



# Sustainability Report

## 2012

Bosch Group



**BOSCH**  
Invented for life

# Urban Utopia

The world's major cities are growing rapidly. According to United Nations estimates, more than 36 million people will be living in Tokyo by 2030. Mexico is expected to count more than 20 million inhabitants and the population of Los Angeles will likely exceed 18 million. Urban conurbations of this size require an enormous amount of energy, produce large volumes of waste, and pollute the air with greenhouse gases. However, megacities also give rise to opportunities. In densely populated areas, resources can be used more efficiently and technical innovations rolled out in a more cost-effective manner. Bosch is already working to turn urban areas into powerhouses for sustainability.

● **Smart helpers** – *how RFID chips reduce energy consumption in workshops, page 9*

● **Striking a balance** – *when acknowledging family commitments boost career opportunities, page 13*

● **Eco-friendly design** – *why household appliances are becoming increasingly energy efficient, page 10*

● **Solutions for the future** – *how Bosch is promoting the creation of worldwide knowledge networks, page 16*



**“Sustainable action**  
ensures that the future  
will be worth living for  
generations to come.”



● Dr. Volkmar Denner, chairman of the board of management of Robert Bosch GmbH

**D**r. Volkmar Denner on the interactions between global megatrends, corporate responsibility, and sustainability as a business model.

**Dr. Denner, networking is a major theme in the current Bosch Sustainability Report. Why is that?**

**DENNER** In today's world, things are more interconnected than ever before. The global flow of goods, business, and capital means that change is becoming ever faster and more frequent. This creates complexity and, often, we do not fully understand how our current actions will impact on the future. This is equally true for individuals, organizations, and even whole societies. But that is precisely what sustainable action is about - understanding the link between cause and effect. Both over time and for the world as a whole.

**Could you please give us an example of this?**

**DENNER** One very serious example is climate change. Before we do anything else, we need to understand how the energy consumption of, say, a production facility or a vehicle today will affect the climate in the future - including on the other side of the planet. Only then can we do the right thing. As private citizens, we can buy vehicles with good fuel economy. As a company, we can invest in optimizing the energy efficiency of production processes and facilities, or develop eco-friendly products that help conserve resources. However, the following example is absolutely paramount in this: as long as we do not fully understand cause-effect relationships, we should focus on minimizing the potential negative effects of our actions. This preventive approach is advisable when it comes to climate change, for instance.

**Is climate change the measure of all things when it comes to the interconnectedness of developments over time and around the world?**

**DENNER** Alongside global warming, there are other worldwide factors involved, known as megatrends. Here, too, we can see a high level of interdependency. At the center, there is demographic development, which varies greatly from region to region, but will ultimately result in the continuous net growth of the world's population in the coming years. More people means increasing demand on food supplies and greater energy consumption. These trends have a knock-on effect on global pollutant emissions, which once again reached a record level in 2012.

“No one can ignore **global megatrends** and **their interactions** any more.”

Dr. Volkmar Denner

No one can ignore these interactions and their implications any longer. A company of our size, with more than 300,000 associates in over 50 countries, certainly can't. For this reason, we are well-advised to carefully analyze the megatrends that are relevant to us and draw the right conclusions.

*The topic of sustainability has become omnipresent, particularly in business. Do companies have a special responsibility?*

DENNER Balancing the present day against the future is a challenge for the whole of society. One thing is certain – everybody bears equal responsibility, especially because the world is working in ever more interconnected ways. At this point, I would like to quote our company founder Robert Bosch, who as early as 1921 said, “Improvements in the world of technology and science should always also be beneficial for mankind.”

*Does sustainability work as a business model?*

DENNER Yes, we at Bosch are certain it does. Household appliances offer a good example. Our decision in 2010 to launch the super-efficiency portfolio of exceptionally energy-efficient appliances was a business decision – not the result of expectations being placed at our door. Today, BSH Bosch und Siemens Hausgeräte GmbH is a European market leader. This proves to me that consumers recognize serious efforts, and reward them not least through responsible purchasing decisions.

*Could you please define the Bosch Group's position on sustainability?*

DENNER Sustainability means planning with foresight, recognizing the consequences of your own actions, and working toward securing a future worth living for generations to come. That was how Robert Bosch acted, because he was convinced that a company could only achieve long-term success in a socially and

ecologically sound environment. That is why he promoted healthcare, education, and international understanding in his time.

*What makes Bosch qualified to roll out sustainability as a business principle?*

DENNER Our four business sectors – Automotive Technology, Industrial Technology, Consumer Goods, and Energy and Building Technology – focus on areas that will be decisive in achieving a sustainable society in the future. The high level of technological innovation in our products and services is helping to conserve resources and reduce energy needs worldwide. This applies to industry and manufacturing, but also to private households. Our “Invented for life” quality promise therefore provides significant value contributions in the here and now – and stimuli for the future.

*What are you doing to make sure you continue to keep this promise of sustainability in the future?*

DENNER The future doesn't develop in step with annual reports. It is an ongoing process that has to be explored and thus shaped. We did that in 2012, for instance: despite the difficult market environment, we further increased our high level of research and development expenditure. We spend 50 percent of our R&D budget on products that are energy-efficient and conserve resources. As a result, we filed a total of 4,800 patents last year, with which we hope to help raise quality of life worldwide. Furthermore, sustainability in a company is also a question of attitude. A values-based corporate culture can only grow by virtue of everybody's conduct over the long-term.

**Dr. Denner, thank you for talking to us.**

Sustainability on the internet at [csr.bosch.com](http://csr.bosch.com)



# Acting **Responsibly**

Business success and corporate social responsibility do not rule each other out. In fact, they go hand in hand. Robert Bosch put this principle into practice when he established the “Workshop for Precision Mechanics and Electrical Engineering” in Stuttgart in 1886. In the decades that followed, he used his innovative strength, far-sightedness, and sense of social responsibility to lay the foundations for what is now a leading company in its industry.

