



---

**2011/12**

**VOLVO CAR  
CORPORATION**

---



---

**CORPORATE REPORT  
WITH SUSTAINABILITY**

---

CEO Comment	2-3
Our view of sustainability	4-5
Global situation	6-7
China	8-9
Profitability	10-11
Environment	12-15
Electrification	16-17
Safety	18-21
Reporting principles	22
Stakeholders	23
Employees	24-27
Dealers	28-29
Suppliers	30-31
Social responsibility	32-33
Sustainability facts	34-35
Products	36
2011 in figures	37
Board of Directors	38
Executive Management	39
This is Volvo Car Corporation	40
Contact information	





# MOVING TOWARDS SUSTAINABLE MOBILITY

**Since mid-2011, Volvo Car Corporation has established a new corporate strategy – Designed Around You. This is now the foundation for our business, products and corporate culture. As a human-centric brand and company, our customers are central in everything we do.**

Consumers in general are becoming more responsible and more aware of the choices they make; that they really make a difference when it comes to the environment and a sustainable society. The same goes for our employees; people want to work for a good cause, in a company that cares. Environmental care and social responsibility are natural priorities for us as a company

with a global presence. Our cars represent a thoughtful kind of luxury and the way we do business should reflect our commitment to the environment, where we take our responsibility by contributing to society, both globally and locally.

Our responsibility as a company stretches further than our own business and employees. Our Company Code of Conduct is an important document underlying our commitment to conduct business in a responsible and ethical way. This is expected from all of us in order to reach our company's objectives.

Volvo Car Corporation is a company in rapid transformation and we want to be part of developing a sustainable society. However, we will never achieve this without partnership, cooper-

ation and political awareness of the challenges facing the automotive industry.

We believe in electric mobility. And we believe this has to be achieved through cooperation between the automotive industry, governments, infrastructure providers, electric energy providers and scientific institutions. In China for example, the government has earmarked 15 billion US dollars to support its domestic vehicle industry's research and development in the field of electrification.

Important pioneering research into a new Scalable Product Architecture is under development within the R&D, manufacturing and purchasing units at Volvo Car Corporation, along with new fuel-efficient four cylinder engines.



We are also extremely dedicated to continue being world leaders in automotive safety systems, protecting the driver and passengers as well as pedestrians.

Furthermore, we will continue building on our electrification strategy. Fleets of our all-electric Volvo C30 are now running in Europe and China with successful results. To demonstrate our determination to be a leader in this area, we have launched the Volvo V60 Plug-in Hybrid – the world's first diesel-powered plug-in hybrid.

European car manufacturers are facing difficult challenges; carbon dioxide legislations requiring electrified cars are implemented without incentives that make these cars affordable for a growing number of consumers. In 2011, fewer than 50,000 battery powered vehicles were sold in Europe, equivalent to a market share of about 0.1 percent.

This figure suggests that the car market will continue to be dominated by traditional combustion engine models and we believe it is far too early to dismiss them. We are continuously improving efficiency. In fact, over the past two years Volvo has reduced carbon dioxide emissions from our diesel and petrol model ranges by 13 percent.

Drive-E is our all-encompassing approach to sustainable driving. It's the innovative thinking behind a whole range of technologies that give

you more power, more efficiency and greater driving enjoyment, while respecting the environment. Drive-E stands for new, efficient and powerful engines, plug-in electric hybrids, high-output batteries, Start/Stop technology, energy recovery systems and even sustainable manufacturing. Sustainable mobility is central to our philosophy of intelligent, thoughtful luxury, and it's at the heart of every car we make.

We believe that when you combine fuel efficiency, electrification and efficient manufacturing with intuitive, human-focused design and innovative safety systems and solutions, the result is a luxury car brand for the future. We also believe in growth for our company, aiming for a global sales target of 800,000 cars in 2020. New manufacturing plants in China, together with continued investment in our European operation, will help us achieve this.

Aiming to be the Employer of Choice, we realise that none of this can be achieved without the support and commitment of our employees. With passion for cars and customers, we want to move fast, aim high, challenge each other and at the same time show one other and our surrounding environment respect.

Stefan Jacoby  
President & CEO

## HIGHLIGHTS

Volvo Car Corporation recorded an Earnings Before Interest and Taxes (EBIT) of 1,636 MSEK in 2011. Sales improved by 20.3 percent, to 449,255 cars.

Volvo Cars is now a stand-alone company with a new corporate strategy – Designed around you. Several new members with global experience have been recruited to the management team to ensure implementation of the new operational plan and achieve profitable growth.

The basis for future Volvo cars is defined with the announcement of a Scalable Product Architecture (SPA). Together with a new engine and electrification strategy, this will provide technologies that will make Volvo Cars' products leaders in fuel efficiency.

Volvo Cars' aggressive future product plans have generated considerable demand for recruitment and in the past year, the company has increased the number of employees with about 2,000.

The world's first diesel-powered plug-in hybrid, Volvo V60 Plug-in Hybrid, will be delivered to the first customers in 2012.

A strategic cooperation has been announced between Volvo Car Corporation and Siemens to jointly advance the technical development of electric cars.

**“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”**

Brundtland (Our Common Future, 1987)

# APPROACH TO SUSTAINABILITY

---

**Sustainable development comprises three elements – Economy, Environment and Social Responsibility, which for Volvo Cars means the following priorities:**

### **Profitability**

Profitability for Volvo Cars means a long-term good deal for the company, the customer and society in general. The goal of Volvo Cars is to profitably sell cars in the luxury segment. The key to success is to design cars around people – cars that match customer dreams and requirements. The luxury concept includes Scandinavian design, smart engineering art and intuitive application. An aggressive product plan, including investment in new plants and product development in China, offers the potential for profitable growth.

### **Environmental care**

Volvo Cars approaches this responsibility with a holistic perspective, involving the environmental adaptation of a car's entire life cycle. The cars are what truly exemplify Volvo Cars' environmental strategy. Efficient engines, electrification and a new platform pave the way for making the company among the leaders in terms of fuel efficiency and lowered carbon dioxide emissions. A fleet of fully battery-powered C30 Electric is already on the road and in 2012, the world's first plug-in hybrid with a diesel engine – V60 Plug-In Hybrid will be ready for delivery to its initial customers. Volvo Cars continues to introduce cars that will have reduced impact on the environment, without losing sight of the driving experience the customers have come to expect.

### **Safety**

Volvo Cars' vision is that by 2020, no serious injuries or fatalities will occur in a new Volvo car. That the company's safety focus applies equally to new, electric cars has been demonstrated in unique crash-safety tests in which high-voltage batteries and cables remained undamaged following collision. Safety programmes are based on research in the behavioural sciences and findings from real traffic situations, which have opened the way for successful pioneering innovations. Volvo Car's leadership in car safety was confirmed in the Insurance Institute for Highway Safety's (IIHS) 2012 Top Safety Pick award where no less than five Volvo models earned a Top Safety Pick.



### REVENUE, SEK BILLION

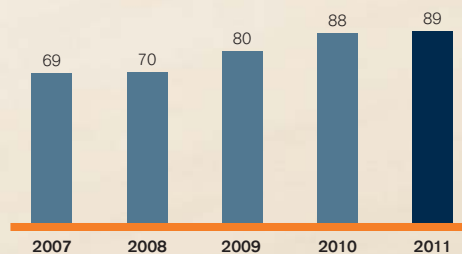
# 125.5 BSEK



Volvo Car Corporation has transitioned to IFRS accounting principles. As a consequence, 2011 figures are not fully comparable with the figures announced historically.

### NUMBER OF CARS WITH TOP MARKS IN SAFETY TESTS

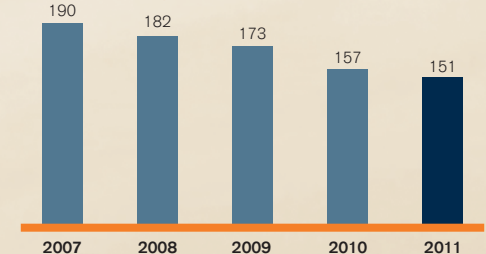
# 89%



In 2011, Volvo Cars gained the highest ranking in 81 of 91 completed tests by external rating institutes, or 89 percent.

