

The magazine for decision makers. July 2010

#### **Dossier: Resources**

Pushing the boundaries. How a mountain hut became a laboratory of the future. Saving water. How Geberit achieves global success with smart flushing systems. The value of the worthless. Why waste is an increasingly important energy source.



Dr Markus R. Neuhaus

Dr Markus R. Neuhaus CEO PricewaterhouseCoopers Switzerland

We have seen more certain times than these. Who'd have thought a few years ago that sovereign debt default could possibly be an acute issue for European nations?

Now that the media can bring everything happening in the world to our living rooms and computer screens in the form of ever more gripping and prominent emotional images, the dangers and threats seem even more complex and omnipresent. But many of these purported threats have subsequently turned out to be a media construct. Others have simply been resolved. In all cases the solutions have come from creative, experienced people acting courageously and decisively, approaching matters with a healthy dose of confidence and optimism. Hesitancy, despondency and a lack of courage are fatal when you're trying to resolve problems. It's fascinating to see how the three people from different walks of life featured in this magazine's forum see the line between caution and optimism.

One issue that has been with us for a long time is the finite nature of natural resources. A great deal has already been said and written on the subject of sustainability – much of it very abstract. The issue becomes more concrete once you start addressing the question of how to use resources intelligently in practice, as we have endeavoured to do in this issue of ceo magazine. The example of the New Monte Rosa Hut shows us how interdisciplinary collaboration, teamwork and curiosity can lead to astonishing results. It's also astonishing to see how waste has turned into a resource that can help solve the energy problem, as our article on Von Roll Inova shows. And the examples of Siemens and Geberit demonstrate the huge impact - and market potential - of using resources intelligently on both a large and a small scale.

#### Good grounds for optimism

It seems to me that optimism is one of the keys to working out forward-looking solutions – and this also applies to the way we use resources. Our dossier shows – impressively, I think – how a mixture of creativity, expertise, experience and intellectual curiosity can help find new, better and motivating ways of doing things.

We see one of our main roles as an advisor as giving our clients grounds for optimism. Here too, by intelligently combining and channelling expertise, experience and creativity to address a problem, an advisory company can help boost or restore confi-

dence. In the PwC Expertise section our head of consulting, Ralph Schlaepfer, reflects on how consultants can be of greatest use to clients in times of economic turmoil. And in our articles on corporate performance management and headquarter moves, we look at how companies (in the former case) and a country like Switzerland (in the latter) can create grounds for confidence and optimism.

Anyone who has written a text of any length knows that this process – from putting the first word to paper to the discipline required in editing the manuscript – also requires a degree of confidence. Once again I would like to express my respect for a member of our staff, and hope that you too enjoy reading the article on our very own thriller writer.

I wish you interesting and inspiring reading!

Markus R. Neuhaus

Publisher: PricewaterhouseCoopers AG ceo magazine, Birchstrasse 160, CH-8050 Zurich, Switzerland

Editors-in-chief: Alexander Fleischer, alexander.fleischer@ch.pwc.com, Franziska Zydek, zydek@purpurnet.com Creative director: Dario Benassa, benassa@purpurnet.com

Concept, editing and design: purpur ag, publishing and communication, zurich, pwc@purpurnet.com

© 2010 PricewaterhouseCoopers. All rights reserved.

The opinions and views expressed by the authors do not necessarily reflect those of the publisher. ceo magazine appears three times a year in English, German and French. Circulation: 26,000 Free subscriptions and changes of address: sonja.jau@ch.pwc.com





Lithography/Printing: ud-print AG, Lucerne. Paper: Magno Satin FSC, wood-free, two side coated, silk, bright white

### ceo2/10, contents



Michael Hobmeier, CEO of the Valiant Holding, writes in ceo Forum: "Who dares, wins. Who dares too much, risks losing everything."

06



Hans-Martin Wahlen, CEO of Kambly, writes in ceo Forum: "Today, we cannot conceive of manufacturing our products abroad."

10



Katja Gentinetta, deputy director at Avenir Suisse, writes in ceo Forum: "I believe in people's freedom and their ability to make the right decisions."



Occupation versus vocation: PricewaterhouseCoopers' administrator Mona Bodenmann recently published her second crime novel.

54

### pwc expertise

Consulting: Managing in a downturn is a bit like running a marathon. Just as many runners count on the help of their crew over the last few miles to the finish line, many companies bring in external consultants to improve their performance.

Strategy transformation: Corporate performance management is usually geared to improving performance by way of efficient processes and systems. But PwC has now developed a model that systematically improves the effectiveness of strategy execution.

16

'The secret lies in execution": Roland Siebelink on a project to execute an effective strategy transformation within the organisation of the Swiss Life Group.

Headquarter moves: Switzerland is well placed when it comes to attracting international companies looking for a base. Bu it still has to stay ahead of countries that are constantly improving their tax competitiveness. This country has many trump cards, but it has to play them.

Service: Events, publications and analyses. Subscriptions and contacts.

Cover: KEYSTONE/Martin Ruetschi

# dossier

### resources

The notion of sustainability has taken on new meaning. It not only refers to an approach which is future oriented and environmentally aware, but now also invokes business activities that are both entrepreneurial and in the public interest. You'll find discussions and reports on this subject in our dossier. 24







Pushing the boundaries. The New Monte Rosa Hut represents a new benchmark in terms of sustainability and the efficient use of resources. It is also an object lesson in project management, a model for the future. ETH professors Meinrad Eberle, Andrea Deplazes and Lino Guzzella express their views.

26



Saving water. "We want to give future generations a better quality of life," says Albert M. Baehny, CEO of the globally successful Geberit group.

48



Educating more efficiently. "Today, people have to learn faster and more cost-effectively," says John R. Wells, President of the IMD in Lausanne.



Renaturalising land. The Schutz Nursery in Filisur specialises in Alpine-hardy plants. The roots of these survival experts provide protection against erosion.



Optimising technologies. What can companies do to make themselves and the world more sustainable? Barbara Kux, member of the managing board of Siemens on growth opportunities and limitations.



Using the worthless. Waste is becoming a sought-after energy source. Georg Silbermann, from the Swiss company Von Roll Inova, heads the Energy from Waste division of the AE&E Group.

ceo/contents 05

04 ceo/contents

# forum1. caution/confidence

# Michael Hobmeier: Who dares, wins. Who dares too much, risks losing everything. The key to every venture is the stakes involved.

Michael Hobmeier has been a member of the group management of Valiant Holding since 2003 and the CEO of Valiant Bank since 2005. Before that, he was a partner and director of the Financial Services Switzerland division at Pricewaterhouse-Coopers and then held the same position at IBM Switzerland. Hobmeier gained a degree in finance and accounting from the University of St. Gallen and in electrical engineering from the Swiss Federal Institute of Technology Zurich. On May 20 he took over as head of Valiant Holding.

Valiant Bank is a classical Swiss retail bank. Our clients are private individuals and small and medium-sized companies in areas closely associated with our sphere of activity. The companies extend across 10 cantons in the German- and French-speaking parts of Switzerland. We focus solely on the Swiss market and ensure proximity to our clients through our local presence with more than 100 branches.

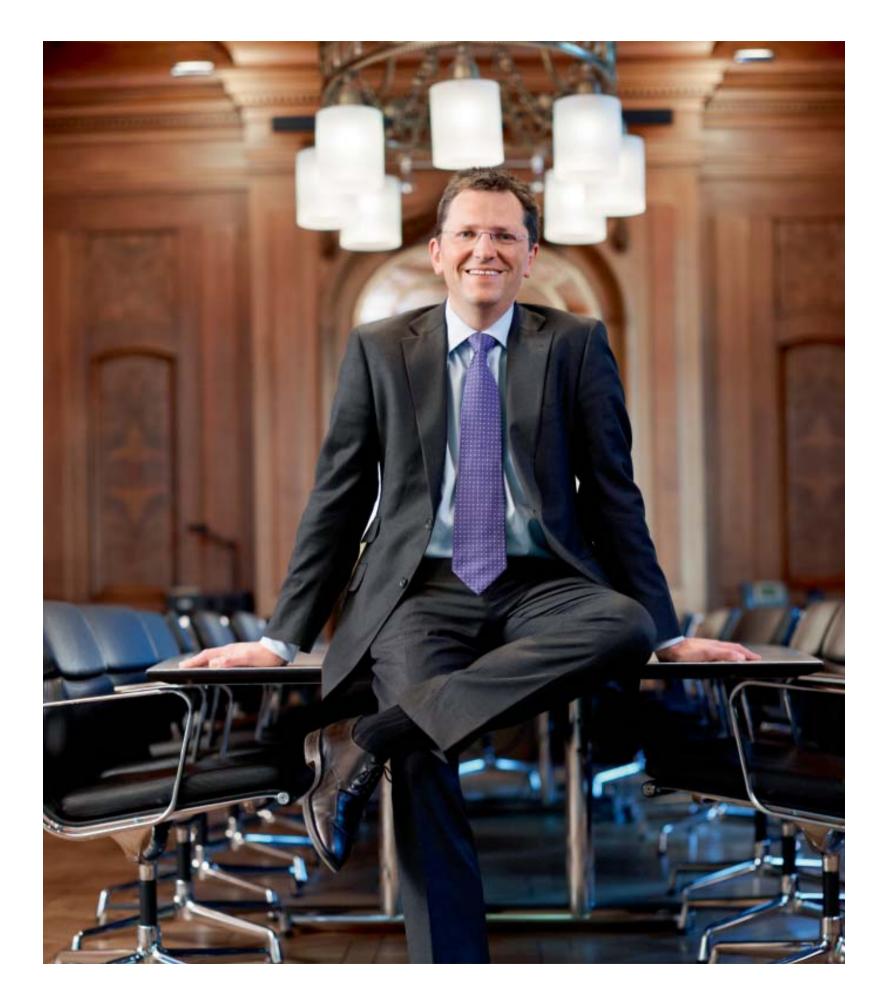
The combination of caution/confidence also aptly describes the essence of all our activities. Like every other company, we want to grow. Our strategy for growth is based on three pillars. First, we want to strengthen our market position through mergers; second, we are striving for cooperation with

strong partners; and third, we also want to grow organically. Both caution and confidence play a major role here. Confidence because it is the driver behind every acquisition or partnership. Caution because we only want to cooperate with banks that are financially sound and that dovetail with our own plans and approach because they do exactly the same thing as we do – it is not our ultimate aim to diversify.

The right blend of caution and confidence results in progress, in the form of growth, quality and stability, and in the form of trust. Progress means learning; learning involves trial and error. Trial is an expression of confidence; error ultimately teaches you the wisdom of caution. In my opinion, there is no conflict between the two terms - they go hand in hand. With confidence alone, we may be on the path to ruin; with nothing but caution, we might not tread any path. He who dares, wins. He who dares too much, risks losing everything. Any entrepreneurial decision is all about assessing the opportunities and risks. In all instances, a worst-case scenario needs to be played out. In other words, the worst case must be bearable. As a bank, we are responsible for our investors' money. Our caution in this respect is the sum of the experiences we have acquired in our business and recorded in manuals, catalogues of criteria and rules that our employees work by. These specifications ensure that we learn from our mistakes. But by no means does every business case fit perfectly into an overall formula. You also need intuition and people

smarts to carry out an assessment. The proximity to our clients that our local approach gives us plays a pivotal role here. I am regularly asked whether we have benefited from the financial crisis at Valiant and what lessons we have learned from it. Have we benefited? Yes and no. Yes, with regard to the inflow of money. Last year, we recorded a net inflow of CHF 1.1 billion and acquired many new clients. No, because we all suffer when our industry is not doing well. With regard to lessons, I can only say: We only do business that we understand and can follow - that was also the case even before the crisis. During the boom, when the major banks delivered great returns, institutions like ours tended to be laughed at. Today, our strengths are much more apparent. In that respect, the last two or three years have been good for honing our profile. However, nothing at all has changed in our business policy. Incidentally, we ceased proprietary trading many years ago. The reason for that decision is that a bank's profits become very volatile when they are closely linked with trading. We do not want any volatility; we want predictable business. And for that, we will gladly forego potential profits. //

Photo: Marc Wetli



# forum2. caution/confidence

# Katja Gentinetta: I believe in people's freedom and their ability to make the right decisions based on their knowledge and experience.

Katja Gentinetta is the deputy director and head of strategy and planning at Avenir Suisse. Her special focus is social and foreign policy.

Confidence and caution only appear to be opposites. Confident people can also be cautious – and vice versa. The two terms complement one another. For me, confidence and caution are not uncontrolled emotions but rather behavioural patterns that are deeply rooted in our own experiential knowledge. Both attitudes can be taken to extremes: Overconfidence may lead to arrogance and recklessness, and excessive caution to fear and even despair. Between confidence and caution, behaviour tends to be rational and beyond them probably more emotional.

In addition to experiential knowledge, external factors play a role. If I have to make a decision for others as well as myself, I tend to be more cautious. Seen in this light, managers and politicians have to exercise a healthy degree of caution no matter how confident they are. Attributing the current crisis to a lack of caution on the part of managers would not, however, be telling the

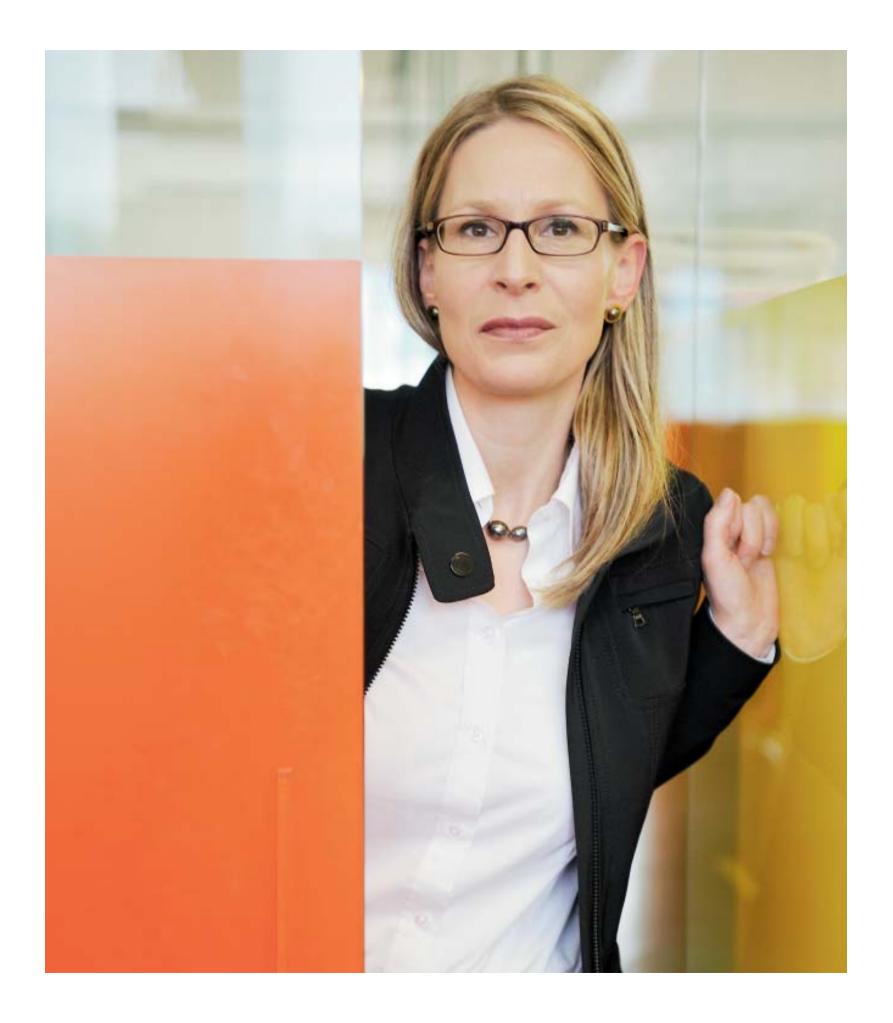
whole story. Didn't customers often show insufficient caution too? The temptation of money apparently made a lot of people not only confident but also downright frivolous. Now the pendulum is swinging back in the opposite direction, towards fear. Of course, the fact that the political elite also give the impression of trying to tackle reality as it happens without any coherent strategy does little to inspire confidence among the general population.

