasing power is increasingly demanding food that can be trusted. Companies like TÜV SÜD offer independent inspections and certifications for this purpose.
Strong economic growth, a good consumer climate: India’s middle class is growing and is in search of new, modern culinary experiences.

You’ll never grow big and strong if you don’t eat. That’s something kids learn at an early age, but it also applies to entire countries. India is just such a country, with a population that has grown by 250 million over the past decade. According to official figures, around 1.25 billion men, women, and children today live between Delhi and Madurai, and Mumbai and Kolkata.

India’s economy is also on the rise – the country is one of the world’s ten most rapidly growing economies. One consequence of this is that an increasingly prosperous middle-class has emerged in recent years. By 2025, 128 million households could have an annual income of between USD 4,000 and USD 22,000, according to estimates by management consulting firm McKinsey. And the country’s people are demanding ever higher standards of food quality: experts anticipate that spending in this area will treble between 2010 and 2020.

Just what this development means in concrete terms can be seen in Gurgaon, some 30 km southwest of the Indian capital New Delhi. More than 1,000 restaurants can now be found around the satellite city’s two dozen or so shopping malls. These include international chains as well as local providers. They are clean, hygienic and boast high quality standards. Eating out in Guragaon has almost nothing in common with the «typically Indians» cook shops of Delhi’s old town.

For companies like TÜV SÜD, cities like Gurgaon are a vast market: «There is an increasing awareness of safety and sustainability,» says Dr. Pankaj Jaiminy from TÜV SÜD South Asia. «As a result, demand for independent certifications is also on the up.» These include, for example, audits that enable restaurants to demonstrate they have a functioning food safety management system. Since 2012, TÜV SÜD has also operated a special laboratory in the center of the city, where food is inspected according to international and local standards. Tests are conducted to determine, among other things, whether products actually contain the ingredients specified by the manufacturer. Customers include not only producers and importers, but also the restaurants themselves. After all, their customers want to be sure that the food they are served is safe and free from impurities.

With a global network of test facilities, TÜV SÜD makes a major contribution to ensuring that people around the globe can rely on the safety of their food – whether fresh fish, convenience products or beverages. In the laboratories, food is analyzed, tested and subjected, for example, to toxicological examination.

Food safety encompasses the entire production and preparation process. That’s why TÜV SÜD provides the industry with support in the form of comprehensive audit and certification services – for example in accordance with international ISO 22000, IFS and BRC standards. Inspections by TÜV SÜD as an independent third party help manufacturers and retailers improve their processes, thus engendering trust among their customers.
There are more than 1,000 restaurants in Gurgaon, 30 kilometers southwest of New Delhi. Eating out in Gurgaon is a culinary experience far removed from the cook shops in the capital.

Traditional ingredients such as daal, chickpeas and rice ...

... expertly prepared in modern surroundings.

Eating out in Gurgaon is a culinary experience far removed from the cook shops in the capital.
Higher incomes and a comparatively young population – this is boosting purchasing power and opening up new business opportunities for international chains.

Whether in Gurgaon, Glasgow or Geneva, food quality and safety are a matter of trust for consumers worldwide.
What does trust mean to you?

TRUST IS SAFETY AND SECURITY

Your family’s roots are in Africa. You’ve lived for many years in Europe – have you noticed different types of trust between these two worlds?

JEANNE MUKARUHOGO No, everyone is looking for a feeling of security, for a place where they can feel at ease. But my experiences in Africa have taught me that there are differences depending on the specific situation. Most of all, it depends on the situation people live in: where livelihoods are secure, I see no cultural differences between trust in Europe and in Africa. But where the social systems are deficient, if they exist at all, where disputes in civil society are much more frequent, or where people suffer under extremely difficult living conditions, feelings like security and well-being are often a luxury. Trust and confidence in the future then tend to apply to the short term.

Who do you trust?

JEANNE MUKARUHOGO A person I can trust is a person I feel safe with, a person I can confide in unreservedly, and a person with whom I know this knowledge will be in good hands. For example, my SOS Children’s Village mother in Imst, Austria, where I grew up, is such a person for me.
Lowry goes the distance //

04

LOWRY GOES THE DISTANCE

They talk about the loneliness of the long-distance runner. But if you want to successfully complete a marathon, you need a team – a group of people who share your passion for the extreme. Michelle Lowry from the US has a team like this behind her. A team whose faith in her allowed her to join the frontrunners in the Hong Kong Marathon.
E DISTANCE
Marathons are decided in the final 10 kilometers. That’s when the pain really starts to kick in. When not just your legs and arms hurt but your whole body – your feet, your neck, your back and your shoulders. When your lungs burn with every breath you take. This is when the race really starts. This is when the bell sounds for the battle between your mind and body. I want my body to win. To make that happen I have to start believing. Believing in what truly matters to me, in what drives me in my life. There are runners who dedicate every kilometer to one person who is important to them. Not me. Throughout the marathon, I think of my family, of the people who will greet me and embrace me when I cross the line; of the people who stand along the route – of Team Lowry.