### AVERAGE CARBON DIOXIDE EMISSIONS FOR THE EU CAR FLEET, G/KM

# -4%



Volvo Cars' average emissions in Europe declined from 157 g CO<sub>2</sub>/km to 151 g CO<sub>2</sub>/km. With innovative technology, including fuel efficiency, electric and hybrid technology, we anticipate strongly reduced emissions in the next few years.





# GLOBAL DRIVING FORCES

**Several unforeseen events strained the world economy in 2011, including the Arab Spring, the disasters in Japan, and the floods in Australia and Thailand. At the same time, the Eurozone debt crisis continues to be a concrete threat to both Europe and the global economy.**

The image of a divided world economy was reinforced during the year. Global economic growth slowed, while the growth economies expanded by around 6 percent. While Japan's economy grew strongly at the end of the year after the disasters that struck the country, the US was recovering from a very low level. At the same

time, Europe is preparing for a lost decade of no growth and a recession.

Macroeconomic factors were also the driving force behind raw material prices, which were governed more by external shocks than industrial factors. The strongest price trend involved raw materials that were linked to the price of oil. In general, however, the prices of most raw materials fell – in part as a result of less demand, but also as a consequence of the USD strengthening as the Eurozone crisis worsened.

Interest-rate policy and availability of credit in various economies governed the readiness and capacity to lend funds for car purchases. The European and US central banks maintained their

very low interest rates, while the central banks in the BRIC economies\* raised their key interest rates to fight inflation.

## **International environmental issues without incentives**

There was still a lack of political consensus in the form of regulations and legislation with regard to the world's environmental issues. The climate summit in Durban ended in a compromise where the Kyoto Protocol continues to apply while awaiting a new agreement that encompasses all countries. That the decision regarding a crucial climate agreement was further postponed to the future, was also negative for the automotive



industry. The development of environmentally adapted cars demands sustainable, long-term and robust political decisions.

Despite the slowdown in the global economy, demand for cars remained positive in 2011. During the year, more than 63 million cars were registered globally, which was an increase of 2.6 percent compared with 2010 and slightly higher than the previous record from 2007.

Stronger exports of premium cars supported the European auto industry, which was characterised by strong sales in Northern Europe and very weak sales in Southern Europe. The US witnessed a strong recovery with 12.8 million registered cars, an increase of 11.6 percent. Sales declined somewhat in China and instead Russia (+39%) emerged as the largest growth market in 2011 with 2.5 million new cars sold.

### Global economic factors

Some factors included in the risk assessment of a serious global recession are the Eurozone crisis, a still vulnerable US, the situation in Iran and a threatening economic instability in the Chinese housing market and the banking sector. The economy of the Eurozone is expected to decline by 0.7 percent and, if the debt problems are not resolved quickly, the ongoing recession will worsen.

The global economic growth is expected to decline from 3.0 percent in 2011 to 2.7 percent in 2012. In Asia, a positive growth of around 5.5 percent (China +7.5-8%) is expected although the region would not be immune to a severe European recession. An anticipated GDP growth in the US of nearly 2 percent means that the country will likely avoid ending up in a recession.

At the same time, the country's weak real estate and labour market continues to be a concern.

Raw material prices are expected to rise slowly, but weak economic growth and demand are indicators against strong price increases.

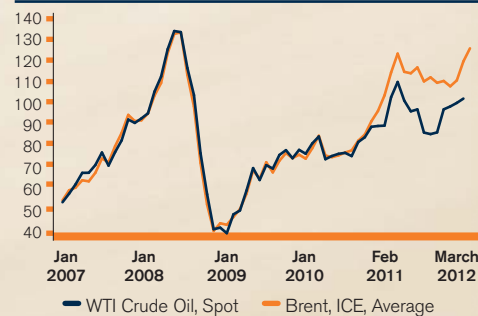
Between 2011 and 2015, the percentage growth of car sales in emerging markets such as India, South Korea, Indonesia and Russia (11.3%, 8.8%, 8.1% and 8.0%, respectively) is expected to exceed the corresponding figure for China (7.5%). The US, Brazil, Thailand and some African countries are also expected to contribute to this growth.

\* Brazil, Russia, India and China

### TREND IN EXCHANGE RATES, EURO/USD



### TREND IN OIL PRICES, USD/BARREL



## STRONG FINAL SPURT IN ONE TONNE LIFE

Is it possible to live a normal life and at the same time be climate neutral? The Swedish Lindell family accepted the challenge and moved into the One Tonne Life house in January 2011. To their help, they had an energy smart house, an electric car and a panel of experts.

Six months on, the family had reduced their emissions by nearly 80 percent and achieved 1.5 tonnes of carbon dioxide emissions on an annual basis following an impressive final spurt. In Sweden, the average is 7.3 tonnes per year.

"Down to 2.5 tonnes, we did not need to make any major compromises in our regular lives. Then it got harder. For us, living at the 1.5-tonne level was an extreme daily life," says Alicja Lindell.

The greatest improvements were made in transportation and power consumption. The transportation emissions were reduced by more than 90 percent, thanks in particular to the fact that the family's Volvo C30 Electric was charged with electricity from hydro-electric power.

Volvo Cars was one of the initiators of the project, together with A-hus (house manufacturer) and Vattenfall (energy company). ICA (retail company) and Siemens also participated in the project as industry partners.



Read more about the project at:  
[www.onetonnelife.com](http://www.onetonnelife.com)





Today, China is the world's largest car market with more than 12 million cars sold in 2011. Volvo Cars' new plants will be a welcome addition to meet the large demand – in last year alone, the company's sales in China increased by 54 percent.

## VOLVO CARS GROWING IN CHINA

In Chengdu in south-eastern China, a complete car factory is being built with a capacity of 120,000 cars a year.

"We are installing the production equipment in June and after tests and running adjustments, production is scheduled to commence in the second half of 2013," says Lars Danielsson, Director of Production in China.

In Daqing in north-eastern China, a second factory is being prepared in parallel and an engine factory is being planned. The goal is to sell 200,000 cars in the Chinese market in 2015.

The objective is for the cars that leave the factory in Chengdu to have the same quality standard as those that leave Torslanda or Ghent.

"There should simply not be any difference, we follow Volvo Global Standards – and this also applies to our suppliers," says Lars Danielsson.

There are carmakers from around the world in China so both international and Chinese suppliers are there. The new factories are being built to a high environmental standard.

"My impression is that the environment is taken very seriously by Chinese authorities. The standards we set on our cars and factories at home are something we take with us to China. We want to be a good employer and a responsible company."





# EXPANSION AND STRONG PRODUCTS

**During the year, Volvo Cars showed sharply increased sales and growth in all markets – proof that the new strategy and the aggressive product plan have been well received, especially by the customers.**

The full year 2011 presented a profit of 1,636 MSEK, despite major investments in product development and the expansion of industrial capacity affecting profitability in the short term. The key factors are products that are designed around people's needs and lifestyles.

## **Expansion towards sustainable profitability**

Today, Volvo Cars is a global growth company that is laying the foundation for long-term sustainable profitability. As the company is in a powerful expansion phase, this is also a time of tough margins. This was a challenge that was amplified in 2011 by the world's currency fluctuations and more expensive raw materials.

Volvo Cars works intently to meet and exceed the customers' expectations, a commitment that results in considerable sales success during the year. Global sales increased by 20.3 percent (449,255 cars in total) in 2011 compared with the year before. The most successful markets included China, which increased 54.4 percent

compared with 2010, North America (+22.5%) and the Nordic region (+13.3%).

Sales were mainly driven by strong demand for the 60 series: the Volvo S60, V60 and XC60. The fuel-efficient Drive-E models drove sales in Europe, while the XC series' popularity continued with 36 percent of the total sales.