**T**he Bosch Group is a leading global supplier of technology and services. In fiscal 2012, the company generated sales of 52.5 billion euros with some 306,000 associates. The Bosch Group comprises Robert Bosch GmbH and its roughly 360 subsidiaries and regional companies in almost 50 countries. If its sales partners are included, Bosch is represented in some 150 countries worldwide. A new structure based on four business sectors – Automotive Technology, Industrial Technology, Consumer Goods, and Energy and Building Technology – has been in place since the beginning of 2013.

The aim of the Bosch Group is to improve the quality of people’s lives through innovative and beneficial products and services that spark customers’ enthusiasm – in other words, to offer technology “Invented for life.” This goal is closely related to the company’s commitment to responsible corporate governance, which has been a constant throughout its history.

## **Protecting the environment, climate, and resources**

A responsible citizen and philanthropist, Robert Bosch always gave back to the wider community right from the outset. To this day, lasting corporate social responsibility is an important



**“Our founder Robert Bosch believed that striving for sustainability made perfect business sense.”**

Dr. Volkmar Denner

Self-sufficient in its energy needs, and comfortable as well:  
The award-winning Solar Decathlon house was created in a joint project with the Technical University of Darmstadt

part of the company’s philosophy. This includes protecting the climate, environment, and resources. The company is committed to reducing harmful CO<sub>2</sub> emissions, continuously improving technical systems, and developing new applications for the future. All Bosch divisions offer customers energy-efficient solutions, such as energy-efficient refrigerators and state-of-the-art heating systems and machine tools. In production, Bosch attaches utmost importance to the efficient use of energy and the conservation of natural resources. Renewable energy sources such as wind, water, and the sun play a key role in this.

### **Supporting associates**

Worldwide, some 306,000 associates bring their expertise, dedication, and passion to bear for the Bosch Group. The company strives to offer these associates the best possible conditions. This is why Bosch trains young people around the world, is committed to equal opportunities, and is open to new employment models such as part-time work and job sharing. With these options, Bosch is also creating the conditions that will attract qualified new associates.

The Code of Business Conduct offers all Bosch associates a set of guidelines that help them act with integrity and a sense of purpose. It also sets out all relevant legal and internal regulations. Together with the Bosch Values, the Code of Business Conduct lays the foundation for global success and trust in the Bosch Group.

### **Supporting society**

Today, Robert Bosch Stiftung GmbH owns 92 percent of Bosch. The foundation carries forward the social commitment of company founder Robert Bosch and helps find solutions to pressing social issues through its own programs and institutions and by supporting external initiatives. The work of the foundation is geared primarily toward supporting international understanding, social welfare, education, and health. ●

---

**More information on the company can be found [here](#). More information on the Robert Bosch Stiftung can be found [here](#).**

## Environment

# All for One Goal

According to the International Energy Agency's (IEA) World Energy Outlook 2012, fossil fuels remain dominant in the energy mix despite the increase in low-carbon energy sources. In light of this, the aim of limiting the increase in the global temperature to two degrees Celsius seems a distant dream. But there is hope. Energy efficiency is a key lever of climate protection. With regard to increasing energy prices and political requirements, it is also becoming a competitive factor for companies.

**B**osch is committed to actively shaping climate protection. Based on its own value added, the company aims to reduce relative CO<sub>2</sub> emissions by 20 percent by 2020 compared with 2007 levels. To this end, the Bosch divisions have defined clear climate protection objectives and measures to improve energy efficiency. Their CO<sub>2</sub> coordinators are responsible for defining specific goals for the various locations and coordinating their activities. The figures show that Bosch is on the right track. In 2012, relative CO<sub>2</sub> emissions were already 13 percent below 2007 levels.

### Heat from cooling water

Measures that may seem laborious in theory are quickly becoming a reality at the Bosch locations. One example is the utilization of waste heat from cooling water at the German plants in Reutlingen and Kusterdingen. To produce ultrapure water, the locations use drinking water from Lake Constance. The water, which has a temperature of less than ten degrees Celsius, has to be heated to 10 degrees Celsius. For this purpose, the plants use the heat from cooling water, which is recovered using two heat exchangers. This reduces the combined energy requirements of both locations by around 14 million kilo-

watt hours, which corresponds to the annual energy consumption of approximately 930 single-family homes. As a result, CO<sub>2</sub> emissions at Reutlingen and Kusterdingen are around 3,500 metric tons lower at each location, which makes an important contribution to the Bosch climate protection goals.



Reutlingen plant uses waste heat from cooling water to reduce its energy consumption



On average, 90 percent of the heating requirements at the Bosch location in Rodez, France, are met by its new biomass heating plant

### Energy from biomass

Consuming energy in a manner that conserves resources and protects the climate is also extremely important at Bosch in Rodez, France. Since January 2013, this location has been equipped with a biomass heating plant. Around 6,600 metric tons of wood chips from local forestry are incinerated in this plant each year. Rodez uses the energy generated in this way to produce hot water and process heat. On average, the energy generated by the wood chip plant covers 90 percent of the location's heating needs. And since the incineration of biomass releases only the same volume of carbon dioxide that trees previously absorbed from the atmosphere, the location also saves CO<sub>2</sub>: the plant reduces its emissions by around 600 metric tons per year.

### Reaping the benefits of hard work

Experience at the Charleston plant in the United States underlines the importance of associates' contributions and ideas for energy efficiency. The environmental officer's team works with all associates at the location. As a result of this cooperation, a throttle in the compressed air pistols used at this plant prevents compressed air from being wasted. The plant has thus been able to reduce the number of compressors. Thanks to this and other

measures, the largest Bosch production location in the United States has already cut its CO<sub>2</sub> emissions by 28 percent since 2007. ●

**More information on environmental and climate protection at Bosch can be found [here](#)**

## Key data 2012

<b>Total energy requirements</b>	→ 6.3 million megawatt hours
Reduction since 2007	7 percent
<b>Total CO<sub>2</sub> emissions</b>	→ 2.5 million metric tons
Reduction since 2007	5 percent absolute, 13 percent relative
<b>Total waste</b>	→ 0.5 million metric tons
Reduction since 2007	10 percent
<b>Total water usage</b>	→ 16.6 million cubic meters
Reduction since 2007	5 percent
<b>Total wastewater</b>	→ 13.3 million cubic meters
Reduction since 2007	5 percent

# Project Portfolio

## Commitment to the planet

The main idea behind "Earth Week" at many Bosch Group locations was to set an example for environmental and climate protection. When the initiative was launched on March 31, 2012, non-production departments turned off the lights for an hour to help protect the climate. The following week, associates took part in a number of different environmental protection initiatives. For example, associates planted trees, cycled to work, or car-pooled. In other words, they helped the planet and encouraged others to do the same.