On the eve of the long race, Michelle Dale Lowry is sitting with a medium rare Angus steak in front of her, drinking a glass of lukewarm water. I guess it’s a tradition the English brought to Hong Kong, she says. But right now, that’s not really important to her. She is simply feeling cold. And so there she sits, the 36-year-old American mother of three, who has been in the city for two years now, sipping her water and telling us about the Kenyans, the Ethiopians, the Mongols, the Tajiks and the Chinese. They’re the ones who’ll set the pace, says Michelle, who tomorrow will be among the frontrunners.

Tomorrow is marathon day in Hong Kong, and here, in Greyhound, an American-style restaurant in an upmarket city-center shopping mall, she tells us about her hopes of placing among the top ten. But, she adds, it’s really not so much about how she places, but about the battle, her own very personal battle between mind and body – one that she is confident her body will win. She hasn’t eaten anything sweet for four weeks now. And she’s planning to take along a chocolate bar especially for that one-off moment when she crosses the finishing line tomorrow, no matter who wins.
The starting shot for Hong Kong Marathon is fired early – at 6:10 in the morning. “I haven’t slept so well,” says Michelle as she warms up in Cameron Lane. She has eaten four slices of white bread, three of them with jam. It’s now 5:30, and 45 minutes earlier she greeted the world by posting her Facebook status as “Excited.” In Hong Kong, as in almost any other city, running a marathon means getting up early, warming up out of sight, getting changed in a side street or at a tram stop; making sure that someone, somehow gets your few possessions to a place where you’ll be able to find them again later. It’s about starting and finishing fast so that the city notices the race as little as possible and as much as necessary. That might sound strange, but when can you shut down entire highways in a metropolis with a population of millions, if not on an early Sunday morning?

At 5:50 a.m., Michelle joins the ranks of the top runners in Nathan Street. She stands under a blue inflatable starting gate, which gradually deflates, hanging limply over the Ethiopians and Kenyans, who are not at all amused. But the less exalted runners, at a seemly distance, are grateful for any source of amusement. “It’s unusual for something like that to happen in Hong Kong,” Lowry will say later. “Here, everything is honed to perfection.” The tendon in her right knee is a little tight, but it’s no big deal, she says.

As a runner, I need someone I can trust implicitly. And for me, that’s Roberto Veneziani, president of the Italia Running Club in Hong Kong and my coach. His training philosophy is: less is more. You don’t have to run a full marathon during preparation; you simply have to believe that you’ll finish the final kilometer. You should be aware that every runner has to contend not only with the same pain but also with one all-important thought: what the hell am I doing here?”

Knowing that everyone else feels the same pain

At 5:50 a.m., Michelle joins the ranks of the top runners in Nathan Street. She stands under a blue inflatable starting gate, which gradually deflates, hanging limply over the Ethiopians and Kenyans, who are not at all amused. But the less exalted runners, at a seemly distance, are grateful for any source of amusement. “It’s unusual for something like that to happen in Hong Kong,” Lowry will say later. “Here, everything is honed to perfection.” The tendon in her right knee is a little tight, but it’s no big deal, she says.
"I don't really remember much about it. A marathon makes you a bit delirious, not least because I hadn't had enough to drink. I saw that I could keep under 2:53:00 and stepped up the pace again. Well, if you can talk about stepping up the pace at the 41st kilometer. But I know that, whether I run faster or slower, it's going to hurt anyway."

Running is like life, says Michelle. "It's about learning to deal with challenges and disappointments."

And it's about never losing sight of the fact that defeat can make you stronger.
A quick run round the block: the 18th Hong Kong marathon took runners from Kowloon to Ting Kau Bridge in the Northwest and back.

Relaxing after a marathon: Michelle Lowry just seconds after crossing the finishing line in Victoria Park.

That’s what makes marathons special: it’s not the final kilometer and not the first kilometer. It’s the sum of all the kilometers. It’s the process I have to trust. It’s the plan that has to deliver results.

