

# **ARE DEVELOPING BUILDING** THE **SWITZERLAND TOMORROW**

If a company wants to operate successfully over the long term, it needs to bring its business activities into line with its social and environmental responsibilities. Implenia's declared aim is to create sustainable value, and it wants to set an example for the whole of the construction industry. CONTENTS 4-5

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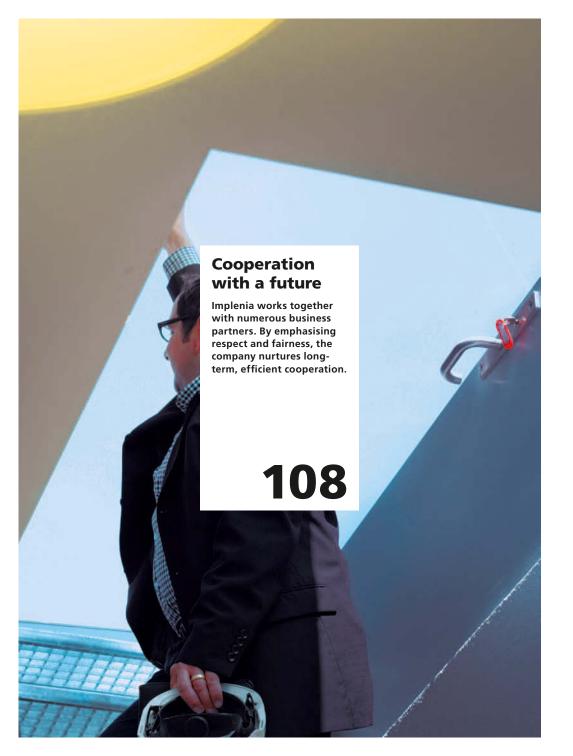
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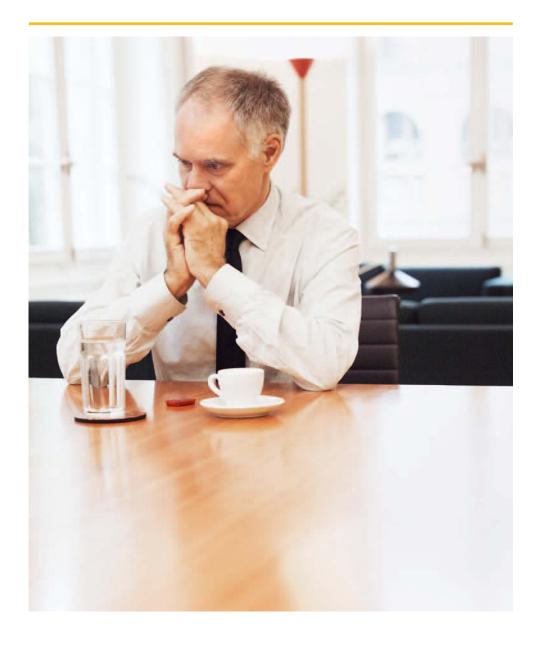
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# Implenia Director and former Federal Councillor Moritz Leuenberger talks about Implenia's sustainability vision and strategy

Sustainability is the word on everybody's lips these days. It's hard to find any products or services these days that aren't glibly advertised as sustainable, usually without any thought about the real meaning of this important concept – a concept that the United Nations, no less, created to encourage a fundamentally new way of doing politics and business throughout the world. The UN's 1987 "Brundtland Report" sought to find a balance between the three pillars of financial, social and environmental development, so that we can satisfy our current needs without compromising the ability of future generations to satisfy theirs. Responsibility for sustainability rests with the international community, individual countries, each individual person and every business in the world.

"Implenia is currently assessing its position and defining its ground – to ensure a successful future with sustainable construction."

Implenia has included sustainability in its strategy and defined it in more detail in five "priorities": it wants to supply sustainable products and services and guarantee that employees have an attractive working environment; it wants to protect the environment, live up to its social responsibilities and operate a transparent financial policy. Admittedly, these priorities might initially appear very



Moritz Leuenberger, Member of the Board of Directors and Chairman of the Sustainability Committee, knows that Implenia, as Switzerland's largest construction company, has a particular responsibility for its business policy throughout the country.

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abstract. The details have to be fleshed out and made real for all concerned by presenting concrete numbers and facts. First of all a comprehensive and detailed review needed to be carried out to establish the current situation and provide a basis for comparison with other companies. Having conducted this analysis we are now in a position for the first time to measure the accuracy of our own claims, show progress and set ourselves new targets for the future.

We are doing this on the one hand for our employees. We want to work with them to develop interesting and sustainable jobs - which includes prioritising health and safety. We want to nurture and encourage their talents in a targeted manner and offer them training and development opportunities within our company. We are also doing it for the environment: managing energy and resources carefully, avoiding waste, recycling building materials and minimising CO<sub>2</sub> emissions and the fuel we use in all our areas of activity. We also know that as Switzerland's largest construction services provider, we have a particular responsibility. Consequently we are issuing a Code of Conduct designed to ensure the kind of fair conduct that benefits the customer but also, ultimately, the whole market. As well as paying off financially, the results of such work are deeply satisfying. Just as we can be proud of our contribution to the longest tunnel or the highest tower, we can also be proud if a project we are involved in is sustainable, i.e. completed in a way that is respectful of the environment and socially responsible. This is our way of helping ensure we leave the world in a fit state to provide a good home for future generations. There are various concrete examples of this strategy in the following chapters.

"Implenia is determined to crack the tough nut of sustainability."

In this sense, a sustainable business policy improves our customer relations and serves our shareholders' interests. As our shareholders know, companies that pursue a sustainability strategy generate more value more sustainably over the long term. So it is hardly surprising that demand for sustainable investments is growing. We are very pleased that Implenia has achieved the "SRI" ("Socially Responsible Investment") standard (see chapter 6).

Implementing sustainability is hard work. Someone – unsurprisingly someone from the world of business – once said that responsible politics was like "cracking a tough nut with good judgement". Implenia is determined to crack the tough nut of sustainability.

# 1 The company

### 1.1 Foreword by the CEO

"Sustainability is our passion."

People sometimes ask me: "Why have you now committed yourselves so publicly to sustainability?" Have you just been dragged along by fashion? Or is this just the latest obsession of the Executive Committee, the CEO or the Board of Directors? I have to say clearly at this point that it is neither a fad nor just a bee in someone's bonnet. We are totally committed to sustainability as an integral part of our corporate strategy.

The following thinking is shared by a great many Implenia employees:

"What we do – and don't do – has a major impact on the environment, economy and society." The construction industry exerts a strong influence on the economy, the environment and society. Starting with the environment, 30 percent of greenhouse gas emissions, 40 percent of energy consumption and around 75 percent of the waste generated by Switzerland can be ascribed – directly or indirectly – to building and infrastructure construction. Every year our industry generates total turnover of on the average of CHF 55 billion, and it provides more than 300,000 jobs. At the same time we influence our society very directly by providing and modernising places to live and infrastructure.

How we manage our impact on the economy, the environment and society is a central concern for us and our stakeholders. We have no doubt that only businesses that are sustainable have a viable future. At Implenia, we want to determine our own future. Which is why we take sustainability so seriously.

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"Environmental, economic and social megatrends are decisive for the development of our company."

Climate change, water shortages, environmental degradation, scarce resources and loss of biodiversity are a reality that we confront every day in our business. The mobile society, migration, urbanisation, digitalisation – yet more important trends that affect our society and influence the way we do business. Relentless competition, increasingly volatile markets and globalisation also have an effect on the business environment.

Understanding all these trends, drawing the right conclusions and thus being able to identify opportunities and risks in good time can only mean one thing for us: acting sustainably.

# First we want to create value for our customers.

In building construction we want to be the first choice for sustainable construction and to keep developing the expertise needed for this. In tunnel construction we want to influence sustainable development directly and, for example, help solve waste, energy and transport problems. Our civil engineers see and develop solutions for the implementation of sustainable renovation concepts and life-cycle construction projects. In roads and civil works we want to achieve continuous progress through energy and resource-efficient solutions.

### We also create value for our employees.

Companies that want to recruit and motivate talented employees need to have a convincing sustainability strategy that is actually carried out in practice. The challenge is clear and we have no choice but to turn our words consistently into action.

# Finally, we create value for our shareholders.

Investors are looking for transparent companies focused on sustainability: our transparency makes us more attractive on the financial market and thus very directly creates value.

"As a company we want to create sustainable value."

### What do we mean by sustainability?

For us, sustainability is not just another point on a long checklist. And our Sustainability Report should not be just another report that we publish because we have to. We have been working on sustainability directly and indirectly for a long time, and have always done so from the simple conviction that it is good for us and our stakeholders.

At the start of 2010, Implenia launched a comprehensive "sustainability initiative" across the whole group. Employees from all areas of the business took part in a wide range of workshops at which they explored the meaning and role of the megatrends mentioned above, and worked on the development of sustainability. Priorities were defined and then integrated as key points in the group's strategy. Finally we embedded the principle of sustainability in our corporate vision.

We are now working everyday on implementing and further developing these key points. With the publication of our Sustainability Report we are now presenting the results to our stakeholders for the first time.

We have achieved a lot. There remains much to do. We are passionate about doing it.

Anton Affentranger CEO

**1 THE COMPANY** 20–21

### 1.2 What sustainability means to Implenia

### Significance of the construction industry

The construction industry has a substantial impact on Switzerland's sustainable development, because its work is concerned not only with economic value creation, but with society and the environment.

### **Environment**

- Approx. 30% of greenhouse gas emissions
- Approx. 40% of national energy consumption
- Approx. 75% of waste generated

### Society

- 50,000 accidents at work every year
- Production of 1,500,000buildings, providing 3,400,000 homes
- 70,000 km of roads and 5,000 km of railway tracks

### Economy

On the average CHF 55 billion a year, a third of which funded by the public purse
 300,000 jobs

### **Potential in all areas**

There are major challenges to be faced in all three areas, so there is great potential for the construction industry and Implenia to exploit. Implenia aims to use this potential and make an active contribution to finding solutions.

### Environment

- Climate change
- Dwindling supplies of energy and resources
- Loss of biodiversity
- Environmental degradation

### Society

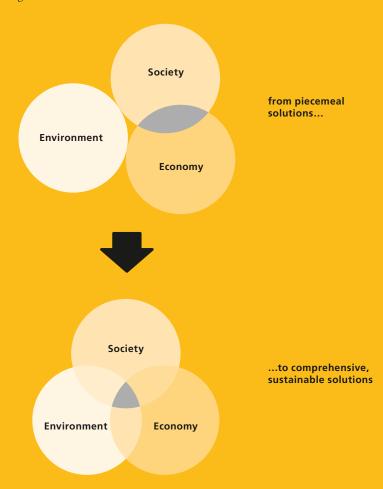
- Health and safety
- Population growth
- Demographic change
- Mobile society
- Urbanisation
- Equal opportunities

### **Economy**

- Sustainable investors/shareholders
- Competitive pressure
- Shortage of expertise
- Globalisation

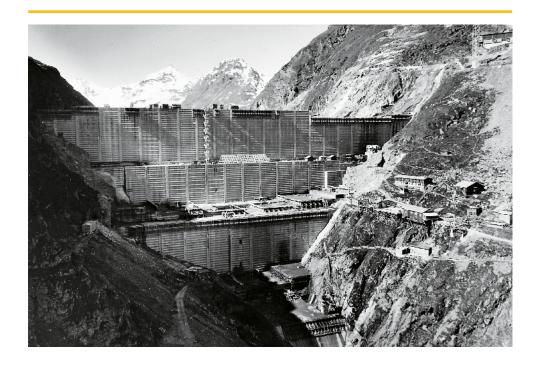
### **Seeking balanced solutions**

For Implenia, being sustainable means combining economic performance with social responsibility and protecting the environment.



This requires comprehensive, interdisciplinary solutions rather than piecemeal gestures. Implenia intends to use its entire group-wide expertise to develop such solutions. Because being sustainable means being ready for the future.

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### 1.3 Implenia at a glance

# Implenia – a young company with a long history

Implenia's origins stretch all the way back to 1866 when Batigroup's predecessor firms were first established. Batigroup itself was created in 1997 from the merger of the three long-established companies Preiswerk, Stuag and Schmalz. Their core competences were general contracting, infrastructure construction and tunnel construction.

Conrad Zschokke, founded in 1872, expanded over the course of the decades – through organic growth and numerous acquisitions – to become the Zschokke Group. Its core business embraced general planning, general and total contracting, engineering, construction and real estate services.

For more than 140 years the two construction companies completed countless projects in Switzerland and, occasionally, abroad. Then in March 2006 Batigroup and Zschokke merged to form Implenia, the largest construction firm in Switzerland. Implenia combined the youthful freshness of a new company with the skills and experience of two long-established businesses. More than 6,000 employees work hard every day to ensure that Implenia's customers' wishes are fulfilled.



### **Sustainability Committee**

The Sustainability Committee helps the Board of Directors and Executive Committee to set the sustainability strategy. The committee is composed of Moritz Leuenberger (Chairman) and Markus Dennler. The CEO also takes part in its meetings. Every year, sustainability targets are set in collaboration with the Executive Committee for the following areas:

- Sustainable products and services
- Respect for the environment
- Attractive working environment
- Social commitment and compliance
- Financial excellence

Implementation is led by the CEO and the Executive Committee in the divisions. Continuous controlling ensures that the targets are achieved. During the initial phase, the "Sustainable Implenia" initiative is being supported by a project team.

1 This division was headed by Luzi R. Gruber until the reporting date. Since 1 January 2012 it has been headed by Peter Preindl.

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The members of Implenia's Executive Committee are: Arturo Henniger, Anton Affentranger, Beat Fellmann, René Zahnd and Peter Preindl (left to right).

Anton Affentranger, CEO

Born 1956, Swiss At Implenia since 1999 (incl. predecessor firms)

**Beat Fellmann,** CFO and Head of Corporate Centre Born 1964, Swiss At Implenia since 2008

**Arturo Henniger**, Head of Infrastructure Construction Division Born 1956, Swiss At Implenia since 1998 (incl. predecessor firms)

**Peter Preindl,** Head of Industrial Construction Division Born 1956, Austrian At Implenia since 2011

**René Zahnd,** Head of Real Estate Division Born 1966, Swiss At Implenia since 2009

### 1.3.1 Board of Directors

The Board of Directors had seven members during the year under report. At the Annual General Meeting of Shareholders of 19 April 2011, Moritz Leuenberger and Theophil H. Schlatter were appointed as new members. On 1 October 2011 the Board of Directors appointed Anton Affentranger as the new CEO of Implenia. At the same time Anton Affentranger – up to that point Chairman of the Board of Directors – stepped down from the Board of Directors. The new Chairman of the Board of Directors is Markus Dennler, who had been Vice Chairman of the Board since the merger in spring 2006. Hans-Beat Gürtler was elected as the new Vice-Chairman.

None of the Members of the Board of Directors has an operational management role in the company or any of its subsidiaries.

No Member of the Board of Directors was part of Implenia's Executive Committee or part of the operational management team of any Group company in the three years before the period under review.

No member of the Board of Directors has any significant business relationships with the Implenia Group.

First elected	Re-elected	Term ends
20.12.2005	14.04.2010	AGM 2012
14.04.2010		AGM 2012
20.12.2005	14.04.2010	AGM 2012
19.04.2011		AGM 2013
19.04.2011		AGM 2013
20.12.2005	14.04.2010	AGM 2012
20.12.2005	14.04.2010	AGM 2012
	20.12.2005 14.04.2010 20.12.2005 19.04.2011 19.04.2011 20.12.2005	20.12.2005 14.04.2010 14.04.2010 20.12.2005 14.04.2010 19.04.2011 19.04.2011 20.12.2005 14.04.2010

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### 1.3.2 Three divisions - an integrated business model

Implenia's operational organisation is split into three divisions.

- Real Estate
- Infrastructure Construction
- Industrial Construction

There is also a Corporate Centre, which takes care of all centralised functions. The operational divisions each have their own specific core competences, but they combine their aggregate expertise under the single roof of a nationally and internationally active company. With this integrated business model and a comprehensive portfolio of products and services covering the whole construction value chain, Implenia is a full-service provider that can offer everything required to complete a project – sustainably and from a single source. Together with the Integrated Management System (IMS), all this guarantees that the processes deliver efficient and professional job execution for customers at all times.

### **Corporate Centre** the central services provider

tions that are best provided on a centralised

- Finance and Controlling

### **Division**

### Real estate - the total service provider

The Implenia Real Estate Division offers its customers an integrated business model and supplies a complete range of services covering the entire life cycle of a property from sourcing finance to development and realisation to operational optimisation and promotion. Implenia Real Estate is the market leader in Switzerland for general and total contracting.

- General and Total Contracting
- Development
- Engineering

Implenia's Real Estate is certified under international standards ISO 9001 (quality), ISO 14001 (environment) and OHSAS 18001 (health and safety).

### **Division**

## **Infrastructure Con**struction - complete **building services**

Implenia Infrastructure Construction offers the full range of building services:

- Road Construction and Civil Works
- **Building Construction (new and** renovations)
- Infrastructure Projects
- Civil Engineering
- **Underground Construction**
- Foundation Engineering

As the market leader in Switzerland, Implenia has the experience and critical mass to supply the right specialist expertise, financial resources and first-class technical equipment for any situation.

Implenia Construction is certified as follows for its quality, environmental, and health and safety systems: ISO 9001 (all locations), ISO 14001 (most locations) and OHSAS 18001.



www.reprojet.ch

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### Division

### **Industrial Construction –** the infrastructure specialist

Implenia's Industrial Construction Division is the specialist for institutional and private infrastructure projects in Switzerland and targeted international markets. Organisationally it is divided into two operational units:

Tunnelling (Swiss and international)

- Underground Construction
- **Power Stations**
- Rail Technology
- Microtunneling

### Prime Building (international)

Consulting and project/construction management for challenging real estate projects.

Implenia Industrial Construction is certified for quality, environmental standards and health and safety under international standards ISO 9001, ISO 14001 and OHSAS 18001.

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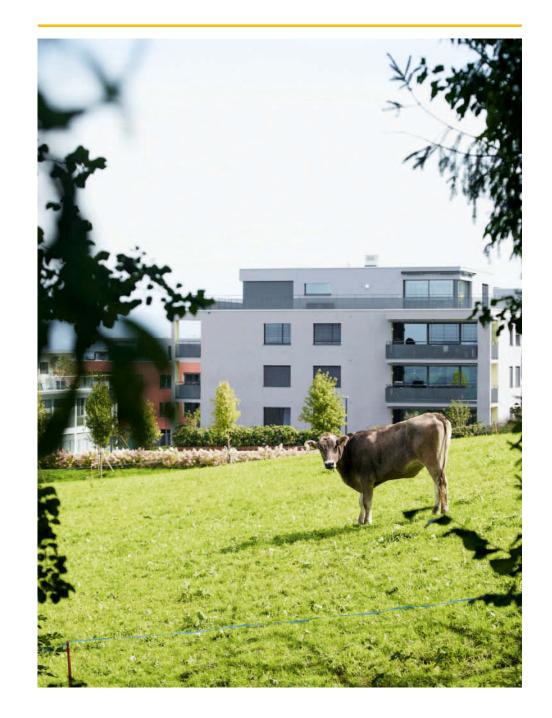
# 1.3.3 Head office and branches – at home in Switzerland, present around the world

Implenia's head office is in Dietlikon near Zurich, and it has approximately 100 branches throughout Switzerland, as well as representative offices in Germany, the Ivory Coast, France, Italy, Liechtenstein, Mali, Norway, Russia and the United Arab Emirates.

### **Exploiting potential in the far north**

The acquisition of Norwegian company Betonmast Anlegg in July 2011 marked another milestone in the execution of Implenia's international strategy, helping it exploit its growth potential in international infrastructure business.