**More information on environmental and climate protection at Bosch can be found [here](#)**



## New lighting systems

To save energy, the Bosch locations have developed and implemented IndraLogic SPS, an innovative lighting solution. The system automatically regulates the intensity of light – depending on the level of daylight and whether anyone is in the room. The lights are therefore only turned on when necessary, and only at the required intensity. Thanks to this energy-efficient control system, plants have reduced their energy requirements for lighting by up to 60 percent.

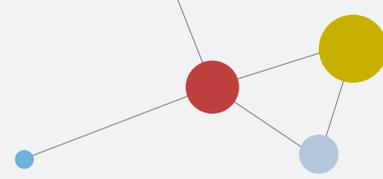
**More information on this topic can be found [here](#)**

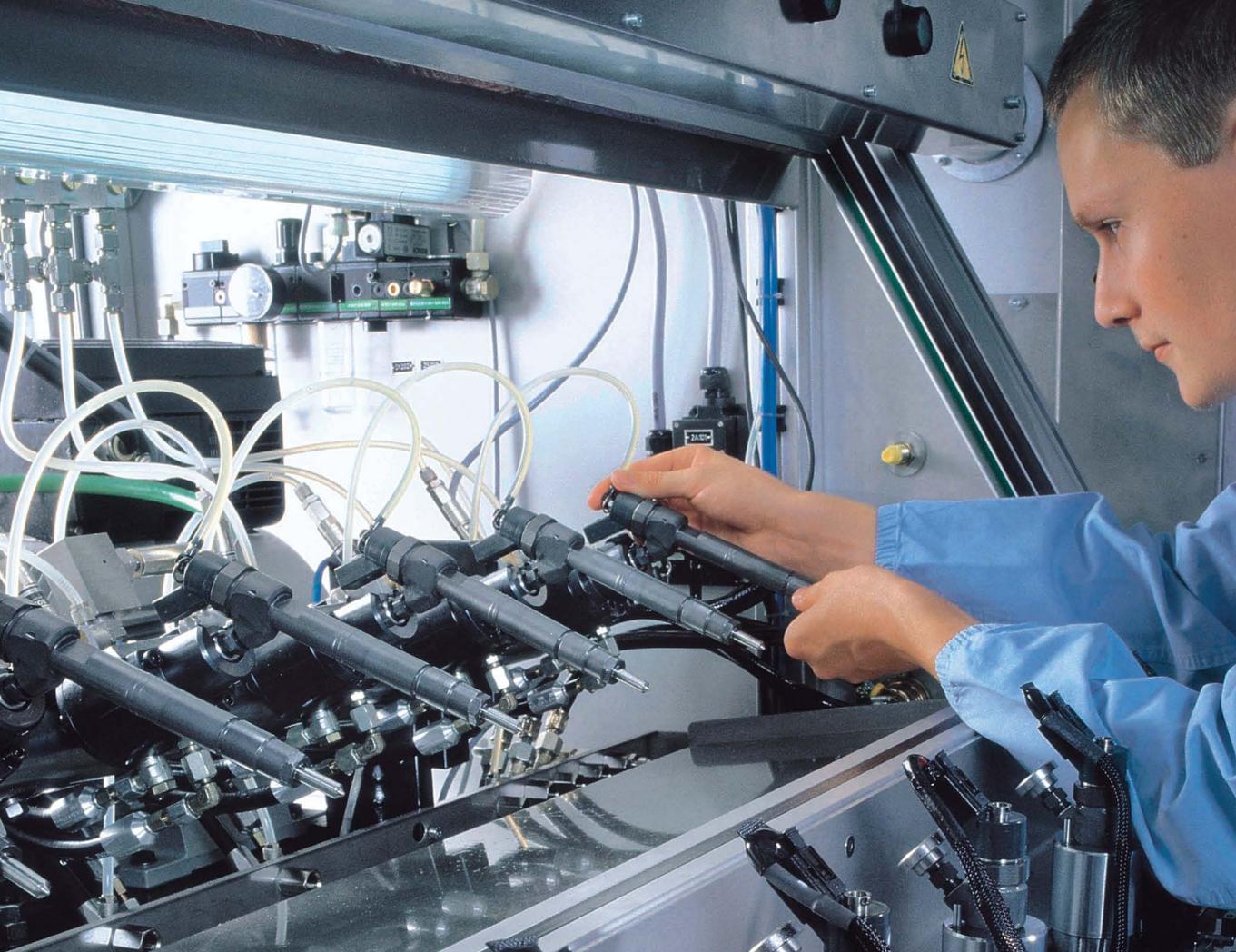


## Controlled process

Lower water and paint consumption, reduced solvent requirements, efficient use of waste heat, and energy savings of up to 75 percent – with credentials like these, RFID-controlled painting at Bosch in Mellansel, Sweden, is another milestone in environmental protection. In the past, external service providers were responsible for painting the hydraulic motors. Today, the company performs this task itself and has developed a special resource-friendly process for the purpose – with the aim of protecting the environment.

**More information on the Mellansel location can be found in English and Swedish [here](#)**





## Products

# Eco-Friendly Production

Due to climate change and the increasing scarcity of resources, products now have to meet ever-stricter environmental requirements. Firstly, legislation is being introduced to minimize air, water, and soil pollution. Secondly, growing environmental awareness and rising energy prices mean that ecological considerations are playing a greater role in customers' purchasing decisions. With the "Design for Environment" concept, Bosch ensures that material specifications as well as energy and resource efficiency are taken into account when new products are being planned.