Michelle Lowry breaks down her race into the individual meters, dissects the hours into minutes and the minutes into seconds. She has a meticulous plan in her head and is annoyed if it doesn’t come to fruition – if it takes her 45 seconds more than planned for the first half of the race, for example. She rapidly overcomes her annoyance, draws on her experience, her self-confidence and her faith. Later, she will say that when she came to the 33rd kilometer, she thought of the book of Genesis, Chapter 22, Verse 13: Abraham went and took the ram, and offered him up for a burnt offering in the stead of his son. She feels strong at this moment, just before she runs into the two-kilometer-long tunnel that connects Kowloon with Hong Kong Island.

When she emerges on the other side, there is a slight incline ahead of her, laughably slight really. My God, will this hill never end? she thinks. Her legs feel tired and chafed. There’s a slight headwind. More and more spectators line the street, among them a few of her friends.

On the morning shortly before the race, she says: Winning really isn’t all that important. This is not entirely true. But sportspeople are like that: they tend to underrate the case, to avoid jinxing themselves and pushing their luck too far. Nevertheless, you can sense her ambition when she says how much she envies the top runners, with all their training opportunities, their water-treading therapy after even the smallest of injuries, their sophisticated nutrition plans and horrendously expensive massages.

She had a few moments of weakness, she says on the evening after the race. And then in a flash you can see how much she’d love to be among those running even farther ahead of the field.

TRUST IN TÜV SÜD

People who achieve outstanding sporting performance have to be able to rely on their team – and on their equipment. So it’s reassuring to know this equipment carries TÜV SÜD’s octagonal quality seal. The company is one of the world’s largest providers of services for the inspection and certification of consumer products – including sporting goods, shoes and textiles. In a global network of laboratories, these are scrutinized with regard to safety, quality and suitability for use.

The expertise of TÜV SÜD’s specialists in the areas of product standards and market requirements delivers benefits for a large number of industries. In addition to consumer goods, the company also inspects industrial and medical products.

A quick run round the block: the 18th Hong Kong marathon took runners from Kowloon to Ting Kau Bridge in the Northwest and back.
05
THE DIGITAL
Is our economy on the verge of a new industrial revolution? The Internet of Things is coming to the factory floor – with momentous consequences for production and IT processes. If companies are to get off on the right foot with Industry 4.0, they need one thing above all: a new security concept.

Anyone interested in taking a look into the future of industry would do well to set their sights on Trippstadter Strasse 122 in Kaiserslautern, Germany. This is the location of a soap production plant – or, to be more precise, a smart production plant, part of the central SmartFactory research and demonstration platform at the German Research Center for Artificial Intelligence. At first glance, it looks much the same as any production line, but it is how and what it produces that makes it so special. The smart factory manufactures customized soap bottles according to customers’ specific wishes. Custom production with a wide variety of variants and in small batches – until now, this was the province of time-consuming, made-to-measure manual work.

Anyone interested in taking a second look into the future of industry should check out New York. On the West Side of Manhattan, between 27th and 28th St. in the Chelsea district, stands the Terminal Warehouse – a monument dating back to 1891, a seven story clinker building, through whose gigantic arches the freight trains rolled in to be unloaded at the end of the 19th century. Today, the art scene, with its galleries and showrooms, has discovered the Terminal Warehouse.

Perhaps it’s just a coincidence, but on this very spot, where modernity is today seeking the factory-hall charm of yore, a factory of the future is also taking shape: Quirky, a New York startup that is increasingly being mentioned in connection with the Internet of Things and Industry 4.0.

The company considers itself a catalyst for a new form of mass production. It is a platform for modern inventors and their ideas. At Quirky, these ideas can be posted online for discussion and then – if they find favor with the public at large – they can be developed through to market readiness. This process transforms consumers into «prosumers» – producers and consumers in equal measure.

The SmartFactory in Kaiserslautern and the startup in New York are spearheading a trend – they are striking examples of what many call the fourth industrial revolution. In the wake of Manchester’s weaving looms, the introduction of mass production and computerization of industry, revolution number four sees the advance of the internet onto the factory floor – where it is turning the logic of industrial production on its head. In this new paradigm, prosumers demand customized, smart products that demonstrate their intelligence even at the production stage. Within the web-based factory, raw materials equipped with sensors and chips can seek out the production equipment that will turn them into the intended end product. Moreover, the factory can freely choose from the machines available in the marketplace. Instead of traditional, inflexible manufacturing channels, this new industry is organized along flexible, multi-adaptive production lines, overthrowing the centralist top-down principle of the old order.