This first Sustainability Report provides details of Implenia's sustainable development in Switzerland in 2011. International locations are not included.



1 THE COMPANY

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# 1.3.4 Services, markets and sectors served – all from a single source

Implenia offers a comprehensive programme of products and services, and it aims to apply the principles of sustainability to all its activities. This includes creating long-term economic value as well as taking a responsible approach to the environment and society. Consequently, the sustainability of its products and services, and respect for the environment lie at the heart of the company's economic activities.

### Project Development

### (Switzerland)

- Turn-key solutions
- Sale of land plots
- Developing plots to increase their value
- Investment properties
- Selling new apartments
- Optimising existing properties
- Conversion of existing properties
- Building replacement properties
- Finding locations for new business premises
- Optimising business premises
- Investment products

# **General/Total Contracting**

### (Switzerland)

- New builds
- Conversions/renovations

### **Engineering**

#### (Switzerland)

- Sustainability planning
- Building technology planning
- Operations and logistics planning
- General planning for industry
- Energy management
- Simulations

# **Building Construction**

#### (Switzerland)

- New builds
- Wooden and modular building
- Renovation/reclamation

### **Civil Engineering**

#### (Switzerland)

- Concrete construction/major projects
- Bridge construction
- Falsework
- Concrete repairs (renovation of civil engineering structures, buildings, tunnels)
- Noise protection
- Hydraulic engineering
- Hydrodynamics

# **Foundation Engineering**

#### (Switzerland/Western Europe/Scandinavia/Middle East, North Africa)

- Large-bore drilling
- Displacement piles
- Excavation bracing
- Small-bore drilling
- Dewatering
- Exploratory drilling
- Vibro-flotation
- Complete excavation solutions

# Road Construction and Civil Works

#### (Switzerland)

- Farthworks
- Stabilisation
- Hydraulic engineering and lining of streams
- Drains and service lines
- Concrete road surfaces
- Road and surface construction
- Special concrete forms with slipform pavers
- Surveying services
- Track construction
- Manufacturing plants
- Construction laboratory

# **Underground Construction**

(Switzerland/Western Europe/Scandinavia/Middle East, North Africa)

- Transport tunnels (tunnels, underground power plants, shafts)
- Power plant construction (galleries, caverns and shafts)
- Service tunnels

### **Prime Buildings**

(Western Europe/Russia, Central and Eastern Europe/ Middle East, North Africa)

- Design and planning
- Development
- Execution



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"WE'VE GOT A GRIP OF GREY ENERGY"

In the city of Basel, Implenia is building a beacon project for the 2000-Watt Society. At the new "schorenstadt" residential development, singlefamily homes and apartment blocks are being constructed to the highest environmental and social standards. Not an easy job, but certainly an exciting and valuable experience. We take a look at the construction site of the future.

"Good morning Katja," says the computerised voice from the ceiling. "It's a beautiful day, 25 degrees and less than 2 percent risk of rain." It's not an alarm clock that gets the 32 year-old out of bed this fine morning in June 2033, but a microprocessor that also controls the rest of the technology in the building, including regulating the ventilation based on the latest weather forecast. Katja slips into her summer clothes and gulps down the espresso that her digital kitchen assistant has already poured into her cup. Final preparations for the day and then a quick look in the mirror before hurrying down to the garage, where the freshly charged rented motor scooter awaits. As soon as the apartment door closes, the LED lights automatically switch off behind her. Katja starts the scooter by typing in her security code, then opens up the throttle and zooms off with a quiet hum towards the station.

2000

2000 watts is the amount of power available to each person in the long term if it is produced sustainably and distributed equitably around the world.





### An important step

Architect Franco Fregnan of the University of Applied Sciences and Arts Northwestern Switzerland is coordinating construction projects in Basel, which is a 2000-Watt pilot region. He believes the "schorenstadt" project proves that the activities of the construction industry and the operation of buildings can be made environmentally sound:

"I think it's great that the company has opted for such a far-reaching standard. This marks an important step on the road towards a sustainably managed civilisation."

This, or something very like it, is what researchers think life in a 2000-Watt Society will be like. 2000 watts is the amount of power available to each person in the long term if this power is to be produced sustainably and distributed equitably around the world. The average Swiss person currently uses more than 6000 watts. This is

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three times as high as in 1960, before the recent decades of rapid economic growth. But researchers don't want to turn back time. In a few decades time, it should be quite possible to live life comfortably and well with minimal energy consumption and CO<sub>2</sub> emissions. A few more innovations are needed before we reach this point, but even with the technology available today, combined with an energy-conscious lifestyle, people can still come very

close to making the vision a reality. They need to use environmentally friendly modes of transport, like trains, buses and electric vehicles. They need to use energy-efficient devices and products. And they need to live and work in homes and workplaces that are properly insulated, intelligently heated, and built from low-energy materials.





### Profile of "schorenstadt"

- 2 apartment blocks and 43 terraced houses in a high-density setting
- High standard of architecture
- Compliant with the new SIA Energy Efficiency Path (2011)
- Compliant with the Minergie-P-Eco Standard
- Wooden construction, the small amount of masonry used is made from recycled concrete
- CO<sub>2</sub>-neutral supply of heating and electricity
- High proportion of green areas, green roofs
- Low-car-use estate
- Charging points for e-bikes

### A model sustainable housing estate

At various locations in Switzerland. work has already begun on creating this energy-saving future. The schorenstadt site in Basel is one of them. Between the city's Badische railway station and the German border, Implenia is building a housing estate designed to pave the way for the 2000-Watt Society. On the site itself, however, there is still no physical sign of its ambitious plans. Between the tracks of a disused railway line and the orange-reflecting windows of a Novartis building stretches an unspectacular industrial wasteland. This used to be where the pharmaceutical giant had its research greenhouses, but now the area, about the size of two football pitches, is completely covered by gravel and moss. Silvan Bohnet points through the chain-link fence that surrounds the cleared site and draws virtual buildings in the air. In a few months, 43 terraced houses and 2 apartment blocks – sustainable prototypes – will be built here. "The people who come to live here will experience at first hand how good life can be in a 2000-Watt Society," says

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the 47 year-old architect, who works in the development department at Implenia in Basel and who is responsible for the project.

The "schorenstadt" development is the first residential new-build within the 2000-Watt Society project in Canton Basel-Stadt. However, there are still a few obstacles to overcome before construction can begin. "There are barely any standard technical solutions for these types of building," explains Silvan Bohnet. So there is a lot of additional work to do in the early planning phases. The pilot scheme and all the preparatory work have taken twice as long as for a housing estate built in the traditional way. 2000-Watt Society buildings demand highly detailed planning and calculation right from the start. Even small issues such as the choice of underlay play an important role and need to be sorted out early on. Otherwise it would be impossible to keep control of the grey energy used – i.e. the energy required to produce the construction materials even before they are delivered to the building site. In sustainable construction,



**Benefits for Basel** 

Canton Basel-Stadt has been supporting energy-efficient pilot buildings and show homes for ten years, and it is also making a financial contribution to the "schorenstadt" project. Thomas Fisch, Head of Department at the Environment and Energy Office, is very positive:

"We welcome Implenia's initiative, which is exactly in tune with our progressive energy policy."

these grey energy calculations are absolutely vital. "We keep precise accounts of the non-renewable primary energy and greenhouse gas emissions," Implenia's project manager tells us.

The architects in Basel have had to revise their plans more than once and then throw out the designs because they didn't comply with the energy requirements. Achieving the goals for energy consumption and greenhouse gas emissions proved very challenging. "This is why we chose to build in wood," explains Silvan Bohnet. "Concrete is only used where it's needed for structural reasons and if it's justifiable from the environmental perspective." Only the ground floor and a few individual elements are going to be built in solid construction – for which recycling concrete made on site will be used. Many other smart solutions are being employed to keep energy use down. These include roof-mounted solar panels to generate power, district heating from Basel's wood-fired power station,

green electricity from the grid, charging stations for e-bikes, public transport season tickets included in the purchase price, an on-site car-sharing scheme, and flexible floor plans to ensure that the homes meet their inhabitants' changing needs over the long term.



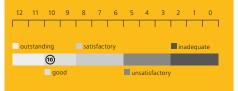
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### In-house expertise

The links between the technical and the financial aspects are very complex. In Silvan Bohnet's experience so far, this means that the planning process is extremely interactive, with many different experts all having to work together. "It needs a lot of know-how and commitment." And the project manager has to make sure that costs don't spin out of control. Owing to the high standards of construction, investment costs are higher than average, so in order to keep the price of the homes within reasonable bounds, the planners have had to be inventive. "For me sustainability also means that it's not just a rich few that can afford to live here." says Bohnet. Environmental, social and financial factors have to be considered in a balanced way.

### GeNaB® shows the way

Like all construction projects developed by Implenia itself. "schorenstadt" was audited using the firm's own GeNaB® standard (GeNaB = "Gesamtbewertung Nachhaltiges Bauen" = total evaluation of sustainable construction). This includes 18 sustainability criteria covering energy issues as well as social, financial and locational aspects. One of the strengths of this evaluation system is that it takes account of all stakeholders and their concerns, which in turn facilitates holistic planning. Right at the start, in 2009 when the company first took on the site, the project scored 6 out of a maximum 12 possible GeNaB® points. A little later, Implenia made its decision to take a bolder course towards sustainability, and the planners gradually optimised the project. The energy requirements were raised several times, first from Minergie to Minergie-P, then to Minergie-P-Eco Standard and finally to the additional 2000-Watt Society level. The project now scores a total of 10 on the GeNaB® scale.



The overall evaluation is measured on a 12-point scale

The project manager is aided in his work by the experts from Reuss Engineering – an Implenia subsidiary that always gets involved when sustainability is the issue. Reuss experts calculate the project's energy values and ensure that it follows the "SIA energy efficiency path". This is a set of guidelines, developed by the Swiss Society of Engineers and Architects (SIA), for constructing buildings for the 2000-Watt Society. The SIA guidelines include target levels for greenhouse gas emissions and nonrenewable energy which apply to the production and operation of the buildings as well as to the traffic flows they generate. "Throughout the development phase, our experts assist with the project and constantly assess whether sustainability goals are being achieved," explains Andreas Pfeiffer, Head of the Energy+Environment Department at Reuss Engineering. The engineers calculated that the Basel project comes in significantly below the SIA target value for non-renewable primary energy consumption of 440 megajoules per square metre per year. The project also meets the guideline figures for greenhouse emissions (16.5 kilogrammes per square metre per year).

# Calculations that work out for everyone

Everyone involved benefits from sustainable buildings. Thanks to their low energy consumption and own energy generation, buildings built for the 2000-Watt Society are not dependent on fossil fuels. In a time of rising energy costs, this is obviously a good thing. The use of long-lasting materials and construction techniques, combined with flexible usage options, helps to keep down maintenance and replacement costs. Initially, the construction and certification of sustainable buildings might increase investment costs, as "schorenstadt" shows. "But buyers are prepared to pay more for property that delivers a higher quality of life," says Andreas Bähler, Head of Central Region within Implenia's Development Department. And they will also pay more for cutting-edge construction methods that will keep depreciation to a minimum. "The bottom line is that both users and investors benefit from high energy standards in construction."

2 SUSTAINABLE PRODUCTS AND SERVICES 42–43

The pilot project in Basel will ultimately prove whether this really does all add up. This will not become clear, however, even when the first home-owners move in three years from now and fill what is now a wasteland with life. The final reckoning can only come much later. "You only really know exactly how sustainable a building has been when it is finally demolished," says Andreas Bähler. The analysis has to be across the building's entire lifecycle, especially since the environmental impact of a building is often greater during the period it is being lived in or used than when it is actually being built. Much can be achieved with good planning. But only time will tell whether, for example, the inhabitants of "schorenstadt" really do use the good public transport facilities on offer. What is certain is that right up until it hands over the keys, Implenia will do everything in its power to ensure "schorenstadt" achieves its ambitious goals and becomes a benchmark project for sustainable construction – proving once again that the company can put its strategies successfully into practice.

### Specialists in sustainability planning

Reuss Engineering, a subsidiary of Implenia, has 65 employees who specialise in sustainability planning, building technology planning, general industrial planning, energy management and simulation.

Sustainability planning services include:

- Developing and implementing strategies for sustainable construction
- Putting the "2000-Watt Society" vision into practice
- Helping to develop and apply sustainability standards
- Helping with qualification for labels and certificates

"Implenia's 'schorenstadt' project has the potential to be a beacon project with national and eventually international resonance."

Holger Wallbaum, Assistant Professor at ETH Zurich and Chair of the Professorship for Sustainable Construction, sketches out the opportunities and potential of sustainable construction.



Implenia's 'schorenstadt' project has the potential to be a beacon project with national and probably international resonance. Not only because it has set very ambitious targets for operational energy, but also because it has included the grey energy invested in the buildings and the transportation habits of the eventual users. I'm also impressed by the modern wooden design with its generous spaces, roof terraces and loggias, its green areas, playgrounds and private gardens.

## How would you rate Implenia's efforts at sustainability in general?

In recent years Implenia has started to work systematically and at all levels on promoting sustainable development, including the sustainable development of the company itself. This process began with a commitment by senior management, and it is now finding increasingly broad support throughout the company. The process must be given time because it gradually



needs to incorporate everyone concerned – not just the employees but also clients and their suppliers. If this is done successfully, with clients and investors also recognising the benefit of sustainable buildings, it will be a landmark achievement – for Switzerland but also globally. So Implenia's contribution should not be underestimated.

# What opportunities and challenges do you think will determine future progress?

I think the major opportunities lie in the fact that Switzerland has a very well developed culture of planning and building, as well as sufficient financial resources and expertise. Sustainable planning, construction and operation of buildings is a risk management strategy or, as it's often put, a bet on the future. In a society dominated so much by the here and now, forward-looking measures that don't bring an immediate return on investment are hard to sell. The challenge is to change the parameters so that the added value of sustainable construction becomes palpable and appealing to planners. clients and investors. It has to be possible for us to give the goals of sustainable development and justice for future generations - which are enshrined in the Swiss constitution - a decent chance. And this requires commitment at all levels.

# <sup>2</sup> Sustainable products and services

Depending on whereabouts the product or service sits within the value chain, Implenia can intervene to different degrees. At the planning stage, fundamental decisions can be taken about using "greener" materials throughout a project. If Implenia only comes in at the construction stage, it can still focus on the greenest possible implementation strategy. In both cases, progressive solutions can be found to suit the specific circumstances. Implenia has given responsibility for "Sustainable Products and Services" to the CEO and to the Head of its Real Estate Division. This should ensure that sustainable solutions are found throughout the whole group. By involving Real Estate we can make sure that in our own projects, sustainability considerations have an influence right from the start.

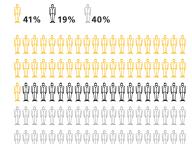
The principles of sustainability can only be implemented in a targeted fashion if the concept is broken down into concrete qualitative and quantitative criteria. Implenia has developed these criteria in various projects over recent years with the SIA (Swiss Society of Engineers and Architects), for example, in the case of the 2000-Watt Society. The company also has its own in-house tool for making comprehensive evaluations of construction projects. This is known as GeNaB® ("Gesamtbewertung Nachhaltiges Bauen" = total evaluation of sustainable construction). At the same time, Implenia is already putting pioneering sustainability projects into practice. These include a residential estate built in accordance with the vision of a "2000-Watt Society" (see report on pages

### 2.1 Management approach

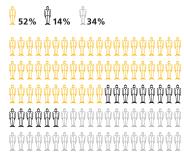
Implenia defines "sustainable products and services" as those that take equal account of financial, social and environmental aspects. They satisfy a social need, secure long-term financial added value and simultaneously minimise the use of natural resources. The company is well aware of the numerous conflicts that there can be between these principles, but it sees these as a challenge.

As described in detail in the "What does sustainability mean for Implenia" section (page 20), the construction industry has a huge influence on sustainable development. In order to make an active contribution to meeting this challenge, Implenia aims to deliver sustainability in its products and services – i.e. in its core business – rather than just at the level of in-house environmental protection measures.

By number of projects



By construction volume



41% of General Contracting projects were commissioned by customers who had worked with Implenia

Repeat customers

One-off customersFirst-time customers

#### **BREAKDOWN OF GENERAL CONTRACTING CLIENTS 2011**

(in %)

### 2.2 Evidence

### 2.2.1 Client satisfaction

Implenia's Guiding Principles state the following: "Partnerships with our customers lie at the heart of our work. By concentrating on our customers' needs and desires, we gain a better understanding of their business, which in turn allows us to offer tailor-made solutions." As a competent partner for all products and services associated with the planning, construction and management of buildings, we want to be a one-stop-shop for innovative solutions. The large proportion of customers who come back to work with us again and again reflects how successfully we do this. For example, 41% of the projects being handled by Implenia General Contracting were commissioned by customers who have already worked with Implenia in the past.

### **CUSTOMER SATISFACTION REAL ESTATE 2011**

121 customers surveyed

Total
81%
82%
78%
76%
81%
78%
82%
67%
83%

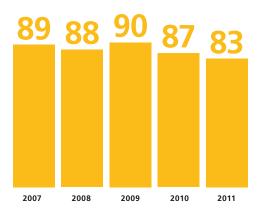
Respondents also give an overall evaluation using ++, +, +/-, - or --. The marks chosen for the overall evaluations were ++, +.

2 SUSTAINABLE PRODUCTS AND SERVICES 46–47

Each of the divisions carries out customer satisfaction surveys. These vary according to the different types of products and numbers of customers involved, and some are more systematic than others. The Real Estate Division. for example, has used consistent criteria for many years to assess how satisfied customers are with every individual project, either through a personal discussion or a written survey. The results show that Implenia's customers appreciate the commitment and expertise of the group's employees. Some respondents, however, believe the company could be better at correcting defects. Consequently, the division has carried out a project designed to improve the project completion process. Internal standards have been clarified, project and site managers have been trained, and experiences have been shared. The overall trend over the last five years shows that the goal of at least 90 percent positive assessments represents a constant challenge.

The Infrastructure Construction Division. which works on around 3,000 building sites every year, holds a discussion with each customer at least once a year. In addition to this personal contact, many clients also make use of the option to give written feedback. In general, private and public-sector customers are happy with the work done by Infrastructure Construction. They particularly appreciate the division's ability to stick to budgets, deadlines and quality standards. Implenia uses critical feedback to optimise its internal processes. For example, the foundations on a road construction site in Canton Thurgau were not strong enough, and Implenia took this mistake as an opportunity to improve its testing processes and employee training. In a project handled by the Civil Works Department in Zurich, the client complained about late invoicing. In response, Implenia reconfigured its billing process and brought in an additional construction manager to help with this.

The overall trend over the last five years shows that the goal of at least 90 percent positive assessments represents a constant challenge.



**CUSTOMER SATISFACTION TREND REAL ESTATE** 

(in %)

Direct customer relations are particularly important in the Industrial Construction Division. This area deals mainly with demanding, large-scale, multi-year construction projects. Examples include several sections of the NEAT (transalpine railway) project at the Gotthard, the Central Olympic Stadium at Sochi, and the A8 bypass tunnel at Lungern. All final building inspections are systematically evaluated. Close contact is maintained with clients throughout the construction process, and client requests and feedback are addressed quickly while work is going on.

Raising the level of customer satisfaction is a continuous task for Implenia.

Until now, customer activities have been located mainly in the individual divisions. A group-wide key account management system is now being launched to ensure customers are advised early and comprehensively.



Customer satisfaction is not just evaluated when the building is handed over; close contact is maintained with the client throughout the construction period, so that client requests and feedback can be addressed quickly.