**T**oday, Bosch refrigerators and freezers use up to 72 percent less energy than comparable models from 15 years ago. And a compact vehicle equipped with innovative diesel technology already meets the CO<sub>2</sub> targets that are set to come into force in 2020 in the EU. These are just two examples of how Bosch products across all business sectors

are becoming increasingly eco-friendly. This success story is the result of a systematic approach known as "Design for Environment" (DfE). Since this approach was introduced in 2000, the company has applied four main criteria to assess the environmental impact of products as early as the development phase. Do energy consumption levels meet



A product's environmental impact is assessed right from the development phase

the specified targets? What degree of noise or exhaust pollution does the product generate? Is the material used environmentally friendly? Can the product be reused or recycled? This information is used to compile a requirement profile that takes the legislative framework, customer requirements, and company-specific guidelines into account. Regular audits ensure that these requirements are met.

### Taking eco-friendly design one step further

To continue its success story, Bosch began expanding the definition of eco-friendly design in 2012 with the aim of decoupling growth and resource depletion. The concept implies that growth is accompanied by a continuous decrease in the relative quantity of raw materials used. To achieve this, product engineers are testing materials to determine which are suitable for production, how much waste is generated during the manufacturing process – and how resources can be reduced or even recycled. In a second step, Bosch also plans to systematically and efficiently analyze existing products around the world with regard to their contents and recyclability. Implementing this forward-looking project also provides an opportunity to pool the envi-

ronmental expertise of all Bosch locations. After all, a lot of small improvements can make a real difference when it comes to eco-friendly product design. ●

**More information on our portfolio of sustainable products can be found [here](#)**

## Key data 2012

<b>Number of associates employed in research and development</b>	→ 43,000
<b>Research &amp; development expenditure for sustainable products</b>	→ Around half the R&D budget
<b>Sales attributable to the environmental/safety portfolio</b>	→ Around one third of total sales
<b>Patents registered worldwide</b>	→ 4,800
<b>CO<sub>2</sub> emissions from current compact diesel vehicles</b>	→ 81 g/km

Products

# Project Portfolio



## High-performance lightweight fan module

The AirMax ECo2, a new air conditioning fan module for vehicles, consists of an electric motor and a fan wheel. When this product was being developed, a broad range of environmental criteria were taken into account. For example, the engineers decided not to use carbon brushes and copper commutators and thus eliminated graphite and copper dust. What's more, the module performs just as well as its predecessor, but is 500 grams lighter. This leads to considerable savings in raw materials, fuel, and CO<sub>2</sub>.

More information can be found [here](#)

## Doctor's visit at the touch of a button

Bosch experts across business sectors worked together to develop a technical solution to support treatment for the chronically ill. The result is a system based on measuring instruments, a base station, and programs to process health data. With this system, patients can take measurements themselves and send them to their doctors. The data is presented in such a way that doctors can assess their patients' state of health at a glance. Telehealth thus enables the chronically ill to lead a "normal" life without constant visits to the doctor's office.

More information can be found [here](#)



## A house full of energy

Bright rooms, state-of-the-art building technology, and energy-efficient household appliances – that is how an Energy Plus Home, which is the product of the Bosch brand Buderus, provides more energy than its occupants consume. Take the new-build in Wetzlar, which Bosch uses as a model property in Germany. A brine/water heat pump that extracts energy from the ground provides heating for the family that has lived in the house since 2012, and a solar array provides additional power. The Energy Plus concept can be realized in both new and existing buildings.

More information can be found [here](#)



Associates

# Work Culture of the Future

Structural change within society presents a double challenge for companies. On the one hand, they have to prove themselves on an ongoing basis in the battle to attract new recruits and the most promising talent. On the other hand, they also have to encourage employee loyalty and systematically train staff throughout their careers. Bosch shapes this process by adopting a forward-looking HR policy and taking an active approach to diversity management. Factors such as family-friendliness and flexible work models are key parameters in this process.

To create an attractive work environment and enable flexible working hours and workplace arrangements for associates, Bosch looks beyond the implementation of individual measures. The company strives to make comprehensive changes toward a work culture that takes individual circumstances and interests into account. The global work-life balance guidelines introduced in 2012 were an important milestone on this path. Through these,

Bosch pledges to help associates achieve a work-life balance, promote mobile working, and implement a management culture that focuses on results rather than the amount of time spent in the office. Specifically, this means that associates can, for example, work flexibly from home if their child is ill. Bosch already has more than 100 different work time models across hierarchical levels – from part-time work models and teleworking to job sharing.



In May 2012, Bosch was named the most family-friendly large company in Germany. Left to right: Kristina Schröder, Germany's Federal Minister of Family Affairs; Christoph Kübel, member of the Bosch board of management; Angela Merkel, the Chancellor of the Federal Republic of Germany; and Heidi Stock, head of diversity management at Bosch

### Family time as a career module

For many years, Bosch associates have been able to work flexibly and thus strike a balance between their family and professional responsibilities. In introducing the new guidelines, Bosch is strengthening its commitment to actively supporting part-time managers and associates in particularly difficult family situations. For instance, since 2012 associates have been allowed to replace a career module, such as an international assignment, with family time to reach the next level of the hierarchy. With this approach, Bosch is promoting a work culture in which family obligations and work commitments are of equal value.

The company is also creating the basic conditions to enable associates to return to work quickly after an absence due to family commitments. To this end, Bosch is continuously expanding the child-care facilities at its locations in cooperation with parent initiatives, municipal authorities, and external service providers.