If you sense that Avenir Suisse too is not particularly confident about Switzerland's future, it is due to our mandate. You could say the very nature of our job makes us cautious. Our studies and analyses aim to focus public debate on topics that we believe require political action. After all, we want a Switzerland that can continue to look to the future with confidence! And we need to ensure the prerequisites for this today.

Put simply, you can examine the future in two ways. You can either draw up a remote, utopian image of the future or, based on current studies, you can extrapolate data and analyses in an objective manner and draw logical conclusions for the future. At Avenir Suisse, we adopt the second approach. For me personally, grand designs of the future are suspicious anyway. In the end, they either promise paradise in a naively confident manner or prophesy the end of the world with no hope of redemp-

tion. Messages like these usually depend on the sender's perspective. They are based on categorically good or radically bad assumptions about people. Both are wrong - the first ignores the baser motivations of people; the second underestimates their ability to act. And it is diametrically opposed to my understanding of humans. I believe in people's freedom and their ability to make the right decisions based on their knowledge and experience – particularly in regard to whether confidence is justified or caution advisable in a particular situation. In philosophy, caution and confidence are often discussed in the context of "providence". However, this providence is divine, not human. Today, when we use the term "confidence" in conjunction with economic expectations, do we mean belief in an invisible hand? Or in our own powers? Fortunately, I have achieved a lot up to now. I am regularly faced with challenges, but I also know that I have already overcome similar ones. That gives me assurance. Perhaps that is why I am a confident person. //

Photo: Andri Pol



# forum3. caution/confidence

# Hans-Martin Wahlen: Today, we cannot conceive of manufacturing our products abroad. Yet our main potential for expansion is at the international level.

Hans-Martin Wahlen is the CEO of the biscuit manufacturer Kambly. With premium fine biscuits, such as the legendary crêpetype Bretzeli, the company is on a course of expansion worldwide. This year, Kambly celebrates its 100th anniversary.

Fortunately, we have been left largely untouched by the economic crisis. Perhaps that is why we see it more as an opportunity. It has sharpened our senses. First, it strengthens us in our conviction that we can grow further as a supplier of premium products in niche markets around the globe. Second, it demonstrates to us that a good dose of caution is also always advisable. Particularly in the investments sector, the risks involved need to be well considered. Our confidence is based on three pillars: the unique quality of our products; the superb abilities of our staff in marketing and supply chain management; and our technologies, which we largely develop ourselves in line with our requirements. Producing a "Butterfly" biscuit that weighs just 1.8 grams, for instance, places high demands on the production department.

We bake our biscuits in the Emmental village of Trubschachen, which is where the founders and owners of the company have lived for three generations. The company is owned entirely by Oscar A. Kambly III and his wife. Many of the 420 or so employees

live in the area. The farmers from the village deliver the milk and butter, and the miller the flour for our biscuits. The Bretzeli, the signature biscuit of Kambly, has been produced in its original form since 1906; only a few people know the recipe. The range is supplemented every year by new creations.

We have such close ties with the Emmental valley that today we cannot conceive of manufacturing our products abroad. Yet our main potential for expansion is at the international level. Switzerland, which accounts for just under 50 per cent of our turnover, is a saturated market. Today, we are already active in more than 40 countries. The leader abroad with regard to sales is France, which is hardly surprising when you consider that the French have a long tradition in cake making and patisserie and appreciate premium fine biscuits. We have more than 140 sales outlets in Asia and representatives in New York, Moscow and Sydney. But there are still blank spots on the map where it is not yet possible to buy Kambly products. We will be specifically developing these over the next few years. The aim is to increase turnover from its current level of CHF 160 million to more than 200 million. We do not have any Kambly stores of our own - apart from the factory shop in Trubschachen. To mark the company's 100th anniversary, we expanded this outlet on 20 March of this year by opening the "Kambly Experience", where visitors can taste and buy more than 100 types of Guetzli (biscuit), experience the company's history in a gingerbread house, visually accompany

Kambly around the globe in the joyful Kambly World, watch the master confiseurs at work and, when booked in advance, also actively participate in the production of fine Kambly biscuits.

The route taken by our biscuits from Trubschachen out into the world represents our greatest logistical challenge. Exporting is expensive, which is why we are constantly striving to simplify delivery routes.

We have clear goals for the next few years. First, we want to strengthen our position as the world's leading biscuit company in the premium segment. Second, we want to be present in markets where our quality is in demand. Third, we want to grow in a sustainable manner, just as we have done over the last few years.

Knowing that the potential of the company is only as great as the ability of everybody in it, the company management is striving to provide our employees with an organised sphere of openness and trust for positive development. In this way, the people and the organisation should grow and manage Kambly as an independent family-run business over the long term, i.e. into the fourth generation of the Kambly family. Management is all about developing abilities. //

Photo: Helmut Wachter



# ceo2/10. pwc expertise

Consulting: Support over the last six miles. Page 13

Strategy transformation: Doing the right thing. Page 16

Interview: "The secret lies in execution." Page 18

Headquarter moves: What prompts companies to relocate? Page 20

Service: Events, publications and analyses. Page 22

# Consulting: Support over the last six miles.

Managing in a downturn is a bit like running a marathon. Just as many runners count on the help of their crew over the last few miles to the finish line, many companies bring in external consultants to improve their performance.

#### ralf.schlaepfer@ch.pwc.com

Is there still a need for consulting? Can companies justify spending money on consulting when they're trying to cut costs throughout the organisation? The reflex response to both questions is probably no. And indeed market data confirm that demand for advice among companies is presently less strong than during times of growth. According to the industry association ASCO, the Swiss consulting business shrank 4 per cent in 2009, and looks set to decline in 2010 as well. ASCO only expects demand to pick up again from 2011 onwards.

However, looking at the situation from the companies' perspective reveals a different picture: Since the end of 2008, their battle

for revenues, markets and margins has reached a new level. They have faced new challenges in financial and risk management. The economic slump has confronted many managements with an entirely new situation. For years they had been used to managing a business in a prosperous environment, free of the pressure of financial and economic crisis. CEOs spent their days dealing not with cost-cutting, but with growth projects and opportunities to innovate. So it's no wonder that many managers lack the skills and experience in cost management that have become so vital in today's business environment. This is where the experience of an advisory and consulting firm is so valuable. Consultants should provide resources on a temporary basis for a clearly defined task, resources that are not available within the company itself. They must also bring in competence and comparative expertise that an individual company could never develop on its own. In so doing, consultants can make a contribution in areas such as restructuring, introducing shared service centres, supply chain optimisation, offshoring, renegotiating debt and capital reconstruction. Their experience and methodologies also enable change to be tackled as quickly as necessary. The current situation – managing a business through the downturn - is like running a marathon. Now that you've reached the

20-mile mark, the question is whether you

have what it takes to make the last six miles to the finish line. In this case the finish line is a return to business as usual, or, for organisations with more ambition, a competitive edge once the cycle picks up again. Marathon runners need a crew to provide the moral and physical support and the fluids they need to get through the last six miles. Similarly, many companies have almost made it through the downturn, but not quite; external support helps them prepare for the upturn in terms of strategy, management and resources (as regards staff, material and finances). Once this has happened they will have a foundation for new growth. Then the consultant can withdraw, leaving management to get on with business as usual.

#### The type of advice is crucial

So it's less a question of whether advice is needed, and more of what type of advice the company needs. Giving the "right" advice means differentiating between the different fields consulting can cover, and deciding on precisely how the consultant and the organisation he is advising are to collaborate. Both aspects are of equal importance; good consulting happens when



Ralf C. Schlaepfer, Leader Consulting

#### Portfolio review Core competencies & blue oceans Organisational design Building new business Innovate Strategy Business technology Due diligence, carve-outs management Building, Do deals renewing Post-deal Renegotiation preparation of covenants Reorganising, Integration driving restructuring value People & change Post-deal services management Performance improvement. optimising business Corporate taxes Corporate Supply chain optimisation. Strategic planning. transfer pricing internal audit support

there is effective interplay between internal and external resources, in terms of both the content of the advice and the way it is communicated.

Example of 360° consulting

Consulting always revolves around the company's strategy. A good way of illustrating the concept of "360° consulting" is to imagine the process of formulating and executing strategy as a circle (see graphic). A company may need advice in connection with making its strategic objectives happen. But these days most organisations have a sufficiently broad range of competencies and resources of their own to implement

many of the strategic projects within this circle under their own steam. But there can be gaps which companies themselves cannot fill. This is where external consultants come in. The broader the range of competencies the external consultant has to offer, the better they will be able to do so. Consulting firms that are able to close all the gaps in the circle not covered by the organisation's own resources can add real, targeted value for their clients.

# 360° consulting requires breadth and depth

So even when companies are seeking selective support in precisely defined areas, it makes sense to use a consultant who offers the entire range of competencies: a consultant with in-depth industry knowledge combined with profound technical know-how in areas ranging from strategy to process design, finance and tax to governance and compliance issues, and which can draw on global resources. It is only with this combination of breadth and depth that 360° consulting is possible.

This is where the second factor comes in: working together as partners. Good and efficient consulting involves more than merely offering niche solutions. Ideally, consultants make themselves superfluous by putting their clients in a position to solve similar problems themselves in future. Modern consulting revolves around teams of experts and an integrative approach. Using the existing framework, the consulting team first works with the client to identify the strengths of the organisation. On this basis, strategic objectives are defined. The job then is to cultivate the strengths necessary to implement this strategy, while at the same time endeavouring to deal with or compensate for any weaknesses that exist. The external consultants must address the gap between the existing strengths and those that are required.

#### Advice starts with strategy

The point of departure for a specific consulting situation is always determined by a strategic issue. Roughly speaking, there are three different situations with corresponding strategies: growth strategies, optimisation strategies and innovation strategies. During the downturn, growth strategies geared to boosting revenues and market penetration have taken a back seat. At many companies, strategic growth projects have given way to optimisation projects centred around cost-cutting. When a business is struggling for survival, it's more interested in disinvestment than acquisitions.

By now many organisations have realised that reducing costs isn't about cutting budgets by a certain percentage. What is required is strategic cost management that enables the true drivers of cost to be identified and tackled. This means looking at how the supply chain is organised, or considering the pros and cons of offshoring and outsourcing or setting up shared service centres. Planning and implementing cost savings requires far-sightedness, as failing to take account of key enterprisewide functions that may be affected can result in a boomerang effect. For example,

extreme care must be taken to ensure that risk management and governance structures are not impacted by cuts: Compliance violations and economic crime flourish in an inadequate control environment.

#### Think of the future

Finally, it is extremely important to remember to think of the future, even when economic times are tough. As soon as there are signs of an upswing, it will be time again for innovation and growth strategies, subject to strict cost management. For this reason far-sighted businesses are already thinking about how to create competitive advantage going forward, for example through research and development or targeted deals. They are starting to refocus on performance, and on how to make the transition from old to new organisational structures. Here it is decisive for transformation to be communicated effectively, in other words to involve the organisation and the people who work for it in the process of

This is also the time to reassess costcutting programmes. Human resources are key to being prepared for the upswing. Does the organisation have enough people, and even more importantly, the right ones? Does it have sufficient resources at both the top and second levels of management to get the business up and running again? If action is required on the personnel front, corporate culture and corporate values will be crucial to the future success of the organisation. If staff are able to identify with the organisation's values and culture – in other words if people feel fully involved and committed to its success - this will also boost loyalty and innovation.

#### **SUMMARY**

Can companies justify spending money on consulting projects at this time? Yes, they can, for at least four reasons:

- External consultants have specialist knowledge, and most importantly knowledge applicable to times of crisis, that management does not need during normal periods, and which may be much too expensive for companies to acquire themselves.
- External consultants can draw on a wealth of experience that allows them to benchmark (in areas such as cost optimisation) or compare different options for resolving problems.
- External consultants can provide temporary resources to tackle isolated challenges or bridge busy periods.
- External consultants can act as partners enabling organisations to help themselves.

The 20-mile mark is a crucial point in a marathon. Good runners make sure they have people on hand to provide isotonic drinks and moral support. In business, consultants play a similar supporting role, helping management through the gruelling periods in the downturn so that they can focus on new goals again in the subsequent upswing.

# Strategy transformation: Doing the right thing.

Corporate performance management (CPM) is usually geared to improving performance by way of efficient processes and systems. But PwC has now developed a model that systematically improves the effectiveness of strategy execution.



Roger Kunz-Brenner, Leader Business Reporting Mario B. Stephan, Director Corporate Performance Management

#### roger.kunz-brenner@ch.pwc.com mario.stephan@ch.pwc.com

In a globalised economy with lower market entry barriers, shorter innovation cycles, and an increasingly rapid succession of new technologies, businesses find themselves under steadily growing competitive pressure. To survive and flourish in an environment like this, companies must step up their performance. They are most likely to do this if they manage to implement their strategic objectives systematically and effectively. Here lies the real aim of corporate performance management: to define principles and methods that an organisation can and must apply to improve its performance. There are two places performance managers can start: with the "what", or with the "how" of what the company does. The "what" has to do with effectiveness: It's about doing the right thing, or ensuring that what the company does results in a better performance. The "how" has to do with efficiency: It's about doing things in the right way, in other words influencing the manner in which the company goes about its business. Both these approaches - increasing effectiveness and improving efficiency – are ways an organisation can apply leverage to achieve a better performance.