2 SUSTAINABLE PRODUCTS AND SERVICES 48–49



Implenia maintains a 24-hour stand-by service in case of flooding. This involves collaboration with Cantons Zurich, St. Gallen, Glarus, Schwyz and Solothurn, as well as with numerous municipalities.



# 2.2.2 Reducing greenhouse gas emissions

The effects of climate change are being felt in Switzerland in the form of more events such as floods and landslides, but also more storms, heat waves, downpours and other extreme weather. For Implenia, which is involved in such a wide variety of activities across the whole construction process, the consequences of climate change are very important, as are efforts to mitigate them. On the one hand, the company can reduce greenhouse gas emissions in its own activities. On the other, it is directly affected by the consequences of global warming. Implenia's many building sites, for example, are directly exposed to extreme weather events.

Implenia takes its responsibilities in the field of climate change seriously and is taking various steps to cut greenhouse gas emissions. It always tries to make sure its products and services are sustainable and that it treats the environment responsibly.

In concrete terms this means:

- Using materials with a low grey energy profile when developing its own projects
- Advising on, planning and using renewable energies such as geothermal, process heat and solar
- Collaborating on the development and implementation of ambitious energy standards such as the 2000-Watt Society
- Reducing energy consumption on building sites, and in workshops and production facilities

Environment	Finances	Society
Resources  - "Grey energy"  - Operational energy  - Climate protection	Costs  - Price of property compared to market price  - Investment cost or lifecycle perspective  - Vacancy rates in location	Location and architecture  - Attractiveness of location  - Noise pollution  - Process used to produce architectural concept
Ground  - Public transport connections  - Best use of the available land  - Promotion of diversified green spaces	Value retention  - Local demographic trends  - Flexibility of use  - Durability of construction	Community  - Good mix of social groups  - Acceptance/participation in realising project  - Convenience and health

THE 18 GENAB® CRITERIA FOR ASSESSING SUSTAINABLE CONSTRUCTION

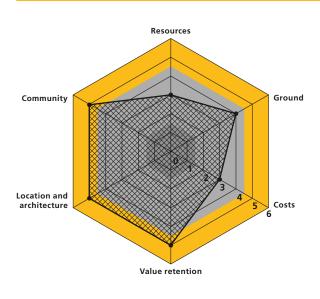
The company is also able to mitigate the impact of climate change. It has great experience in clearing up after storm damage and in flood protection. With rapid response times and very flexible employees, Implenia is a competent partner for affected regions. In flood protection, for example, the company operates a 24-hour stand-by service.

### 2.2.3 Own evaluation system

A new build does not automatically become sustainable just because someone has mentioned sustainability somewhere in a concept paper. The whole construction project has to be focused rigorously on concrete targets. In 2004 the SIA (Swiss Society of Engineers and Architects) set out principles for the definition of sustainable buildings in its "Sustainable Build-

ing Construction" recommendation. This recommendation (SIA 112/1) includes 36 criteria to be applied at different phases of the project. These cover things like the composition of construction materials, the energy consumed in operating the building, transport links, and the opportunities for social interaction among users. In an effort to ensure that it sets the right course very early on in the construction process, Implenia has developed its own evaluation tool, based on the SIA recommendation. This tool is called Gesamtbewertung Nachhaltiges Bauen ("total evaluation of sustainable construction") or GeNaB® for short. Implenia's project developers and the sustainability specialists at its subsidiary Reuss Engineering selected 18 criteria relevant to the initial phase of a construction process (see table).

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GeNaB® helps project managers and builders to review and optimise new builds and renovation projects in terms of their sustainability. The assessment grid can be applied to four categories of building - residential, office, retail and retail park – and to two types of project – new build or modernisation. Each criterion is backed up by a detailed assessment aid. The evaluation is based on individual criteria as well as an overall assessment shown on a 12-point scale. GeNaB® allows developers to plan a property sustainably right from the start.



**GENAB®: TOTAL EVALUATION OF SUSTAINABLE CONSTRUCTION** 

(Overview of individual criteria)

### **OVERALL SUSTAINABILITY EVALUATION**

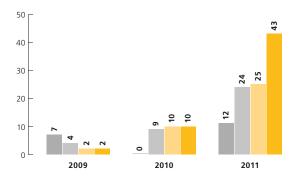
(12-point scale)

Implenia's own projects usually have to score more than eight points - a high sustainability standard – if they are to be approved by the company's Investment Committee. Since GeNaB® was introduced in 2009 the company has already assessed 148 projects using this comprehensive evaluation method (see charts on p. 51). Over the last three years, there has been a clear trend towards more sustainable construction. The rising number of projects shows that the issue has become more important within Implenia too. In 2011 the company assessed and optimised four times as many projects with GeNaB® - 104 in all - than in the previous year. The Investment Committee dealt with 24 projects and approved 20. 17 projects

achieved at least 8 points. The remaining three scored less than 8, but the Investment Committee approved them owing to their strategic importance.

#### **Investment Committee**

The Investment Committee's core task is to assess the financial viability and the sustainability of construction projects. The CEO, CFO and Head of Real Estate sit on the committee.

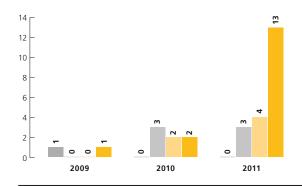


The number of sustainable building projects has increased significantly over the last three years.

 0-5 points ● 6–7 points

8 points 9–12 points

### PROJECTS ASSESSED USING GENAB® POINTS



13 projects approved by the Investment Committee in 2011 achieved the high score of 9 to 12 points.

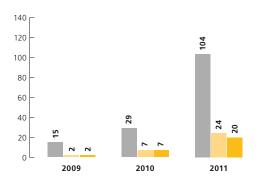
0-5 points

● 6–7 points

8 points 9–12 points

### PROJECTS APPROVED BY INVESTMENT COMMITTEE

(by points)



In 2011 Implenia evaluated 104 projects using GeNaB®. 24 projects were presented to the Investment Committee, of which the committee approved 20.

Evaluated projects Projects assessed by the

Investment Committee Projects approved by the

Investment Committee

#### **OVERVIEW OF EVALUATED PROJECTS**

(by number)

2 SUSTAINABLE PRODUCTS AND SERVICES 52–53

# 2.2.4 Sustainable construction – a concept with real content

Interview with Markus Koschenz, Project Manager of "Sustainable Implenia" and CEO of Reuss Engineering.

### What does sustainable construction mean?

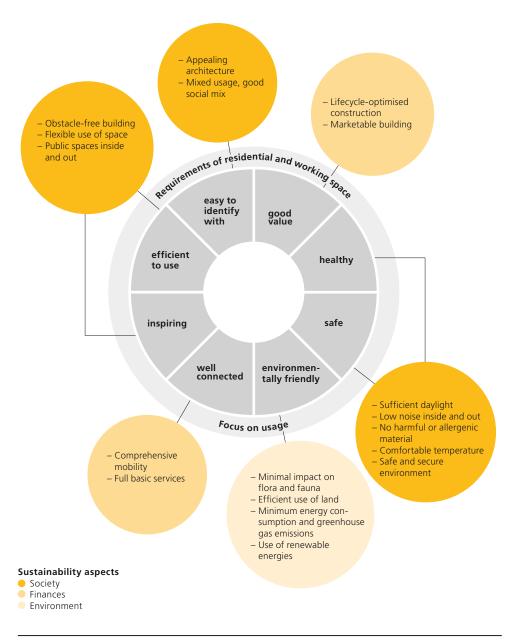
Markus Koschenz: I like to explain the concept using our diagram (opposite). When developing any construction project, the users and their needs must be put at the centre of everything. The focus on sustainable construction has not changed this. For example, users tend to want good-value housing that is tailored to its location and that will have no negative health impact (as the diagram shows). The site should be in a safe area, it should be environmentally friendly and use as little energy as possible. Users also expect a well-connected location that is easy to identify with and provides inspiration, so it is easy to feel at home there. At the same time it should be functional and efficient to use. Users typically have social and environmental requirements as well as purely financial ones.

# What are the concrete requirements that a sustainable construction project must fulfil?

A "good-value" place to live, for example, implies that the price should be appropriate to the location and build quality. "Healthy" means having enough daylight, low noise levels and no harmful materials, as well as comfortable temperatures in summer and winter. An "environmentally friendly" place to live means

low impact on local flora and fauna, minimal energy consumption and greenhouse gas emissions – from the construction and operation of the building and from transport in and out of the development – plus the use of renewable energies. A "well connected location" is achieved by providing a comprehensive range of mobility options and all the basic services. "Identity and inspiration" are created, for example, through appealing architecture, opportunities to use the space in different ways, and a good social mix.

A building is labelled as sustainable if it is marketable over the long term, produces an appropriate return, creates a positive social environment outside and inside, avoids any negative health outcomes and uses natural resources carefully.



2 SUSTAINABLE PRODUCTS AND SERVICES 54–55

# How are the different criteria taken into account?

The weighting given to each aspect depends on depth of implementation and, therefore, on the investors' focus. Different depths of implementation are reflected in sustainability labels that tend to use a "silver", "gold", "platinum" rating system. Switzerland's Federal Office of Energy has set up the "Standard Nachhaltiges Bauen Schweiz" ("standards for sustainable construction in Switzerland") project to ensure that ratings are not left to chance and to create uniform standards for assessing sustainability.

# Don't we already have established standards for sustainable construction?

Yes, but only for individual aspects. For example, the "2000-Watt Society" initiative focuses on energy consumption, greenhouse gas emissions and the use of renewable energies. By including mobility, the ETH's concept also encompasses transport implications. Thanks to the work done by eco-bau and Minergie-Eco we also have methods for evaluating daylight, noise, harmful materials and comfort. However, one aspect on its own does not produce a sustainable construction project.

### What does this all mean in practice?

Sustainability assessments are going to be increasingly helpful for checking whether goals have been achieved and for carrying out optimisations. But sustainable construction will remain a balancing act between the user's many requirements and sustainability aspects. The challenge is to get this balance right in each individual project. This requires everyone in the planning team to talk to each other and work together to find the best possible solution for the specific location and project.

### 2.3 Initiatives

# 2.3.1 Initiatives in civil engineering and infrastructure

Sustainability is an important issue when constructing buildings, but there is just as much potential to apply sustainable practices in civil engineering and infrastructure construction too. The largest clients for infrastructure construction – Switzerland's federal and cantonal authorities – are bound by law to promote sustainable development. Article 73 of the Swiss Constitution says: "The federal government and the cantons are striving for a long-term balance between nature and its ability to renew itself on the one hand, and its use by humans on the other." However, to put this principle into practice, clearer rules and standards are required.

With most infrastructure projects, and road, rail and air transport schemes, the degree of sustainability is determined by the services ultimately being provided, but also by the actual construction process. For example, an overall traffic management concept will seek to optimise traffic flows over the long term. This will help reduce fuel consumption and CO2 emissions once the roads are being used. During the construction phase, the way the roads are surfaced (using recycled materials for example) affects the consumption of resources and CO<sub>2</sub> emissions. Obviously, Implenia is mainly active in the production phase of such projects, and it is here that it can bring its wide expertise to bear.

Implenia is supporting the development of the new recommendation by contributing funds and personnel.

The construction industry is currently formulating assessment criteria for sustainable construction in civil engineering and infrastructure projects - following the example of SIA recommendation 112/1 for building construction. Implenia is closely involved in the project, which is known as SIA 112/2 and is being led by the University of Applied Sciences for Technology and Architecture in Rapperswil. Implenia is supporting the development of the new recommendation by contributing funds and personnel. Implenia also has a seat on the advisory committee alongside representatives of the federal authorities, research institutions and the construction industry. Implenia is able to bring to the table its experience of realising complex construction projects. At the same time its presence on the committee allows it to gain new insights into sustainable civil engineering and infrastructure construction and to learn more about clients' requirements.

56-57 2 SUSTAINABLE PRODUCTS AND SERVICES



### **Building stock**

New build, refurbishment, existing, site redevelopment



### **Building-related** energy systems

Thermal solar energy, photovoltaic cells, wind energy, heat pumps etc.



### General energy provision

Electricity, gas, district heating, geothermal



### Mobility

Bike, walking, bus, rail, car

#### **2000-WATT SOCIETY**

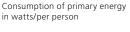
### 2.3.2 Initiatives for the 2000-Watt Society

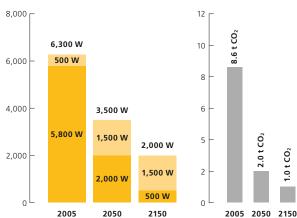
In its corporate vision, Implenia commits itself to sustainable development. In order to turn this principle into reality in terms of energy and resource consumption, the company has decided to help realise the "2000-Watt Society". The 2000-Watt Society is a vision that describes how we can sharply reduce our energy consumption and CO<sub>2</sub> emissions while still living a good life. For construction, which is a major consumer of energy, the vision encompasses the production and operation of the built environment, as well as the mobility needs generated by new buildings. The first 2000-Watt pilot projects are currently underway in Switzerland, and these are showing that it is quite possible to live well while being resource-efficient.

The 2000-Watt Society vision aims for a sustainable climate policy and sustainable resource management. The chart shows the vision's main areas of focus.

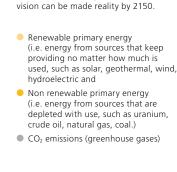
Implenia doesn't just want to sign up to the 2000-Watt Society as a theoretical vision of the future, but is very keen to implement pioneering projects. The company's goal for 2011, for example, was to develop and gradually realise at least one 2000-Watt project. It made a preliminary review of its own existing plans and selected four projects for more detailed investigation. In the end Implenia chose two projects through which to implement this challenging vision. These are now in development. Because it is involved from the very start, the company can directly influence important factors such as the location (mobility), the construction concept (grey energy) and provision of basic services (energy systems). One of these projects is "schorenstadt", a new residential development in Basel (see reportage on p. 32). The other is in Winterthur, where 2000-Watt buildings are to be constructed on the "Werk 1" site.

Implenia actively supports the vision of a 2000-Watt Society.





#### Greenhouse gas emissions in tonnes of CO<sub>2</sub>/per person



The energy efficiency path shows how and

over what period the 2000-Watt Society

can be achieved. Experts believe that the

#### **GOALS OF THE 2000-WATT SOCIETY**

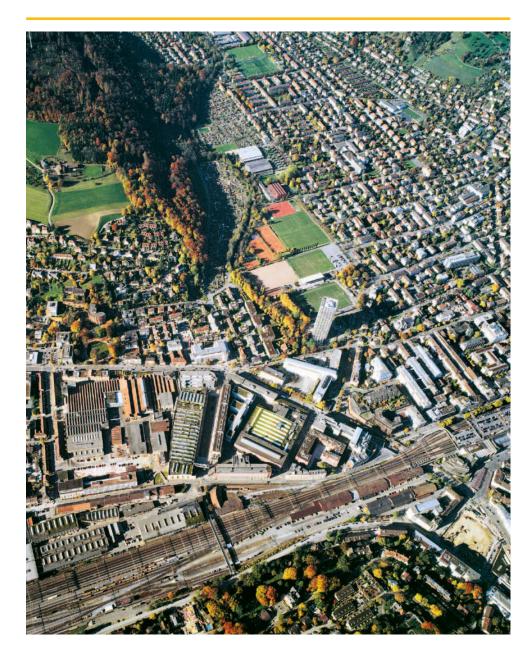
(primary energy and greenhouse gases)

emissions and primary energy.

For 2000-Watt buildings, the construction techniques, choice of materials and numerous other parameters need to be constantly checked and optimised in order to achieve the ambitious reduction targets for greenhouse gas

The city of Winterthur commissioned Reuss Engineering to analyse the potential for implementing the 2000-Watt philosophy throughout the town. To do this the company developed software to process the relevant data and clearly map the available potential. Its work showed that Winterthur can realise the 2000-Watt vision if it ensures that certain conditions are fulfilled. For example, the city has to improve public transport links to its suburbs. And in future it needs to build large, compact buildings using hybrid and lightweight construction techniques, but stop building freestanding single-family dwellings. Energy needs should be covered mainly by district heating from waste incineration, and by renewable energies. Existing buildings also need to be comprehensively refurbished to maximise energy efficiency.

2 SUSTAINABLE PRODUCTS AND SERVICES 58–59



In 2010, Implenia acquired the former Sulzer site in the middle of the city of Winterthur, just next to the railway. It is constructing several developments there over the next few years.

# 2.3.3 Initiative for cleaner transportation in the Gotthard

Implenia is playing a central role in the construction of the challenging Sedrun, Faido and Bodio sections of the Gotthard tunnel. The success of these complex undertakings depends not just on the expert execution of the building work, but on the logistics that bring materials to the underground construction site, take the excavated rock away and transport personnel to and from their places of work in the tunnel. All of this transportation is usually done by diesel-driven rolling stock. For the Sedrun site, however, which is about nine kilometres in length, the Industrial Construction Division has collaborated with a logistics provider on a new type of electric shuttle for underground workers. The aim was to replace the 25-tonne diesel locomotives with a modern, low-emission system. As well as being cleaner, the new tunnel railway is designed to fulfil other requirements. For example, it makes it easier to transport injured personnel on stretchers without the need for additional engine drivers.

The new personnel shuttle developed by Implenia and a logistics systems specialist provides comfortable, safe and environmentally friendly transport for up to 14 people. The batteries can be charged at any power point along the route or at a central charging station.

Implenia's newly developed rolling stock cuts emissions, saves costs and makes a positive contribution to workplace health and safety.

- "Trenino" electric personnel transporter
- Diesel personnel transporter





COMPARISON OF CO<sub>2</sub> EMISSIONS

(in g/km per person)



2 SUSTAINABLE PRODUCTS AND SERVICES 60–61

The solution is called "Trenino": The new personnel shuttle provides comfortable, safe and environmentally friendly transport for up to 14 people. It emits almost a third less CO<sub>2</sub> than conventional diesel transporters, and its electric AC motor does not produce nitrogen oxide, particulates or any other harmful emissions. The batteries can be charged at any power point along the route or at a central charging station via the integrated charging device. All of this makes "Trenino" the ideal mode of transport for people working underground, especially on small and medium-sized sites. As well as having low emissions, it saves costs and makes a positive contribution to workplace health and safety.

#### 2.3.4 Silent road surface initiative

Manufacturers of road surfacing and concrete products have made significant advances in their use of resources. For more than ten years now, nearly all the materials they use have been recycled. However, product quality issues and the large amount of energy used in the high-temperature process mean that further massive innovation is required before these companies are able to not just fulfil the statutory conditions, but become comprehensively sustainable. Geneva-based surface manufacturer SAPA SA has taken a step in this direction in collaboration with Implenia's laboratory. Implenia has a 75% stake in SAPA SA.

For decades now, the two partners have been working on noise emissions from tyres on road surfaces. Switzerland's federal government tightened the rules on this in 1995, demanding that surface products must reduce tyre noise by at least 3 decibels - roughly halving normal noise emissions. In the meantime SAPA SA has developed a surface that achieves much better results: SAPAPHONE reduces noise emissions by around 9 decibels, i.e. three times as much as demanded by the authorities. The new silent surface has other positive characteristics too, such as a reduced tendency to aquaplaning and lower reflectivity when wet. Further benefits include reduced tyre friction, which cuts average fuel consumption per vehicle and thus helps reduce CO<sub>2</sub> emissions.



Road surfacing work often has to be done at night.

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The low-noise surface cuts average fuel consumption per vehicle and so reduces CO<sub>2</sub> emissions.