### Breathing life into the guidelines

With these and many other measures, Bosch is systematically expanding the basis for a flexible and family-friendly work environment. This commitment has also been recognized. In 2013, the Bosch Group was named the most family-friendly large company in Germany in the "Erfolgsfaktor Familie" (family as a success factor) competition. Bosch not only offers specific measures, but is also commit-

ted to changing its work culture, and this makes the global supplier of technology and services a real driving force. But cultural change takes time, even for pioneering companies like Bosch. It cannot be prescribed. It needs to develop slowly over time. In this process, the new guidelines serve as a frame of reference for managers and associates across countries and divisions. Their task is to breathe life into the guidelines and implement them in their day-to-day working lives. ●

**More information on our flexible work time models and our diversity management measures can be found [here](#)**

## Key data 2012

<b>Work time models at Bosch</b>	→ More than 100
<b>Proportion of female associates worldwide</b>	→ 24 percent
<b>Cross-location associate networks</b>	→ 10
<b>Senior experts at Bosch worldwide</b>	→ More than 1,600

Associates

# Project Portfolio



## Living and experiencing diversity

"Diversity is our advantage" was the motto of the first Diversity Week held at more than 40 Bosch locations in Germany and Switzerland in 2013. This measure was a highlight of the global diversity initiative launched in 2011. Associates were given the opportunity to find out about diversity at Bosch at info stands, events, and presentations. Members of more than ten different associate networks such as "women@bosch", "50plus", and "Abroad and back for Bosch" also provided practical insights into the topic.

**More information on diversity management at Bosch can be found [here](#)**

## Focus on family

The question of how to combine family and career is a key topic for diversity management at Bosch and also an important issue for members of the "family@bosch" associate network. The group meets regularly to discuss how a better work-life balance can be achieved, and to initiate events on the topic. Examples include the "Leben im Alter" (life in old age) trade fair and workshops on flexible and part-time work. The network also currently distributes information to around 600 associates via the family@bosch mailing list.

**More information on the topic of work-life balance can be found [here](#)**



## Successful integration

Diversity and equal opportunities are part of the Bosch corporate culture and are vital for the Group's global success. A prime example of this is Bosch in India, where the "Ability in Disability" project was launched in 2009 to promote the occupational and social integration of people with physical or mental disabilities. Bosch initially employed five associates with disabilities in the country – and now employs around 60. The company also awards manufacturing contracts to the "Ability in Disability" organization. Its zero-error rate makes it a valued partner.

**More information on "Ability in Disability" can be found [here](#)**



## Society

# Knowledge for Change

Whether it's the steam engine, the internet, or nanotechnology – sometimes, technical innovations can change the world. Such innovations are essential to master global challenges such as the transition to renewable forms of energy, urbanization, and demographic change. This is why, for decades, Bosch has been committed to networking knowledge and driving forward research in areas that are relevant to society. Since the launch of the InterCampus program at the end of 2011, the company has stepped up its support for higher education.

**T**he Robert Bosch Centre for Cyber Physical Systems opened in Bangalore, India, in November 2011. The renowned professors and scientists who work there, most of whom are IT specialists, are focusing primarily on the highly complex task of networking virtual and real worlds. The solutions developed in the new research center are highly relevant to society. For example, specialists are currently developing a control system that allows buildings to independently influence and regulate their energy requirements based on current energy prices or the

local weather. Another team is working on the topic of how sensors can be used to help cultivate land in a needs-based manner.

### **Intelligent networks**

To make these and other pioneering research activities possible, Bosch launched the InterCampus program in 2011. As part of this program, a total of 50 million euros is to be made available over a period of ten years. The funds will go toward setting up university chairs, founding institutes, and supporting university networks. Scientists in Germany, China, India,

## Key data 2012

<b>Projects authorized by the Robert Bosch Stiftung</b>	→ 800 projects
<b>Funding provided by the Robert Bosch Stiftung</b>	→ 70 million euros
<b>Expenditure for the Bosch InterCampus program</b>	→ 5 million euros
<b>Donations collected by the Primavera association</b>	→ 0.6 million euros

and the United States will benefit from this. Across national boundaries, they will have the opportunity to work on forward-looking solutions in the fields of electromobility, power generation, energy efficiency, and emissions reduction. The aim is to encourage a dynamic transfer of knowledge, both between individual universities as well as between scientists and development teams at Bosch.

Scientists from Fudan University in Shanghai are working with colleagues from Reutlingen and Stuttgart to enable the series production of power electronics for electric cars. In the United States, the Bosch Energy Research Network (BERN) was founded with the help of the InterCampus program. The network is made up of ten top universities, which are cooperating to investigate energy efficiency and renewable energies. The best results will be put into practice, and Bosch will provide funding to encourage their use.

### Prospects for academics

With the InterCampus program, Bosch is expanding its support for higher education and creating value added for everyone involved in the project. Through the close contact with specialists and innovators, the company is able to access research findings that translate into products and can thus be made available to the masses. In turn, highly qualified experts at universities benefit

from the Bosch Group's practical experience in addressing challenging topics. What's more, the Group also offers young graduates excellent prospects for the future. In 2012, Bosch employed 43,000 research and development professionals worldwide. Last but not least, the close cooperation between product engineers and scientists across the globe helps find solutions to complex global challenges and thus safeguards the future well being of society. ●

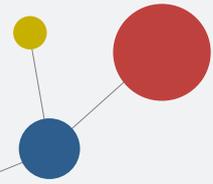
---

**More information on our social commitments can be found [here](#)**



Society

# Project Portfolio



## Students train students

Based on this guiding principle, trainees at Bosch in Waiblingen made the most of the opportunity to spend six weeks working in Chon Buri in Thailand. The company is setting up a plant there and thus requires well-trained skilled workers. The German trainees shared their knowledge with their Thai co-workers and strengthened their own intercultural skills. The project is part of the international apprentice exchange program, which aims to enable young people to act responsibly and be team-focused.

**More information on the apprentice exchange program can be found [here](#)**

## Training for Vila Verde

Helping young people get an education – this was the aim of the Oficina Profissionalizante project launched in 2004 in Vila Verde, a disadvantaged district of Curitiba, Brazil. With the help of this project, some 300 school children gained certified qualifications in 2012 and around 70 percent of them found suitable jobs. The project is sponsored by the Instituto Robert Bosch, which also initiates various activities in schools and kindergartens in Vila Verde and trains women in skilled trades.

**More information on the work of the Instituto Robert Bosch can be found in Portuguese [here](#)**



## Empowering people

The aim of the Bosch India Foundation, which was founded in 2008, is to help people – regardless of their origin – to lead an independent life in dignity through training and technical solutions. The foundation is bringing this vision to life with around 50 individual programs. In 2012, for example, it held computer training courses for unemployed young people from rural areas, offered self-defense courses, and reached around 3,000 young people thanks to its close ties with other non-profit organizations.