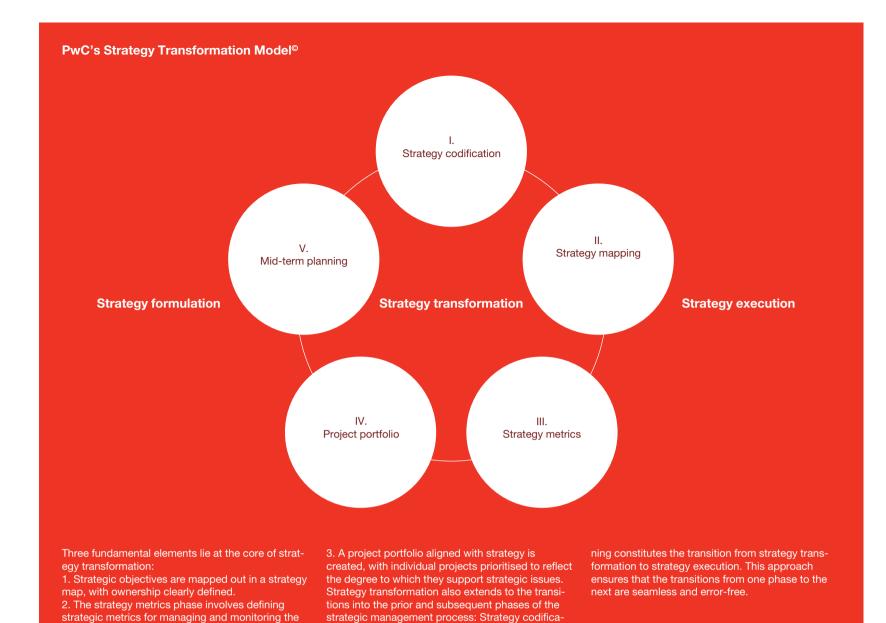
There are various places this leverage can be applied, including management processes. Traditional CPM models are

designed primarily to improve the efficiency of operational processes. They focus on optimising processes and systems, ensuring the rapid availability of accurate data, and ensuring the availability of the right information for the appropriate levels of management. The metrics contained in balanced scorecards are intended to show "how" a company operates. But now there is a growing realisation that improvements in performance - or at least significant improvements - cannot be achieved via improved measurement systems. This is why metrics-based management models such as balanced scorecards are finding less and less favour.

#### Choosing the right courses of action

These approaches do not pay sufficient attention to what is to be done in the first place. But it is precisely this question that is decisive: whether the business is choosing the right courses of action to effectively achieve its strategic objectives. Since strategies are executed via projects, effective strategy execution revolves around a project portfolio. PwC has developed an approach that addresses precisely this issue, focusing on the effectiveness of the way strategies are executed or transformed into concrete actions: the Strategy Transformation Model®.

Since strategy transformation, as the link connecting strategy formulation and strategy execution, is the key component of the management process, the model deliberately addresses the management process itself. Empirical research shows that a large



part of effectiveness, and thus a large part of strategic success, can be attributed to the strategy transformation phase. Not only does the Strategy Transformation Model® provide a methodology for effective strategy execution, but it gives CEOs an instrument for constantly aligning the company's resources to changes in the operating environment.

business, which are visualised in management

cockpits and a dashboard.

#### Constantly setting new priorities

The project portfolio plays a pivotal role within strategy transformation. These days there is no dispute that the most potent lever of value lies in optimising the project portfolio. It is through the project portfolio that management creates a basis for effectively translating strategy into reality by

choosing the right projects – in other words the most effective ones – and reprioritising them on an ongoing basis.

tion is the interface between strategy formulation

and strategy transformation, while mid-term plan-

This is why unlike traditional management approaches, the Strategy Transformation Model® does not confine itself to formulating forward-looking metrics. Significantly, it also sets up strategic criteria which enable prioritisation of the activities defined as a means of executing strategy. This model allows a company to lay down clear preferences, as it provides tools for evaluating individual projects in terms of how effectively they contribute to the attainment of objectives.

# Discontinuing projects without strategic value

The financial value of individual projects is usually measured by calculating a figure such as net present value (NPV). This calculation should always relate to the original information on the value of the project, as this was the basis on which the project was given the go-ahead in the first place. Every project with a negative NPV should be subjected to scrutiny, as experience shows that however well they are funded, projects like this generally fail to deliver the hopedfor benefits. Another rule of thumb is that the longer a project runs, the harder it is to stop it. The strategic value of a project depends on the degree to which it supports

strategic objectives, both quantitatively and qualitatively. If a project makes a major strategic contribution, this can more than make up for a negative NPV. But if a project has no value from either a strategic or a financial point of view, the company can shelve it with a clear conscience and use the resources for better, more effective projects.

# Managing objectives via project optimisation

Strategy transformation provides a methodology for re-evaluating the individual projects in the portfolio on an ongoing basis, and gives management a set of convincing arguments when it comes to communicating the prioritisation of projects internally. It allows performance managers to concentrate on the relevant issues, and focus on the question of which projects are doing most to improve performance.

Strategy transformation enables a company to identify and assess the most effective courses of action in a particular economic environment. The strategic planning and budgeting phase only starts once strategy has been specified in such a way as to allow objectives to be managed via project optimisation. After this the various instruments for improving efficiency come into play. For example, information can be made available rapidly to the appropriate levels of

The philosophy underlying the effectiveness-driven

model is based on the realisation that the best way

of improving corporate performance is by increasing

ive means of executing strategy is to constantly align

the project portfolio to the company's objectives.

Strategy Transformation Model<sup>©</sup> is different from that

of traditional performance management, which focuses

on process efficiency and optimising metrics. The new

effectiveness in the choice of projects. The most effect-

**SUMMARY** 

management. This provides the basis for the CEO to make decisions crucial to the management of the business – never losing sight of the project portfolio, which has already been optimised.

This new, effectiveness-driven approach to corporate performance management is designed to improve the performance of a company by enabling it to execute strategy more effectively than is possible with existing models aimed at optimising metrics. Naturally companies should continue to exploit all their options for improving the efficiency of operational processes. But the most effective element of performance management is the effectiveness of the strategic implementation process, in other words the ability to choose the right projects and prioritise these projects on an ongoing basis in the light of strategy. Roland Siebelink, former Head of Group Strategy at Swiss Life, puts it in a nutshell: "The secret lies in execution."

# "The secret lies in execution."



Until March 2010, Roland Siebelink was Head of Group Strategy, Portfolio and Performance Management at the Zurich-based insurance group Swiss Life. In this capacity he ran a project with PwC to execute an effective strategy transformation within the organisation. He is now CEO of the Swiss-Canadian IT company PhiScape.

Roland Siebelink, you argue that a company's performance depends to a large extent on its ability to focus on certain differentiating features. In this light, how can organisations go about managing corporate performance?

Performance managers have to understand that a company can't be as good as or better than the competition in all respects. So they have to make sure that the limited resources that are available are deployed in areas where the company can best stand out from the competition. The aim of performance management should be to ensure that the organisation leads the way in terms of only – yes only! – two or three strategic issues. In all other areas it's sufficient to meet an acceptable minimum standard while keeping costs as low as possible.

In turbulent times companies are primarily looking for crisis managers who can oversee short-term cost-cutting and optimisation projects. Where do strategy managers come in?

Strategy is often equated with medium-term planning and demarcated from short-term measures. I think this is misleading. The

original meaning of "strategy" is derived from warfare, not futurology. It's all about winning the war in the marketplace. This requires both short- and medium-term action. But what's important is to ensure that all these actions take you in the same direction. It doesn't matter whether times are turbulent or not: You should always be thinking about how to position yourself better in the market, and how to convince and bind customers and shareholders for the long term – whether you do it by means of better or different products and services, or via lower costs and price cuts.

# What are the implications in terms of cost-saving programmes?

In most cases, even if a company has a problem with costs it doesn't mean that every single thing it does is done inefficiently. What companies are often doing is trying to deliver too many different things to the highest possible standards of quality. The challenge is to cut funding for or even discontinue entire activities where the company is failing to differentiate itself in the marketplace. You then free up resources to invest in areas where your organisation is differentiated from the competition.

#### Basically companies seeking to improve their performance can apply leverage in two places: boosting effectiveness, or increasing efficiency. Which of these two levers does Swiss Life favour?

This is also a distinction I sometimes find misleading. If you're doing something ineffectively, it doesn't matter how efficiently you do it. And if you're doing something inefficiently, it's almost always because there are too many subsidiary goals undermining its effectiveness. So we always use both levers. Efficiency measures bear fruit relatively quickly. But if you fail to invest in measures to improve effectiveness at the same time, your company will have no potential for the future. The times where organisations found themselves either in growth or cost-cutting mode are gone. Activities that make the least contribution to success in the marketplace usually also result in higher costs in terms of core processes. If a company focuses strictly on the most important needs of its customers. it will also boost its effectiveness and efficiency.

# Is this combination where the secret of performance management lies?

The secret always lies in execution: in the painful but necessary decisions that impact the everyday work of middle management. And this happens almost exclusively via projects. Projects must be realigned on a permanent basis, and the portfolio has to be structured differently from what was originally intended. This really is where the secret of performance management lies.

### How important is optimising the project portfolio in terms of executing strategy?

You can draw up no end of strategies in PowerPoint slides. But if there are no concrete projects to drive the desired change forward, these strategies are worth little more than the paper they're written on. Using the strategy transformation model devised by PwC, we were able to work out where to apply strategic leverage. Now each project that's submitted is reviewed not just in terms of its profitability, but also – primarily – to ensure that it underpins one and only one of the targeted strategic issues. This is the link between the strategy formulated on paper and the concrete things we make happen to shape our future.

# What conclusions did Swiss Life draw from this analysis? Were projects shelved or discontinued?

Oh yes. For example we found that in one unit, more than 50 per cent of projects did not serve our strategic objectives. More than 80 per cent of these projects were cancelled, shelved or rejected. If you're not prepared to cancel projects, you won't bring the business any further forward. The advantage of actively managing your project portfolio is that you're only killing ideas as part of projects. Ultimately that's easier to swallow than closing whole departments or making people redundant.

# Why did you bring in an external consultant to support you with strategy transformation?

When we initiated the new strategy we needed a strong impetus to make the change concrete for middle management and staff. Within the organisation there were too few people with the right knowledge and experience, and there was a certain lack of neutrality in discussions, which involved all our managers, including people from the various country organisations. We were glad to be able to work with experienced specialists. With their help it soon

became clear where the problems lay and what the potential savings were. Once we saw this potential, there was no question in management's mind that we wanted to follow through.

### What was the concrete output of the new methodology?

Swiss Life's project portfolio used to consist of the sum of the projects submitted. These would be discussed and a small number thrown out, but most projects would simply be implemented. By applying the strategy transformation methodology to these proposed projects, we were able to achieve savings equivalent to at least 100 FTEs. But we didn't make these people redundant; instead we deployed them in more effective projects that really moved the business forward. Not only this, but there was a clear shift in the mentality of our managers in the desired direction. They now realise that every project has to support the company's strategy, and that every project has to be able to demonstrate its profitability. Even though our goal wasn't savings as such, but moving towards more effective projects, the mere fact that we cancelled or realigned projects that were not congruent with strategy meant that the project with PwC achieved the desired return on investment more rapidly than I've ever seen with any other project.

### Is Swiss Life now able to apply the methodology itself?

That was the goal from the outset. And we achieved this goal not only at group level, but also at the level of the country organisations

# Do you think that Swiss Life succeeded in creating a foundation for effectively harnessing its differentiating features to build its market position?

In terms of performance management, absolutely. We backed the right horse when we opted for the strategy transformation project. At the same time we reduced our structural costs. Together, these factors mean a much stronger position in the marketplace.

18 ceo/pwc expertise enced specialists. With their help it soon ceo/pwc expertise 19

# Headquarter moves: What prompts companies to relocate?

Switzerland is well placed when it comes to attracting international companies looking for a base. But it still has to stay ahead of countries that are constantly improving their tax competitiveness. This country has many trump cards, but it has to play them.

#### stefan.schmid@ch.pwc.com

With the economy becoming more and more global, and international companies less and less tied to their home market, many are now asking where the most suitable locations are for regional or even global headquarters.

Headquarter moves are a strategic issue for management. And for potential locations, they are a reason to compete: Alongside foreign direct investments, there are surely few better indicators of a country's locational attractiveness than its ability to attract companies looking for a base. Competition in individual countries is influenced by many different factors, which reflect the criteria by which companies assess potential locations. In addition to the ability to meet business requirements by offering scope for optimising internal and external production,



Stefan Schmid, International Tax Services

distribution and/or service delivery processes, these locational factors extend to tax competitiveness, a high degree of stability and consistency in the law, a liberal employment market, a good work ethic, political stability, a good transport and communications infrastructure and geographic location, the availability of a qualified workforce and quality of life. The main considerations for companies moving headquarters are a combination of strategic and related operational factors. This may include the need to implement a centralised, more efficient distribution structure, or locate headquarters closer to the market. Only once these matters have been clarified can the company start asking where its new regional or global headquarters are to be located.

#### **Operational and tax benefits**

At present, as tax competition has got more intense, Switzerland is an extremely attractive location for companies. This is reflected among other things in the country's high rankings in numerous international comparisons. In the "Global Competitiveness Index 2009–2010" published by the World Economic Forum, for example, Switzerland once again took first place. As might be expected, this top ranking is down to the stability and consistency of the law, the lack of bureaucratic red tape, the infrastructure

and education system, the quality of research and development and employment market structures. But there are growing concerns that this competitive advantage could be lost. SwissHoldings, for example, the association of multinational companies in Switzerland, has produced an entire catalogue of requirements for politicians, designed "to bring about lasting improvements in Switzerland's attractiveness as a location for headquarters".

cial industry and the regulation of management compensation, and in particular altercations with other countries on taxation and banking secrecy, have detracted from the dependability of the operating framework in Switzerland – surely the most important locational factor of all. These doubts as to the reliability of institutions, while they lack any substantial basis in fact, are unfortunately the result of confusing communications. This means that the most important signal Switzerland can be giving to multinationals at present is to communicate its locational policy clearly and consistently.