SAPA SA was helped in its development work by the experts at Implenia's laboratory. They constantly analyse the recipes for surfacing products available on the market and improve on these by, for example, adding recycled materials, optimising the structure and reducing the friction between tyre and road. The laboratory also tests bonding agents and develops cold laying techniques. Improved equipment and better employee training are helping SAPA SA and the Implenia laboratory build on their technical advances and make the most of the latest developments in processes and products – not least in the interests of greater sustainability. For example, SAPA SA has achieved a 5% reduction in the energy required to heat aggregate by sheltering its stockpiles more effectively (antidew effect to prevent aggregate freezing up). It is currently investigating whether the energy required to prepare bitumen can be reduced through the use of solar energy. Implenia expects this investigation to deliver energy-efficient solutions for integrated surfacing plants.

### 2.4 The goals of "Sustainable products and services"

Implenia wants its core business to contribute to sustainable development.

Goal	Status in 2011	Activities by 2012/2013
Advise customers early and comprehensively	<ul> <li>Individual customer activities in the divisions</li> </ul>	– Launch group-wide key account management
Push ahead with initiation and realisation of sustainable construction projects	Building Construction  4 pilot projects in planning  Collaboration on Swiss Sustainable Construction Standard, SIA Efficiency Path 2040 (2000-Watt Society)  GeNaB® consistently applied to developments  Civil Engineering and Infrastructure Construction  Collaboration on initial formulation of "Sustain- able Construction in Civil Engineering/Infrastructure Construction	Building Construction  - Work on one "Swiss Sustainable Construction Standard" project  - Continuously check compliance with sustainability criteria in ongoing projects  - Keep developing and consistently applying GeNaB®  Civil Engineering and Infrastructure Construction  - Work on concrete "Sustainable Construction in Civil Engineering and Infrastructure" projects
Define and imple- ment criteria for suppliers	– No activities yet	– Define, implement and review criteria for suppliers
Intensify network- ing between divi- sions	<ul> <li>Know-how transfer and cooperation in early project phases has been strength- ened and put into practice in various projects</li> </ul>	<ul> <li>Make "Sustainable Overall Construction" a reality based on Implenia's core competences</li> <li>Consistent cooperation between divisions</li> </ul>



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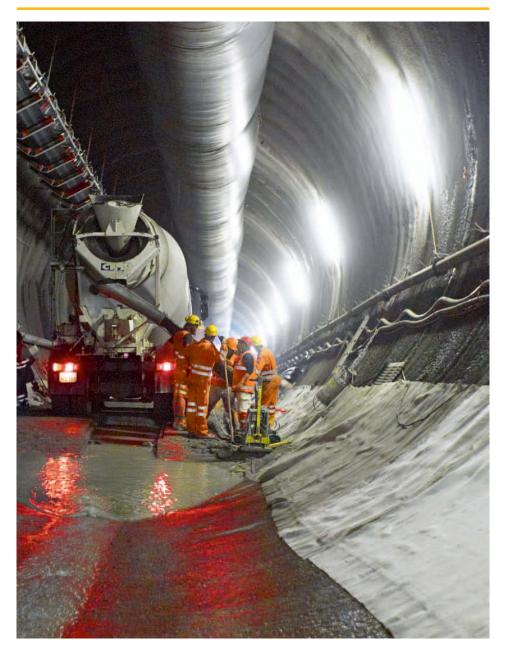
## USING SMART PSYCHOLOGY TO IMPROVE SAFETY

Lots of people feel uncomfortable just making the short trip through the Gotthard Tunnel; but not the men who work day and night on the Nant de Drance subterranean pump storage power station. We go on an inspection tour with Implenia's Philippe Roehlly. As Safety Officer for the Marti Implenia consortium, he makes sure nothing bad happens to workers at the spectacular mountain construction site in Canton Valais.

An extraordinary construction site requires very special safety measures. Philippe Roehlly puts on his helmet and buckles up the avalanche beacon. Avalanches are a very real danger on the slopes around the entrance. The safety

officer then jumps into his dusty jeep and starts his extensive inspection tour. Today he wants to look at all the construction areas and check the air quality meters in the tunnels. But before Roehlly drives to the main subterranean construction site, he stops by a group of workers clearing snow away from drainage shafts at almost 2000 metres above sea level. "Before we can start on the actual work, we've got to clear a 12 metre thick layer of snow off the site," says foreman Luis Gomes. Roehlly watches the men for a while, checks the barriers and drives on.

Just a few minutes later, on the crown of the 180 metre high dam wall on Lake Emosson, the safety officer is presented with a breathtaking view. From here you can see the highest mountains in the Alps – a symphony of glacier, rocky cliffs and sheer peaks, topped only by the majestic snow cap of Mont Blanc. In this spectacular location, in the extreme south-western tip of Switzerland, tunnellers have been drilling through the granite round the country's second biggest reservoir for the last three years. They are creating caverns and shafts and all the other infrastructure needed for the Nant de Drance subterranean pump storage works, which will link together two existing reservoirs (see box on page 68).



Concreting despite the damp and darkness.

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#### Nant de Drance

The Nant de Drance pump storage power station is a joint venture by Alpiq, the SBB and the Valais power company FMV. The project's aim is to exploit the difference in altitude between the Emosson and Vieux Emosson reservoirs south-east of Martigny in order to generate electricity at times of peak consumption. The power plant is built around approximately 900 megawatts of turbine and pump power. Water from the upper reservoir will fall 400 metres, almost vertically through the rock, to drive the turbines. The same machinery can also be used to pump water back up again when there is sufficient electricity in the grid. The power station will help greatly to cover periods of peak usage by the railway network. It will also help to balance out the irregular production of energy from renewable sources, such as wind and solar power, which fluctuate greatly depending on the weather and the time of day. Thanks to state-of-the-art technology, the plant will operate at more than 80-percent efficiency - an unusually high level.

### Fear of fire

The grandiose scale of the Alpine scenery is matched by the work going on underground. One of the access tunnels rises 600 metres over its length

of approximately five and a half kilometres. To create space for the turbine equipment, workers are blasting a cavern measuring 190 metres long, 35 wide and 55 high. This subterranean hall would be big enough to accommodate Zurich's Prime Tower, albeit on its side. Ultimately, the cavern will house six huge turbines that will generate electricity or pump water upwards – depending on power requirements in the valley. In six years time the enormous plant, which is costing around CHF 1.8 billion, will be making a significant contribution to Switzerland's energy supply.

But there is a hard road to travel before this happens. The men on the tunnel boring machine are not looking happy today. The 1,000-tonne monster, which drills a hole of more than 9 metres in diameter through the granite, is currently only advancing at barely 10 metres a day through the incredibly hard layer of rock. The giant drill usually progresses three times as fast. The workers are right in the middle of the mountain, with half a kilometre of rock above their heads. And millions of cubic metres of water, ice and snow above that. But what the men down here fear above all else is fire. Not rock falls, floods, being buried alive or being trapped for eternity. No, their worst nightmare is that one of the mighty

machines they are using to tackle the mountain overheats; that the hydraulics ignite, plastic parts go up in flames, tyres catch fire. In this environment a fire would have terrible consequences: in the smoke you immediately lose your sense of direction, while the fumes burn your lungs.

### **Comprehensive safety precautions**

A tunnel construction site is no playground. It is claustrophobic, slippery and dark. The escape routes are full of obstacles and the nearest hospital is a long way away. This is why the GMI consortium (Groupement Marti Implenia) invests massively in safety precautions that go well beyond the already strict requirements for normal construction sites. Rescue vehicles with medical



Philippe Roehlly, safety officer for the Marti Implenia consortium, in the middle of his extensive tour of inspection.

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equipment stand ready in every sector. Rescue containers equipped with emergency air supplies, drinking water and food are placed in gaps in alcoves at frequent intervals. With their portholes in hermetically sealed doors, they look like little submarines in a sea of rock.

Philippe Roehlly is the man who has arranged all these measures. You could say that he is the secular equivalent of Saint Barbara, patron saint of miners and tunnellers. He works on safety concepts, evacuation plans, emergency arrangements, safety equipment and

signage. He is also responsible for checking air quality. Everyone who wants to go on site gets an hour's personal safety instruction from him. And when it's time for workers to receive their regular training, he delivers sessions on safety issues such as trip hazards and first aid.

An extremely hard layer of rock slows the progress of the tunnel boring machine, which weighs more than 1.000 tonnes.



But in spite of all the training, most accidents that do happen can be attributed to human error. Including sheer thoughtlessness. Like when a lorry driver drove too quickly round a bend, tipped the vehicle over and ended up in hospital with a fractured pelvis. It goes to show that it doesn't always make sense to add more and more safety measures. Roehlly has only put mirrors up in a few places in the tunnel: he would much prefer drivers to drive cautiously rather than thundering round the bends because they can see round the corner. And unfortunately a few black sheep don't use the prescribed equipment. Roehlly stops his jeep several times, winds the window down and talks to workers who aren't wearing the right protective gear. Sometimes he just meaningfully taps his helmet or goggles.

# Personal safety equipment for tunnel workers

- High-vis clothing, safety boots, protective goggles, helmet, respirator mask, ear defenders.
- First aid kit
- Radio badge: so the control centre always knows how many people are in each sector.
- Self-rescuer: a kind of diving mask that provides workers with half an hour of air.

### **Management support**

"It's not an easy job," Roehlly resumes. "You have to explain things to people so they understand, not just tell them what to do." The security officer has to develop a relationship with the men, and he doesn't drive past a single worker without greeting them. During his tour he often stops and exchanges a few words. Knowing the rules and regulations is an essential part of his job, but the most important thing of all is to be sensitive to the psychology of the people he is talking to. Without this sensitivity it would be difficult to achieve much at all on a construction site.

Sometimes the 45 year-old safety expert feels he is caught between a rock and a hard place. The site managers want to make progress and often see safety measures as a source of unwelcome delay. And the workers aren't particularly enthusiastic about protective equipment that makes their arduous work even more uncomfortable. Every now and then Roehlly has to get tough. Nevertheless, he feels he has a lot of support, including among managers. For example, he proposed that every vehicle should be fitted with a

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fire extinguisher. This didn't need a directive, but line management approved his suggestion immediately. "The most important thing of all," emphasises site manager Mario Giovani, "is that people go back home as healthy as when they arrived". So far, everything has gone well. Over the last two years there have been a total of approximately 80 accidents, none of which resulted in anything more serious than broken bones. Only 800 of the total 520,000 work-

In the event of an accident, the rescue containers can protect up to eight men from dust and fumes.

ing hours have been lost to accidents. Roehlly is very satisfied with this record. The numbers vindicate his hard work and commitment. But Saint Barbara, the patron saint, has also done a good job. "Despite all the safety precautions we take down here," says Roehlly, "you still also need good luck".



"Management awareness of safety issues has increased. For example, the number of days lost to accidents is now one of the managers' key figures."

Dario Bischofberger, Implenia's Head of Occupational Health and Safety, explains in this short interview what the company is doing on its construction sites to ensure that its employees go home in the evening unscathed.



Undoubtedly. Accident figures have been falling for about the last ten years. There are a number of reasons for this welcome trend: on the one hand there are now more ways of preventing accidents, or at least reducing their impact. I'm thinking here about protective equipment, onsite safety gear, emergency plans and emergency supplies. On the other, the company has done much to sensitise its employees to risk. Management awareness of safety issues has also increased. For example, the number of days lost to accidents is now one of our managers' key figures. The subject of health and safety is no longer treated lightly by either managers or by the workers themselves.

#### What is Implenia doing to ensure that employees actually carry their safety equipment with them?

Basically we provide all employees with the equipment they need for their work and for the particular job concerned, right down to the correct gloves. Foremen and site managers are responsible for motivating and checking the workers. In addition, Implenia has more than



20 quality and safety officers who regularly carry out audits at the construction sites. Experience shows that the obligation to wear a hard hat is well observed. People are less diligent about wearing goggles, so for some time now we have been providing more and more helmets with integrated goggles.

## How often do employees receive training on safety issues?

It's impossible to say in terms of pure numbers, because different employees have very different functions. Implenia has a safety training plan in place for every employee according to his or her responsibilities. The plan states how often the employee has to pass a certain training course. For example, each new construction worker starts by undergoing an intensive induction course lasting at least one day. And every month on every construction site there is a fifteen minute training session on safety and protecting the environment.

# Training is a good thing. But isn't it true that many accidents occur on construction sites because of time pressure? How does Implenia counter this problem?

I wouldn't reduce it to time pressure. Employees know that safety is paramount at Implenia and that nobody should risk injury just to meet a deadline. In practice, when things go wrong it tends to be because of lack of concentration or a breach of routine. Unfortunately these are the factors behind the relatively large number of unnecessary trip-related accidents. Implenia, working with SUVA, is currently focusing on training in this area.

## 3 Attractive working environment

#### 3.1 Management approach

"One company, one goal, one spirit" is Implenia's motto, encouraging a culture of cooperation across the divisions. With its unified management culture, Implenia wants to strengthen its employees' commitment and increase the company's effectiveness. Responsibility for human resources policy rests with the Group Head of Human Resources, who reported directly to the CEO during the period under review.

As stated in its corporate vision, Implenia wants to be "the preferred partner for customers and employees", which is why the company is committed to the following values: reliability, sustainability, integrity, awareness of opportunities and risks, transparency, operational and financial excellence, a focus on solutions and customers, and innovation. These values are also enshrined in Implenia's Code of Conduct, which it introduced in 2009.

Implenia wants to improve talent-management.

Implenia's modern management structure is designed to increase employee motivation. Management's aim is to empower every employee by giving them as much freedom as their abilities and responsibilities allow. Authority to make decisions is delegated down to the lowest level possible. This principle certainly makes processes more efficient, but it also makes jobs at the company more attractive: all employees should be able to make decisions about their own work.

To ensure that employees are prepared for current and future challenges, Implenia is constantly creating training and development opportunities for managers and specialists. The company regularly evaluates its range of advanced training modules and develops new courses.

Well qualified specialists are hard to find on the labour market, Implenia aims to fill these positions increasingly from within. However, Implenia regularly takes part in university and college job fairs in order to recruit talent from outside the company. A modern talent-management process and the basic principle of promotion from within improves cohesion and facilitates careers that span different divisions. As the company becomes increasingly international, Implenia is also encouraging mobility among its staff. In order to create incentives for international exchange, transfer guidelines have been established that encourage short and long placements in foreign offices.



Attractive place to work: Implenia has built one of Switzerland's highest mountain-top restaurants on the Weisshorn above Arosa. The building was designed by respected architect Thilla Theus.

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All managers are required to nurture dialogue with their staff.

Implenia believes in the value of open and direct communication. It encourages employees to identify with its corporate objectives and ensures that they understand and support the decisions the company makes. All of Implenia's managers are trained to nurture dialogue actively with their staff. In 2011, 95 percent of onsite employees had appraisal meetings and 35 percent of office employees had target-setting meetings at which their development options were discussed. Implenia has decided to use a new web-based management tool to ensure that participation in target-setting meetings also goes up to 95 percent. In addition to this direct dialogue, the company uses various internal communications tools and channels. including the employee magazine "Impact", the intranet, regular staff events and an electronic newsletter.

During the period under review, Implenia introduced a transparent compensation policy that facilitates specialist and management career models based on modern job evaluations. Implenia's new salary system, with salary bands adjusted to the Swiss labour market, ensures that the company's pay is fair and gender-neutral. Salaries are defined using the "Hay Method": each function is evaluated in terms of the knowledge and cognitive abilities required and the responsibility involved. Salaries are fixed on the basis of this evaluation. Naturally Implenia complies with statutory minimum wage requirements and the conditions set out in national settlements. In addition to their agreed basic or fixed salary, managers receive a variable salary component. Top managers, around 25 of them in the group, are also paid an additional component in the form of shares.

Salaries, but also employment rules and social benefits, meet modern standards and go beyond the statutory requirements. For example, pension benefits are significantly in excess of official BVG standards. Employees are granted one more week of holiday than legally required, as well as one week's paternity leave. Expectant mothers enjoy maternity leave of 16 rather than the statutory 14 weeks.

The construction trades involve a lot of hard physical work, and there are many potential risks to be found in workshops and on construction sites. Implenia therefore puts a great deal of effort into awareness and information campaigns relating to health and safety at work. Within the Infrastructure Construction Division, which has the most employees and the most workplace risks, OHSAS 18001, ISO 14001 and 9001 certification ensures effective measures are in place. Infrastructure Con-



Health and safety at work are absolute priorities for Implenia.

struction trains all new employees in workplace health and safety when they first join Implenia, tailoring the training to the specific job. Temporary employees hired through agencies also have to go through this initial instruction. In addition, managers on construction sites are responsible for informing temporary staff as well as permanent employees about the particular dangers and the emergency procedures used on site. Foremen and site managers also inform site personnel of current danger areas on a monthly basis. The status of health and safety measures is audited once a year by an external agency. The last health and safety at work audit was carried out in November 2011.

Over and above these comprehensive health and safety measures, Implenia is committed to various other programmes designed to enhance employees' wellbeing. Examples include a health promotion programme, which in 2011 included an "Ergonomy at Work" campaign. External health promotion specialists also act as a contact point for employees who would like to talk to trained experts about health, social, family or financial issues. Implenia's employee programme to help prevent alcohol abuse won the "Santé au travail" prize awarded by the AEPS (Association Européenne pour la Promotion de la Santé). Implenia is also very involved in looking after employees who suffer accidents or illness, and helping them get back to work; it collaborates with case management specialists who provide intensive support and rehabilitation services.

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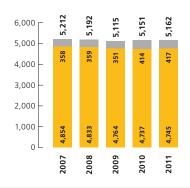
#### 3.2 Evidence

#### 3.2.1 Staff structure

As at end-2011, a total of 6,000 employees worked for Implenia, or 5162 full-time-equivalents (FTE) – 11 more than in the previous year. The fluctuation rate came to 12.7 percent across the group as a whole (excluding seasonal fluctuations), which is 1.2 percentage points lower than the previous year. Infrastructure Construction is the division that employs the most people, and its workforce, along with that of the Real Estate Division, grew still further during the year under review. By contrast, headcount at the Industrial Construction Divisions fell slightly. Relatively few women work in the construction industry, and the same is true at Implenia. Women account for 8.1 percent of the company's total workforce and 6 percent of its managers. In terms of nationalities, the Swiss account for the largest proportion with 47 percent, followed by 21 percent from Portugal and around 10 percent from Italy.

#### Headcount (FTE) at end-2011

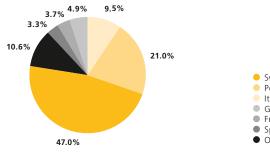
Office-based and on-site staff	Number of employees
Real Estate	482
Infrastructure Construction	3,912
Industrial Construction	573
Other	195
Total FTE (Switzerland and	
neighbouring border areas)	5,162
Implenia Norway	260
Other countries	226
Total FTE	5,648

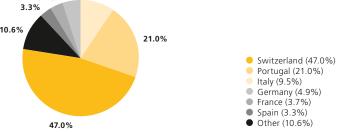


1 Headcount: Switzerland and neighbouring border

Number of women (FTE) Number of men (FTE)

FTE 2011<sup>1</sup> (Number of men and women)





4% 28%

FTE BY COUNTRY OF ORIGIN 20111

(in %)

Office-based On-site Apprentices

**EMPLOYEES BROKEN DOWN BY TYPE OF EMPLOYMENT 2011**1

(Number of persons)

68%

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#### 3.2.2 Pension provision

In Switzerland, occupational pensions (known as Pillar 2 pension provision) guarantee that workers receive a pension and/or lump sum on retirement, in the event of disability, or on death. Employees of the Implenia Group are insured in a defined-contribution pension fund – essentially a savings fund fed by employee and employer contributions and earned interest. Members can draw their retirement benefits early, depending on the precise pension plan, from the age of 58 or 60.

Pension contributions are age-dependent and are defined as a percentage of gross salary as specified in the pension institutions' terms and conditions. Employer and employee usually make exactly equal contributions. In 2011 Implenia transferred a total of CHF 24.8 million into the pension fund for employees. At the end of 2011, the Implenia Pension Fund's estimated funding ratio was 98.4 percent.