**More information on the Bosch India Foundation can be found [here](#)**

## Key data 2012

### Key data on the group

**52,464** IN SALES  
million €

**+1.9 %** SALES GROWTH  
over 2011

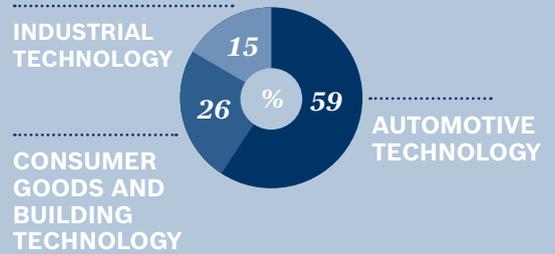
**77 %** SALES REVENUE  
generated outside Germany

**4,800** PATENT APPLICATIONS  
in 2012

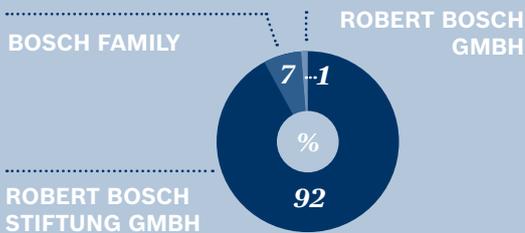
**4,787**  
million €

RESEARCH AND  
DEVELOPMENT  
EXPENDITURE

### Sales by business sector



### Shareholder structure

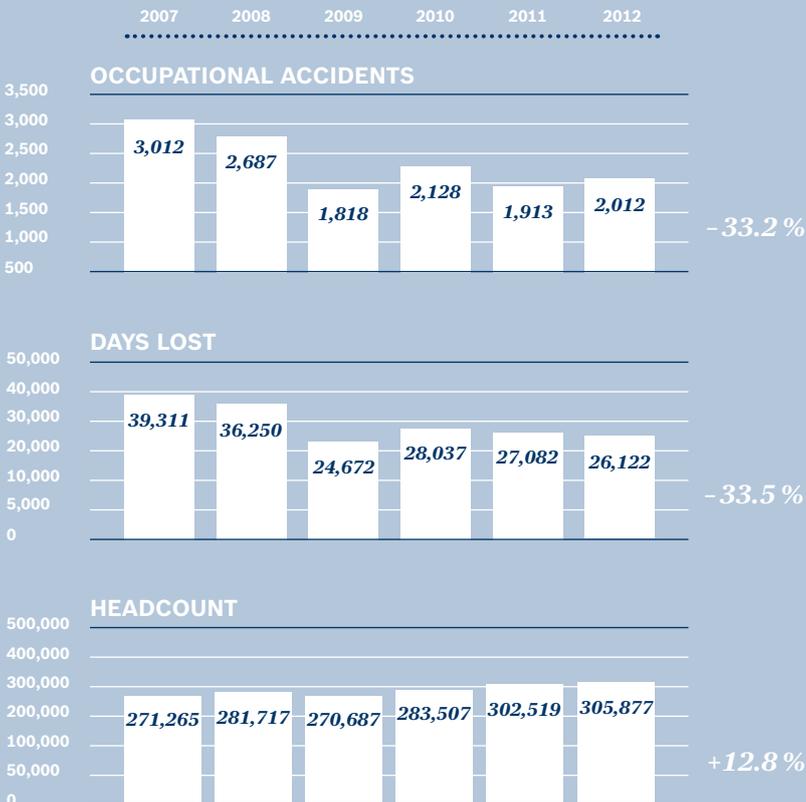


### SOME OF OUR CORE AIMS

**20 %** REDUCTION IN CO<sub>2</sub> EMISSIONS  
by 2020 compared to 2007 levels

**20 %** PROPORTION OF FEMALE EXECUTIVES  
by 2020

### Occupational health and safety



### Environment



More information about our sustainability figures can be found [here](#)



Communication on progress

# Activities – an Overview

Robert Bosch GmbH has been a member of the United Nations Global Compact since 2004 and is committed to the Compact's ten global principles for responsible corporate governance. The following table offers an overview of the progress made in the 2012 reporting period in relation to these ten principles.

Principle	Basis/goals	Activities	Results
Principle 1: Support and respect human rights	Code of Business Conduct	<b>Audits:</b> Scheduled continuation of supplier audit on social and environmental topics; target: 240 audits worldwide by the end of 2013	Around 180 audits performed so far; the best suppliers acknowledged with the Bosch Supplier Award; penalties for non-compliant suppliers
Principle 2: No complicity in human rights abuses	Basic principles of social responsibility at Bosch		
	Bosch purchasing guidelines		
Principle 3: Uphold freedom of association	Corporate objective: Women to occupy 20 percent of management positions by 2020	<b>Education shapes the future:</b> International charitable organization "Primavera" established by Bosch associates to educate and train disadvantaged children in poor regions of the world	Record sum of over 660,000 euros raised, support for 25 projects in 11 countries to foster independent living for young people
Principle 4: Elimination of all forms of forced and compulsory labor			
Principle 5: Abolition of child labor	Integration of the topic of diversity/proportion of women into the Bosch Group's strategic roadmap	<b>Dual training in Asia:</b> Systematic expansion of the Bosch training model – after China and India, now also in Vietnam and Thailand	Since 1913, over 100,000 young people worldwide have been given occupational training based on the German dual model (apprentices' workshop and in-company training) – currently around 6,500 young adults in 20 countries
	Bosch Human Resources System (BHS)		
Principle 6: Elimination of discrimination		<b>Working culture:</b> Rolling out group-wide directives to achieve individual work-life balance	Impetus for sustainable change in working culture at the Bosch Group; now over 100 working time models across all hierarchy levels, including part-time work, teleworking, and job sharing; family time as a career module; extension of childcare; awarded title of "most family-friendly large company" in Germany by the Federal Ministry of Family Affairs, Senior Citizens, Women and Youth
		<b>Diversity management:</b> Systematic continuation and expansion of the group-wide program to support associates and attract the best staff	Proportion of female associates now around 24 percent; number of retirees who continue their commitment as senior experts: 1,646
		<b>Inclusion:</b> Expansion of the "Ability in Disability" project at Bosch in Bangalore (India) launched in 2009	Around 60 people with physical or mental disabilities now employed in Bangalore (around 5,700 associates with severe disabilities in Germany)
		<b>Awareness week:</b> First "Diversity Week" held at 40 locations in Germany and Switzerland	Information and knowledge-sharing on diversity for Bosch associates