In 2012, the all new V40 is launched as well as the XC60 Plug-In Hybrid concept car where the electrification technology is blended with a fuel efficient 280-horsepower four-cylinder gasoline engine. The diesel-electric V60 Plug-In Hybrid will be delivered to the first customers at the end of 2012. The development of cars powered solely by electricity continues in parallel.

The new Scalable Product Architecture (SPA) will be launched with a premier in the new XC90, and in parallel, the new four-cylinder VEA engines – Volvo Environmental Architecture – are being developed with higher performance and lower fuel consumption.

### Strong growth in China

Committed change work was a hallmark of 2011, in which the business plan was concretised and the new strategy was introduced to all employees.

The volume target is to sell 800,000 cars in 2020. This will be done through a strong presence in the main markets of Sweden, the US and China while opportunities on the new emerging markets are fully leveraged. The growth strategy for the Chinese market is vital to achieve the volume target of 800,000 cars in 2020.

In 2011, Volvo Cars grew by more than 54 percent in China, which is a strong indication that the company is on the right path. Since the end of 2010, the presence in China has grown from a position with a national sales company to comprising a comprehensive organisation with sales, marketing, purchasing, product development and other support functions with a head office in Shanghai.

The sales network in China is growing according to plan. The construction of the new factory in Chengdu is in the final phases. Volvo Cars is also awaiting permits from Chinese authorities to build an engine factory and another factory in Daqing. The objective is to sell around 200,000 cars on the Chinese market by riding the strong Chinese growth in luxury car sales and taking a larger market share.

The supplier base in China will be optimised for the global market. Wherever the cars are developed and built, the focus will always be on quality and safety. Volvo Cars' global manufacturing and quality systems apply irrespective of where the cars are produced.

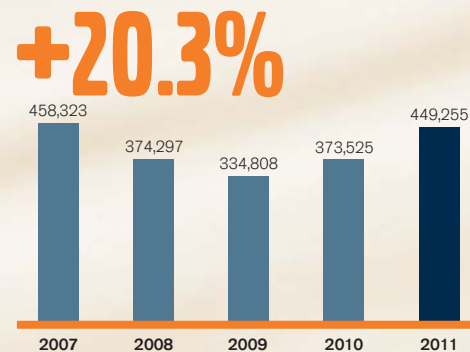
### People-centric profile

Once Volvo Cars has implemented the new, flexible, scalable product architecture in a few years and built up its industrial capacity in China, the company will have created a stable base for higher profits, better margins and less sensitivity to external factors such as exchange rate fluctuations.

Volvo Cars is a small player in the global car industry, a position that offers advantages and disadvantages. On the positive side, there is the potential for greater flexibility. A smaller company is more nimble and can be redirected fairly promptly. Meanwhile, a small company has fewer resources. It is imperative to make definite choices in research and development programmes.

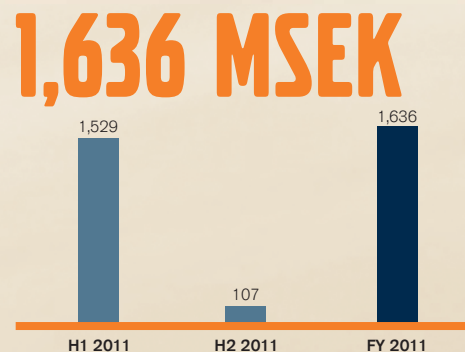
Volvo Cars has always been an innovator in terms of technical solutions. Now, even more focus is placed on issues that offer customers added value. Volvo Cars puts people first, with the help of Scandinavian design, advanced engineering and intuitive cars.

### SALES, NUMBER OF CARS SOLD



During 2011, global sales rose 20.3 percent (75,730 cars) compared with the preceding year.

### EARNINGS BEFORE INTEREST AND TAXES, MSEK



Volvo Car Corporation has transitioned to IFRS accounting principles. As a consequence, 2011 figures are not fully comparable with the figures announced historically.



# STRATEGIC ENVIRONMENTAL COOPERATION

**Volvo Cars focuses on carbon dioxide in all respects. The environment strategy therefore encompasses the car's environmental impact throughout its life cycle – from development, use and service to recycling when the car is scrapped. Greatest focus is on the actual use of the car because it affects the environment the most.**

The stake on new engines, electrification and a new platform paves the way for efficient technical solutions that make Volvo Cars' products some of the industry leaders in terms of fuel efficiency. The goal is to sell profitable cars in the luxury segment by focusing on people. An important part of the work is for the customers to be able

to drive a Volvo with a clear conscience – and feel that they have made the right environmental choice – without compromising on the car's other characteristics.

## **Even lower carbon dioxide emissions**

In 2011, carbon dioxide emissions from Volvo Cars' fleet were reduced by an additional 4 percent. The fuel-efficient diesel engines in the DRIVE family made considerable contributions to this reduction, including the C30 DRIVE with 94 grams per kilometre and V50 DRIVE with 99 grams/km. Today, there are seven models with emissions below 120 grams of carbon dioxide per kilometre, of which three are below 100 grams/km.

Entirely electric powered cars are also developed and tested in parallel. Launching electric cars on a large scale represents a pioneering move in the automotive industry, and one that Volvo Cars has accepted with considerable effort and energy. An example is the fully battery powered Volvo C30 Electric, which has no emissions when driven. In 2011/2012, Volvo Cars delivered a fleet of 250 cars that are now in city traffic in several cities and the response from the users is very positive. C30 Electric is charged with regular household electricity and has a range of up to 150 kilometres. The top speed is 130 km/hour and the car can accelerate from 0 to 50 km/hour in 4 seconds.



### Cooperation for the environment

Volvo Cars participates in a number of projects to learn more about environmental issues. Long-term sustainable solutions demand an active cooperation with other companies, the public sector and the research world. Volvo Cars has initiated strategic cooperation with Siemens with a focus on developing technology for electric power, power electronics and charging technology.

In 2012, production will commence of the Volvo V60 Plug-in Hybrid, the world's first plug-in hybrid with diesel engine that does not compromise on safety, comfort or performance. The car's battery is charged from a regular wall outlet.

### Efficient new engines

In 2013, Volvo Cars will be launching its new, Volvo-developed engine family of the Volvo Environmental Architecture (VEA) – four-cylinder petrol and diesel engines that reduce both carbon dioxide emissions and fuel consumption. The engine is approximately 40 kilograms lighter than today's engine and improves fuel economy by 15–35 percent, depending on the model. The VEA engines combine high performance with lower emissions and are an excellent alternative for the future.

The new lighter platform of the Scalable Product Architecture (SPA) opens for electrification of the entire product line. The first out with the platform will be the new XC90. Thanks to SPA, most models can be built on the same production line, regardless of the car's size or complexity, which provides flexibility and efficient resource management in the production process as well.

While electrification represents a key gateway to the future, carbon dioxide emissions and fuel

consumption must continue to be reduced in cars with conventional engines. Volvo Cars' carbon dioxide strategy also includes cars with varying degrees of hybridisation, more efficient diesel and petrol engines and a strategy for alternative fuels. How fast and intensive the development is depends on legislation, the energy supply and customer demand.

### Tough targets encourage creativity

All markets in which Volvo cars are sold have different legal requirements and it is a challenge to manage them from a product planning perspective. Legal requirements can be fulfilled with sophisticated technology, but the concept of sustainable profitability also includes making cars that customers want and that there is a market for. Studies show that the customers gladly buy environmentally sound cars, as long as they meet their various needs and expectations.

As a next step in the electrification strategy, Volvo Cars is developing test cars with "range

extenders" – a combustion engine that increases the electrical car's actual range by around 1,000 km – on the top of the 110 km range provided by the car's battery pack. Carbon dioxide emissions remain below or far below 50 grams per kilometre.

The KERS (Kinetic Energy Recovery System) flywheel technology is also in the pipeline, recycling braking force – a solution originally developed for Formula 1. The flywheel's stored energy drives the car for brief periods, which reduces fuel consumption by up to 20 percent. At the same time, the combustion engine gets an extra injection that significantly increases the acceleration power.

The future is in smaller engines that provide lower fuel consumption together with various degrees of electrification without compromising on the driving experience. Volvo Cars has a significant research and development budget and is on the forefront of offering sustainable mobility solutions.