#### Time zones and quality of life

Multinationals' interest in Switzerland is demonstrated by a development that started at the end of 2008. Since that point, around ten US groups have relocated their global headquarters to this country. One of the reasons for so many headquarter moves within such a short space of time is a possible change in US tax laws that could have far-reaching implications for so-called inverted groups.

From 2000 to 2004, various US companies with considerable business activities outside the United States moved their listed holding companies to offshore locations such as Bermuda or the Cayman Islands. The classic way of doing this was to deposit the already listed shares of the US group in a newly set-up offshore holding company. which thus became the parent company listed on the US stock exchange. However, there was usually little business activity at this offshore holding company, especially given that group management was seldom prepared to move to these locations. The aim of US groups in these "inversions" was to carry out future foreign investments via the new holding company to prevent this investment - which is not connected with the United States - from being subject to US taxation of foreign-sourced income. These structures were possible in the first place because US tax law, unlike the law in most other countries including Switzerland, currently has no rules for determining the tax country of residence of companies on the basis of the place the management is actually based, instead considering only whether a company is incorporated in the United States. This means that these groups can continue to be managed from the United States, with minimal or no management functions at all located offshore, without offshore profits being subject to US tax. Actual management activities in the United States are taxed only on a very small profit base.

The USA is currently looking into the introduction of rules for taxing companies at the place of management and control, the result of which would be that foreign corporate headquarters of inverted groups that perform no substantial management and control functions would no longer be recognised, and would be treated for tax purposes as if they were located in the United States.

When signs emerged that these rules on location would be tightened, the groups concerned had to decide whether to accept the fact that they would have to move their parent company back to the United States for tax purposes, or whether to seek an

#### **Key factors to consider when relocating to Switzerland**

- Switzerland has many locational advantages. To harness these advantages to strengthen their own competitiveness, companies seeking to relocate here should develop and review a solid market entry strategy.
- Switzerland's federalist system is an opportunity for companies to systematically harness the advantages of different cantons. Besides tax considerations, language and the business infrastructure are important factors.
- Integrating Swiss business activities with the global value chain requires careful analysis of all the relevant operational, tax and legal factors.
- Corporate headquarters and regional hubs employ highly qualified people of a wide range of nationalities. Clarifying employment law issues is important, as are the design of compensation systems and the individual taxation of expatriates.

alternative location. Any location would have to make sense in terms of the development of the business and in operational terms, and it would have to be attractive to top management, who would actually be working there. And of course any alternative location would also have to be appropriate from a tax point of view.

Many opted for Europe, for one simple reason: For global companies, Europe is in the ideal time zone, midway between America and Asia. Once they had made this basic decision, companies had to choose a specific destination in Europe. With the tax system one of the overriding factors. Luxembourg, Ireland and Switzerland generally ended up on the shortlist. But the final decision on which of these countries with similarly attractive tax structures to choose was ultimately determined by other factors: quality of life and infrastructure. Since the new headquarters would also be the place executives would be working, the new location also had to fit the bill as top managers' new principal place of residence. This is an area where Switzerland scores high points.

#### **Customer-friendly bureaucracy**

However, this advantage is no reason to stop trying to boost Switzerland's locational attractiveness. Other nations are catching up in terms of tax, with the Benelux countries in particular going to great lengths to attract international groups, and introducing new taxation models recognised by the EU. To stay abreast, Switzerland must offer more than just an attractive tax framework. It must build on its oft-cited strengths and nurture its traditional virtues. These include

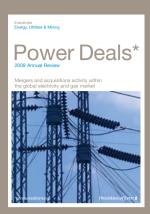
the possibility of talking openly with the authorities. In this country the authorities have always understood the concerns of companies seeking to relocate, and, in adherence to the applicable legislation, have seen fit to decide in the interests of those prepared to invest. Even though there are differences from canton to canton, Switzerland typically treats investors as customers.

This unbureaucratic approach to organisations seeking to relocate, which is also manifest in the speed with which applications are dealt with and the binding nature of agreements, underscores Switzerland's reliability and builds trust. But here too the competition is intense. Other countries are firmly on the ball, launching comprehensive location strategies designed to force competitors such as Switzerland out of the game. This is something the Swiss authorities have to be aware of.

#### **SUMMARY**

While a favourable tax climate is one key determinant in attracting companies to this country, it is not sufficient on its own. To stay ahead of countries with comparable tax regimes, Switzerland has to have an effective, coordinated communications policy emphasising the numerous other locational factors that work in its favour.

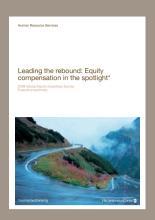
#### Events, publications and analyses.



Europe's energy providers lead the way

In 2009 there were 596 deals in global power and gas utilities industry, a 10 per cent year-on-year decline in the number of the total value of these transactions shrank to only half of the previous year's level. As they did last year, European utilities companies led the global process of consolidation, accounting for more than 60 per cent of total deal volume.

The only major deal in Switzerland was the merger of EOS and Atel to create Alpig. You can download the "Power Deals" report compliance requirements around the globe. in English at www.pwc.ch/energy.



Equity compensation in the

Equity Incentives Survey" condenses the findings of the sixth such survey conducted mergers and takeovers. At USD 97.6 billion, by PricewaterhouseCoopers. The report is one of the most comprehensive studies available on the design and administration of equity incentive compensation plans for multinational companies. The 2009 survey covers new topics reflecting general trends in the mix of equity awards, in shifts in global grant practice, in shareholder activism and in continued adaptation to various tax You can download the publication in English at www.pwc.ch/publications.



CEOs are convinced the economy is on

The executive summary of the "2009 Global" Of the CEOs polled worldwide, 81 per cent say they are very confident of economic growth in the next twelve months. Around 40 per cent are planning to increase their headcount in 2010.

A protracted global recession is the main worry of CEOs across the world (voiced by 65 per cent of those polled), followed by fears of overregulation (60 per cent). These are some of the findings of PricewaterhouseCoopers' "13th Annual Global CEO Survey", conducted on 1,198 CEOs in 52 countries in the last quarter of 2009. You can download the publication in English at www.pwc.ch/en/press\_room

Short, concise and to the point! Keep track of PwC Switzerland on Twitter:



Appetite for change:

Despite the outcome of the Copenhagen summit, companies are taking climate change and environmental requirements very seriously. PwC has published a report entitled "Appetite for change: Global business perspectives on tax and regulation for a low carbon economy" which shows that business wants a uniform framework and reliable rules, and is prepared to take measures to protect the climate. There is considerable potential support in the global business community for carbon taxes, emissions trading schemes and financial incentives. A clear majority of executives polled believe that climate change will have a major influence on the way we do business going forward. One quarter expect changes in terms of compliance with climate legislation and regulation, with other important influencers including cost savings and competitive advantage. There is also a growing realisation that climate change is boosting demand for new and innovative products and services. The survey covered 700 companies in 15 countries, namely the USA, UK, France, Germany, the Netherlands, Spain, Sweden, the Czech Republic, China, Canada, Russia, Brazil, India, South Africa and Australia.

You can download the report in English at www.pwc.ch/sustainability.



Emissions trading: ready for

Events.

Turnaround Community Forum.

The Turnaround Community Forum is

designed as a platform for promoting

in restructuring are presented and

Next forum: 21 September 2010,

Park Hyatt Zurich

discussed on the basis of real-life ex-

Contact for information: Markus Koch,

Head Business Restructuring Services

Switzerland, markus.koch@ch.pwc.com

dialogue among turnaround managers,

bankers, investors, lawyers and corporate

executives. Challenges and developments

Are airlines and freight carriers prepared for emissions trading? In an exclusive report entitled "Ready for take-off? The inclusion of aircraft operators in the EU Emissions Trading Scheme" PwC investigates how far European airlines are prepared for the planned introduction of emissions trading. You can download the publication in English at www.pwc.ch/publications.

Questions audit committees members should be asking.

Audit committees will have to consider the impact of the current regulatory and economic environment on their financial reporting. A PwC brochure entitled "Fragen, die Audit Committee Mitglieder stellen sollten" ("Questions audit committee members should be asking") identifies issues that may have important implications in terms of the preparation of financial statements and that should normally be included in the audit committee's discussions with management and the auditors. You can download the publication in German at www.pwc.ch/publications.

#### Subscriptions:

ceo, the magazine for decision makers, The magazine appears three times a year in English, German and French. To order sonja.jau@ch.pwc.com specifying your desired language.

Address: PricewaterhouseCoopers, ceo Magazin, Birchstrasse 160, 8050 Zurich, Switzerland.

#### Reader service:

pwc expertise section of this issue of ceo magazine can be contacted directly at the e-mail addresses given in their article. For a comprehensive overview of PricewaterhouseCoopers publications, please visit www.pwc.ch. You can order PwC publications and place subscriptions by e-mailing sonja.jau@ch.pwc.com or faxing 058 792 20 52.

3 minutes: a monthly publication for your company.

"3 minutes" looks at current issues in the economy and the associated business challenges. It features short, informationpacked articles on relevant management themes that look into the risks and provide concrete, practical recommendations.

If you would like to subscribe to the publication in English, German or French, or download previous issues, please go to http://www.pwc.ch/3minutes.

Twitter.

www.twitter.com/PwC\_Switzerland

# dossier resources

#### Pushing the boundaries.

ETH Zurich uses the New Monte Rosa Hut as a research station for sustainability and smart technologies. That this spectacular structure was built at all is a tribute to organisation, coordination and interdisciplinary collaboration, and an object lesson in project management. This is how the future could look.

#### Saving water.

The world's population is growing and the trend of urbanisation is continuing. The result is a steadily increasing demand for water. Geberit develops water-saving flushing systems. "We want to give future generations a better quality of life," says Albert M. Baehny, CEO of the globally successful group.

#### **Educating more efficiently.**

The IMD in Lausanne is helping to make teaching more efficient by looking at how different people learn most quickly. Companies invest heavily in training their employees, and want to be sure the outlay will pay off. "Today, people have to learn faster and more cost-effectively," says Dr John R. Wells, President of the Lausanne Business School.

#### Renaturalising land.

The Schutz Nursery in Filisur specialises in Alpinehardy plants. The grass-growing section of this family-run business in particular is booming as the roots of these high-Alpine survival experts bind soil in avalanche barriers, roads and dams, offering efficient protection against erosion.

#### Optimising technologies.

What can companies do to make themselves and the world more sustainable? Barbara Kux, member of the managing board of Siemens, head of supply chain management and chief sustainability officer, gives her thoughts on growth opportunities and limitations.

#### Using waste.

Waste is becoming a sought-after energy source. Swiss firm Von Roll Inova is the market leader in energy from waste technology.

Texts: Corinne Amacher, René Bortolani, Kaspar Meuli, Franziska Zydek Portraits: Markus Bertschi



# dossier **resources** pushing the boundaries



A team venture: Meinrad Eberle with the model of the New Monte Rosa Hut at an exhibition at ETH Zurich.

### Uniting forces.

"Without strong partners from business, the Swiss Federal Institute of Technology (ETH) would never have been able to implement its New Monte Rosa Hut venture," says Meinrad K. Eberle. The professor emeritus for internal combustion engines and combustion technology at the ETH Zurich was responsible for coordinating and managing the project.

#### Professor Eberle, are you a mountain climber?

More a mountain walker. I like ascents.

# So we'll occasionally see you in the New Monte Rosa Hut, then?

Yes, definitely. I will be going there frequently – for two reasons. First, I am interested to see first-hand how the energy management for the hut – the research part carried out by the ETH – is done. Second, there are a lot of people who want to go up there, and I will be accompanying some of them.

# The New Monte Rosa Hut was the largest project associated with the 150th anniversary of the ETH Zurich, and you were the project manager.

It was the biggest and the most complex. You are now probably wondering: Why would anybody do something like that? The answer is quite simple: When you organise an anniversary, you start thinking about what characterises the organisation. In our



Snowfall after construction commenced in 2008.

Photo: ETH Zurich, Hans Zurniwen

"When you build a structure that is almost 2,900 metres above sea level, risk management is particularly important. We regularly examined different variants, including from an engineering perspective, and tried to systematically record the risks."

case, we asked, "What sets the ETH apart"? It is an engineering college. It is an academy of architecture. It symbolises sustainability and cross-border expertise. So we looked for projects that fit into this framework. The New Monte Rosa Hut was one such project. Incidentally, it was my wife's idea. She is a biologist and has been a fan of the Valais mountains and their flora for years.

# Combining all the expertise of ETH Zurich in one project – was that the appeal for you?

Yes. To put it bluntly, I said I didn't fancy having a barbecue and drinking beer to celebrate the anniversary, even though I do like doing that on other occasions. I wanted to implement projects that said something about the ETH. The New Monte Rosa Hut is the work of an ensemble: It combines architecture with great emotionality and aspects of sustainability, avant-garde energy management, research and engineering. The trick is in achieving this combination. That's what makes this project so fascinating.

# The New Monte Rosa Hut is a prime example of interdisciplinary collaboration within and outside of the university.

The ETH can develop an idea, execute certain elements and manage projects like these. But it relied on partners for the implementation. We collaborated with universities of applied sciences and industry. Some sponsors contributed specialist know-how as well as money towards the construction of the hut. As you know, the building was not financed out of taxpayers' money. And that automatically meant we had to have strong partners.

# Was it difficult to balance the interests, ideas and perceptions of all the disciplines and personalities involved?

It was indeed a challenge. You have to be able to reconcile extreme positions: On the one hand, for instance, you have the

architecture, which is a form of art and strives for emotionality; on the other hand, there is the Swiss Alpine Club, which is primarily interested in functionality. The architecture demands certain standards that the other party does not understand at all. And then you need someone in between who tries to bring the two sides together ...

#### ... and can keep costs under control.

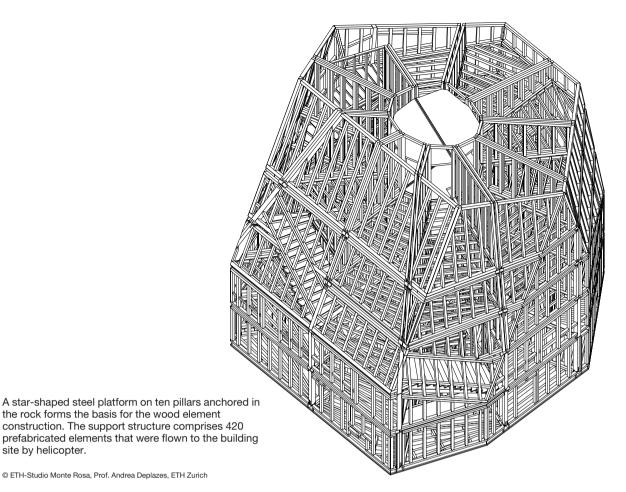
When you build a structure that is almost 2,900 metres above sea level, risk management is particularly important. We regularly examined different variants, including from an engineering perspective, and tried to systematically record the risks. For a long time during the construction of the façade, for instance, we were not sure whether we were doing the right thing. The bottom line in the discussions was that we only used components that were already tried and tested and that we knew worked. Throughout, we were very conscious of the risks and dealt with them accordingly.