In addition to its statutory pension provision, Implenia set up the "Fondation Patronale" pension foundation with an endowment of CHF 8 million (as per 31.12.2011). This foundation's remit is to mitigate the financial consequences of illness, disability and death by paying out pension benefits, paying voluntary inflation supplements on top of normal pension payments and helping people who have been affected by restructuring. The foundation's Board of Trustees is made up of equal numbers of employee and employer representatives.

#### 3.2.3 Fostering talent

#### **Apprenticeships**

People often join Implenia as apprentices, so good, solid apprenticeship is crucial. As an outstanding organisation for training, Implenia is currently taking care of 215 apprentices: 25 in office-based roles and 190 in on-site roles. These 190 are being trained in various professions, including as construction machine mechanics, builders, foundation engineers, heating engineers, ventilation engineers, plumbing engineers, masons, mechanics, carpenters, road builders, railway builders and joiners. Most trainees will be given a job at the company after they have finished their course. By training its own young talent, Implenia is not only investing in its future, but is performing an important task for society as a whole.

#### University training

At university level, Implenia supports the ETH Zurich's Excellence Scholarship Programme, providing grants for three construction engineering students a year.

International market research specialist "Universum" conducts its "Universum Top 100 Ideal Employer Student Survey®", which includes Switzerland, every year. The survey shows which companies are the most popular choices for Swiss university graduates on completing their studies. In 2011, Implenia was one of the most popular, coming in at 13 within the engineering sector.

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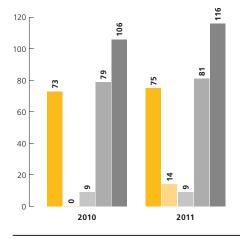
Implenia believes that even those who leave school with below-average qualifications should be given an opportunity to access training, which is why it gets involved with such schemes. In summer 2011 Implenia was for the third time able to offer road construction apprenticeships to young people who had already proved themselves in a "Sprungbrett" internship. Meanwhile, the first of the trainees has now successfully completed his apprenticeship.



This kind of apprentice work is motivational: in preparation for their final apprentice exam, four Implenia trainees chose to build a barbecue area close to Interlaken. Within a week they had constructed a permanent facility by the Unterseen canal, complete with four large concrete tables, which can now be used by the whole community. The project was made possible by the good working relationship between the apprentice management team at Implenia Construction in the Bernese Oberland and the head of public works in Interlaken. It's a great example of collaboration between Implenia and local authorities to realise a project that benefits the whole community.

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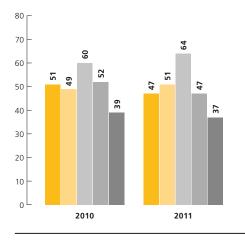


FREQUENCY OF OCCUPATIONAL ACCIDENTS<sup>1</sup>

Swiss data collection method (per 1 million scheduled hours)

1 These numbers include all incidents that led to hours being lost or a visit to the doctor. Smaller injuries that were taken care of directly at the place of work, and after which the injured person could continue working ("first aid cases"), are not included.

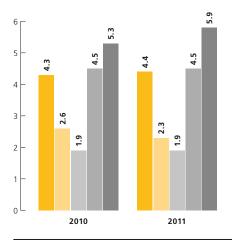




FREQUENCY OF NON-OCCUPATIONAL ACCIDENTS
(per 1 million scheduled hours)

We managed to reduce the accident frequency for non-occupational accidents by 8 percent to around 47 incidents per million scheduled working hours.





ABSENCE RATES

(in % per 1 million scheduled hours)

The total absence rate for occupational and non-occupational accidents and illness came to 4.4 percent. Unfortunately, the amount of time lost to occupational accidents in 2011 increased by around 11.5 to 1.4 percent of scheduled working hours.

Implenia hardly sees any occupational illness. In 2011 the occupational illness rate was 0.4 cases per FTE. This is much lower than the SUVA figure for the construction industry as a whole (1.80 cases).

## **3.2.4 Absence owing to sickness/accident**The following information and charts refer to all Implenia Group employees who are employees where employees who are employees who are employees who

all Implenia Group employees who are employed in Switzerland and who are covered by SUVA, the country's obligatory occupational and non-occupational insurance scheme.

Despite all the efforts at accident prevention, in 2011 there were around 75 occupational accidents<sup>1</sup> per million scheduled working hours (accident frequency rate). This figure, which represents an increase of 2.7 percent on 2010, is within the normal range for the industry. Fortunately, Implenia did not suffer any fatal accidents in 2011.

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#### **ACCIDENT CATEGORIES**

(as % of all accidents)

The most frequent causes of accidents at work are slipping, tripping and falling, which account for around a third of the total. The second most common category is "tools and equipment". In general, most accidents can be attributed to human error. Many accidents can be avoided by better implementation of the established rules and better preparation for work.

#### 3.3 Initiatives

#### 3.3.1 Health and safety initiative

#### Awareness campaigns

Implenia conducts regular awareness campaigns on construction sites to remind site personnel and technical managers of important health and safety measures and, therefore, reduce the number of accidents in the medium and long term. In 2011, the company ran the "Responsibility on the building site" and "Vital rules on the building site" campaigns in the Real Estate and Infrastructure Construction divisions.

During the "Responsibility on the building site" course, which was aimed at foremen and technical managers, there was a showing of the SUVA film "Moment of Truth" followed by a discussion. The main aim of this film is to motivate managers on construction sites to take their responsibilities seriously every day, not because they fear the legal penalties if they don't, but principally out of respect for the human suffering that can be prevented. Many participants had little idea of the possible consequences of a serious accident. The training highlighted the fact that on-site safety increases when the different functions work together in the spirit of Implenia's slogan "One company, one goal, one spirit".

In the "Vital rules on the building site" campaign, it was impressed upon site personnel, foremen and technical managers that disregard for elementary safety guidelines could often have very serious consequences. During this training, several employees pointed out that the necessary safety equipment was not always readily available on site, so people often resorted to sometimes dangerous improvised solutions. Implenia recognised the need for action and will in future place more emphasis on early planning and rigorous implementation.

#### **Emergency planning for offices**

Emergency planning has been standard practice on construction sites for a long time, and Implenia wants to expand this with its "Emergency planning for offices" initiative. If someone has an accident in an office building, or if there is fire, for example, the risk of personal injury needs to be kept to a minimum. During the year under review, the company started its emergency planning initiative by auditing all Swiss offices and grading then according to the



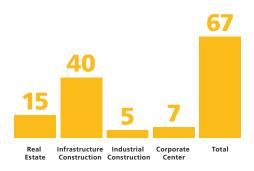
In 2011 Implenia reviewed emergency planning at all its Swiss offices and graded them according to the level of risk present.

Implenia developed the "CAS Construction Cost Planning course" with Lucerne University and advertised it in an image campaign.



level of risk present. The survey revealed gaps in emergency planning in several locations. Out of Implenia's total of 54 office complexes, 7 proved to be in need of greater action. The building managers at these locations are currently carrying out safety measures to correct the problems that were uncovered. In some cases, emergency drills are being carried out.

As well as organisational emergency planning, first aid training is also very important, so Implenia has trained up cross-divisional first aid officers at different locations for several years now. The two-day foundation course and one-day annual refresher course also include a basic life-saving module that follows SRC (SWISS RESUSCITATION COUNCIL) guidelines.



#### **LIFE SAVING COURSE 2011**

(Number of participants)

## 3.3.2 CAS Construction Cost Planning initiative

Without precise construction cost planning, companies have no way of knowing whether budgets and deadlines will be met. And although the importance of cost estimates was recognised in the construction industry some time ago, until now there has been no dedicated training in this discipline. This is why Implenia decided to initiate a comprehensive training programme in conjunction with the School of Engineering and Architecture at Lucerne University: the Certificate of Advanced Studies (CAS) in Construction Cost Planning for General and Total Contracting (CAS Baukostenplanung GU/TU). Enrolment for the course opened in 2011 and it actually began at the beginning of 2012. It lasts one year and includes face-to-face lessons in Lucerne as well as internet e-learning sessions. The course is a fixed component of Implenia's career programme, which also includes various internal development courses. Implenia has publicised the new course with an image campaign and an information event.

#### 3.4 The goals of "Attractive working environment"

Implenia wants to be the preferred partner for its employees.

cause

Goal	Status in 2011	Activities by 2012/2013
Use training and development to nurture employees	– CAS Construction Cost Planning launched	<ul> <li>Successfully implement CAS Construction Cost Planning</li> <li>Continue existing training and development offering</li> </ul>
Recruit from within	– Succession planning launched	<ul> <li>Implement succession planning/talent management/Implenia Academy (Icademy)</li> </ul>
Reduce number of occupational accidents and number of lost hours they	"Vital rules on the building site" awareness campaign carried out	<ul> <li>Use training and control measures to reduce slips, trips and accidents involving tools and equipment</li> </ul>



4 RESPECT FOR THE ENVIRONMENT 92–93

## "IF YOU'RE IN A HURRY, DRIVE SLOWLY"

In recent months Implenia has trained 510 of its drivers and machine operators in environmentally friendly, economical driving. We drop in on a course that shows truck drivers how to make their heavy vehicles less thirsty.

The men are called Wisi, Luciano, Hausi, Manuel, Tomic, Jovica. But for once the nameplates aren't balanced behind the windscreen of a lorry, but are placed on the large conference table on the top floor of Implenia's carpentry shop in Rümlang. A dozen drivers have been here since eight in the morning to participate in an Eco-Drive course. This is one of four scheduled training days at this workshop on the edge of Zurich's Kloten Airport. Planes thunder over the building once a minute. But the men aren't distracted, they are quite used to loud noise.

Before them stands Anton Graber, equipped with a whole arsenal of presentation tools: flip chart, slides, films. The course leader works as a driver trainer at Mercedes-Benz Switzerland. Before that he was on the roads himself for 18 years. He knows what drivers need. And he knows how they talk. "Gentlemen, let go of the gearstick when you're driving; I promise you, it won't fall off!" In simple, straightforward words, Anton, as he likes to be called, explains the principles of the Eco-Drive method.



#### **Eco-Drive**

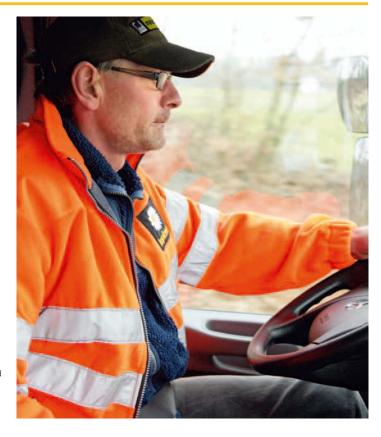
Eco-Drive is a method that helps make driving more economical and more environmentally friendly. In Switzerland, the Quality Alliance Eco-Drive – an organisation of transport associations, trainers, government departments and private organisations – is working to disseminate this method. Its aim is to communicate the benefits of Eco-Drive to car and truck drivers in Switzerland by means of a high quality training and development programme.

He does, however, occasionally have to resort to technical terms. After all. heavy goods vehicles, like everything else in the world, have changed in recent years. Numerous technical developments have made life easier for drivers, but at the same time have made the job more high-tech. The sophisticated technology available is fantastic for people trying to drive more economically, but it has to be explained. So rather unusual terms can be heard in the Implenia workshop, like "torque", "full load chart" and "newtonmeter". The men round the big table listen hard; their busy jobs don't give them much time to think about the technical niceties.



You can't have an Eco-Drive course without a few technical terms. The men round the big table listen hard. For once the signs with their names on are not propped up against the windscreen of a lorry.

4 RESPECT FOR THE ENVIRONMENT 94–95



It's another world up here: sitting on the air-cushioned seat two or three metres above the lane, you really do feel like a king of the road.

#### In another world

Once Anton Graber has told them how the day will proceed and explained the basic principles of eco-driving, the men push back their chairs and leave the conference room. The group goes down to the nearby car park where half a dozen lorries already stand waiting. The first test-drive begins. Graber gets the drivers in the mood for their task: "You've got to get a move on, the boss

has already rung three times to ask where the load is." Each team of two climbs into the cabins and the drivers start up the engines. One is Thomas Indlekofer, who works in Foundation Engineering. The 45-year-old often used to drive loads to East Germany, but he now works mainly on a large drilling machine and only rarely drives lorries. But now he steers the big Mercedes through the test course with practiced ease.

It's another world up here. Sitting on the air-cushioned seat two or three metres above the lane, you really do feel like a king of the road. "Actually, the job is no picnic," says Indlekofer. Quite apart from the fact that the pay is hardly princely, the pressure placed on drivers has risen enormously. The density of traffic has doubled since 1990. It's become very crowded out on the road. "Plus there's a black box relentlessly telling you how fast you are going and how long you've been driving, while mobile technology and GPS mean that drivers can be located and issued with new orders at any time." The legendary freedom of the road is a thing of the past. This morning there is no manager on the drivers' backs. But their co-drivers are noting down every movement: they have to fill in a highly

detailed record sheet and count every single gear change and stop. Thomas Indlekofer, who lives locally, steers the lorry smoothly around the circular course on the south-western edge of the airport. His co-driver records around 100 gear changes – no wonder since the Mercedes has more than three times as many gears as a normal car. And another difference to cars becomes clear when the course leader records the fuel consumption at the end of the journey: over the 25 kilometre course, the lorry has burnt up more than 10 litres of diesel.

The results of the day's training are clear: thanks to Eco-Drive the drivers have used almost 5% less diesel.

#### **Impressive savings**

Implenia has held six training days and trained a total of 75 truck drivers. During test drives, they have saved an average of 4.5 percent of their fuel. Given that Implenia's 86 trucks cover more than five million kilometres a year between them, this implies a potential annual saving of 120,000 litres of diesel, equivalent to CHF 220,000 and a 300 tonne reduction in CO<sub>2</sub> emissions.



4 RESPECT FOR THE ENVIRONMENT 96–97

#### Just don't rush when you're driving!

Every time it comes to a halt, a heavy goods vehicle uses between 200 and 500 millilitres of fuel to start up again. When a vehicle is this thirsty, it obviously makes sense to drive sensibly. Not just for the environment, but for the wallet too. "How can the boss pay higher wages if the money's been left on the road," Anton Graber warns the drivers. Better to drive slowly but continuously. Despite the obvious differences, Graber also keeps talking about the similarities between different forms of transport. "Think what you would do in any given situation if you were riding a bike," he says to the drivers of lorries that weigh many tonnes, "the basic principle is the same."

In the afternoon the drivers try to put what they have learned into practice on a second run. And they are amazed how effective it is. The results at the end of the day's training are clear: thanks to Eco-Drive the drivers have used almost 5% less diesel. And the lorries got round the course more quickly too: three kilometres an hour faster on average. Not because the drivers broke the speed limit, but because they drove more steadily. Using Eco-Drive, the drivers actually got to the end sooner. And this is crucial if

the drivers, who work under great time pressure, are going to use the method in practice. "If you're in a hurry, drive slowly," is how Gerber sums it up. The day has shown in a striking way that this is not just a clever phrase. It actually works.

#### The five principles of Eco-Driving

Whether you drive a heavy goods vehicle, a digger or a car, Eco-Drive is a simple and very well proven driving method. Anyone who consistently puts the basic principles into practice can make up to 10% savings on fuel without arriving any later at their destination.

- 1. Accelerate quickly and move up to a high gear as soon as possible.
- 2. Drive in the highest possible gear and shift down gears as late as possible.
- 3. Use your anticipation and drive at an even pace. Where possible, let the vehicle roll naturally to a halt instead of putting the brakes on fully.
- 4. Switch the engine off for stops of more than five seconds.
- 5. Check your tyre pressure regularly.

"The results are uniformly good. By the end of the course, drivers are cutting diesel consumption by about 4.5 percent. Extrapolate this to all of Implenia's lorries and this gives a reduction in emissions of about 300 tonnes a year."

Bruno Jäger, Head of Inventory at Implenia and coordinator of the Eco-Drive course for lorry drivers and machine operators, briefly explains the opportunities and potential created by sustainable driving techniques.

## Mr. Jäger, how many Implenia employees have attended Eco-Drive courses?

About 510 people in total. Most of them, about 435, are machinery operators – from crane specialists to steamroller drivers. The remaining 75 are professional drivers. Bringing together so many people from all over the country is a considerable undertaking.

#### How are you arranging the courses?

Since 2009, when the Swiss government brought in its new driver licensing rules, all professional drivers must do a total of 35 hours training by 2014 in order to keep their permit to drive commercial vehicles. Implenia decided not to squeeze this number of hours into a single week, as other companies are doing, but to provide training at short intervals.



#### Why?

There's less risk of the drivers forgetting what they've been taught. Regular small doses is the best way. It also gives us an opportunity to focus on topical themes. And ultimately it would be almost impossible to take a driver away from his or her work for a whole week. A day is sometimes hard enough. We even run the course on Saturdays for some operators who simply have to be on site all week.

#### How have things gone so far?

Feedback from the course leaders has been great. The course evaluations show that Eco-Drive can lead to considerable savings. Of course we'll have to see how effective the technique is in day-to-day work. But if we make only some of the savings in practice, the courses can be counted a great success.

## 4 Respect for the environment

#### 4.1 Management approach

Construction, by its very nature, affects the environment. Implenia is aware that, as Switzerland's leading construction company, it has a significant impact. Consequently, it systematically strives to respect the environment in all it does and to continue improving its environmental performance.

By optimising consumption of energy and materials, Implenia is not just minimising the environmental impact, but is also increasing its own productivity. First, because being green entails using newer and thus more efficient equipment and machinery. Second, because the company's commitment motivates its employees and encourages them to make their own contribution.

Implenia's particular priority in environmental protection is to increase efficiency throughout the whole value chain, from the materials it uses to the energy it consumes and the  $CO_2$  it emits. However, the company is also committed to waste management, either by avoiding waste in the first place or through recycling. Implenia's environmental management system is certified under ISO 14001.

All employees should share the sustainable philosophy. In autumn 2010, the company formed a working group made up of employees from all the divisions to help improve Implenia's environmental performance and embed environmental thinking in the workforce. In four workshops this group formulated proposals for measures and their implementation, as well as designing staff awareness campaigns. Thanks to the diverse composition of the group, different types of proposal were made, which were then tested for feasibility.

These proposals are very varied and cover all of Implenia's areas of business equally. For example, the working group looked for opportunities to reduce fuel consumption, both on site and for business travel. Other suggestions related to more environmentally friendly drainage systems on construction sites and greener ways of returning waste to the materials cycle. For every measure, Implenia analyses the current situation and then defines target values.

Implenia would like all its employees to help pursue the sustainability agenda and be aware of the company's goals in this area. Employees can always read about the progress made and about the latest campaigns in the internal sustainability newsletter. This is the only way to ensure that the company's efforts are successful and that they are recognised and acknowledged internally and externally.

#### 4.2 Evidence

#### 4.2.1 Energy and resource flows

Implenia has created a measuring system tailored to its activities in order to formulate concrete environmental goals and monitor their implementation. From next year it will use actual consumption data to define target values and check whether the various measures introduced gain traction.

The customised set of indicators allows Implenia to capture all the main energy and material flows. The indicators are based on the flow of resources from extraction of raw materials to finished buildings, with experts checking every stage to see if there are any opportunities for optimisation. The company only records figures that it can actually influence itself.

Implenia uses a systematic process to capture all the relevant data, and it has trained its staff to record indicator values. For example, master data managers have to produce electricity statements that not only show the amount paid, but also the quantity and type of electricity used. Fuel consumption is also entered directly into the group-wide SAP database via an entry screen.

The smooth running of Implenia's recording system depends on the cooperation of suppliers and subcontractors, so the company ensures that its business partners are integrated into the process. They have to submit detailed invoices that allow Implenia to extract and calculate the relevant indicator values.