# ENVIRONMENTAL RESPONSIBILITY IN EVERY PROJECT

**Volvo Cars' environmental strategy comprises both operations and products and is integrated in the company's overall business strategy.**

Every operation reports what efforts are made to meet the company's environmental targets and strategic direction. In Volvo Cars' environmental council, all units gather to govern, lead and tie together the company's environmental issues.

Volvo Cars has developed an approach that clearly weaves environmental consideration into the beginning of each project. There are now checklists at the early project phases that ensure

that the environmental issues are taken into consideration from the beginning.

The establishment of production in China is in full swing and a high level of environmental performance is strived for in all plants in accordance with Volvo Cars' environmental standard. The largest environmental impact from car factories comes from emissions to air and water from the painting units. To minimise the emissions of volatile organic compounds and emissions to water, the same process and purification technology is being installed as in Belgian Ghent, where the environmental performance at the plant is among the best in Europe.

## **Energy efficiency for lower carbon dioxide emissions**

In the energy area, Volvo Cars continuously works to reduce its total consumption because it constitutes a major part of Volvo Cars' total environmental impact. An important component is to maximise the recycling of waste heat and replace fossil fuels with renewable fuels. In total, Volvo Cars' has reduced its energy consumption by 30 percent in the past five-year period.

Since 2008, the factories in Sweden and Belgium only use energy from renewable sources, mainly hydro-electric power, which has led to the plants cutting their carbon-dioxide emissions in



half. At the Ghent plant, 15 percent of energy consumption is supplied by three wind power turbines on the company's site. The goal is an entirely climate-neutral energy supply by 2020.

Just like in Europe, Volvo Cars in China invests in modern technology to reduce energy consumption and this is particularly true of ventilation and heat recycling systems. On the transportation front, a large part of the goods will be transported on the Yangtze River.

### Efficient logistics solutions

Volvo Cars actively works on logistics solutions to reduce the climate impact of the company's goods transports. The truck transports have been optimised for many years, which has led to full loads, more parts per pallet and filled return shipments.

For longer distances and larger volumes, it is crucial to find alternative solutions. Volvo Cars constantly seeks better alternatives and forms

of cooperation for the transports between the moulding factories and car factories, and between Europe and Asia – and this applies to both rail and maritime shipments.

The sheet-metal waste that comes from Volvo Cars' body panel production in Olofström is transported by specially made trains to other parts of the country for recycling. These transports replace 5,000 truck shipments and reduce carbon dioxide emissions by 55 percent per year. The company also continuously works to replace internal vehicles powered by fossil fuels with electric powered vehicles, which reduces environmental impact and improves the working environment.

### Reduced environmental impact on water and air

Volvo Cars works intently to reduce the company's total environmental impact on water by using the Global Water Footprint method that measures

both the quality of output water and total water consumption. For emissions to air, the painting units in Gothenburg and Ghent have been among the best for decades in terms of minimising emissions of solvents.

Since spring 2011, Volvo Cars also has a common global waste-management process – an approach that continuously provides both environmental and financial advantages.

Volvo Cars actively monitors how the environmental legislation is developing in countries in which the company conducts business and has a continuous open dialogue with national and local authorities. The company also participates in various networks in several countries.

### REDUCED ENERGY CONSUMPTION SINCE 2007

**-30%**



In the Ghent plant, 15 percent of the electricity is provided by three wind-power plants located on the company's land.







Production of the V60 Plug-in Hybrid – the world's first plug-in hybrid with a diesel engine and Volvo Cars' most advanced car model ever – is scheduled to begin in November 2012.

## V60 PLUG-IN HYBRID IN PRODUCTION

The V60 Plug-in Hybrid combines an efficient diesel engine with electric power where the battery is charged from a regular wall outlet. The driver chooses between pure electric power, hybrid power or extra power with a simple push of a button, a flexibility that opens for minimal carbon dioxide emissions and maximum driving enjoyment.

"This is an entirely new car and an entirely new way of building so it is a very exciting journey," says Johnny Lindberg, Production Manager at the Torslanda factory.

Johnny manages the product specialists, all of whom are certified hybrid technicians. The team was brought into the development work early on to prepare underlying data for how the car should be built and then share their knowledge with the fitters.

"We began working in virtual reality to determine how and in what order the parts should be assembled. Then we transferred the optimal flow to the line and installed the new equipment."

In terms of production, it is mainly the installation of the battery, the high voltage cabling and the electric motor on the rear axle that is the largest difference compared with a regular V60.

"Right now, we are still building test cars, evaluating and looking at what we can improve. When mass production does get started, we will have already built and tested 120 plug-in hybrids."

The Volvo V60 Plug-in Hybrid has been developed in a unique partnership with the Swedish electric power supplier Vattenfall. The driver can drive up to 50 km on pure electric power with no tail pipe emissions. In the hybrid mode, the electric motor and diesel engine work together for as environmentally adapted driving as possible (49 grams of carbon dioxide per kilometre, 0.19 litres per 10 kilometre). For extra power, the two engines together provide 215+70 horse power and strong acceleration.



# INNOVATION FOR GREATER SAFETY

**The vision of Volvo Cars is to design cars that do not crash. In the shorter perspective, the aim is that by 2020 no one should be killed or injured in a new Volvo. This is why all safety work is based on people, primarily the driver, but also passengers and people in the car's surroundings.**

The company's targeted efforts have made the cars world leaders in safety, with innovations such as the three-point seat belt, the rear-facing child car seat and the Pedestrian Detection with full auto brake. From traditionally having worked on developing crash-safe cars, Volvo Cars' development work increasingly focuses on active safety

solutions, where the driver continuously receives information needed to make the right decisions and thereby avoid dangerous situations. In line with the new Designed Around You strategy, innovative solutions are created that shape the environment around the driver's needs and ability.

## **Support, prevent and protect**

Today, Volvo Cars is on the forefront of prevention and active safety through the development of systems that keep the driver alert and well-informed. And if the driver cannot manage a situation, the car, in some situations, can. If the driver does not respond in time, the car can warn and automatically activate the brakes. In the cases where an

accident does happen, the passive safety solutions kick in and help protect the people in the car.

For Volvo Cars' vision to become reality, a comprehensive approach must be taken to responsibility for the traffic environment. The starting point is that future society needs common solutions to handle every part of traffic safety. The company therefore participates in a number of partnerships with other companies, authorities and organisations. One example is EuroFOT, where 28 different partners cooperate on field tests of active safety with the support of the European Commission in order to better understand the interaction between driver, car and traffic environment.



### Successful road train tests

Soon, cars are expected to be able to communicate with both other vehicles on the road and the traffic environment. In the EU SARTRE project (Safe Road Trains for the Environment), seven European partners are working together to create environmentally efficient and safe road trains. In December 2011, the first successful tests were conducted where cars travelled in convoys led by a lead vehicle.

Volvo Cars participates as the only carmaker in the project, which is now in its final phase. Road trains free up time from driving and increases traffic safety thanks to the fact that distractions to the drivers are reduced and along with them the risk of mistakes during long-haul trips. In addition, lower air resistance leads to a reduction in fuel consumption by up to 20 percent.

### Clear reduction of accidents

Volvo Cars is a leader in the field of active safety with solutions such as the Pedestrian Detection with full auto brake and City Safety, an automated brake system that contributes to, at lower speeds, avoiding or reducing the consequences of an accident.

In the US and Europe, several insurance companies have lowered premiums on cars with City Safety because the number of accidents has dropped sharply. A new report from the US Insurance Institute for Highway Safety (IIHS) shows that the accident frequency decreased by 22 percent. At the same time, insurance claims for personal injuries decreased by 51 percent and workshop expenses dropped by more than 20 percent.

Traffic accidents with pedestrians are common and often have serious consequences. In 2010, Volvo Cars launched its unique Pedestrian Detection with full auto brake that discovers, warns and brakes for pedestrians that suddenly enter the road. If all cars were equipped with Pedestrian Detection with full auto brake, the number of pedestrian fatalities in traffic would decrease by 24 percent according to Volvo Cars' estimates, and by up to 85 percent in special cases according to a research report (Pedestrian fatality risk as a function of car impact speed, Rosén and Sander, 2009).