#### What was the biggest challenge for you?

There were two, actually. First, the financing. I was the person responsible for procuring funds. Second, bringing all the different forces under one roof, so to speak. There were strenuous discussions in places. You have to demonstrate great persistence to implement a project like this one. If you are not prepared to make a special effort, then you shouldn't start it in the first place.

## The hut cost CHF 6.5 million to construct. How did you go about obtaining the funds?

First, you have to have an idea. Then you have to be able to document the idea well, and ultimately you have to be able to communicate it. In addition, you have to know people. I wasn't just a professor; I had also worked in industry for 20 years. That's why I know a lot of people. I had the necessary contacts, and still do.



© ETH-Studio Monte Rosa, Prof. Andrea Deplazes, ETH Zurich

#### So it's all about networking?

Yes, and you need to have reached a certain age for it. A 20-yearold will never have the network that a 60-year-old or a 70-year-old has. When you're looking for a sponsor, there's always the guestion: "Whom do I contact?" If you don't know the right people, you won't get the money.

You were able to convince 3 so-called Nobel partners, i.e. main sponsors, 9 master's partners and 31 bachelor's partners of the worth of your project. Did you negotiate with these partners yourself?

Yes, I did. When you talk to the CEO of a major company and also want money from him, you have to do it yourself. You cannot send your assistant, no matter how nice that person may be.

You got the money because your enthusiasm is catching. That's right. I can motivate people and communicate well.

#### Are you an extrovert?

If I had been an introverted researcher in an ivory tower, the project would never have got off the ground. That is not meant as criticism of others; I only mean that you need a certain type of personality to see something through.

From the idea to the opening of the New Monte Rosa Hut in March 2010 it took about six years. Was there ever a moment during that period when there was a risk of the project failing? Things were occasionally slow moving with regard to financing. There was a difficult moment when we had trouble motivating the Valais to participate.

#### Do you mean companies in the Valais?

There was a phase during which certain people in Zurich told me they would not contribute anything to this project if the Valais did not participate. I had to put the canton of Valais under pressure. I told the people there: "If you don't participate, this hut is not going to be built."

"This hut" has now been completed and opened. The 150th anniversary is over. You are 73, and retired. What are you going to do now?

I am often asked that question.

#### It's fair, isn't it?

The answer is: I still have my office at the ETH. I will be occupied with the New Monte Rosa Hut project until around the end of the year; everything should be settled by then. I am also working for a company; and have a few major projects of my own as well. I am a workaholic and will continue to work full-time. I will, but I don't have to. That's my privilege. //

dossier **resources** pushing the boundaries



Playing with possibilities: Andrea Deplazes and ETH architecture students.

### Building a castle in the air.

"Architecture must create a coherent whole out of requirements that you cannot always select or influence," says Andrea Deplazes. For this ETH Zurich professor, the New Monte Rosa Hut proves the feasibility of utopias.

#### Professor Deplazes, it all started with the idea of building an SAC (Swiss Alpine Club) hut, in addition to other projects, to celebrate the 150th anniversary of the ETH Zurich. What interested you most about this project?

From the outset, it was the remote location up there in this crazy world of mountains and glaciers. Like an island! Another factor of course was the ETH Zurich's stipulation that the hut be very comfortable despite the remoteness. The project is a case study for the efficiency of modern technologies and their interaction – in fact, you could say their integration in architecture is a kind of feasibility study for futuristic global urban development.

#### How would you grade the result?

I think we have succeeded in realising a construction outside of established conventions that points the way to new solutions.

# dossier **resources** pushing the boundaries

### What were your requirements from an architectural perspective?

Architecture is not an isolated discipline. Nobody can just build a house today. The physical, engineering and technical aspects alone present complex challenges. A further complication are soft factors such as people and their ideas, in other words, the cultural framework. And these days, sustainability plays a huge role. Finally, there are always personal considerations: What can I do as an architect – and what will society accept? What is relevant? The project emerges gradually out of all these different requirements and questions – for me, that is a very special moment every time.

# The hut was developed in the ETH Zurich Monte Rosa studio over four semesters by alternating students in different project phases ...

The process was really extraordinary! The construction site and the potential builder were real, as was the remote location with its extreme weather conditions – not to mention issues such as transport logistics, infrastructure, energy and water management. It soon emerged that the absence of our familiar civilisation brought to light a wealth of very urban problems that the students had to take into account in developing their concepts. Ultimately, the hut was created by a process of evolutionary design involving 33 students.

#### A competition among students – how did that work?

The drafts – a dozen in all – were developed and discussed in open competition, with a cup being awarded to the winner. Contestants were permitted to adapt other people's ideas and to combine them intelligently. What counted was the better concept in each case – no matter where it came from. The origins of an idea were thus consciously blurred, and the sensitivity for the process as such was encouraged. Other factors included discussions with experts and specialists from other disciplines and an intensive dialogue with the SAC. In my opinion, such a process is an ideal basis for allowing new things to develop, a pioneering form of collaboration. The Monte Rosa Studio was thus something like an architectural flight simulator.

# Was it your task as a professor to point the students in the right direction?

Yes, in the form of coaching: I was the trainer who determined the game plan and deployed his players as best as possible in the team. I believe that you can only overcome boundaries by permit-

ting errors. To create new things, we need the privilege of developing new scenarios that are not rational or promising at first glance. It is not always the easy things that are the right way to go. Architecture is a game with countless possibilities.

#### So it's not a rational process?

If we were all rational, we would be machines. The ability to err is a human potential that is utterly underestimated and is often even seen as a moral blemish.

# Nevertheless, and in particular, the New Monte Rosa Hut is a prime example of the efficiency of science and technology and of compact, purpose-built construction.

Exactly. However, the path to achieving a goal is not always straightforward. The aim is to develop and discard scenarios. To develop other scenarios in more detail and then to discard those. A chain of decisions and feedback which ultimately – after a lengthy, difficult process – allows us to overcome circumstances that exert a powerful influence.

#### Can you explain that in more detail?

Let us take the location of the hut at almost 3,000 metres above sea level and the resulting problems with regard to energy and water supply; the ideas of the SAC and the environment organisations; the requirements of the ETH Zurich with regard to the project; societal and cultural aspects, costs, construction specifications, guidelines and so forth. As an architect, you have to fly under this radar. In other words, create a coherent whole from a wealth of prerequisites that are not automatically harmoniously tuned to one another and that you often cannot freely select or influence – and that you are not even aware of when planning starts.

# Were you surprised that the project was finally realised after years of planning?

Yes. The ETH Zurich anniversary was long over when the planning phase went into the final rounds. The model could just as easily have disappeared into the department's archive. But two factors gave the project new impetus: first, a change in the management at the ETH Zurich and, second, an entirely irrational enthusiasm for a phantom called "mountain crystal".

# You mean the picture of the hut that was circulating in the press at the time?

In 2005, students in the third semester had created a montage of the hut on its location high above the glacier which then turned out to be an unbelievable means of persuasion at all levels – both within the ETH Zurich and among benefactors and sponsors. An icon emerged from the vision, not least due to the media hype. Although at the time the whole thing was nothing more than the image of a castle in the air, it had huge emotional power. It inspired people used to asking hard-hitting questions with regard to feasibility.









A cascade staircase links all the floors, spiralling along the outer wall. Alongside it, a ribbon window circles the building once – cutting through the large photovoltaic system on the south side – and offers a panoramic view of the surrounding mountains.

They all consequently embarked on an adventure with an uncertain outcome.

#### An illusion that arouses desires – isn't that manipulation?

Let us say it is an innovative manoeuvre to realise an intention. Since time immemorial, people have always fallen for the charms of illusion. Real or not real is not even the question here. Something does not have to be real when it is done well. We showed this something – we did not prove that it works.

#### And yet it worked.

The full capacity of the project only became clear to many (outside of the Monte Rosa Studio) later on. The realisation of the hut created a new consciousness for interacting disciplines at the ETH Zurich; in actual fact, it became a prime example of the success of interdisciplinary collaboration. The emotional pull of the architecture was the initial trigger for this. The emotions helped to bridge divides and unleash exceptional talents. The fascination and the enthusiasm are evident not only in the pioneering use of resources and future technology – they are also tangible and visible. I believe another reason why the New Monte Rosa Hut is perceived as "beautiful" is that it was built with so much passion. All participants were aware that collaboration on this project was a once-in-a-lifetime experience. //

#### **Architectural highlights**

The shape of the hut is based on the idea of a building corpus in the form of a point located on a mountain ridge. It follows the ideal of a sphere or a cylinder and has maximum capacity, with minimal surface. In the interior of the hut, a cascading stairway leads through all five storeys - along the outer wall of the building - made visible through ribbon glazing. The irregular octagonal floor layout is divided into ten equal segments. This creates a tight structure of 50 trapezoid-shaped room cells that are accessed on each storey from a space in the centre. The façade facilitates a combination of energy saving and energy generation. A highly insulated surface minimises heat loss; the ribbon glazing facilitates heat generation through direct sunlight. The outer skin of the wooden construction consists of matt glossy raw aluminium.

# dossier **resources** pushing the boundaries



Not all problems have a neat solution: Lino Guzzella lecturing at the ETH.

# Managing complex systems.

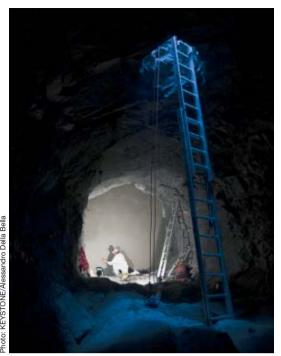
"Self-sufficiency of more than 90 per cent is our goal with the New Monte Rosa Hut," says Lino Guzzella. The ETH Zurich professor for dynamic systems and control is working with his team on intelligent building technology for the future.

# Professor Guzzella, were you enthusiastic straight away about the idea of the ETH Zurich building an SAC hut?

The potential of the idea was immediately clear to me: A mountain hut in a spectacular landscape equipped with state-of-the-art technology is a unique opportunity to present new ideas to a broad public, a platform to demonstrate what is already possible today in the use of resources and a stage for the innovative power and expertise of the ETH Zurich.

#### Were completely new equipment and systems built for the hut?

The isolated location and the stresses that the hut is exposed to through extreme weather conditions required pragmatic decisions. Flying in a technician every time to have a small repair done was out of the question! So a clear decision was taken against experiments or prototypes. Only proven systems were used in the energy and building technology.



In a cavern behind the frost line, melted water is collected in the summer and stored over the winter.

#### Technical highlights

The power station of the hut consists of a photovoltaic system, a thermal solar collector, and a combined heat and power unit operated by rapeseed oil that can be used if required. To cover the water requirements, melted water is collected in the summer in a rock cavern above the hut. The wastewater from the kitchen, washroom and shower is cleaned in a biological microfilter system and reused as grey water in toilets and washing machines. The wastewater is then cleaned again and discharged into the environment. The building technology system is operated by the Swiss Federal Institute of Technology (ETH) Zurich. A meteorological measuring station at the hut supplies data that are incorporated into the model-based, predictive control unit.

# Why is the hut referred to as a research laboratory of the ETH Zurich?

The output of renewable sources of energy – thermal solar collectors and photovoltaic system – depends heavily on the weather. In addition, the weather and user frequency have a great influence on the building's energy requirements. The energy efficiency of the entire system therefore rests on the strategy for managing the technical equipment. Developing optimal solutions is a research task that will occupy us for a long time yet.

#### Can you explain that in more detail?

In principle, it's about creating reserves; otherwise you live from one day to the next. The hut works thanks to energy and water storage units that are intelligently managed, i.e. are emptied or filled at the right moment. After a fully booked weekend, a conventional building control system would start immediately to treat the wastewater in the full tank. As this requires a lot of energy, the battery charging status would also drop towards zero. That's not a problem if there's fine weather the next day! If, however, there was a bad weather phase, you wouldn't have any reserves of energy. The combined heat and power unit would have to be activated again – with negative effects on the energy balance.

#### What is the alternative?

An intelligent control unit is also oriented to the weather and the visitor forecasts. For instance, it delays the wastewater cleaning until the middle of the week, when only a few guests are in the hut and sunny weather is forecast. Then the following weekend, when lots of visitors are expected, they can count on full batteries and empty wastewater tanks.

#### The skill therefore lies in orienting the use of the resources to the future. What do you do when the forecasts are uncertain?

That is exactly the question: How is a system meant to work that has to deal with uncertainties such as the weather? What scenario do you select as a model? If you opt for a worst-case scenario, you are too conservative. And if you consistently take the middle line, you miss the opportunity to save energy.

#### And the ideal model – can that be calculated?

It would be possible from a purely mathematical perspective. However, mathematics can never precisely describe nature. That is why we cannot count on neat mathematical formulas to solve the complex problems we face.

#### How do you find solutions at all these circumstances?

By breaking the problems down into subproblems that can be solved. And by combining mathematics and physics with intuition and experience. In this way, you can handle problems that, from a strictly mathematical perspective, are unsolvable and work in a solution-oriented manner. The result is then perhaps not ideal – but at least you're on the right track. The New Monte Rosa Hut, with its self-sufficiency level of more than 90 per cent, is an excellent example of this.

#### Do you think the hut sends out a signal for the future?

In future, we will have to make more efficient use of our resources; there's no way of getting round that. The hut shows what is already technically possible today in this respect. Our task is to optimise even further. The insights gained will help in future to improve the energy efficiency of normal buildings in the lowlands. A theoretical challenge with practical relevance – that's an ideal research goal! //



# Mr Baehny, water is a precious commodity – and a business for investors. Do you invest in water?

I have invested in Geberit and will continue to do so. In other words, I don't just believe in the topic of saving water, I also have great confidence in our company.

The investment bank Goldman Sachs estimates that the water industry will grow by 15 to 20 per cent annually over the next few years. It recommends buying shares of companies that earn their money with water.

The recommendation makes sense. Water is a topical subject. It is either scarce and/or of poor quality. Seen on a global scale, the population is growing and urbanisation is advancing further, resulting in an ever-increasing need for water.

The United Nations expects that the world will consume up to 40 per cent more water in 2050 than it does today. And Helvetas, a Swiss organisation for development cooperation, fears that by then almost one in four people will be living in a country where water is scarce. Is mankind heading for a catastrophic shortage of water?