Principle	Basis/goals	Activities	Results
Principle 7: Precautionary environmental protection	Corporate objective: 20 percent cut in relative CO <sub>2</sub> emissions by 2020	<b>Design for Environment (DfE):</b> Systematic expansion of the group-wide strategy on developing especially eco-friendly products launched in 2000 – consumption, emissions/noise, materials, recycling/conversion	Further development of DfE requirements profile – breaking the connection between growth and consumption of resources; pooling environmental know-how at all Bosch locations. Around 50 percent of the group-wide budget for research and development is now spent on especially sustainable products. Bosch filed 4,800 patents worldwide in 2012, including 838 in Europe. Bosch is therefore the European company with the most patent applications in 2012
	Guidelines for occupational safety and environmental protection		
	Bosch Product Engineering System (BES)	<b>Energy efficiency and reducing CO<sub>2</sub> emissions:</b> Efficient production processes and cutting-edge plant technology at location for automotive electronics in Reutlingen (Germany)	Reduction of around 10,000 metric tons of CO <sub>2</sub> each year; presented with the “environmental award for companies” of the State of Baden-Württemberg in the energy efficiency category
	Bosch Production System (BPS)	<b>Waste-heat utilization:</b> Heat exchangers for heating the necessary ultrapure water from the cooling water at the Reutlingen and Kusterdingen locations (Germany)	Reduction in energy needs by 14 million kWh p.a., cut in annual CO <sub>2</sub> emissions at both locations of 3,500 metric tons
Principle 8: Initiatives to promote greater environmental responsibility	Design for Environment (DfE)	<b>Biomass heating plant:</b> Covering 90 percent of the annual heating requirements at the Rodez location (France) via a biomass heating plant using wood offcuts from local forestry	Conservation of natural resources and cut in CO <sub>2</sub> emissions at the location by 600 metric tons p.a.
		<b>CO<sub>2</sub> coordinators:</b> Appointment of people responsible for specific achievement of emission reduction targets in the group at locations throughout the world	In 2012, relative CO <sub>2</sub> emissions were down 13 percent on the value for the reference year 2007
		<b>ResQ – resource efficiency in the supply chain:</b> Project to boost sustainability performance in the Bosch supply chain in China	Optimization programs initiated at four suppliers so far; significant improvements in production (wastewater treatment plant, savings in lubrication oil) and processes (working conditions, cut in occupational accidents, goal of certification to ISO 14001 by end of 2013)
		<b>Energy Plus Home:</b> Development of a building services concept with positive energy balance for the Bosch Buderus brand	Reference project for energy-efficient building management for new and existing buildings
Principle 9: Development and diffusion of environmentally friendly technologies		<b>Earth Week:</b> One-week campaign at locations internationally to mark the WWF’s annual Earth Hour	Raising associates’ awareness and motivating them to make their own contributions to environmental and climate protection
		<b>Award-winning innovative strength:</b> Assessment of the Bosch Group with regard to innovative strength, HR management, use of financial resources, corporate social responsibility, management quality, financial solidity, long-term investment planning, product and service quality, and international competitiveness to ensure economic and environmental sustainability	Honored as the “World’s Most Admired Company” in the automotive supplier category by business magazine Fortune. Bosch is number one in all nine categories. Basis for the award is an international management survey by Fortune
		<b>Super-efficiency portfolio:</b> Systematic expansion and further development of BSH Bosch und Siemens Hausgeräte GmbH energy-efficient refrigerators and freezers	Energy savings of up to 72 percent compared to equivalent appliances 15 years ago
		<b>Diesel engines – common-rail production milestone:</b> Bosch production of its efficient and eco-friendly common-rail injection system is already in its fourth product generation with continuously improved performance and systematically reduced fuel consumption	Injection pressure has increased from 1,400 to 2,500 bar since 1999. By 2013, production of 10 million systems for commercial vehicles and 74 million systems for cars; vehicles with Bosch injection technology honored by the German Automobile Club ADAC – BMW 520d as “car of the future”, VW eco up! as “best innovation” in the environment category

Principle	Basis/goals	Activities	Results
		<p><b>Gasoline engines – production milestone for injectors and high-pressure pumps:</b> Gasoline direct injection as a key technology for economical yet high-performance engines; production of 50 million injectors and 10 million high-pressure pumps by the end of 2012; doubling of manufacturing volume within just one year</p> <p><b>Alternative drives – electromobility:</b> Founding member of the national electromobility platform with the objective of making Germany a leading supplier and leading market for electromobility by 2020</p> <p><b>Energy storage for the energy revolution:</b> Concerted development efforts by the Bosch Group to counter the volatilities of renewable energy sources and the challenges of decentralized energy generation, thus making a key contribution to efficiency and security of supply as part of the energy revolution</p> <p><b>Smart light management:</b> Roll-out of the Bosch IndraLogic SPS system for demand-driven control of lighting in buildings at all locations</p> <p><b>RFID in coating:</b> Resource-friendly coating of hydraulic motors using automatic radio-frequency identification at the Bosch Rexroth Mellansel location (Sweden)</p> <p><b>Research networks:</b> Continuation and expansion of the international InterCampus Program launched in 2011 with investment totaling 50 million euros</p>	<p>Fuel consumption and CO<sub>2</sub> emissions reduced by 15 percent by using Bosch gasoline direct injection, turbocharging, and electronic engine management; market volume for eco-friendly engine components expected to triple by 2015</p> <p>Launch of Alpha-Laion joint project to develop high-performance and cost-efficient lithium-ion cells; the project is being managed by Robert Bosch GmbH, supported by the German Federal Ministry of Economics and Technology for three years with funding totaling 13 million euros. The consortium partners' own contribution is around 19.5 million euros. Bosch invests a total of 400 million euros a year in electromobility</p> <p>Market-ready storage media for wind and solar farms, co-generation and biogas plants, and individual households; unveiling of a virtual power station of the future for smart management of decentralized power generators at distribution grid level</p> <p>60 percent reduction in energy consumption for lighting at all locations</p> <p>Reduction in water, ink, and solvent consumption; energy savings of up to 75 percent</p> <p>Research into future-focused solutions for electromobility, energy generation, energy efficiency and cutting emissions at locations such as Shanghai (China), Reutlingen, and Stuttgart (Germany); founding of the Bosch Energy Research Network (BERN) in the U.S.</p>
Principle 10: Work against corruption	<p>Code of Business Conduct</p> <p>Basic principles of social responsibility at Bosch</p> <p>Bosch purchasing guidelines</p> <p>Member of Transparency International (since 1995)</p> <p>Compliance with Code of Business Conduct for executives and associates</p>	<p><b>Compliance officers and whistleblower portal:</b> Facility for all associates to report identified or suspected breaches of compliance; contact persons in the regions and whistleblower portal for personal, telephone or electronic notification – also anonymous if desired</p> <p><b>Compliance training:</b> Scheduled continuation of training courses and web-based training sessions on raising awareness among all associates in the group</p>	<p>Annual reporting to supervisory board and combined works council on recorded breaches and action taken</p> <p>Raised awareness and assessment competence result in increased use of group-wide compliance structures</p>