### More innovations in the V40

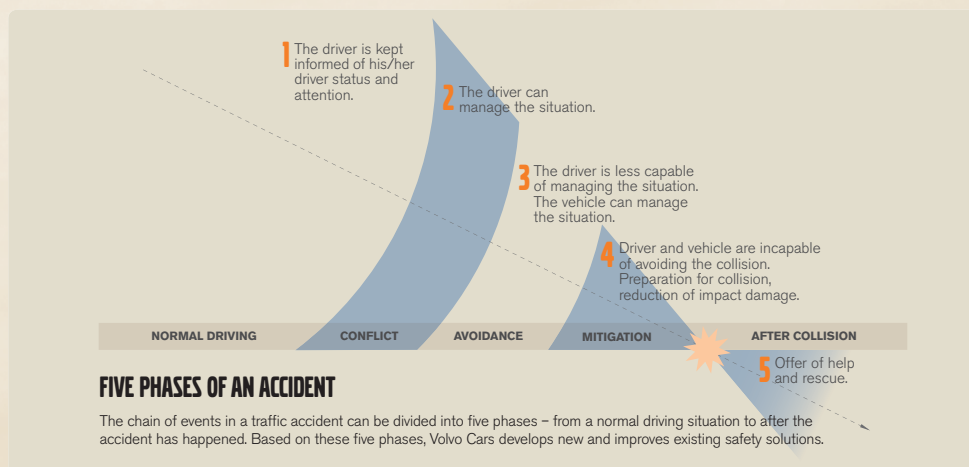
In March 2012, the new V40 was premiered with the world first Pedestrian Airbag Technology. The airbag is included as a part of Volvo Cars' extensive pedestrian protection. Sensors in the front discover that there is a pedestrian that is being hit and activate the airbag, which lifts the back part of the bonnet and then extends over part of the windscreen area. The combination of the

lifted bonnet and airbag will help reduce the severity of pedestrian injuries.

Another innovation launched in the new V40 is the Lane Keeping Aid, a system that physically keeps the car in the lane if the driver mistakenly drifts out of his or her lane.

With more than 80 years' experience of car safety, Volvo Cars has a methodical approach for constant improvements and development. This includes the company's own traffic accident research team, which is a one of a kind and has collected accident data from more than 40,000 Volvo cars in Sweden over the past 40 years.

The safety focus permeates the entire company and the work is based on research on people and knowledge from real traffic situations. It is a matter of extensive development efforts and field studies to see how people act in various situations. Today, tests of individual adaptation are already under way, looking at solutions that are entirely adapted to the person driving the car.





On the test track, a stuffed moose is used to test the new technology in the best way.



The next step in Volvo Cars' development of active safety is a system that warns and automatically brakes for animals on the road. The new system will be introduced to the market in a few years.

## ANIMAL DETECTION PREVENTS WILDLIFE ACCIDENTS

"This is a further development of the Pedestrian Detection technology where we now add technology that discovers animals and provides better low-light performance," says Andreas Eidehall, Technical Specialist in active safety.

In Sweden, there are 47,000 wildlife accidents every year. When moose are involved, the consequences are particularly severe because the animal's long legs and high centre of gravity mean that the upper body strikes the car's most vulnerable area, the windscreen. Moose are also a major problem in North America, while deer are involved in most wildlife accidents in Germany.

"We look at the accident statistics and address the greatest challenges first. First, we addressed the pedestrian accidents, a major problem with many fatalities. We are now working on wildlife accidents, mainly involving moose and deer, because we are focusing on the largest animals and the most severe personal injuries," says Andreas Eidehall.

The new system will comprise a radar sensor and an infrared camera that can register the traffic situation. When an animal is discovered on or at the side of the road, the system provides a warning so the driver can brake. If the driver does not have enough time to react, the car brakes automatically – with full braking capacity if necessary.

The goal is to avoid the accident all together. However, because animals can turn up very quickly, it is an advantage if there at least is a reduction of speed to below 80 km/h.

"Then, there are rarely any severe injuries since airbags and girders are enough to protect the driver; a good example of how active and passive safety solutions work together," says Andreas Eidehall.

The project to develop a safety system that reduces the risk of collisions with wild animals is a part of Volvo Cars' vision for 2020 – that no serious injuries or fatalities will occur in a new Volvo.



# TRANSPARENCY AND COMPARABILITY

**For the eleventh consecutive year, the company is reporting sustainability issues, and for the past four years, in the form of this integrated corporate report with sustainability.**

## New Code of Conduct adopted

In 2011, the Board of Directors of Volvo Car Corporation adopted its first Code of Conduct as an independent company. The Code of Conduct is a policy document describing the company's ethical values and rules. All employees are required to know and comply with the Code of Conduct. The Code outlines our determination to run our operations in an ethical and correct manner.

Volvo Cars supports several important international initiatives, which together with the Code of Conduct provide a framework for the company's sustainability reporting. The two initiatives below, and regular dialogues with stakeholders, provide the basis and guidelines needed to conduct diligent and appropriate sustainability efforts.

## Volvo Cars supports Global Compact

The Global Compact sets requirements for increased transparency. Volvo Cars was one of the first companies to sign the Global Compact

in 2000. Volvo Cars also participates in the Global Compact Nordic Network.

## Global Reporting Initiative

Global Reporting Initiative (GRI) is an independent organisation that develops global guidelines for sustainability reporting. The guidelines are voluntary and are continuously developed through a dialogue with stakeholders. A GRI index and a full GRI report are available on Volvo Car Corporation's website: [www.volvocars.com/sustainability/GRI](http://www.volvocars.com/sustainability/GRI)

## Significant issues for stakeholders

Volvo Cars bases its sustainability efforts on active stakeholder dialogues and regular follow-ups of issues that stakeholders feel are the most important. Examples of stakeholder dialogues include "Electromobility" in Brussels with key people linked to the auto industry, seminars on the SARTRE cooperation on road trains and the seminar "Innovation Towards Zero" in Washington on what is required to develop cars free from carbon dioxide emissions.



## GLOBAL COMPACT'S TEN PRINCIPLES

### HUMAN RIGHTS

**Principle 1** Businesses should support and respect the protection of internationally proclaimed human rights in their sphere of influence; and **Principle 2** make sure that they are not complicit in human rights abuses.

### LABOUR STANDARDS

**Principle 3** Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; **Principle 4** the elimination of all forms of forced and compulsory labour; **Principle 5** the effective abolition of child labour; and **Principle 6** the elimination of discrimination in respect of employment and occupation.

### ENVIRONMENT

**Principle 7** Businesses should support the precautionary principle as regards environmental challenges; **Principle 8** undertake initiatives to promote greater environmental responsibility; and **Principle 9** encourage the development and diffusion of environmentally friendly technologies.

### ANTI-CORRUPTION

**Principle 10** Businesses should work against corruption in all its forms, including extortion and bribery.

# DIALOGUE FOR CONTINUED SUCCESS

**Volvo Cars' stakeholders contribute new perspectives and expectations that the company strives to consider and balance to the greatest possible extent. This open and constructive dialogue is an important part of the company's continued success.**

By listening to the customers and meeting their expectations, lasting relationships are forged. Volvo Cars puts people in focus and designs its cars based on customer needs.

Volvo Cars work for a creative, open and inclusive working environment where the employees develop and thrive. Employee surveys, employee discussions and dialogue with employee organisations are important tools to

listen and create dedication and a sustainable corporate culture.

Suppliers are of considerable significance to Volvo Cars' success and a central part of operations. The company's social responsibilities include imposing clear demands on suppliers and supporting them in the implementation of high standards in such areas as labour conditions and environmental care.

The dialogue with non-profit organisations provides additional perspectives and is an important source for identifying topical social issues. Partnerships with organisations that represent various interests promote a shared understanding of challenges facing society.