If people do not actively react and make the right decisions, there could indeed be a catastrophe. The responsibility for implementing the right measures lies primarily with politicians.

#### Which measures would you consider to be worthwhile?

A simple solution would be, for instance, to install dual flush toilets in new builds and renovations: three litres for liquid waste and six litres for solid waste. This principle should be established by law. It could save a lot of water. But most countries are still a long way off from that. The old systems require eight to twelve litres per flush, irrespective of use.

# Developing systems to save water. Is this the most important topic at Geberit?

Absolutely. It is not only about saving water, it's also about the quality of the water. The second most important topic consists in developing safe systems that can also be installed by less qualified tradesmen. The reason for this is that there are unfortunately ever fewer qualified sanitary plumbing installers worldwide.

Albert M. Baehny is a graduate biologist from the University of Fribourg. He comes from the French-speaking part of Switzerland and lives in Arlesheim near Basel. In 1979, he began his career in the research department at Serono-Hypolab. After spells at Dow Chemicals Europe, Ciba-Geigy, Vantico and Wacker Chemie, Baehny joined Geberit in 2003. He has been the CEO and a member of the Group Executive Board since 2005.

### Geberit is the global leader in the development of these systems. Can they be improved further?

Yes, there are still a host of possibilities to make the systems even simpler and to consume even less water when flushing. We are now at three and six litres and hope that we will have reduced it to two and four litres in a few years' time, for example.

#### What does it depend on?

You have to work on two things at once: on the flushing technology and on the toilet bowl, and specifically on the shape and surface of the bowl

#### Do engineers develop flushing systems?

It takes material engineers, mechanical engineers, and experts in hydraulics. We have all of these at Geberit.

#### Geberit does not produce toilet bowls. Why not?

That is not our focus. There are already enough suppliers and there is even excess capacity. Our business is technical products that are installed behind the wall.

### Using water sparingly can be learned. Does Geberit run educational campaigns?

No, that's something we leave to other people. We train sanitation installation personnel, but we do not educate the general population

#### It's not just flushing the toilet where you can save water.

Correct. But think about it from a global perspective. I don't know how many billion people do not have a toilet. We work on social projects that involve explaining what a toilet is and how to use it. Many people don't know what it means to use a toilet.

The Global Reporting Initiative (GRI), which develops guidelines for the creation of sustainability reports, awarded Geberit an A grade for achieving the maximum possible degree of transparency. What does sustainability mean for you?

For Geberit it means generating values in a sustainable manner in order to facilitate a better quality of life for future generations. Or to quote Antoine de Saint-Exupéry, the author of "The Little Prince": "You do not inherit the Earth from your ancestors: You borrow it from your children." That is my life's philosophy – and that of Geberit.

#### Does the GRI Award help you in the award of contracts?

It is useful on the capital market. There are an increasing number of funds in the sustainability area. And when you have reached this level and been awarded an A grade, you are given preference. We make use of that

### Is sustainability a commercially calculable factor or does it primarily involve attitude, conscience and awareness?

When we think about sustainability at Geberit, we try to strike a balance between three dimensions: economics, ecology and society, or people. To invest in sustainability, you need money. And this money first has to be earned. But even when earning money we try to ensure sustainability. After all, the end does not justify every means.



# How can you, as a CEO, encourage sustainability in your company?

The topic is omnipresent, in our objectives, in our strategy and in the processes of the company, such as in the areas of products, logistics and product development. We also want our employees to only drive cars that are fitted with a particle filter. We consider whether and which flights are necessary.

#### You have introduced a code of sustainability.

Yes – and more than that. It is almost like a "gene" that is in us. Our reports are testimony to the progress that we have made in the area of sustainability.

Geberit is extremely successful, although the company generated a 15 per cent lower profit (CHF 397.5 million) in 2009 than 2008 and suffered a loss in turnover in America and the Near and Middle East. Nevertheless, with an operating margin of 24.1 per cent, it achieved a figure that others can only dream of. Can it be increased further?

Always, but that is not our goal. Of course, we are still striving for good margins, but we do not necessary want to drive the values of 2009 up further. We want to invest even more in research and marketing to be more successful worldwide.

#### **Should Geberit grow further?**

Of course. Every company has to grow. If a company stops growing, then it's the beginning of the end. It must stay innovative to

The Geberit Group is the European market leader in sanitation technology. Its range of products includes sanitation systems and pipeline systems. Geberit is represented in 40 countries. The company has 15 production sites in 7 countries and employs some 5,600 staff around the world. In 2009, Geberit generated CHF 2.2 billion in turnover; the company, which has its registered office in Jona, has been listed on the Swiss stock exchange since 1999.

hold its own at the front. It has to see the global opportunities and seize them. And with regard to Geberit: There is still huge potential in the sanitation technology sector.

#### What markets do you want to develop?

In Europe, we are focusing on markets in which we are still underrepresented compared to Switzerland, Germany, Austria, Italy and Benelux – i.e. France, the United Kingdom and Spain. In Asia, the focus is predominantly on China, South-East Asia and India. The Middle East is interesting for Geberit – as is North America, where we are still very small. There are therefore still many regions in the world where we can achieve great things.

### You didn't mention Africa. Could Geberit be of assistance here?

To find this out, we formed a partnership with Helvetas. Here, it is about creating access to clean drinking water and basic sanitation supplies for one million people in the poorest regions of the world by the end of 2013. What products and systems could Geberit help with? We don't know yet. We only know that the present-day technology from Geberit is unsuitable for these very poor countries.

#### Why?

Above all, they have a lack of water there. We would have to invent low-water or even waterless systems. Perhaps, in time, we will be able to develop a technical solution for these countries.

Another question, this time on your style of management. People who know you say: "He sets great store by a cooperative style of management, but ultimately he always decides on his own."

(Albert Baehny laughs) Let's put it in a very neutral way: In the end, somebody has to make the decision. And sometimes I make the decision even if my colleagues in the company management are of a different opinion. However, I do not manage on my own; I always do it with my colleagues. These are not just any colleagues either, they're the right ones for the job. Incidentally, I am accessible and approachable, as well as uncomplicated, direct and honest. //

dossier resources educating more efficiently

# "Today, managers have to be quicker and more efficient in their job; they have to be more productive,"

says John R. Wells. The President of the Lausanne Business School IMD is convinced that dealing with cultural differences is the most important success factor in managing a global company.

Photos: Cédric Widmer

#### Professor Wells, you are the president of a leading educational establishment. What are your memories of your own time at school?

I attended a small village school, where the children sat at different tables in the same room, according to their age. But my teacher was great, she kept us all under control and taught us to read and write. Sometimes, we all sat round a wind-up gramophone and listened to music – I think it was "Peter and the Wolf" by Sergei Prokofiev. And at the end of the school day, she read us a story. It was very simple teaching, but highly efficient. I started out at that local school and ended up in Oxford.

#### What makes a good teacher?

He or she has to make the material very relevant. As soon as you realise what importance a topic has, learning becomes much more exciting. When I think about the really great lecturers that I have had, all had extensive knowledge in their field but were also able to convey this knowledge in an exciting manner so that you remembered it. They were able to create super metaphors in our minds to help us to recall the material.

#### And what characterises an IMD lecturer?

Only people with practical business experience teach here. Our lecturers are required to have in-depth knowledge in their field and enormous energy to bring this to life. They must engage with the participants of their courses and help them to learn. At IMD, we ensure a collaborative learning





environment. Participants learn from one another. For that, lecturers need great skill in setting discussions in motion. We teach board members here. Although they have a wealth of experience of their own to contribute, they are also relatively impatient. The more energy and passion our lecturers offer, the more successful they are.

# IMD works with partner companies that also send the majority of the students. Most of these companies come from Europe. Will this change in future?

Yes, that is something we are aiming for. Our strategy is to collaborate with a small number of important companies in other regions, companies that are striving to become global corporations. For that is where our strengths lie. We cannot show Chinese companies how to operate in the Chinese market. But what we can do is show them how to adopt a global perspective.

Are the same qualities required to manage a Chinese, Brazilian or Swiss company for it to be globally successful?

No, there are differences. Depending on the cultural background, a company starts out with a different mindset and with a specific view of reality. The Brazilian view of Europe, for instance, is rather different from the European view of Europe. It is fascinating to see how Brazilians assess the role of Europe in the global economy over the next 20 years. And why they want to be present in Europe or not. Different regions of the world have different perspectives and different philosophies. It is very important to understand this if you manage a global company. People underestimate, for instance, what a challenge it is for a

IMD is one of the leading business schools in the world. In the "Financial Times" ranking, for instance, IMD came second in 2009. Unlike other business schools, IMD is not part of a university; instead, it is an independent foundation. Every year, more than 8,000 managers from around 100 countries take part in the school's training programmes. IMD works closely with 200 or so companies that are its "Learning Partners". These multinational companies are the most important clients and sponsors of the Lausanne-based institute; many of them are also represented on its foundation board.

company to work around the clock. But they have to do this if they want to operate globally. If the headquarters only wants to work from 9 until 5, there are problems. I regularly hear from CEOs how difficult it is to get employees to feel connected 24/7 to colleagues in other parts of the world.

# What are your personal experiences as a CEO in this respect?

I have managed, among others, the subsidiary of an American company in London. I was shocked at the problems in working

Englishman John Wells studied nuclear physics at Oxford University, did his MBA at Harvard Business School, and completed a doctorate in corporate synergy and profitability. In the 1980s, Wells set up several companies and then held senior positions at PepsiCo and at the Thomson Travel Group. In 2002, he returned to Harvard as a lecturer in strategy. Since 2008, Wells has been president of IMD in Lausanne, where he also teaches.

methods between the two countries which, after all, speak the same language. For instance, the way Americans write e-mails to their superiors is difficult to accept for the British; they were highly offended. Conversely, the Americans were irritated at the excess of sensitivity ...

# ... a case for intercultural training. Is that on the training schedule at IMD?

Yes, and it has been for years! We compose our MBA classes in such a way that 40 or 50 countries are represented there. The most important reason for this is that participants learn to understand how they each work and how they can adapt accordingly. It is precisely these questions that are decisive for managing a global company.

# What has changed for top managers with the advance of globalisation?

Managing a company operating at national level is already a complex matter in itself. Like a game of chess. There are a host of decisions to be made, but many aspects, for instance statutory regulations, remain the same – if they change, competitors are also affected by it. The management of a global company, however, is far more difficult. Where should we invest? And in which areas? Should we simply follow our competitors, or forge our own path and risk being the only one affected by changes in the framework conditions. In chess, that would be like changing from a two-dimensional to a multidimensional game. Quite a

challenge! Not only do the right decisions have to be made, people also have to be encouraged to implement them in practice, across cultural and linguistic boundaries. Huge demands are placed on the management of a globally active company.

# How is IMD reacting to these mounting requirements?

We are proactive in trying to identify the global trends and issues of tomorrow in collaboration with our partner companies. And we also respond reactively by supporting companies in finding solutions to the challenges of globalisation. Half of our work at IMD consists of developing specific programmes for our partner companies and helping them to develop their business.

# IMD spends almost a third of its funds on research. Why?

Although we are not an academic institution, research is very important for us. Our lecturers have to invest 40 per cent of their working time in research. Rather than a lot of theory, we carry out predominantly empirical, case-related research. More than 100 cases are produced at IMD every year, and we win more awards than any other business school in Europe for the quality of these case studies. We do not carry out research just for the sake of it, but rather because we want the lessons learned to be useful for companies.

# How do you pass your knowledge on to your partners?

We regularly carry out so-called Discovery Events, for instance. At a university, you would call these research colloquiums and invite other researchers to them. However, we also invite people from the world of practice as well as researchers. One recent meeting was about the difficulties that crop up in family-run companies when family members work alongside managers who are not part of the family. Many company owners participated in this event with their CEOs. These are workshops with topics taken from real life and with very lively discussions. A learning event.

#### And what is the research aspect here?

One of my colleagues, who has a special interest in family-run companies, spoke to different companies to find out what works where in this interface problem. He then

presented the findings to the 90 participants of the Discovery Event for discussion. And this input is now being used by him as a basis for continuing his research project.

### What has changed at IMD as a result of the global economic crisis?

Many of our partners are demanding greater efficiency in the training of their managers. They are asking for more relevance and more benefit. We have to take this into account. We are implementing an increasing number of programmes off campus because companies want our courses where their people work. They want short programmes and customised learning. In other words, we have to divide up the training courses that we offer in such a way that the participants can take the parts of them that they really need.

#### What specific impact is this having?

We have to drive our innovations forward more quickly, both with regard to the structure of our programmes, and the educational method behind them. We are trying to find out who learns faster and are increasingly merging different teaching methods to make teaching more efficient. Today, people have to learn faster and more costeffectively. Companies invest in training their employees and want to be certain that these investments are also worthwhile. After their training, managers have to be guicker and more efficient in their job; they have to be more productive. Rewarding employees by sending them on a management programme is now very much a thing of the past! We are active in the knowledge, decision and implementation sectors, but definitely not in the infotainment business. //





The seeds of the indigenous grasses and herbs are sowed mechanically in small pots, and then grown in greenhouses. Up to 200,000 of these little pots are required to restore a lost layer of ground vegetation in the high mountains.

The small plants are planted by hand on site. "If necessary, our people are roped up on gradients of up to 100 per cent."

At first glance, the Schutz family-run business in the Grisons mountain village of Filisur looks like a conventional nursery, with glass greenhouses, a small self-service garden centre, a tree nursery and flower beds everywhere populated by seedlings and plants. The Alpine environment defines the range of plants on offer: Rows of blue gentian and silver edelweiss are a blaze of colour, mountain carnations bob up and down in flower boxes, and fire lilies and Turk's cap lilies form a guard of honour.