Implenia measures what it can influence itself.

4 RESPECT FOR THE ENVIRONMENT 100–101

	Planning process	Production process	Indicators that can be influenced	Division
Raw material extraction		7 h	Choice of type of extraction  - Extracted material  - Energy  - Fresh water  - Waste	Infrastructure Construction: Gravel plant
Production of building materials	4	<b>∮</b> ♦	Choice of production method  - Fresh material (planned only)  - Recycling material (planned only)  - Energy  - Fresh water  - Waste	Infrastructure Construction: Asphalt production
Technology and choice of building material	4 <b>^</b>		Technical equipment and choice of building material – Building material – Energy (grey and operational energy) – Site	Real Estate: Develop- ment, Reuss Engineering
Choice of supplier		<b>∞ ▷</b>	Choice of supplier	Real Estate: General Contracting Industrial Construction: Prime Buildings
Processing building materials		<b>4 ♦ ⊕</b>	Choice and use of vehicles and machinery – Energy – Fresh water – Waste – Recycling	Infrastructure Construction Industrial Construction

#### **RECORDING DATA IN THE CONSTRUCTION PROCESS**

Resource flows at the heart of the indicator concept

Energy: (heating oil, natural gas, firewood, district heating, diesel, petrol, electricity)

f Energy (planned)

Water (fresh water requirement)

Waste (by type of disposal)

Material: raw materials (gravel)

Material (planned): concrete, reinforcing steel, masonry, wood, glass

Recycling material: proportion used

Recycling material: for re-use

Recycling material: planned proportion

Choice of supplier

Site (planned)

♠ Rental space

Office material (paper)

	Process	Indicators that can be influenced	Division
Properties		– Rental space – Energy – Fresh water – Waste – Office material (paper)	Group as a whole
Mobility	4	Energy (fuel)	Group as a whole

#### **RECORDING DATA ON PROPERTIES AND MOBILITY**

Resource flows at the heart of the indicator concept

At Implenia, material flows begin with the extraction of raw materials. At the gravel plants, the volume of extracted material is recorded and, as in all the company's areas of activity, energy, water and waste flows are also logged.

In terms of actually making building materials, Implenia itself only produces asphalt. And one of the indicators it can influence here is the proportion of recycling materials added to the mix. Thanks to the use of modern technologies Implenia has been able to steadily increase this proportion. Depending on the process, the end product can contain between 20 and 50 percent recycled material.

It is during the planning phase (selection of techniques, construction materials and suppliers) that Implenia can have the most influence on the energy consumed on construction sites. Consequently, Implenia records consumption figures separately for the key building materials – concrete, bricks, reinforced steel, glass and wood – and for the planned energy re-

quirement for the project concerned. It always tries to find the greenest and most resource-optimised solution.

Finally, on the construction site itself, the choice of machinery and the consumption of water and energy are the main indicators. At this point, Implenia can no longer have any significant influence over the type and quantity of building materials used, so they are not measured any more. This is why the company defines its reduction targets in advance during the planning phase.

There are material flows in Implenia's offices as well as on its building sites, and these too can be reduced in the interests of sustainable development. Office personnel are encouraged to be sparing in their use of office materials and paper. Implenia uses supplier invoices to record a "consumption and costs" indicator. The company also tries to save energy at its premises through the personal actions of its employees, but also more fundamentally by choosing energy-efficient properties to rent.

4 RESPECT FOR THE ENVIRONMENT 102–103



Green roofs provide a habitat for rare flora and fauna and help to preserve species diversity.

#### 4.2.2 Biodiversity

Sustainable construction also involves minimising impact on the land, the natural water cycle and on flora and fauna. In its activities, Implenia tries to retain unsealed land and promote biodiversity. Its main priorities are as follows:

- Optimising the proportion of green spaces: Provision of as much dedicated green space as possible, allied to diverse and appropriate planting around the site, has a positive impact on biodiversity. Extensive "greening" of flat roofs helps to even out variations in temperature and humidity, thus contributing to the local microclimate. Vegetation on flat roofs can also help to store large quantities of rain water, which relieves pressure on drainage systems. Green roofs also provide a habitat for rare flora and fauna and help preserve species diversity.
- Efficient use of land: Land is a scarce resource and Implenia tries to manage it carefully so that in 2050, when Switzerland is predicted to have a population of 9 million, there will still be enough free land for everyone. Wherever possible, the company aims for compact, high-density construction. Land is not sealed unless absolutely necessary. Drainage systems and permeable surfaces ensure that rainwater is taken into the ground as it would be on unbuilt land.
- Active use of rain water: By actively using rain water as service water and grey water, less strain is placed on filtration plants and similar infrastructure. Implenia tries to do this in areas where there is no need for the water to be of drinking quality: for flushing toilets, for example, cooling technical systems in the building, or watering the gardens. Building owners benefit from this in the form of lower water and wastewater costs.

#### 4.3 Initiatives

#### 4.3.1 Savings campaigns initiative

Employees have an enormous influence on energy and resource consumption, so the company carries out regular awareness-raising campaigns. They are designed to heighten people's ability to spot savings opportunities and motivate all personnel to reduce the use of energy, water, fuel and waste on construction sites, despite all the deadlines and performance pressure they face.

Usually campaigns consist of a multilingual information poster that is put up in a central, highly visible location. The poster delivers the main messages concisely in words and images. "Impact", the staff magazine, keeps project managers up to date with the latest campaign activities and progress made. At the same time, project managers are trained in the relevant subjects and provided with in-depth documentation through the intranet. Managers are required to set a good example and ensure that all employees take part.

4 RESPECT FOR THE ENVIRONMENT 104–105



Implenia uses posters like this to sensitise employees to environmental issues. This poster was put up at about 4,000 construction sites and in office buildings.

## 4.3.2 Reducing fuel consumption initiative

Implenia uses hundred of vehicles every day: cars, lorries, diggers, steam rollers and many more. Altogether they consume an impressive total of 6.5 million litres of fuel each year. The company has set itself the target of reducing the amount of fuel used by 10% for the same number of miles driven. This will be achieved through two main measures: improving the way people drive, and using newer, more fuel-efficient vehicles.

Implenia launched an Eco-Drive course during the year under review. The courses are compulsory for machinery operators, lorry drivers and employees with company cars. Other employees can also take the course if they wish to. The results so far have been astonishing. The driving simulator shows that drivers end up using 19% less fuel on average. Even if this saving is not replicated exactly on the roads, it shows how driving differently can have a significant positive impact on the environment and climate change. (See pages 88 to 95 for a full report.)

The greatest savings potential, however, lies in the vehicle fleet itself. Despite the greater initial purchase costs, Implenia is committed to investing in more energy-efficient, low-emission vehicles and machinery. The company has also added a maximum CO<sub>2</sub>-emission standard to its company car rules. A company car is not allowed to emit more than 170 grams of CO<sub>2</sub> per kilometre (from 2013: 150 g CO<sub>2</sub>/km). Any employee with a car that emits less than 130 grams of CO<sub>2</sub> per kilometre (from 2013: 110 g CO<sub>2</sub>/km) is given a sustainability bonus by the company.

By continuously renewing the fleet of leased vehicles, CO<sub>2</sub> emissions have been cut by about 17 tonnes.

By continuously renewing the fleet of leased vehicles, which account for 85 percent of Implenia vehicles weighing less than 3.5 tonnes, the company is reducing its carbon dioxide emissions by about 17 tonnes a year. This extrapolation is based on the average number of kilometres travelled by the fleet and on the manufacturers' consumption data.

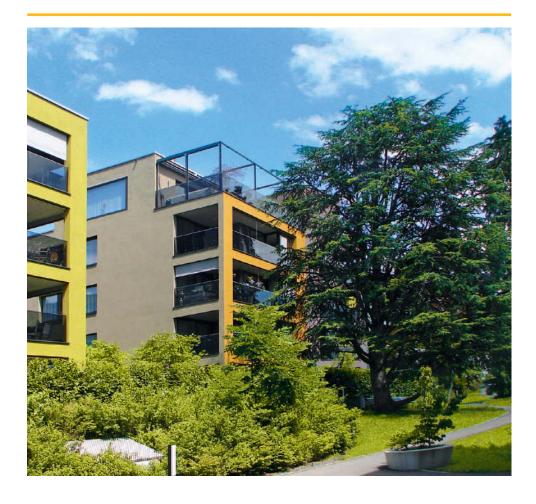
Individual members of the Executive Committee obtained new company cars and chose the environmental options (hybrid or higher class of efficiency). This only has a small effect on the company's total emissions, but its impact as an example for others to follow should not be underestimated. Subsidiary Reuss Engineering is also making a difference by replacing the conventional vehicles in its car pool with hybrid alternatives. Thanks to the ongoing replacement of the car fleet, about half the total kilometres driven in 2011 were already accounted for by hybrids. This produces a saving of 1,400 litres of fuel and a 4 tonne reduction in CO<sub>2</sub> emissions.

#### 4.3.3 Building in the Park initiative

Almost 100 years ago, Hoffmann nurseries held the first in a long series of dahlia shows on a piece of land in Unterengstringen in the countryside near Zurich. Over the years the show gained a national and even international reputation. A few years ago, Implenia acquired the land with plans to build a residential estate. The aim was to realise a high quality development that paid due consideration to the impressive collection of old and often rare trees and shrubs on the site.

The development now consists of 88 owner-occupied apartments in seven buildings, all integrated sympathetically into the parkland. The high-end landscaping represented a challenge for Implenia, which it met with various complementary measures. Special excavations and protective membranes were used to shield at-risk root zones. Specialists with large machines were brought in to relocate whole trees.

106-107



Numerous valuable trees and shrubs, tended and nurtured for several generations, were integrated into the development. Some of the specimens are extremely rare, including a sequoia, Atlantic cedar, Japanese oak, Chinese toon and katsura. The biggest of these rescued trees is a 12-metre tall handkerchief tree, originally from western China.

The aim in "Dahlienpark" was to integrate the very rare and old trees into the housing development.

### 4.4 The goals of "Respect for the environment"

Implenia wants to help ensure that there will continue to be sufficient energy, building resources and land in future.

Goal	Status in 2011	Activities by 2012/2013
Record, and analyse the material, energy and waste flows that Implenia can influence, and take measures to reduce them	Data recording concept mapped and implemented in SAP, staff trained in recording concept	<ul> <li>Interpret initial data, set reduction targets and implement reduction measures for 2013</li> </ul>
Continue employee awareness-raising campaigns	<ul> <li>Awareness campaigns carried out on energy, water and fuel</li> <li>Eco-Drive courses carried out for some machinery operators and office personnel</li> </ul>	<ul> <li>Carry out awareness campaigns to realise reduction targets</li> <li>Complete Eco-Drive courses for machinery operators and office personnel</li> </ul>
Further develop energy and re- source efficiency in production facilities	<ul> <li>Invest in asphalt mixing plant in Valais to preserve resources through hot recycling</li> </ul>	– Use renewable energy for asphalt production



5 SOCIAL COMMITMENT AND COMPLIANCE 110–111



#### "THE COMPANY GETS A FACE"

Good cooperation does not happen by accident. Implenia is interested in regular and close contact with its business partners. Meanwhile, regional procurement managers ensure that projects progress even when things get tough. This sustainable cooperation model has come into its own on one of Zurich's largest roofs.

"Every roof is different," says Peter Olschimke. The place where he is standing makes this abundantly clear. Just a short walk away from Zurich's main railway station, but 10 stories up above the tracks, the Managing Director of Tecton AG Zurich is examining a freshly greened roof in the Europaallee development. We are standing on a building constructed by Implenia. From autumn 2012 it will provide lecture space for the Zurich University of Teacher Education. Olschimke is responsible for ensuring that the

20,000 square metres of roofing is completed on deadline and to the correct technical specifications. We are standing on what is known as an "inverted roof": the 20 centimetres of heat insulation lies on top of the double layer of bituminous membrane that makes the roof watertight. Usually the insulation lies under the membrane.

#### Down by the riverside, up on the roof

It's not just the way the roof is built that makes it different; the gravel that covers it is also very special. This is natural gravel from the River Sihl that flows through the city just next to the building. This gravel bed provides a base for the natural habitat that will hopefully evolve 30 metres above the urban hustle and bustle. Green shoots are only slowly poking up through the stones, and this will certainly never become a jungle. The extensive flat green



Franz Halama of Implenia and Peter Olschimke and André Schreyer of Tecton AG (l. to r.) examine the successful results of the two companies' collaboration.

5 SOCIAL COMMITMENT AND COMPLIANCE 112–113

roof surfaces are more like the natural riverside landscapes that have become rare as Switzerland has become more and more intensively developed. The warmth-loving, drought-resistant plants that grow here will create a little oasis for small animals, insects, birds and reptiles. This carpet of plants is good for people as well as for nature. It ensures that the roof does not overheat despite its exposure to the sun. This means that the building's air conditioning systems don't have to work as hard, so energy is saved. With smaller fluctuations in temperature to deal with, the materials beneath the greenery also age less quickly.

"Because of all these advantages, more than half of all roofs are greened these days," says André Schreyer, Technical Director at Tecton Holding. His job is to ensure that the Swiss family firm, a specialist in waterproofing, keeps up with the latest methods and constantly develops its technical know-how. This includes greening techniques, but also new waterproof materials, fall prevention systems and other equipment.

Together with Peter Olschimke, Schreyer is examining the state of the greening on one of Zurich's largest roofs. While Tecton teams are still working on Plot C opposite, here on Plot A the first green shoots are beginning to show. The two specialists are happy, because their men have done good work.



#### **Both partners win**

Although Implenia is the largest construction firm in Switzerland and can offer many different services, it also works in collaboration with numerous business partners, particularly when specialist experience is required – as in the case of a roof sealing and greening job. To arrive at the right end-result here on the Europaallee development, however, it's not just the business partners' on-site team that has to work well. The preparatory work also has to run smoothly, and this begins long before construction starts. Selecting the right partner in the first place, for example, is extremely important. To ensure that the search for partners and subsequent collaboration with them runs as smoothly as possible, Implenia developed an innovative tool five years ago: the Partnerportal. This helps to integrate partners properly into Implenia's work as a general contractor.

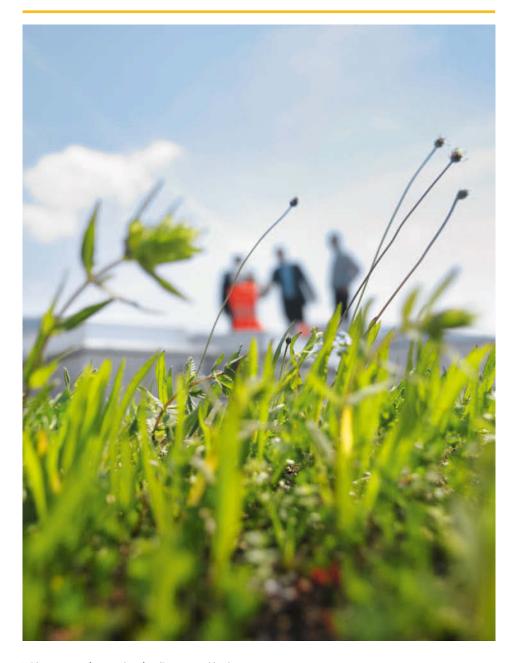
Partnerportal is an online platform on which partners can present and market their services and products to the whole group. They are integrated into Implenia's information network and have direct access to the latest list of Real Estate projects. The list also pro-

vides all contact details for the relevant project managers. Partners thus have a powerful tool to hand that lets them get involved in orders and projects as they evolve. The system increases efficiency on both sides.

#### Europaallee

The Europaallee project is providing a new gateway to Zurich city centre. With a total area of 80,000 square metres the development is currently SBB's biggest real estate building project. Implenia is developing the project's central plots, A, C and E. A whole new district is growing up to the southwest of the city's main railway station, with a diverse mix of services, offices, homes, retirement accommodation, hotels and restaurants, retail outlets, leisure facilities and educational institutions. As a whole the development will accommodate 1,800 students, 6,000 jobs, 400 homes and 160 hotel beds. Construction is costing well over CHF 1 billion in total. The development is named after the main access road, as wide as Zurich's famous Bahnhofstrasse, which will run from the end of Kanonengasse in district 4 all the way to the railway station's southern entrance.

5 SOCIAL COMMITMENT AND COMPLIANCE 114–115



Wide expanses of greened roof replicate natural landscapes.

Tecton and Implenia have been working together for a decade, and they have realised many projects together. "But our collaboration has reached a new level of quality since the introduction of Partnerportal," says Schreyer. Thanks to the online platform, the companies work as equals. The partners know the contact people at Implenia, so they can get involved early and contribute their skills even during initial bidding for orders. This can often help improve the project or make it more cost effective. A win-win situation for both companies, as well as for the client, because it ends up with an optimised building. In the case of Europaallee, early involvement meant that Tecton was able to offer a tailormade option rather than its normal standard solution.

#### **Direct contact is crucial**

In addition to this electronic contact, Implenia's regional procurement managers visit the most important partners regularly in person. Franz Halama, Head of Procurement for the Zurich region and abroad, meets important partner firms at least twice a year to discuss collaboration issues, exchange experi-

ences and get to know about any new additions to the partner's range of services. This allows Halama to tell Implenia's project managers, who he meets every two months, about suitable partners for the work they are planning to do. Of course, this doesn't mean there is no competition. The partners have to put in competitive tenders along with everyone else. But the process is more efficient.

"Personal contact is a huge advantage," Halama and Schreyer agree. It makes it easier to set projects off on the right track, and allows the two sides to make use of each others' experiences. Crucially, problems can be solved in a much more straightforward way when there is a personal relationship.

#### Implenia's partnership model

- Online portal connects Implenia's project managers with partner companies
- About 150 registered regional and national partner firms
- Regular, personal contact with main partners
- Partners have direct access to Implenia Real Estate's detailed project lists
- Targeted positioning and profiling of partner companies

5 SOCIAL COMMITMENT AND COMPLIANCE 116–117

Construction jobs are very complex and require many different people to communicate with each other. Time and cost pressures also tend to be huge. Inevitably, friction occurs. If issues between different parties can't be solved locally, the Implenia procurement manager can step in and sort things out. Or partners can pick up the phone and talk to their contact at Implenia before the situation escalates.

"Ongoing contact and clarity about who to talk to helps give the company a face," Halama summarises. Implenia's partnership model encourages the personal approach. And in the construction industry, where everything is increasingly strictly regulated and swamped by bureaucracy, this goes a long way. It contributes greatly to the kind of positive long-term working relationship that is bearing fruit on the rooftop of a major new part of Zurich's cityscape.



A green oasis 30 metres above the city streets provides a refuge for small creatures.

"We prefer companies with a good reputation that share our interest in collaboration within a sustainable partnership."

Jens Sasse, Head of Procurement at Implenia, explains how important cooperation with business partners is and why he wants to make these relationships more sustainable.



Implenia has introduced a Code of Conduct in which we commit ourselves to respect, integrity, honesty, openness and fairness. These principles underlie our contracts.

### Does Implenia award many contracts to outside firms?

A great many. Implenia Real Estate contracts out about 80 percent of its work. Infrastructure Construction awards between 50 and 60 percent of its construction volume to external partners. In other words, almost three-quarters of the whole group's turnover is contracted out. So the strategic structure of our work with business partners is absolutely crucial.

#### Even when costs have to be cut?

Yes. Price is obviously a major factor, especially for our competitiveness. But it's not the only one. A service provider's creditworthiness, references, quality standards, ability to hit deadlines and innovative strength are just as



important. We want to keep our operational risk low and prefer companies with a good reputation that share our interest in collaboration within a sustainable partnership. Our project managers ensure these factors are taken into account so we can complete construction projects to the right quality and on time. Consequently, our business partners indirectly affect our customers' level of satisfaction.