Long-term sustainable solutions are based on active cooperation between industry and research. In its efforts to remain at the forefront in technical and conceptual development, Volvo Cars conducts extensive research and development related to climate, environmental and social issues.

**"The Commission believes fully and firmly that sound finances are a vital factor. Carmakers must be able to earn money with this. The electric car is an important part of the equation."**

Jos Delbeke, European Commission,  
Director General for Climate Action



EU-debate on Electromobility held in Brussels March 2012.

Overriding social issues that impact operations, including the environment and safety, require an continuous dialogue with government authorities. An example is the long-term cooperation with the Swedish Transport Administration to jointly create the necessary prerequisites for improved traffic safety in the future.

Volvo Cars reports to its main owner Zhejiang Geely Holding Group on an on-going basis. Through regular dialogue, ambitions and focus are developed in strategic areas – from customer relations and new models to future challenges such as sustainable mobility.



# DESIGNED AROUND YOU AT WORK

**Volvo Cars' corporate strategy "Designed Around You" is a clear policy statement that connects to the company's historical values. The strategy's focus on people also applies to Volvo Car Corporation as a workplace. The objective is a sustainable working environment, where the employees have the best possible prerequisites for delivering, developing and thriving.**

In order for the company to achieve the goal of being the world's most progressive and desired car brand, the person must be in focus in the organisation as well. It is Volvo Cars' employees and their expertise that are crucial for the company to succeed.

In spring 2011, change work was initiated with the launch of the new strategy in a number of large intra-company communication efforts. Today, the implementation process has reached the team level. Workgroups are busy throughout the organisation with how "Designed Around You" should be applied to the daily work.

"The employees have welcomed the new strategy and want to be involved in realising it. There is also a strong belief in the future of the company," says Sara Edling, Employer Brand Manager.

A central project is "Designed around you @work", which aims to create the best possible conditions for the employees. This involves a good working environment, smart technical aids and flexibility in time and space.

## Aspired Culture

Whereas the corporate and brand strategy is about what should be done, the new corporate culture is about how we should work to get there. At the core of Volvo Cars' new corporate culture "Aspired Culture" are commitment and a progressive spirit.

**"Bring people from different disciplines together to think and present their views on challenging topics."**

Ad van Batenburg, Managing Director  
VCC Netherlands



"The kind of organisation that we want to achieve is characterised by a passion for our cars and customers. We should be fast, innovative and take on our challenges together. To achieve our goals, we need to have a healthy organisation and this is where our culture plays a crucial role. Many parts are already in place, but culture work is a change process and must be allowed to take time," says Sara Edling.

**"Leading courageously is about taking personal and organisational risks to do what is right. And support others who do the same."**

David Pan, Vice President HR VCC China

Volvo Cars already stands on a firm foundation. The employees were loyal during the tough years, which is a true competitive advantage. One of Volvo Cars' five objectives for 2020 is to become "The Employer of Choice" not just in Sweden, but also globally. This means a company that people seek out, appreciate working for and recommend to their friends.

**"Leadership is about presence: being there, influencing, inspiring, challenging with highly set targets and allowing people to grow."**

Anu Lipponen, Logistics Manager, Torslanda

In order for Volvo Cars to become a truly global operation, the employees must reflect the surrounding world. Diversity is also a prerequisite for

making innovative cars designed around people. Both research and Volvo Cars' experience confirm that heterogeneous groups are more creative and make more well-based decisions.

### Employees in focus

In the 2011 employee survey, the results for "Employee loyalty" and "How attractive Volvo Cars is as an employer" increased sharply compared with 2010, a whole 19 percent, which is proof that the company is headed in the right direction. The increase is general across the entire organisation.

The key to driving the change journey towards the targets in 2020 is inspired leaders in the entire global organisation. As ambassadors for the

**"Leadership is about creating confidence – focusing on being in charge as opposed to taking control."**

Wim Maes: Vice President Marketing, Sales & Customer Service VCC

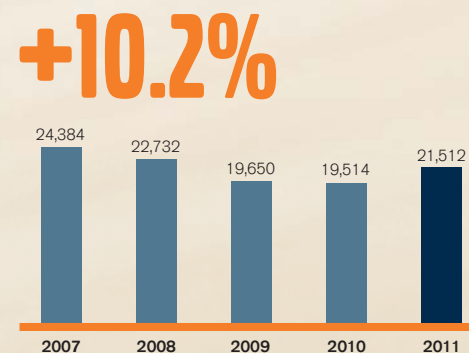
new corporate culture, the managers are crucial to create meaning and customer focus through their ability to engage, coach and encourage the employees to take personal responsibility for the company's highly set goals.

Attitude surveys show that the employees are generally satisfied with the management, which provides a result above the benchmark. The employees are particularly satisfied with the team spirit, the considerable opportunities for development and the fact that Volvo Cars is a dynamic company with "fantastic products".

Coming to Volvo Cars straight from university, Sara Edling is a good example of the fact that young employees are given space and opportunity. Employer Branding was her major focus of study at university and her expertise in the area compensated for the lack of experience.

"When my expertise was linked with experienced colleagues, it resulted in a strong team. I have my dream job and my experience of working for Volvo Cars makes it very easy to market the company."

### NUMBER OF EMPLOYEES







Anastasia Korneva was accepted to the Volvo Cars Graduate Programme directly after completing her university degree in economics. She sees many advantages of the programme, not least the variation between work and education that opens the way for broader knowledge and insights about the company.

## UNLIMITED LEARNING FOR GRADUATES

It is only you yourself that sets limits on your learning, says Anastasia.

"But the greatest advantage of the programme is the networking. The opportunity of working in three different positions over three years' time builds an enormous network in the entire company in a relatively short period of time. And I have yet to mention the strong network that we graduate colleagues build within this group."

Anastasia sees endless career and development opportunities in the company, not least because Volvo Cars is undergoing an exciting change process. Right now, she is working as a Finance Programme Controller in close cooperation with engineers.

"I never thought that I would end up working so close with the technical area in my role. It is a true challenge for me, but that is one of the ideas behind the programme – to be challenged."

### Where do you see yourself in a few years?

"Honestly, I don't have any specific career plans. Sometimes, the plans we draw up for the future mean that we miss other chances that come up. I prefer to be flexible and open to the opportunities that come my way."

Volvo Cars Graduate Programme is a three-year development programme that aims to find the leaders of the future within the company. The participants are recruited to a position and participate in educational modules in parallel. During the first year, the participants work in the business area to which they were recruited, but most of the participants also have the chance to try other business areas or work internationally to get a broader perspective.





# SERVICE 2.0 WITH CUSTOMER FOCUS

**Volvo Cars' customer focus permeates the entire value chain, from design and product development to the overall ownership experience.**

The dealers are the hub of the aftermarket, which encompasses everything that happens after the car purchase – from insurance and warranties to service, accessories and repairs. Volvo Cars works intensively to make the customers' everyday lives easier and build strong, long-term relationships.

A number of initiatives are being launched in Volvo Cars' markets with the objective of setting a completely new standard of service for the automotive industry. The overall concept

of Service 2.0 means that cars serviced by one of the company's dealers are updated with the latest software at no extra cost. In addition, Volvo Assistance and similar assistance packages are extended by one year at no charge when the car undergoes service by an authorised Volvo service centre.

## **Efficient, personal service**

One Hour Stop is being implemented in parallel as a new approach inspired by the Lean philosophy that generates a smart and efficient workflow in the service centres. One Hour Stop has three cornerstones: Lean, team and technicians with broad expertise. This results in the car being serviced and repaired within a fixed, promised

period of time, which for the majority of customers means a maximum of one hour's wait.

Every customer is assigned a personal service technician, who books and plans the work, welcomes the customer, performs the service and does any repairs of the car, as well as prepares and reviews the invoice. This is why the idea of One Hour Stop is people-centric in the true sense of the word. The technicians work in teams and receive the training, mandate and support necessary to perform their best and build a personal relationship with the customer. Thanks to teamwork, knowledge transfer and greater expertise in the team, a holistic perspective of the customer's needs is built. The effort has had a very positive outcome in the countries

where the concept has been implemented, including China, Spain and Taiwan.