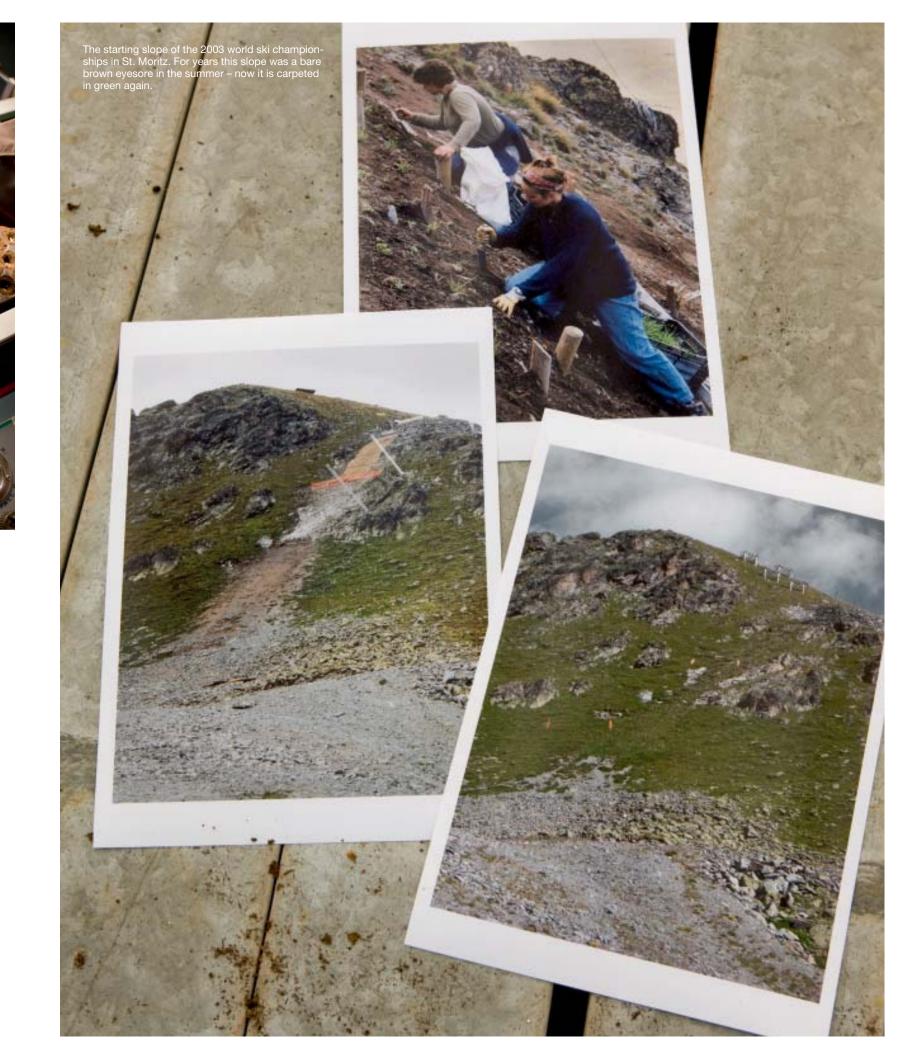
Grass grows on the fields behind the garden centre in neatly delineated, head-high tufts. For the uninitiated, there is no discernible difference between the individual grass plants. Yet there is. "In this mother plant garden, we grow different grasses from the various mountain regions of Switzerland," says Markus Schutz. "We collected the seeds of the grasses in the high-altitude areas of

these regions. We are now propagating the plants and then taking the seedlings back to their place of origin so that they can regreen soils there whose vegetation has been damaged."

The graduate agricultural engineer is describing the company's new business field: renaturation of high-Alpine areas. "In altitudes high above the forest line, the only plants that grow are pioneers that have adapted themselves perfectly to the inhospitable conditions," explains Schutz. "If these sensitive microsystems are disturbed, nothing at all will grow there anymore. The steep areas lie fallow; the soil is eroded and slides away." This also happens with avalanche barriers and with power plant and road constructions. For decades, the concrete foundations of these constructions were set ever deeper into the ground on steep slopes – and were repeatedly re-exposed by frost and melted water. "Today, we know that there is only one way of preventing soil erosion in high mountain areas over the long term – with a natural layer of indigenous grasses and plants whose roots bind the soil."

#### **Creating intact landscapes**

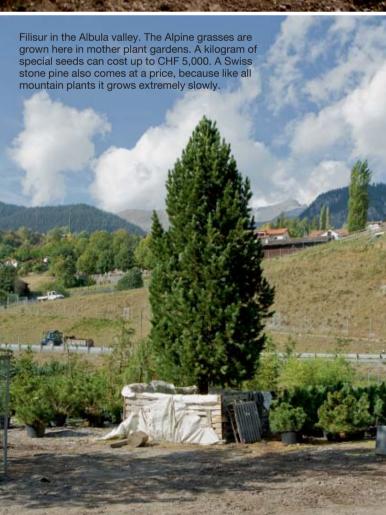
Schutz takes a visitor through one of the company's large greenhouses. A vast array of small plastic flower pots sit under a sprinkler system. Each pot contains three or four small fine grasses. Up to 200,000 of these little pots are required to renaturate a layer of soil in the high mountains that has been destroyed.











"Today, we know that there is only one way of preventing erosion in high altitudes over the long term: with a natural layer of indigenous grasses and plants."

For example in the area near the Grande Dixence dam wall in the Valais region.

Or at the avalanche wall of the Simplon Pass. Or at the starting slope of the 2003 world ski championships in St. Moritz. For years this slope was a bare brown eyesore – now it is a green mat again. Just like the steep slope at Lake Schwarz, near Zermatt, at an altitude of 2,500 metres. "More and more winter sports venues want to offer their summer guests a beautiful, intact landscape too," says Schutz. "The denuded pistes created by careless ski resort operators are a blot on the landscape here."

Why don't they simply sow grass seeds on the slopes? Schutz laughs and says: "Because that doesn't work!" In the past, tonnes of grass seeds from Holland would be emptied by helicopter over the mountains – with no lasting success. Today, he says, people have a greater understanding of how the fragile ecosystem in the high mountains works, and therefore are more willing to accept the costs of sophisticated near-natural regreening. Consequently, the small grass plants growing in their pots in the Schutz family's greenhouses are planted by hand on site. "If necessary, our people are roped up on slopes with a gradient of up to 100 per cent," says Schutz. In flatter locations, they could of course try to scatter seeds. However, not just any old seeds – only seeds from plants that come from this very region: High-mountain grass from St. Moritz does not fare well in Zermatt. A kilogram of special seeds for extreme locations can cost up to CHF 5,000 - depending on how difficult it was to collect the seeds for the mother plants on site and how long it took to generate a sufficient number of new

#### **Hardening off the plants**

Near-natural high-altitude greening is a science in itself. Endless computer-generated tables with different varieties and locations, and sophisticated test series that show where what flourishes best and under what conditions. Plant purity is an overriding concern: "You have to try and restore the original microsystem of the flora. Plants that are not indigenous to that particular location can disturb the natural balance." Schutz and his brother, horticultural technician Michael Schutz, are experts in this area – probably the most accomplished, if not the only specialists in their field in Switzerland.

Their expertise is based on experience that they have acquired locally. When it comes to knowledge about horticulture in high altitudes, a tradition in their family, they have an edge: The name Schutz Filisur has represented Alpine-hardy plants for more than 100 years.

Their father, Christian Schutz, is in charge of this side of the family-run business. "Alpine-hardy plants are propagated and cultivated on our fields at altitudes of between 1,000 and 1,600 metres," he explains. "They are hardened against the winter cold, snow pressure and intense sunlight and are thus considerably more robust than lowland plants." The selection of Alpine-hardy plants ranges from the glacier tomato to pine – plants are sent to locations throughout Switzerland.

#### A business model with potential for the future

Great-grandfather Schutz began to systematically cultivate fruit trees and vegetables at an altitude of more than 1,000 metres in 1905. A gardener from Bad Zurzach, he had married a girl from the Grisons and moved to Filisur. There he created avenues of trees, planted asparagus and propagated outdoor roses, thus laying the foundation stone for the current flourishing business. His son Jakob, who is now 92, developed the company. He was a visionary who realised ideas that were simply inconceivable at the time, such as delivering seedlings all over Switzerland. He also planted forest trees at an altitude of 1,800 metres and – to the horror of the farmers – on prime grazing land. The Swiss stone pine tree nursery is now worth a fortune. Particularly in the nearby Engadine region, wealthy customers appreciate the attractive conifers in front of their chalets and will have a 25-metre-high tree flown in by helicopter if necessary.

Christian Schutz and his two sons, Markus and Michael, run the company jointly. Christian's brother Felix is specialised in sports facilities and landscape gardening. In total, up to 90 people are employed at Schutz Filisur during the season, slightly fewer in winter. "Ninety per cent of them are qualified specialists," says Christian Schutz proudly. Gardeners even come from abroad to learn something about Alpine plants, he says. The near-natural high-altitude greening now accounts for up to 30 per cent of turnover – and the trend is pointing up. "Environmental protection conditions for approving construction projects in the mountains are becoming ever stricter," says Markus Schutz. The melting permafrost is also a growing problem for dams and protective walls and can ultimately only be solved with natural erosion protection: "I believe we have a business model with potential for the future." //

# "Green technologies are undoubtedly growth drivers."

What can companies do to make themselves and the world more sustainable? Barbara Kux, member of the managing board of Siemens, head of supply chain management and chief sustainability officer, ponders growth opportunities and limitations.



#### Interview: Wolfgang Kaden, Photo: Frank Bauer

Ms Kux, the world has just suffered its worst financial crisis in decades. A fundamental cause was the extremely short-term mindset in the financial sector and in industry. Dare we hope that after this painful lesson there is a clearer understanding of the need for sustainability?

We see the financial crisis, but there's a sustainability crisis behind it. Mankind constantly needs to reconcile three factors: profit, people, planet. In the last few years, we focused too strongly on profit. We are using too many resources: those of 1.3 Earths rather than one Earth. This is a state of affairs that cannot continue.

# Whole generations of managers have been trained in short-term thinking. Can that be reversed?

As managers, we need to do both, i.e. act in the short and long term. But we also need to attach greater value to the long term. We need longer-term strategies in companies and politics.

Your CEO Peter Löscher said that the financial crisis could herald a "green economic miracle". Was that too optimistic? Green technologies are undoubtedly growth drivers, even in the crisis.

# There is hardly a page in your sustainability report that does not mention the word "growth". Don't sustainability and growth cancel one another out?

No, quite the opposite. In future, humankind needs to do more with fewer resources. We only have one Earth. And for that we need the best technologies.

When the gross national product is growing, even better technologies cannot get around the need to use more resources. Let me give you an example: With an average power plant, 38 per cent of the energy is converted into electricity. We have developed a new type of power plant that achieves 60 per cent. That means very substantial savings in CO<sub>2</sub>. New technologies do indeed make a considerable contribution to climate protection.

# Nevertheless, growth means greater consumption of resources – even if not to the same extent, thanks to improved technology. Do you believe in constant growth?

At the present time, I wouldn't want to discuss something as long as eternity. If you look beyond Europe to countries such as India, Brazil and China, you will see that these countries have substantial growth rates and represent huge opportunities for European companies.

That is correct, but it still does not answer the question how much additional gross national product this planet can withstand without sustaining irreparable damage. Let us take a look at the CO<sub>2</sub> consumption of individual countries. Every year, the average European generates approximately 10 tonnes of carbon dioxide, an American 24 tonnes and a Chinese 2 tonnes. The question now is what kind of infrastructure the new up-and-coming countries should get. At a level of 24 tonnes, or 10, or less? I think in Europe we have a very important role to play in developing the right framework here. This of course offers great market opportunities.

So as a member of the Siemens managing board, the business aspects are more important than the environmental ones? In 2009, Siemens generated more than EUR 23 billion in turnover with green technologies. From the customer's perspective, this means 210 megatonnes fewer CO<sub>2</sub> emissions. This is a quarter of the annual emissions of Germany. For us, it is a business; for our customers it is a significant contribution to curbing global warming.

# Last year, 20 leading scientists published a call in London for a reversal in CO<sub>2</sub> consumption. They stated, "The ultimate goal must be zero carbon industry." Is this a realistic target, or a utopian one?

Probably utopian, but scenarios like these are important. In 1960, if John F. Kennedy had not said, "Let's go to the moon," then nobody ever would have. We need to think in dimensions like these even if they don't appear attainable at the present time.

# How great is the acceptance of environmental protection concepts internally at Siemens?

Sustainability is not a new topic for Siemens. More than a 100 years ago, Werner von Siemens stated: "I wouldn't want to risk the future for short-term profit." Of course, at Siemens we recognise that green technology increasingly offers new business opportunities. So it's therefore not only about understanding the necessity of environmental protection but also, and not least, about using market opportunities.

# Siemens is present in more than 190 countries. How do you implement your goals from an organisational perspective in such a huge group?

First, there is the managing board, where we coordinate all our goals and decide how we will achieve them. We have also set up a Sustainability board in which all the sectors and important functions are represented that are involved in sustainability. Here, we

Swiss national Barbara Kux has been a member of the Siemens managing board since the autumn of 2008 and is head of supply chain management and chief sustainability officer. Previously she was a consultant for McKinsey and held senior positions at Nestlé, ABB, Ford and Philips. She has worked on the topic of sustainability since 1991. At the time, she was a co-author of a sustainability study by the Massachusetts Institute of Technology in the run-up to the environmental summit in Rio de Janeiro. In 1995, Kux was invited by the World Economic Forum in Davos to join the Global Leaders of Tomorrow.

# dossier **resources** optimising technologies

agree on strategy, programmes and progress. For 2011, we have thus set ourselves the goal of increasing energy efficiency in the group by 20 per cent.

You are responsible for supply chain management as well as sustainability. How do you ensure that suppliers employ environmentally friendly manufacturing facilities and processes? All of them must sign a code of conduct, and we also check compliance. In addition, we have now started audits at the suppliers in the emerging countries and have these carried out by third parties. We try to make suppliers more energy-efficient. Last year we achieved improvement of 15 per cent.

#### Do you know where you stand in comparison to your competitors?

Last year, we were ranked sector lead in the Dow Jones Sustainability Index. With this index, a company is subjected to a comprehensive examination. We had to answer more than 100 questions from the jury. The aim now is to use the boost that this superb ranking gave us internally too.

# You are undertaking a lot to ensure that you stand out as a green corporation. Are you doing that to boost your image?

The most important factor is the inner conviction that sustainability is a fundamental value. It must be more than just the general spirit of the time. This conviction must itself be sustainable. However, an additional factor is of course that these efforts make you look good.