#### Further key principles for sustainable activities in the Bosch Group:

The Bosch "House of Orientation" – vision, mission, values, core competencies, and the Bosch Business System. Newly created bodies are responsible for efficient implementation of all sustainability activities in the group – office, expert committee, and steering committee.

#### Scope of reporting

The validity of information is specified in the relevant text, key figures, or targets. This report presents a summary of current activities from the whole area of sustainability in the Bosch Group. It therefore serves as a progress report as part of the group's membership of the UN Global Compact.

#### Reporting period

The reporting period covers January 2012 to spring 2013. The cut-off date for key figures is December 31, 2012. The editorial deadline was May 31, 2013.

#### Memberships (excerpt)

United Nations Global Compact (2004), Transparency International (1995), econsense (2000, founding member), Global Reporting Initiative (organizational stakeholder)

# LOOKING BACK ON 12/13

2012

## June



### A space for visionaries

→ The groundbreaking ceremony marked the start of construction for the new German research center in Renningen near Stuttgart. From 2015, it will serve as a base for some 1,200 technicians and engineers from a wide range of disciplines, who will be working on forward-looking projects. The location will be run on a resource-friendly basis, thus saving around 30,000 cubic meters of drinking water each year compared with buildings of conventional design, for example.

## August

### Protected habitats

→ The agricultural scientist Dr. Jan Börner is the latest winner of the Robert Bosch Junior Professorship 2012. He is developing strategies for the sustainable use of tropical rain forests in Brazil at the University of Bonn's Center for Development Research. Since 2008, Robert Bosch Stiftung has awarded one junior professorship each year to outstanding young scientists.

### Perfect combination

→ Bosch is equipping the VW eco up! with numerous drive components. The compact vehicle, which can be run on either natural gas or gasoline, was named the most environmentally-friendly vehicle 2012/2013 by Verkehrsclub Deutschland (VCD). Thanks to innovative fuel-injection technology, among other things, the eco up! consumes just 2.9 kilograms of natural gas per hundred kilometers. This translates into 79 grams of CO<sub>2</sub> emissions per kilometer.

## September

### Training beyond requirements

→ In 2012, training at Bosch once again went above and beyond the Group's own needs. In the fall, a total of 1,553 young people started their training at Bosch locations in Germany. Some 6,500 young people around the world are currently completing an apprenticeship. In addition to passing on technical expertise, the training aims to promote the development of social skills. With this in mind, around 300 trainees per year are given the opportunity to gain initial work experience outside their home countries and strengthen their intercultural skills.

## November



### Award-winning energy efficiency

→ The German location Reutlingen earned Robert Bosch GmbH the "Environmental Award for Companies" in the "Energy excellence" category, which is

presented by the state of Baden-Württemberg. With its efficient production processes and state-of-the-art systems, the plant sets an excellent example. Among other things, the Automotive Electronics location saves around 10,000 metric tons of CO<sub>2</sub> per year.

## December



### A better future for children

→ Primavera Hilfe für Kinder in Not e.V., an association run by Bosch associates, raised record donations of 663,000 euros in 2012. Primavera helps children in the poorest regions of the world who grow up without educational opportunities. In 2012, the association supported 25 projects in eleven countries with the help of Bosch volunteers and local aid organizations.

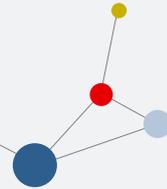
2013

## June 2013

### Promoting diversity

→ "Diversity is our advantage" – Bosch has chosen this motto to encourage associates to take part in the first German "Diversity Day." Companies and institutions throughout Germany can show how diversity contributes to their own success and helps overcome social and political challenges. Over the course of one week, internal events are taking place at more than 40 locations. As well as information stands, presentations, and an international theme week in the cafeteria, every location is offering its own highlights.





#### **Published by**

Robert Bosch GmbH  
Corporate Communications,  
Brand Management, and Sustainability (C/CC)  
Postfach 10 60 50  
70049 Stuttgart  
Germany  
Phone +49 711 811-0

#### **Senior Vice President**

Uta-Micaela Dürig

#### **Contact**

Head of Sustainability Office  
Bernhard Schwager  
bernhard.schwager@de.bosch.com  
Phone +49 711 811-6402

#### **Project team**

Madeleine Förster  
Monika Loy-Schick  
Bernhard Schwager

#### **Realization**

Ketchum Pleon GmbH, Düsseldorf

**Additional information on the company and  
sustainability at Bosch is available here:**

[Annual Report 2012](#)

[Bosch today](#)

[www.bosch.com/sustainability](http://www.bosch.com/sustainability)



# **BOSCH**

Invented for life