### Sustainability through the whole lifecycle

Volvo Cars continuously works to reduce the environmental footprint during the user phase of the car's lifecycle. Volvo's cars are more and more environmentally adapted and systematic environment work is being used at dealers and repair centres.

The company also ensures that there is a network of approved dismantlers available, so that customers can return their worn out car at no cost. Nearly everything in the current Volvo models can be recycled, including the precious metals in the catalytic converter. Today, 85 percent of the material is recycled and 10 percent goes to energy recovery.

Every dealer must meet the Volvo Cars Dealer Standards, which include environmental issues among the requirements. The dealer must also appoint an environmental coordinator who is responsible for the safe storage of chemicals, recycling and source sorting. At the beginning of new projects, such as the introduction of One Hour Stop, environmental consideration is included as an important starting point in the work process.

### Continuous skills development

At Volvo Cars' global competence centre in Gothenburg, dealer representatives are trained and receive knowledge that they then transfer to their region or sales company. In a new car introduction, the dealers study the new active safety systems, for instance. The company's training system is well-developed and includes everything from new car introductions and repairs to work processes and service issues.

Volvo Cars' international competition for the Volvo International Service Training Award motivates service technicians from around the world to strive for perfection in their profession. More than 14,000 participants from 71 markets compete each year in technical knowledge, teamwork and the ability to meet the customer's needs.

In 2011, the Dealer Development Portal was launched, a communication tool in which all dealers study important information and where communication on third-party audits is provided. The idea is that it should be easy to receive and reply to important questions as well as to share knowledge between markets.

## REMANUFACTURING A GOOD DEAL FOR CUSTOMERS AND THE ENVIRONMENT

Around 15 percent of Volvo Cars' spare parts store comprises parts that have been carefully remanufactured to new condition, which is something the company has worked with since 1945.

Volvo Original Exchange Parts are a cost-efficient alternative for our customers and fulfils the same quality standards, specifications and warranty as newly made components. Sometimes, they are even better because parts for older car models are updated to the latest standard. However, the product line is above all an environmentally good choice because a remanufactured part requires 85 percent less raw material and 80 percent less energy than a newly made product. Volvo Cars annually recycles around 1,000 tonnes of steel and 600 tonnes of aluminium through these efforts.

Today, the product line includes everything from gear boxes to injectors and is also being expanded with more and more electronic components as the cars change and develop. In most cases, electronic components are associated with a destruction cost. With remanufacturing, the product is instead upgraded with the latest technology at a better price. This provides added value to the customer and reduces environmental impact. Some replacement parts are already designed in the product development stage to facilitate possible remanufacturing.

### SALES & SERVICE UNITS, 2011

	Sales outlets	Retail sales
Europe total incl. Russia	1,434	273,339
USA and Canada	357	74,088
China	131	47,140
Volvo Car Overseas Corporation	361	50,416
Volvo Car International Corporation	0	4,272
<b>Total</b>	<b>2,283</b>	<b>449,255</b>



# SUPPLY CHAIN RESPONSIBILITY

**A successful company wins additional business advantages by taking an active responsibility for the environment and society. This responsibility covers the entire value chain, of which the supplier stage represents a key link. Volvo Cars' values, such as human rights and good terms of employment, are therefore emphasized as clear requirements on the suppliers and are included in the company's purchasing terms.**

## New Code of Conduct

In 2011, the Board of Directors of Volvo Car Corporation adopted the first Code of Conduct as an independent company after previously having

followed Ford's rules. The Code of Conduct is a policy document summarising the company's ethical values and rules. All employees must know and comply with the Code of Conduct.

Volvo Cars also expects that all business contacts and commercial partners should be governed by the same principals stipulated in the Code of Conduct.

"We want to conduct a serious and ethical business. A positive added value is that good working conditions lead to a more reliable and efficient supply chain," says Kristina Ek Blohm, CSR Manager in Purchasing.

Volvo Cars supports the UN Global Compact, which is an initiative for companies that want to

take responsibility for the environment and social matters, aiming for sustainable development.

## Quality assurance in all phases

The requirements on quality, product development, cost efficiency, delivery capacity and environmental care are high. Volvo Cars Quality through Excellence Award (VOE Award) is the status that Volvo Cars wants all suppliers to achieve in order to meet the company's high standards.

"The VOE Award is a tool that measures the suppliers in the areas of quality, environment and performance. We work in a close dialogue with the suppliers to jointly generate the best possible development," says Kristina Ek Blohm.



Fundamental requirements include environmental certification according to ISO 14001 and quality certification pursuant to ISO TS 16949. VQE also comprises quality assurance of suppliers' manufacturing processes, working environment and monitoring suppliers' quality and delivery performance.

The best suppliers are invited to participate in Volvo Cars Award of Excellence. The objective is to reward above-average efforts and encourage further improvements. Winners are named in each of the categories CSR, technology, quality and cost-efficiency. In 2011, the CSR category was won by Bridge of Weir, which supplies Volvo Cars with leather for upholstery and interior parts.

In 2011, a new supplier portal was launched that improves the efficiency of the communication between Volvo Cars and the suppliers. Here, the suppliers find information on methods of

working, purchasing conditions and operating requirements, as well as requirements and guidelines in the areas of the environment and social responsibility. The portal also has a news tool that rapidly conveys news and important information.

#### **Training with a local connection**

Volvo Cars supports the suppliers in exercising deliberate and responsible management and, in cooperation with other automotive companies, offers global supplier training in business ethics, working conditions and environmental responsibility. The purpose is to highlight the value of good working conditions and also to clarify Volvo Cars' expectations of suppliers. In 2011, training was held in Turkey and India and in 2012, training will be held in Mexico and China.

"We link the training programmes to local conditions and local legislation, which makes them concrete and directly applicable to the daily work. This also reflects the positive feedback we have had from the participants," says Kristina Ek Blohm.

Volvo Cars also participates in an international network that develops a common view of the working conditions in the supply chain.

Long-term cooperation with suppliers worldwide is of major importance for Volvo Cars' success. Currently, some 400 business partners supply car components and approximately an additional 3,300 suppliers provide Volvo Cars with other products and services.





# A PART OF SOCIETY

**Besides responsibility for products and operations, Volvo Cars takes long-term responsibility for finding sustainable solutions by supporting research and training, as well as other efforts.**

## **Volvo Adventure**

Volvo Adventure is run in cooperation with AB Volvo and the UN Environment Programme, UNEP, and is directed at middle school youths. The aim is to motivate young people to get involved and find creative solutions to improve their local environment.

The 2011 winning team from Shanghai, China focused on the fact that even small steps make

a difference, especially if the change takes place on a large scale.

Their project focused on the enormous consumption of disposable chopsticks in China. Over two years' time, the young people worked to inform other school youths in Shanghai of the resource waste. At the same time, they invented a way to clean classic chopsticks with the help of enzymes.

"With great passion and knowledge, they succeeded in raising awareness of the problem and presented a sustainable alternative solution. They even invented a cleaning product. We look forward to seeing this project spread to other cities in China and to other countries," said Jury Chairman Bernard Combes from UNESCO.

The team calculated that 16–25 million trees went to making the roughly 80 billion pairs of chopsticks that are discarded every year in China, where there is a major shortage of forests. The project members visited a number of schools in Shanghai to both inspire debate and provide proposals of solutions. The project incited great involvement in the schools and has also led to positive contacts with the authorities.

There were 240 competing contributions from 45 countries in the Volvo Adventure 2012. The final will take place in Gothenburg, Sweden, in June 2012.

**Read more at**  
**[www.volvoadventure.org](http://www.volvoadventure.org)**







#### Images Volvo Adventure 2011

From left to right, top to bottom:

The winning team from China, Shanghai Pinghe School.

The team from South Africa performing a local dance together with Volvo Adventure hosts.