# To what extent have your convictions been shaped by your background and your upbringing?

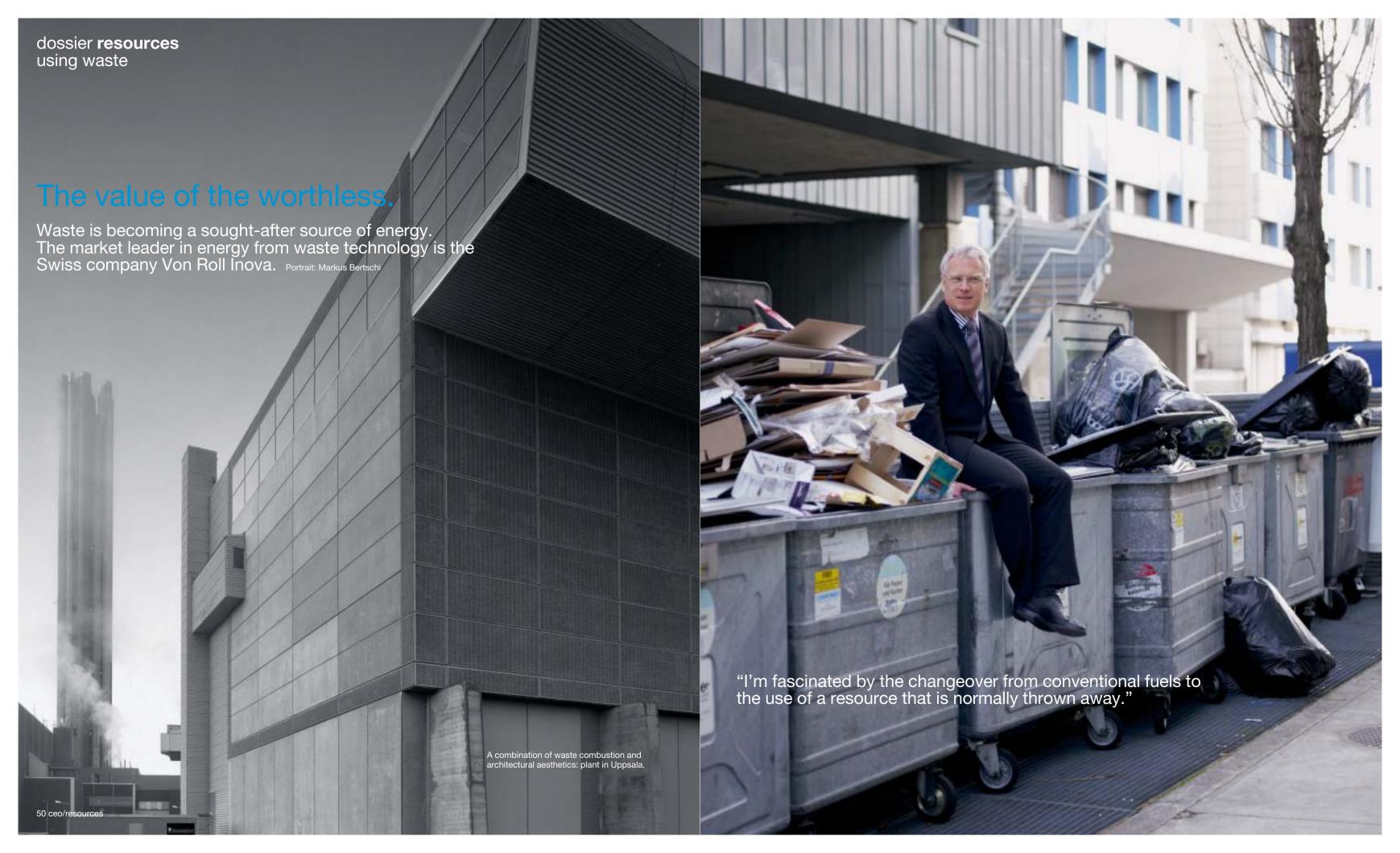
The environment has very special importance in Switzerland. With me personally, this commitment undoubtedly has something to do with my childhood. And also with the fact that I had the opportunity to work on the first sustainability summit in Rio in 1991. That was indeed an eye-opening event for me.

# Rio was a start. Copenhagen was intended to be a continuation of the global efforts to achieve a reduction in CO<sub>2</sub>. The climate summit failed. Is there any chance at all of a global consensus?

I rate Copenhagen more positively than many others do. The very fact that it happened is a success: It brought together 193 countries for the first time. All of them recognised the need to restrict global warming to 2 degrees and declared their intention to find a solution. That is a positive thing. It is an ongoing process.

# Do you believe that there will be an agreement on its implementation in the foreseeable future?

I very much hope so. //



Switzerland is one of the few countries in the world where all waste is recycled and no untreated waste is rotting away in landfills. Half of it – principally glass, paper, cardboard, organic waste and PET bottles – is recycled; the other half – non-recyclable commercial, industrial and household waste – is converted into electricity. One tonne of waste can generate up to 1,000 kilowatt hours of electricity – enough to supply an average household with electricity for half a year. The more than 3 million tonnes of waste that are burned each year in Switzerland meet the electricity requirements of 450,000 households.

"Switzerland is a role model when it comes to waste management." This praise comes from someone who knows what he's talking about: Georg Silbermann, a German engineer who has spent his career in the petroleum and gas industry and in mechanical and plant engineering at ABB and Linde, among others. Two years ago, Silbermann was appointed CEO of Von Roll Inova, a Zurich-based member of the AE&E Group with around 1,000 employees. After AE&E was restructured, in January 2010, he took charge of the most important division at AE&E: Energy from Waste. The long-established Swiss company, which will be renamed AE&E in mid-June, builds systems in which the steam generated during the combustion of the waste drives turbines that generate electrical energy or can be used for district heating. "I am fascinated by the changeover from conventional fuels such as coal, petroleum or gas to the use of a resource that is normally thrown away," says Silbermann. Compared to solar and wind energy that can only be financed with considerable state assistance, waste is commercially viable as a source of energy and can replace fossil fuels to a considerable extent.

#### Pioneering role of Switzerland

"Waste is our energy" – that is the guiding principle that has shaped the company's history for more than 75 years and which is more topical than ever in this age of scarce resources. Energy from waste is seen as an important cornerstone of a sustainable society. A lack of resources and the need for climate protection mean that we are faced with making the best possible use of the energy sources at our disposal, and meeting our evergrowing need for electricity with environmentally friendly and sustainable means wherever possible. The combustion of waste releases considerable amounts of energy; after all, the fuel value of waste in some countries is almost as great as for wood. A tonne of waste replaces around 350 kilograms of petroleum. With a market share of 40 per cent in Europe and more than 450 energy from waste systems worldwide, 14 of which are in Switzerland, Von Roll Inova is one of the leading suppliers of waste conversion systems, which due to the complex composition of waste require cutting-edge technology. The focus on environmental topics has meant the company has really boomed in recent years. Between 2005 and 2008, turnover leapt from EUR 278 million to EUR 518 million, and orders on hand from EUR 306 million to EUR 799 million - Silbermann even speaks of "overheating". The economic crisis has resulted in a cooling down; last year, turnover was (nevertheless) EUR 525 million. Georg Silbermann is forecasting a recovery for 2011. The boost in demand started some years ago with the implementation of more stringent environmental regulations in various Euro"It's no longer just about removing waste but instead more about the maximum utilisation of energy and the maximum reduction in pollutants."

pean countries. Among these was the UK, where over 60 per cent of waste still ends up in landfills. The closure of these landfills is now being driven forward with some emphasis, and this is also of benefit for Von Roll Inova. The company is building the UK's largest energy from waste plant just outside London, at a cost of EUR 400 million. After completion in June 2011, the plant will produce 72 magawatts of electricity per year from just under 600,000 tonnes of residential and commercial waste, enough to supply power to 220,000 households in the Greater London area. The building site with around 1,200 labourers is one of the largest in Europe. Not only the dimensions of the plant but also its geographical location on the Thames near to the city makes the project "very challenging" for Von Roll Inova, as Georg Silbermann points out. To keep costs for transporting the waste to a minimum, the plant is located on a narrow strip of land near to the city. The waste will one day be delivered by boat, via the river. "The quality of the ground and the geographical location mean that there are no standardised plant concepts," says Silbermann; planning starts afresh with every new construction. In Paris, for instance, one of the company's prestige projects that has already been completed, the deepest level of the plant is 31 metres below ground level. The chimney inconspicuously extends a mere 5 metres above the building's roof, instead of the usual 70 metres.

The incineration of waste in Europe dates back to the end of the 19th century. Even then, Switzerland had a pioneering role; the first plant was put into operation in Zurich in 1904. Waste was discovered as a source of energy as early as the 1930s, firstly in the form of steam and subsequently also in the form of electricity. The city of Lausanne is one of the forerunners in energy from waste. A plant built by Von Roll Inova 50 years ago was replaced by a larger and more efficient one in 2006. The majority of the waste from the canton of Vaud is converted in the new plant – enough to supply 18,000 households with electricity. The waste is delivered by rail through a 4-kilometre-long tunnel under the metropolitan area. The plant consists of two process lines, a steam generator with



The combustion of waste releases considerable amounts of energy. A tonne of waste can replace around 350 kilograms of petroleum.

combined heat and power and waste gas cleaning, and a system for recovering recyclables. "With this plant concept, all emissions standards are more than met, and most values are far below the permitted limits," emphasises Georg Silbermann.

#### Replacing fossil fuel sources

In contrast to solar or wind energy, waste conversion systems went virtually unnoticed as producers of renewable energy in the past. This changed abruptly in the autumn of 2005 with the amendment to the energy law. Since then, energy from waste has been considered a promising alternative to conventional energy sources and is to be promoted accordingly. Politicians have recognised that the generation of energy from waste is not only renewable but also "very ecological and relatively cheap", according to the Swiss Federal Office of Energy. The fact that the production of renewable energy has more than doubled since 1995 is primarily due to waste conversion plants. Electricity from waste has an "outstanding energy balance". It not only replaces fossil fuel sources, but also precludes methane emissions from landfills, making an important contribution to reducing greenhouse gases.

As they advance to become an important source of energy, the plants are throwing off their negative image. In many places, they were long seen as air polluters. Georg Silbermann emphasises

that the term combustion no longer does justice to modern-day processes. It is no longer just about removing waste but instead more about the maximum utilisation of energy and the maximum reduction in pollutants. According to him, thanks to highly developed waste gas cleaning, modern waste conversion systems have only a negligible impact on the air. High temperatures of more than 1,000 degrees Celsius ensure that pollutants are destroyed. Metals such as zinc or iron are reclaimed. "However, we undoubtedly need to raise awareness more with regard to the technical necessity and environmental tolerability," admits Silbermann.

#### **New business opportunities**

To retain their leading position, the engineers at Von Roll Inova are researching methods that facilitate more effective conversion of waste into energy. The improvement in the efficiency and the reduction in the emission of pollutants from the systems are an ongoing task of the 20-member research and development team. For expansion into new markets, the development of simplified systems is also currently being promoted as a means of introducing less developed countries to this type of technology. The Old World no longer offers much potential for growth. Western Europe is a largely saturated market, at least for new plants, and the USA is hanging on to its landfills for the time being. But in eastern Europe and Asia new opportunities are opening up. With environmental awareness, an infrastructure is also developing to recycle waste, particularly in China. India, the Middle East and South America are also on the radar as new markets. In Dubai, where waste is simply tipped into the desert, new business opportunities could soon appear. "Dubai is specifically interested in the construction of an energy from waste plant," says Silbermann who has made the case a top priority. There is a lot at stake. The system is to be large and grand, as is expected in the Emirate. It is highly possible that the sheikhs will be inspired by the magnificent constructions Von Roll Inova has produced to date. Company founder Ludwig von Roll would be amazed at the successful combination of waste combustion and architectural aesthetics. In Perpignan, France, the waste combustion plant looks like a museum of modern art. In Newhaven, England, it has the shape of a submarine, in Mallorca you would think you were in a space station, and in the Swiss town of Thun the modern installation is an attractive counterpoint to the Alpine landscape. It is still uncertain what direction the project in Dubai will take. One thing, however, is clear to Georg Silbermann: "We need to venture into new markets and not only take the risks that these involve, but also manage them." //

# Occupation versus vocation: living in two different worlds, as an administrator and an author.

PwC employee Mona Bodenmann recently published her second crime novel, "Mondmilchgubel", and is already working on her next book.



Motivation, initiative and a healthy dose of persistence: Mona Bodenmann. Photo: Vera Hartmann

It happened on a Sunday in spring of April 2007. Early in the morning, Mona Bodenmann set out for a walk in the Zurich Oberland region towards Höchhand and the Mondmilchgubel (literally: "moon milk cave"). As its name implies, this location is mysterious: The Mondmilchgubel is a long cave, situated under a waterfall that plunges over it into the depths below. When Bodenmann arrived at the cave, she walked to the

railing at its edge and looked down at the gushing water. There, she saw a body lying at the bottom of the ravine.

Happily, the body was not real but a figment of Bodenmann's imagination. And a most fortuitous one at that: Before the day was out, Bodenmann was at her computer with the imaginary picture in her head, writing the first lines of her second crime novel. Titled "Mondmilchgubel", 3,000 copies were published in spring 2010 by Gmeiner press. Three years elapsed between the first spark of the idea and the finished book.

Mona Bodenmann says, "I live to write." She has been employed at PricewaterhouseCoopers since 1992 and is currently working as a time and expense administrator. In this position, she ensures that the employees in the Operation division in Zurich complete their expense forms correctly and in compliance with regulations. "This 60 per cent job makes it possible for me to write," says Bodenmann. But the job does more than just pay the bills. "It helps to keep me from drifting off into my own little world too much," she says. "My work gives me exposure to a commercial and performance-oriented way of life and perspective that I would otherwise have no contact with."

#### Her goal: to make a name for herself

From Tuesday to Thursday she is an accountant at PwC, from Friday to Monday a crime author in front of the PC. Bodenmann views this split week as "living in two worlds that share some common features: For both activities I need traits such as motivation, initiative and a certain degree of persistence."

Writing the thriller "Mondmilchgubel" was exciting for her, says Bodenmann. Marketing it, however, was a "most difficult task". Leaving the comfort of her own home to go out and meet people took all her courage. Nevertheless, she pulled all the stops to make her novel known to people: a book launch here, readings there and even "tours of the crime scene" in the real Mondmilchgubel in the Zurich Oberland. Mona Bodenmann did all this with the determined goal of selling all 3,000 copies of the book by the end of 2010 - not just for the money, but also to get herself known as a crime author and to attract a larger circle of readers. She is already at work on the seguel to "Mondmilchgubel". //



Qualified employees are an organisation's most precious resource. But how efficiently are these people working? Which are the best teams? How effectively are they managed? PricewaterhouseCoopers shows you ways of measuring the performance of your people and documenting it in figures. This gives you a solid basis – for fair compensation systems, better performing people, and a better performing business. What's your question?

www.pwc.ch



# forum caution/confidence



Michael Hobmeier:
"Who dares, wins. Who dares too much, risks losing everything."



Katja Gentinetta:
"I believe in people's ability to make the right decisions."



Hans-Martin Wahlen:
"Today, we cannot conceive of manufacturing our products abroad."

10