The Internet of Things creates a factory of interconnected machines and products, is how Professor Wolfgang Wahlster, CEO of DFKI, sums up the principle.
If it is to embrace the digital factory, traditional industry has to radically change in one key respect: it must become more open in order to allow the flow of information – it must allow insight into its processes and structures, which until now have to certain extent been veiled. It must interconnect its machines and, ideally, its suppliers and customers along with them. It will become digitized, decentralized and democratized. “We see this as a great opportunity because interconnection delivers hitherto unprecedented standards of transparency in the supply chain,” says Professor Dieter Spath. In addition, products are designed so intelligently that functionality can be re-fitted in the form of industry apps, enabling real production potential to be leveraged.

**SMART MACHINES FOR LAST-MINUTE CHANGES**

Wittenstein Bastian, a subsidiary of Wittenstein AG and a specialist in gearing technology, has built just such a factory. The long two-story building with its large windows is located in Fellbach, near Stuttgart, and is surrounded by greenery. For now, it is simply a demonstration factory, into which the concepts of Industry 4.0 will gradually be integrated. But even today, it is something more than that. “In the future, thanks to intelligent machines and workpieces, it could be possible to change the specifications of a gearwheel at the very last minute,” says chairman of the board Professor Dieter Spath. If the factory of tomorrow really does become a marketplace where machine tools offer their services, this will be feasible. But is it safe and secure?

If the factory of tomorrow really becomes a marketplace where anything goes, it could be possible to change the specifications of a gearwheel at the very last minute, “says chairman of the board Professor Dieter Spath. “In addition, products are designed so intelligently that functionality can be re-fitted in the form of industry apps, enabling real production potential to be leveraged.”

**TRUST IN TÜV SÜD**

Connectivity will be the key feature of tomorrow’s production processes. Experts speak of cyber-physical systems, characterized by numerous interfaces with the outside world. The problem is that each of these interfaces also represents a potential point of attack. In the future, companies will not only have to secure their data but also safeguard their production lines against manipulation.

TÜV SÜD also protects people, the environment and property in the fourth industrial revolution – for example, through weak-point analyses, risk assessments or IT system security testing – because the importance of IT security will be even greater going forward.

Others see this as posing a danger because interconnection, with the associated necessity of opening up to the outside world, entails a loss of power. And less power means less control and less security. In this context, potential threats do not have to change radically from one day to the next.

Experts believe that barrages of targeted attacks on the industrial infrastructure will be the exception rather than the rule. However, opening up to the outside world inevitably increases the number of interfaces, in other words the number of entry points for malware, for instance, “says Holger Junker, Head of Unit at the German Federal Office for Information Security. As far as the sheer volume of possible attacks is concerned, the issue of security will play a considerably greater role in the future than it has done to date.

What’s more, it is not the attacks themselves that threaten to wreak the greatest havoc in Industry 4.0, but rather the fact that omnipresent interconnectivity will increase the scale of the damage. The area exposed to attack will become larger and with it the channels through which a virus can proliferate will become more complex. This calls for a new approach to security management, one that is in tune with the open, communicative, adaptive systems architecture of Industry 4.0.

**THE PERSON AT THE OTHER END OF THE LINE**

Trust is important because, despite the high degree of interconnectivity and intelligence in the Internet of Things, and the considerable volumes of data exchanged along the value-added and supply chains, there is always a person at the other end of the line. That person can open the door to threats with just one click or one download. But he or she can also be integrated into the process in a way that enhances communication and information, thus enhancing security.
What does trust mean to you?

»TRUST IS BEING VALUED«

»For me, trust derives first and foremost from authenticity. Do individuals actually practice what they preach and deliver what they expect from others? Can they accept their own weaknesses, failures and inconsistencies? Ideally, this authenticity engenders a credibility that is most clearly evident under pressure and in times of crisis – this is especially true of leaders. Increasingly, they have to be not so much supermen and superwomen as authentic personalities. In other words: when the going gets tough, do they distance themselves from employees and pass the buck to their subordinates? Or do they stand before their people in the front line? This distinction is reflected in language: after all, standing behind someone means you can easily take cover. When the heat is on, a trustworthy manager leads his employees from the front.

However, it seems to me that many companies today put too much emphasis on what shareholders can rely on – namely, a projected and rising return on their capital. By the same token, too little attention is given to the people without whom these returns cannot be generated: the company’s employees. They should be entitled to be valued by their company and its managers at least as much as the shareholders’ capital. If this is not the case, no amount of trust-building measures will help.«

ANSELM BILGRI

He studied philosophy and theology, entered the Benedictine Abbey of Saint Boniface in Munich, was ordained a priest by Joseph Cardinal Ratzinger – and left the monastery and the order in 2004: Anselm Bilgri sees himself as ›walking a tightrope between the Church and the world‹. A first step toward greater trust, he says, is mindfulness in management. Since leaving the Benedictine order, he has therefore worked as a management consultant and advises managers on questions of value-driven business.