## Why is ongoing collaboration so important to vou?

It brings clear benefits. Processes are clear and bedded in. People know each others' strengths and weaknesses, can learn from one another and develop the relationship. This leads to significant gains in efficiency. Within Real Estate the Partnerportal gives us a way of developing intensive relationships with companies and getting them involved in new projects at an early stage. In other areas, such as material supplies, we work with framework contracts that are focused on long-term collaboration.

## Do you evaluate a business partner's performance once a project has been completed?

Yes, our project managers and construction managers assess the companies involved. In future we want to make all our business relationships more systematic and we're currently developing a supplier management programme. This will help us classify partners more effectively and will incorporate detailed sustainability aspects.

## 5 Social commitment and compliance

#### 5.1 Management approach

#### **5.1.1 Compliance**

By "compliance" Implenia means correct behaviour by the company and all its employees towards all stakeholders. As well as obeying the relevant laws, this entails putting into practice all the internal guidelines and standards associated with the group's fundamental principles.

Implenia has its own "Code of Conduct". This forms a central element of corporate policy and sets out the basic principles governing the way the company deals with stakeholders and how employees should behave. It describes Implenia's responsibilities to the wider community and the environment, and defines its approach to health and safety issues. Implenia's basic principles are: reliability, sustainability, integrity, awareness of opportunities and risks, transparency, operational and financial excellence, a focus on solutions and customers, and innovation. In order to embed these principles in the company, in 2010 and 2011 Implenia gave compliance training to a total of 1.500 office staff.

Implenia's operational divisions are certified under ISO 9001 (quality), 14001 (environment) and 18001 (health and safety), and have introduced the appropriate processes. It is natural, then, that when evaluating potential subcontractors, business partners and suppliers, Implenia favours those that fulfil these standards too. This provides the greatest possible reassurance that supplier companies will perform properly and adhere to globally acknowledged ethical standards. In 2011 a new clause was inserted into service and subcontracting agreements specifically to combat the use of black market labour.

#### **5.1.2 Social commitment**

Implenia's vision is to develop and build the Switzerland of tomorrow. This is a promise as well as a responsibility. By carefully developing and realising building and infrastructure projects, the company helps ensure that Switzerland and its people can meet the challenges of efficient energy use, protecting the environment, using raw materials sparingly and social change. Public acceptance plays a large role when implementing construction projects, which is why Implenia uses transparent, timely communications to ensure that stakeholders are properly briefed.

Implenia's desire to contribute to social development extends beyond its core business, however. The company takes its social responsibility seriously in other areas too, and is involved in projects that benefit less privileged people and society as a whole. Its individual divisions are left a great deal of scope to make their own social commitments. Because they are so well established in specific localities, they often also support smaller-scale projects that might not register on the radar of a large centralised organisation. By working to integrate less socially and educationally privileged individuals, Implenia also does its bit to improve equality of opportunity.

Implenia also makes a financial contribution through its sponsorship activities, providing numerous grants and awards to promote culture and sport.



5 SOCIAL COMMITMENT AND COMPLIANCE 120–121

#### 5.2 Evidence

#### 5.2.1 Equal opportunities

Implenia guarantees all its employees equal treatment regardless of their ethnicity, colour, gender, religion or political views. The Board of Directors is responsible for implementing this principle, and the company follows the specific guidelines issued by the International Labour Organisation (ILO). These include core employment standards relating to equal remuneration for male and female employees doing work of equal value (C100), and to discrimination in employment and occupation (C111).

Implenia works with the Federal Office for Gender Equality (FOGE) to guarantee long-term equality of opportunity. The FOGE periodically carries out audits – of salaries, for example – and notifies the Head of HR if any risks arise. The FOGE also makes sure Implenia fulfils all the international guidelines and standards. During the period under review no incidents relating to discrimination were reported. The company attributes this success to, among other things, its comprehensive group-wide training in the Code of Conduct, which it therefore intends to continue.

#### 5.2.2 Anti-corruption policy

Corruption is an affront to the principles of equality and justice, and it undermines the rules that make markets run smoothly. Implenia supports all the relevant rules and regulations against corruption and forbids employees from granting or accepting unjustified benefits of any kind. People whose functions expose them to a greater risk of corruption are expressly instructed by the Executive Committee about the consequences of misconduct – both for the company and for the employee. This is particularly true of people who are in contact with suppliers, competitors, the authorities or customers.

Implenia has put risk analysis in place at project level in each of its three operational divisions in order to ensure ongoing assessment of internal guidelines and external rules relating to corruption risks. Implenia also has an internal controlling system to counter corruption. The most important component of this system is the "two-pairs-of-eyes" principle. All these preventative measures greatly reduce the risk of corruption and ensure that Implenia retains its solid image and the trust it has earned. Importantly, these efforts also help the company avoid financial damage.

Auditors also regularly check the books for any signs of corruption as part of the regular auditing process. Internal and external annual reports confirm that no irregularities were noted during the period under review. In a further measure to combat corruption, Implenia has set up a compliance contact unit. Employees with questions or concerns can call and anonymously report suspected or actual infringements.

#### **5.2.3 Competition policy**

The construction industry is one of the most competitive sectors of the economy. As a leading construction company in Switzerland, Implenia is aware of its responsibility to ensure this competition is conducted fairly. Restrictions on competition distort the market and hamper overall economic, social and democratic development, which ultimately harms the company itself. Implenia's Board of Directors and Executive Committee do not, therefore, tolerate any infringement of competition law.

In 2009 the Swiss Competition Commission (CoCom) launched an investigation into whether Implenia and other companies may have been involved in restraints on competition in Canton Aargau. As soon as it heard about the cases, Implenia started cooperating with CoCom and published information on several occasions about the official enquiry and its own internal investigation. The Board of Directors and Executive Committee condemned the illegal agreements and held those responsible to account.

On conclusion of the investigations at the start of 2012, CoCom levied fines totalling CHF 4 million for anti-competitive cartel agreements. Implenia was fined CHF 591,000.

CoCom's investigations prompted Implenia not only to impose internal sanctions, but also to take measures to prevent such misconduct occurring in future. The controlling process has been strengthened, and training in the Code of Conduct, which sets out Implenia's clear position on distorting competition, has been intensified.

#### 5.2.4 Sponsorship

Implenia has sponsored events and sports for many years. Sponsorship augments traditional advertising by associating the company's name with high-profile events and well-known personalities. Implenia's target groups match the group's market priorities. Implenia pursues a multi-layer sponsorship strategy, concentrating mainly on sports. Implenia supports a number of top sporting events, including the Weltklasse athletics in Zurich and Athletissima in Lausanne, mass-participation events like the Zurich and Geneva marathons, and well attended major events such as federal and regional wrestling festivals.

5 SOCIAL COMMITMENT AND COMPLIANCE 122–123

As well as event sponsorship, Implenia has signed "ambassador" contracts with several elite sportsmen and women. For example, since 2010 Swiss triathlete Ruedi Wild has been competing in national and international events with the Implenia logo on his shirt. Alongside his role as ambassador, the young sportsman has entered into a wider partnership with Implenia. Wild is supporting the "Fit4Marathons" campaign, which is designed to motivate employees to do something for their own fitness and health.



Implenia offers its staff a varied and comprehensive programme involving a series of training units in which Ruedi Wild gives valuable tips on subjects such as running for pleasure, motivation, training and nutrition, running-specific strength training and correct stretching. A good number of those who take the course end up deciding to take part in one of the two flagship marathons in Geneva or Zurich, or another mass-participation running event. "Fit4Marathons" thus fits in very well with Implenia's sustainability efforts.

As well as sponsoring sports events, Implenia also promotes innovation as a longstanding partner of the Swiss Venture Club. This organisation recognises innovative companies whose outstanding performance has led to significant and sustainable economic success. The Swiss Venture Club also provides Implenia with an important platform for dialogue with customers, partners and business figures.

Sponsorship is worthwhile for the construction services company on various levels. Media reports help keep Implenia in the public eye. There is also an image transfer to the company from successful and popular events and people. Finally, sponsorship gives Implenia an opportunity to deepen customer relationships, build up contacts with new business partners and consolidate its positioning.

#### **5.3 Initiatives**

#### **5.3.1 Code of Conduct initiative**

Implenia introduced its current Code of Conduct in 2009. This Code provides core guidance on how to behave for the entire group. New staff are introduced to the Code of Conduct on their Welcome Day. Thereafter further measures and training sessions are used to ensure employees have internalised the rules so they apply them intuitively in their day-to-day work. The Code of Conduct is a fixed item in the regular information events put on for the whole workforce.

In 2011 Implenia developed an e-learning programme that all permanent office-based staff in Switzerland have to take by the end of 2012. The results of the first cycle of courses is being analysed so the course can be amended if necessary. Implenia intends to repeat the training at regular intervals, adding new features to take account of new developments such as the group's increasing international focus.



Implenia has made a commitment to its stakeholders that it will always adhere to the principles set out in the Code of Conduct. All employees have signed an agreement that they will comply with the Code of Conduct. The Code also forms part of their employment contracts. Implenia expects its subcontractors, business partners and suppliers to comply with these principles too and to guarantee transparency.

5 SOCIAL COMMITMENT AND COMPLIANCE 124–125

## **5.3.2 Dealing with stakeholders initiative**

#### **Employees**

Dialogue with the company's employees has always been a central priority for Implenia's management. It communicates proactively through an internal magazine, a CEO newsletter and internal bulletins on important developments.

Following the new appointment to the CEO role, the CEO and Chairman went on a "Tour de Suisse" in October 2011. The new heads of the company introduced themselves to staff in all regions and gave their views on the main issues facing Implenia in the months to come. Employees very much appreciated the opportunity to ask questions in person and hear the answers at first hand.

At the same time the tour enabled management to find out what issues were currently concerning staff. The Executive Committee was thus able to discuss important developments and take action where necessary. The tour of Implenia sites and offices was enriching for all concerned and the exercise should be repeated annually.

#### Customers

Implenia wants to strengthen its market presence, which will require further improvements to customer relations. A new Key Account Management concept aims to improve customer focus: processes – from initial acquisition to project handover – will be more closely tailored to customer needs.

#### Shareholders/investors

Implenia believes it is important to communicate its results and strategy transparently and quickly to shareholders. Contact is not just limited to the General Meeting and the annual letter to shareholders. Regular roadshows are used to communicate the company's strategy and operational results to shareholders and potential investors, and to discuss matters with them.

#### **Authorities**

Implenia's corporate vision is to develop and build the Switzerland of tomorrow. It is therefore a willing partner of Switzerland's governmental institutions. For example, in Winterthur, where Implenia purchased the Sulzer site in 2010, the company is building a sustainable urban development in line with market requirements that will create added value for the city and its inhabitants.

#### **Suppliers**

When selecting suppliers, Implenia works with companies that share and put into practice its own core values. Criteria are being defined and implemented to ensure this happens (see page 108).

#### Trade unions/Baumeisterverband

As a leading business in Switzerland, Implenia has a great responsibility to its approximately 6,000 employees. Consequently, the Executive Committee is committed to constructive partnerships with the trade unions and the Baumeisterverband (the Swiss trade association for developers). The CEO talks regularly to union leaders and senior figures in the trade association.

#### Media

Implenia regularly invites journalists to information events where the company reports on its business activities and projects. The aim is to create a transparent relationship with the general public.

#### Society

Direct contact with a broad range of people is vital if a project is to be successful. This is why Implenia organises regular construction site visits. Implenia works intensively with local people and interest groups on projects like the "schorenstadt" development in Basel.

As Switzerland's biggest construction services company, Implenia also wants to be accessible to the whole of society. It intends to intensify its dialogue in this area.

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#### Dialogue with the general public

In the city of Basel, Implenia is building the pioneering "schorenstadt" residential development (see page 32). Even before submitting the planning application, Implenia contacted the local District Secretariat, a consultative body for town planning. Implenia and the District Secretariat jointly invited representatives of various interest groups to an advance information event about the social, environmental and economic sustainability of the planned project.

Although Implenia is developing only one of the three plots at "schorenstadt", the company took a leading role in communicating with local inhabitants, ensuring that representatives of the other plots also came on board. The joint event was held in autumn 2011, generating great interest and attracting an audience of around 150. By communicating openly and actively right from the start, Implenia is helping ensure good neighbourly relations.

#### 5.4 The goals of "Social commitment and compliance"

Implenia wants its partners' trust.

activities

Goal	Status in 2011	Activities by 2012/2013
Consolidate the Code of Conduct as part of corporate culture	<ul> <li>Code of Conduct completed; initial training</li> </ul>	– Carry out consistent training via e-learning platform, revise Code of Conduct
Include all stakeholders in a dialogue	<ul> <li>Further strengthening of dialogue with employees, customers and shareholders</li> </ul>	<ul> <li>Broaden dialogue with society, thus making Implenia more tangible to the general public</li> </ul>
Create trans- parency about Implenia's sustainability	<ul> <li>Reporting concept developed, reporting started</li> </ul>	<ul> <li>Start to formulate second sustainability report</li> </ul>



6 FINANCIAL EXCELLENCE 130–131

Interview with Karen McGrath, Head of Sustainability, Kempen Capital Management, Great Britain

## What is Kempen & Co and who are your clients?

Karen McGrath: Kempen & Co is a Dutch commercial bank offering financial services including asset management, securities trading and corporate finance. Its subsidiary Kempen Capital Management (KCM) concentrates on managing our investments. KCM has defined a set of principles for responsible investment and follows a clearly defined strategy in this area.

## What exactly does the department you manage do?

Following the KCM model, our office in the UK employs sustainability experts who speak several European languages, which helps greatly with cross-cultural cooperation. We look for companies that have developed progressive practices with regard to environmental protection, social commitment and corporate governance. We work with these companies constructively to close any gaps in monitoring and reporting. The Kempen Sense Fund is our flagship ethical fund.

## What is the Socially Responsible Investment Universe Standard?

The SRI Universe Standard is an award for companies that fulfil our requirements. First, this means complying with the rules of the UN Global Compact and the International Labour Organisation (ILO). In addition, we won't invest in companies that are involved in the manufacture of cluster munitions, gambling, pornography, animal experiments or nuclear power. The United Nations Global Compact is a strategic initiative for companies that undertake to tailor their business activities and strategies to 10 recognised principles in the areas of human rights, labour standards, environmental protection and fighting corruption. All these companies are analysed individually and independently audited.

# What does inclusion in the SRI Universe Standard mean to the companies involved?

Companies that meet our strict conditions can use the SRI logo to confirm they fulfil our standards. They come into consideration for investment within the SRI portfolio and are included in the SRI Universe. This makes them more attractive to other sustainability-

oriented investors. Despite the general economic slowdown, the European SRI market is growing fast. Companies that adapt to the changing political environment and climate will be best placed for long-term growth. Furthermore, SRI compliance provides a platform for innovative business practices and efficient risk management.

#### **SRI Universe Standard**

SRI stands for Socially Responsible Investment – an increasingly important factor for the financial markets.



## "IMPLENIA HAS PROVED IT IS TRANSPARENT"

In 2011, Implenia achieved the Kempen SRI Universe Standard. This is awarded to European companies that go beyond the minimum legal requirements in their commitment to employees, society and the environment. SRI stands for Socially Responsible Investment – an increasingly important factor for the financial markets.

6 FINANCIAL EXCELLENCE 132–133

#### Responsible investment

Socially Responsible Investments (SRI) are investments that can be described as sustainable, value-driven, responsible, social or principled. Most institutional investors aim to make a profit on the money they manage. But with SRI, unlike traditional financial models, more attention is paid to the effect the investment has on people, the environment and society as a whole. The criteria used are often very different. No-go areas are usually defined – like child labour, forced labour, human rights abuses, armaments, nuclear power, chlorine chemistry, genetic and biotechnology, and animal experimentation.

The SRI concept covers a wide variety of investment styles and investment products, including ethical funds, "green" shares, environmental real estate funds and environmental technology funds. In recent years the worldwide markets for such financial products have grown rapidly. According to the latest figures from the European umbrella organisation for sustainable financial investment (EUROSIF), almost € 5 trillion are being invested in this way in Europe. In Switzerland, about CHF 42 billion was invested in SRI at the end of 2010, 23 percent more than a year earlier. SRI is clearly growing in importance for financial institutions as well as for the companies that want to raise capital on the financial markets.

**350** 

Implenia is one of more than 350 European companies, 26 from Switzerland, that Kempen Capital Management will consider for its sustainability investments.

# How many companies, and which ones, are currently represented in the SRI Universe?

KCM specialises in small and medium sized companies. More than 350 European companies are included in the SRI Universe, including austriamicrosystems, Rieter, Coloplast und Rockwool.

#### How did you come across Implenia?

One of our fund managers met some Implenia representatives and asked if our team could examine whether the company might qualify for inclusion in the SRI Universe.



With its transparent commitment to environmental and social issues, and its solid financial foundations, Implenia has earned the trust of sustainability-focused investors.

6 FINANCIAL EXCELLENCE 134–135

#### How do you conduct your evaluations?

Each company is assessed using a questionnaire that the company fills in with the help of our experts. The questionnaire is then analysed by an independent partner organisation, so that any conflicts of interest can be avoided. Each company evaluation focuses on three main categories: environmental performance, social commitment and corporate ethics.

## What are the most important evaluation criteria?

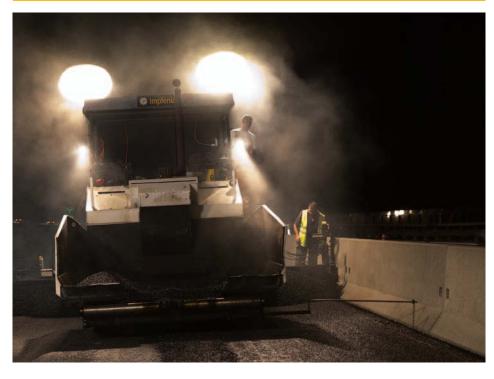
All the areas are equally important. We like companies that take full account of sustainability aspects in everything they do – in order to minimise risk and use energy efficiently. A company needs to understand all the consequences of its activities. That's why our evaluations cover such a broad range of different areas, including corporate ethics, commitment to human rights, health and safety at work, social engagement and environmental performance.

#### What prompted you to include Implenia in the SRI Universe Standard?

All companies are independently audited. Implenia has proved that it's transparent and that it's working to earn external certification in support of its commitment. For example, 96 percent of its locations have OHSAS 18001 (health and safety) und ISO 14001 (environment) certification.

## Where do you think it can still improve?

Our first suggestion last year was that the current Code of Conduct should be translated into the languages of countries where the company operates. Implenia has since done this. We would also recommend auditing the environmental and social credentials of suppliers.



The sustainability analysts at Kempen Bank take a positive view of Implenia's environmental performance, although they would like to see clearer targets for emissions and water.

#### When will Implenia next be evaluated? Are there specific things it needs to do before then?

Another in-depth analysis will be carried out in 2013. But even before this we will look at aspects that we regard as possible risks. In terms of social commitment, we would like to see stronger reporting about respect for human rights, both within the company and along the supply chain. Although only a small percentage of Implenia staff work in "risk countries", a review of this

issue and the introduction of clearer guidelines would be welcome. In terms of the environment, we would like the company to formulate an environmental policy and biodiversity strategy, and to define environmental goals, especially with regard to emissions and water management.

### 6 Financial excellence

#### 6.1 Management approach

For a company to develop sustainably it must of course create financial value as well as environmental and social value. As a listed company, it is crucial that Implenia always generates an appropriate return on invested capital, and that it increases its enterprise value. Implenia succeeds in doing this thanks to the excellent performance delivered every day by its motivated and competent employees in the service of internal and external customers. Optimised operational, administrative and financial processes also contribute to the company's economic sustainability.

As a group Implenia offers a full range of services, from the initial idea to the development and financing, to the construction and operation of challenging buildings and infrastructure projects of all types. The company devotes a great deal of attention to the accurate control and monitoring of all the related financial flows. Implenia is committed to meeting and where possible exceeding the minimum requirements established in this area by the law and by generally accepted rules and regulations. Because of the low margins prevalent in the construction business, it is absolutely vital to maintain cost transparency and keep costs under control. And this is possible only if there is effective project and risk management that always shows the company's financial situation realistically and transparently.

Financial transparency is a top priority for Implenia. It is the only way to earn the confidence of stakeholders.

At Implenia, the Finance and Controlling Department is responsible for these crucial processes and activities. The department is responsible for providing management, key employees, shareholders, creditors and the media with good, reliable financial data. As a listed company. Implenia prepares its accounts in accordance with the accepted standards and in particular with IFRS (International Financial Reporting Standards) accounting rules. Implenia has a comprehensive internal, centrally managed and independent controlling system to further ensure the quality of its financial reporting. It also has an internal audit department, currently outsourced to Ernst & Young, and has selected PricewaterhouseCoopers as its external auditor. With its transparent reporting, Implenia hopes to retain the confidence of its shareholders and other stakeholders.

#### 6.2 Evidence

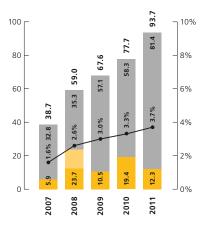
#### 6.2.1 Economic value

Unlike many other markets, the Swiss construction market performed robustly in 2011. As in the previous year, there was a slight annual rise in spending on construction in Switzerland. Civil engineering was one of the main drivers behind this thanks to public sector investment in infrastructure projects. The other main driver was the positive trend in residential construction: low interest rates and migration into Switzerland mean there is still a demand for new homes. Meanwhile. because of the euro debt crisis, investment in commercial and industrial building work was subdued.

Implenia can look back on a very successful 2011. Consolidated revenue rose by 5.6 percent to about CHF 2.5 billion. The company was also able to increase all its profit figures substantially, as the chart shows: EBITDA improved again, by 24.8 percent to CHF 140.5 million. Implenia also managed to raise its return on invested capital (ROIC) to 26.8 percent. This return (operational earnings as a percentage of invested capital) was about 17% above average cost of capital, reflecting how much value was created by the business. Thanks to its well filled order books, the company can look forward to the future with confidence. Implenia is on course to reach its announced medium-term target of CHF 100 million EBIT. During the period under review Implenia did not receive any significant concessions from the public purse, such as discounts, investment grants or development money.



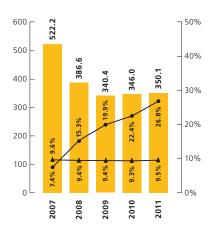
- Privera sale CHF 11.3 m
- 1st half-year
- Margin



#### **OPERATING RESULTS**

(in CHF m)

- Invested capital (in CHF million)
- ◆ ROIC (operating income/invested capital)
- ★ WACC before tax



**RETURN ON INVESTED CAPITAL (ROIC)** 

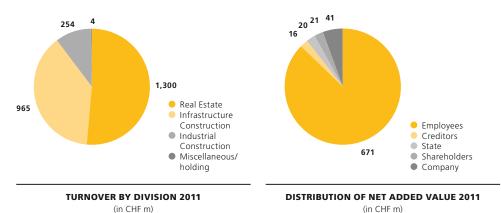
(in %)

6 FINANCIAL EXCELLENCE 138–139

#### **Consolidated key figures**

Consolidated key figures			
	2011	2010	Δ
	CHF 1,000	CHF 1,000	
Consolidated revenue (excl. Norway)	2,441,202	2,388,418	2.2%
Revenue Implenia Norway <sup>1</sup>	81,444	_	
Consolidated revenue	2,522,646	2,388,418	5.6%
EBIT from divisions	93,529	76,997	21.5%
Operating income	93,676	77,658	20.6%
Consolidated profit	61,351	52,458	17.0%
EBITDA	140,489	112,552	24.8%
Free cash flow	67,311	39,920	68.6%
Total number of shares	18,472,000	18,472,000	_
Outstanding shares	18,292,994	18,260,983	0.2%

1 from 18.07.2011



#### Net added value

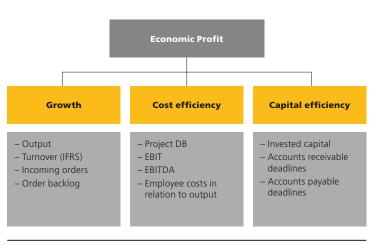
The extent to which each stakeholder group participates in the value created by Implenia is shown in the value creation statement as shown in the output account opposite. Gross added value includes all the income that the company realises in one financial year minus all payments to third parties for goods and services supplied, and minus depreciation. By far the greatest share of the remaining net added value (2011: CHF 769 million, see chart) goes to employees in the form of wages. Creditors receive interest payments on the capital they have provided. The state receives tax payments. The remaining added value – i.e. group profit – is distributed to shareholders or is retained by the company.

#### Net added value

Net added value					
	2011	2010	2009	2008	2007
	CHF 1,000				
Output account					
Revenues	2,522,646	2,388,418	2,279,835	2,324,465	2,380,625
Financial income	3,805	4,174	2,163	3,015	3,312
Other income	5,073	7,141	4,160	15,181	2,846
Business output	2,531,524	2,399,733	2,286,158	2,342,661	2,386,783
Cost of materials	1,565,867	1,480,942	1,412,677	1,437,757	1,448,835
Other costs	150,182	147,030	126,887	133,395	138,678
Inputs	1,716,049	1,627,972	1,539,564	1,571,152	1,587,513
Gross added value	815,475	771,761	746,594	771,509	799,270
Depreciation	46,813	34,894	36,960	39,525	46,010
Net added value	768,662	736,867	709,634	731,984	753,260
Distribution account					
Employees	671,181	655,035	639,828	669,966	711,280
Creditors	15,827	13,791	7,173	11,962	10,422
State	20,303	15,583	15,578	10,073	6,024
Shareholders	20,439	16,393	12,533	9,125	9,183
Group	41,251	36,065	34,522	30,858	16,351
Net added value	768,662	736,867	709,634	731,984	753,260

- Payments to employees (staff costs) have risen steadily in recent years as a result of organic and non-organic growth (Norway acquisition: 260 employees). The fall in 2007/2008 was caused by merger-related adjustments.
- Credit costs increased from 2010 because of the company's first bond issue, which secured funding for Implenia for the next 4 years.
- Payments to shareholders (dividends) have more as doubled since 2007.
- The share of profit retained in the business has risen in parallel with distributions to share-holders, thus ensuring a healthy capital ratio.

6 FINANCIAL EXCELLENCE 140–141



**SELECTED KEY PERFORMANCE INDICATORS (KPI)** 

#### 6.3 Initiatives

## **6.3.1 Value-Oriented Management** initiative

In 2011, Implenia laid the foundations for its Value-Oriented Management concept as one of the 10 main pillars of its "Sustainable Implenia" initiative. The concept puts the focus of management not just on profit targets, but also on the cost implications of using equity and debt capital. The resulting "economic profit" figure shows the value created by the company. The concept brings together the interests of shareholders, lenders and management by encouraging long-term, sustainable growth in the company's value.

Economic profit is influenced by three basic factors: growth, cost efficiency and capital efficiency (see diagram). These value drivers are monitored using operational key performance indicators (KPI), such as capacity utilisation, employee costs per hour, billing days and payment times, etc. The concept was developed by the finance department in collaboration with management and is based on the key figures used by Implenia since 2008: EBITDA and invested capital. Training in the new management tool and its use in the planning process began in 2012. By 2013 the concept should be linked up with Implenia's remuneration concept and feature in individual target setting agreements.

#### 6.4 The goals of "Financial excellence"

Implenia wants to secure further progress.

Goal	Status in 2011	Activities by 2012/2013
Create financial value ("economic profit")	– Foundations laid for intro- duction of Value-Oriented Management	– Introduce Value-Oriented Management

## Afterword

"We'll hit the targets if we take responsibility for solutions that are fit for the future."

With this Sustainability Report, we have tried to shed some light on various issues:

#### What we understand by sustainability:

Combining economic performance with social responsibility and protecting the environment.

## Why sustainability is relevant to us as a construction services provider:

On average, the construction industry accounts for 30 percent of greenhouse gas emissions, 50,000 accidents at work a year, 300,000 jobs and investment of CHF 55 billion a year.

## The contribution we want to make to sustainable development:

Sustainable products and services, respect for the environment, an attractive working environment, social commitment and compliance.

## How we want to continue developing in future:

Achieve our concrete goals for 2012 and 2013 in every area.

Whether we achieve our sustainability targets or not will not be decided in a concept paper but at day-to-day project meetings where solutions are found for resource-efficient construction; on construction sites where machinery is operated economically and with respect for the environment; on the job when employees are motivated to perform to their best; at community meetings when trust is shown in Implenia; and among shareholders who appreciate Implenia's commitment to sustainability. In other words, wherever we all take responsibility for solutions that are fit for the future.

I would like to thank everyone who has worked on this Sustainability Report. I hope the report strengthens our common understanding of what a sustainable Implenia looks like, and that it encourages us and our stakeholders to continue working on solutions that set an example for others to follow.

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Markus Koschenz "Sustainable Implenia" Project Manager

## 7 Appendix

#### 7.1 Information about the Sustainability Report and GRI standards

#### Content and period covered

Implenia's first Sustainability Report has been prepared in accordance with Global Reporting Initiative (GRI) standards. It contains detailed information about all the services the company provides across the whole lifecycle of a building, and about its services for institutional and private infrastructure projects.

Unless stated otherwise, this sustainability report relates to the 2011 financial year, which ran from 1 January to 31 December 2011. The information covers all locations in Switzerland; locations outside Switzerland are not included. The next Sustainability Report is scheduled to appear in 2014 reporting about 2013.

#### **Reporting standard**

The 2011 Sustainability Report is based on the GRI's guideline G 3.0 and takes account of the "GRI Construction and Real Estate Sector Supplement" (CRESS, Final Version 2011).

The report also includes the GRI Content Index, in which the contents are listed using GRI terminology. This Content Index can also be found at www.implenia.com > Sustainability.

The report has been awarded a GRI "B" Application Level.

## Process for defining the content of the report

In 2010, Implenia created a platform for the company's sustainable long-term development. As part of the group-wide "Sustainable Implenia" initiative, 10 priorities were defined. These have been worked on and developed continuously ever since. In the 2011 Sustainability Report, these priorities are divided into the five chapters "Sustainable Products and Services", "Attractive Working Environment", "Respect for the Environment", "Social Commitment and Compliance" and "Financial Excellence".

The content of these chapters was defined together with the responsible specialist staff and drafted to reflect internal processes. The whole report obeys the principle of "we record and report only what is relevant and what we can also influence."

The sustainability reporting process was assisted by triple innova GmbH of Wuppertal, Germany.



# Statement GRI Application Level Check

GRI hereby states that Implenia has presented its report "Sustainability Report 2011" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level B.

GRI Application Levels communicate the extent to which the content of the G3 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3 Guidelines.

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 10 August 2012





The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance, www.globalreporting.org

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 23 April 2012. GRI explicitly excludes the statement being applied to any later changes to such material.

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GRI

Description

fully reported
partially reported
not reported
n/r not relevant
AR 2011 Annual Report
CoC Code of Conduct

#### 7.2 GRI Index

GRI	Description	Status	Chapter
1	Strategy and Analysis		
1.1	Foreword by the CEO	•	1.1
1.2	Key impacts, risks and opportunities	•	1.1/1.2
2	Organisational Profile		
2.1	Name of the organisation	•	1.3/7.3
2.2	Primary brands, products and services	•	1.3.4
2.3	Operational structure	•	1.3
2.4	Location of the organisation's headquarters	•	1.3.3
2.5	Countries where organisation operates	•	1.3.3
2.6	Nature of ownership and legal form	•	AR
2.7	Markets served by the organisation	•	1.3.4
2.8	Scale of the reporting organisation	•	3.2.1/AR
2.9	Significant changes in scale, structure or ownership	•	1.3.3/AR
2.10	Awards received  – Auszeichnung Gutes Bauen 2006–2010  – Auszeichnung für gute Bauten 2006–2010  – Swiss annual report rating 2011	•	
3	Report Parameters		
3.1	Reporting period	•	1.3.3/7.1
3.2	Date of most recent previous report	•	7.1
3.3	Reporting cycle	•	7.1
3.4	Contact point for questions	•	7.3
3.5	Process for defining report content	•	7.1
3.6	Boundary of the report	•	1.3.3/7.1
3.7	Any specific limitations on the scope or boundary of the report	•	1.3.3/7.1
3.8	Basis for reporting	•	7.1/ AR
3.9	Recording methods and accounting principles	•	2.2.3/7.1
3.10	Explanation of the effect of any re-statements of information	n/r	
3.11	Significant changes from previous reporting periods	n/r	
3.12	GRI Content Index	•	7.2
3.13	Verification of the report by external third party	n/r	
4	Governance, Commitments and Engagement		
4.1	Governance structure of the organisation	•	1.3/AR
4.2	Indicate whether the Chair of the highest governance body is also an executive officer	n/r	

GKI	Description	Status	Chapter
4.3	Organisations without supervisory board	n/r	
4.4	Mechanisms	n/r	
4.5	Remuneration	•	6.3.1/AR
4.6	Avoidance of conflicts of interest	•	6.3.1/AR/CoC
4.7	Qualifications and experience of members of the Board of Directors	•	6.3.1/AR
4.8	Internally developed guiding principles, internal code of conduct and principles	•	5.3.1/CoC
4.9	Sustainability evaluation	•	1.3/2.2.3
4.10	Evaluating the performance of the highest governance body	n/r	
4.11	Precautionary principle	•	3.2.2
4.12	Externally developed economic, environmental and social charters principles	•	1.3.2
4.13	Memberships in associations  – Öbu network  – Zukunft Bau  – SGAS Schweizerische Gesellschaft für Arbeitssicherheit	•	1.3.2
4.14	Stakeholder groups engaged by the organisation	•	5.1.2/5.3.2
4.15	Basis for identification and selection of stakeholders	•	5.1.2/5.3.2
4.16	Approaches to stakeholder engagement	•	5.1.2/5.3.2/5.4
4.17	Key topics and concerns that have been raised through stakeholder engagement	•	5.1.2/5.3.2
5	Economic Performance Indicators		
	Management approach	•	6.1
EC1	Value creation	•	5.1.2/5.2.4/6.2.1
EC2	Financial implications of climate change	•	1.2/2.2.2
EC3	Social security payments	•	3.1/3.2.2
EC4	Financial assistance from government	•	None, AR
EC5	Minimum entry wage	•	3.1
EC6	Use of local suppliers	•	
EC7	Procedures for local hiring	•	
EC8	Investments in public infrastructure and services	•	
EC9	Indirect economic impacts	•	
6	Environmental Performance Indicators		
	Management approach	•	2.1/4.1
EN1	Material consumption	•	4.2.1
EN2	Percentage of materials used that are recycled	•	4.2.1

Status

Chapter

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Chapter	Status	Description	GRI
4.2.1	•	Indirect energy consumption	EN4
2.2.2/4.3.2	•	Energy saved due to conservation and efficiency improvements	EN5
2.3	•	Initiatives to design products and services	EN6
4.3.2	•	Initiatives to reduce indirect energy consumption and reductions achieved	EN7
4.2.1	•	Water consumption	EN8
	•	Water sources	EN9
	•	Water recycling	EN10
	•	Biodiversity: land use	EN11
	•	Biodiversity: impacts	EN12
	•	Biodiversity: threatened habitats	EN13
4.2.2/4.3.3	•	Managing biodiversity	EN14
	•	IUCN "Red List" species	EN15
	•	Direct and indirect greenhouse gas emissions	EN16
	•	Other relevant greenhouse gas emissions	EN17
2/2.3.3/4.2.1/4.3.2	0 2.2.	Initiatives to reduce greenhouse gas emissions	EN18
	•	Emissions of ozone-depleting substances	EN19
	•	NOx, SOx and other significant air emissions	EN20
	•	Total water discharge	EN21
4.2.1	•	Waste	EN22
	n/r	Chemical spills	EN23
	n/r	Hazardous waste transportation	EN24
	•	Harming of water systems	EN25
2.3/4.3.1/4.3.2	•	Minimisation of products' environmental impact	EN26
	•	Management of packaging	EN27
No violations	•	Non-compliance with environmental laws	EN28
	•	Environmental impacts of transportation	EN29
	•	Expenditure on environmental protection	EN30
		Labour Practices and Decent Work	7
3.1	•	Management approach	
3.2.1	•	Total workforce	LA1
3.2.1	•	Employee fluctuation	LA2
	•	Benefits provided to permanent staff	LA3
	•	Employees covered by collective bargaining agreements	LA4
	•	Minimum notice periods when there are operational changes	LA5
	•	Health and safety committees	LA6
3.1/3.2.4	•	Absences	LA7
3.1/3.3.1/5.2.4	•	Disease prevention	LA8

Chapter	Status	Description	GRI
	•	Agreements with trade unions	LA9
3.1/3.2.3/3.3/4.3.2	•	Training and development	LA10
	•	Programmes for skills management	LA11
3.1	•	Performance reviews and development plans	LA12
3.2.1	•	Diversity of workforce	LA13
3.1	•	Wage equality	LA14
		Human Rights	8
5.1	•	Management approach	
	n/r	Significant investments in human rights	HR1
	n/r	Suppliers selected on human rights criteria	HR2
	n/r	Employee training in human rights	HR3
5.2.1	•	Incidents of discrimination	HR4
	•	Freedom of association and right to collective bargaining	HR5
	n/r	Precautions against child labour	HR6
	n/r	Precautions against forced labour	HR7
	n/r	Training in human rights for security personnel	HR8
	n/r	Protecting the rights of indigenous peoples	HR9
	,	Society	9
5.1	•	Management approach	
5.1.2/5.2.2/5.3.2	•	Effect of operations on local communities	SO1
5.1.1/5.2.3	•	Corruption risks: percentage and number of business units analysed	SO2
5.1.1/5.2.2/5.3.1	•	Employee training on corruption	SO3
5.2.3/5.3.1	•	Corruption: actions taken in response to incidents	SO4
	•	Public policy positions	SO5
	•	Political donations	SO6
5.2.3	•	Anti-competitive behaviour	SO7
5.2.3	•	Fines and sanctions	SO8
		Product Responsibility	10
2.2.1/5.1.2	•	Management approach	
	•	Health and safety: product improvement	PR1
	•	Health and safety: non-compliance with regulations	PR2
	n/r	Declaration of product and service information	PR3
	n/r	Non-compliance with declaration regulations	PR4
2.2.1	•	Customer satisfaction	PR5
5.2.4	•	Marketing	PR6
	•	Non-compliance with marketing regulations	PR7
	•	Customer data protection	PR8

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#### Paper from a sustainable company

The envelope was printed on natural paper with added straw. It was produced in the FSC®-certified paper factory in Gmund on one of the oldest paper machines in Europe. The environmental charter of the 180-year-old family-run business is based on the four components of water, raw materials, waste and energy.

**Water:** A special circuit and water cleansing system cleans the coloured production water using ozone, among other things, and without added chemicals. This has reduced water consumption.

**Raw materials:** Only environmentally friendly raw materials are used in manufacturing.

**Waste:** Every piece of waste is carefully separated and, where possible, reused. This procedure has considerably reduced waste volumes over the last 10 years.

**Energy:** More than 70 percent of electricity is generated in-house using water turbines, combined heat and power generation and solar panels. A state-of-the-art steam and energy centre reduces emissions to a minimum.







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