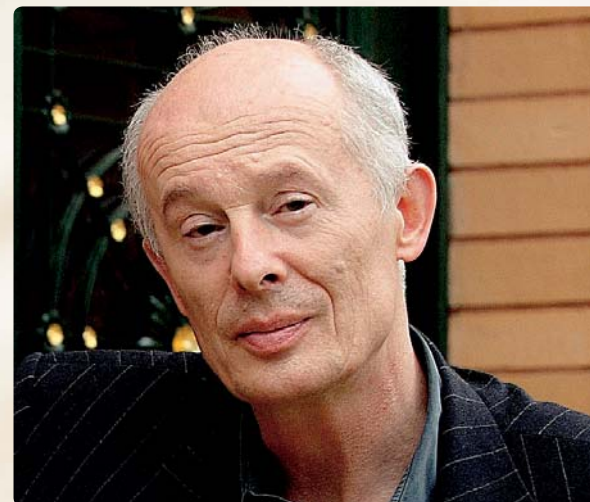
The jury: Katarina Sundqvist, Volvo Car Corporation, Bernard Combes, UNESCO, Chris McLean, previous winner, Jared Abayo, Scout World Organization (not pictured Inge Horkeby, AB Volvo).

#### Volvo Environment Prize to John Schellnhuber

As the academic world began to realise that human activity affects the Earth's climate, global environmental studies have become one of environmental research's fastest growing branches.

This year's recipient of the Volvo Environment Prize, Professor John Schellnhuber, is a world-leading researcher of the complicated mechanisms that influence the global environment. He works to build bridges between science and politics and has served as an advisor to a number of government heads and EU President Manuel Barroso.

In its award motivation, the jury, which includes several internationally leading researchers, emphasized that diversity and interdisciplinary research are needed to meet the alarming climate challenges that mankind faces. Therefore, "there is no one better than John Schellnhuber who can contribute to international leadership to develop



Professor John Schellnhuber, winner of the Volvo Environment Prize 2011.

and apply scientific findings for politicians and decision-makers."

Professor Schellnhuber heads the Potsdam Institute for Climate Impact Research (PIK). On behalf of the German government, he has built up this leading international centre in sustainability research. Schellnhuber is also a professor of theoretical physics at the University of Potsdam outside of Berlin and a guest professor at the Santa Fe Institute in the US.

The Volvo Environment Prize is one of the most well respected environmental awards and is awarded to people who contribute to a more sustainable world through their research. The prize is financed by Volvo Cars and AB Volvo, but awarded by an independent foundation. Since the beginning, the prize has been awarded to 38 people. There are many well-known names among the prize winners, three of which are Nobel Prize winners.

Read more at [www.environment-prize.com](http://www.environment-prize.com)



# SUSTAINABILITY FACTS 2011

	2011	2010	2009	2008	2007	Trend <sup>1</sup>	Comment	GRI-indicator
<b>CREATING VALUE</b>								
Employee Engagement Index (%) <sup>2</sup>	76	–	–	–	–	n/a	A	
Total Sales (retail deliveries)	449,255	373,525	334,808	374,297	458,323	(+)	B	
<b>ASSUMING SOCIAL RESPONSIBILITY</b>								
<b>Product Responsibility</b>								
Safety test results								
Share of independent tests where Volvo Cars received the highest rank (%)	89	88	80	70	69	(+)		PR1
<b>Occupational Health and Safety</b>								
Health								
Sick leave per available hours (%)	4.4	4.5	4.7	5.0	5.5	(+)		LA7
Occupational injuries								
Number of injuries resulting in at least one day of sick leave per 200 000 worked hours	0.7	0.6	0.5	0.9	1.5	(–)		LA8
<b>Diversity and Equal opportunity</b>								
Gender balance								
Share of women in leading positions (%) <sup>3</sup>	21.0	19.6	18.7	18.5	18.0	(+)		LA13, LA14
Gender balance								LA13, LA14
Ratio of basic salary of women to men (blue collar) <sup>4</sup>	0.970	0.790	0.994	0.974	n/a	(+)		
Ratio of basic salary of women to men (white collar) <sup>4</sup>	0.990	1.010	1.034	1.027	n/a	(–)		
<b>Employment</b>								
Total workforce	21,512	19,494	19,650	22,732	24,384	(+)		LA1
Rate of employee turnover <sup>5</sup>	2.3	3.3	12.8	9.2	9.1	(+)		LA2
<b>PROMOTING ECOLOGICAL SUSTAINABILITY</b>								
<b>Emissions from product</b>								
Fuel efficiency								
Fleet average CO <sub>2</sub> in EU (g/km)	151	157	173	182	190	(+)		EN26
<b>Energy use in car production</b>								
Total energy consumption in car production (MWh)	854,936	861,121	713,079	816,581	916,669	(+)		
Total energy consumption in car production (MWh/car) <sup>6</sup>	1.30	1.61	1.71	1.59	1.42	n/a		EN3, EN4
<b>Emissions from production</b>								
Total carbon dioxide emissions (tonnes)	59,685	67,585	58,980	68,367	126,735	(+)		EN16
Total carbon dioxide in car production (kg/car) <sup>6</sup>	114	190	158	151	311	n/a		
NOx emissions (tonnes)	80	85	71	90	101	(+)		EN20
SOx emissions (tonnes)	<1	<1	<1	<1	1	(=)		EN20
VOC emissions (tonnes)	828	738	527	712	740	(–)		EN20
VOC emissions (kg/car)	1.78	1.98	1.80	2.01	1.66	(+)		
Hazardous waste (tonnes)	11,439	9,087	5,594	9,320	11,395	(–)		EN22

1) Trend indicates our progress in relation to Volvo Cars' goals and vision. A plus sign (+) indicates that the company is moving in the right direction toward our goals, a minus sign (–) indicates that actions need to be taken for the company to develop towards our desired direction. (=) no change compared to previous year.

2) Since 2011, new metric replacing Employee Satisfaction.

3) Since 2011, only Sweden, Belgium and China.

4) Since 2011, new salary grades.

5) Since 2010, only Sweden and Belgium.

6) Only production in Torslanda, Sweden and Ghent, Belgium, since 2011.

## COMMENTS ON SUSTAINABILITY FACTS

### A. Employee engagement

Volvo Cars measures employee engagement once a year using a measure called the Engagement Index (EI). The EI goal for 2011 was set to 85, and the global result was 76. Engagement is measured by aspects such as “energy” and “clarity”. The results from 2011 show that 22 percent of all employees are fully engaged, while 1 in 3 employees are disengaged. The long-term EI goal for 2020 is set to 95. In previous years, an Employee Satisfaction Index (ESI) was used to measure employee satisfaction, and the reason for the change is that we want to set goals and measure how we perform in relation to our aspired culture, which is characterised by engagement. See also GRI/ ‘Management Approach: Labour Practices and Decent Working Conditions’.

### B. Sales

Volvo Cars saw growth in all sales regions during 2011. Retail sales increased by 20.3 percent to 449,255 units over full year 2010. China showed the largest increase, with 54.4 percent over 2010. North America grew by 22.5 percent, the Nordic region by 13.3 percent, Europe by 13.1 percent and the Overseas region by 35.7 percent compared to 2010. Market shares improved in all regions. Improved sales are driven mainly by strong demand for the 60-series: the Volvo S60 and V60 together with the XC60. Sales of the low-carbon dioxide DRIVe models continue to boost sales in Europe. The year 2020 global sales target is 800,000 and the growth plan for the Chinese market is vital to achieve this goal.

### C. Product safety

Volvo Cars’ vision and target for 2020 is that no one should be killed or injured in a new Volvo car. To achieve this goal, Volvo Cars continues its long tradition of research and its efforts to enhance security in and around the cars. Each year extensive independent safety testing is conducted and Volvo Cars is committed

to be among the best in the class. In 2011, Volvo Cars received the highest rating in 81 of 91 tests carried out, which is equivalent to about 89 percent of the tests. See also GRI/‘Management Approach: Product Responsibility’, and PR1.

### D. Employee health and safety

The work environment policy is described in the Volvo Cars Work Environment Directive. One of Volvo Cars’ aims is to achieve world-class performance when it comes to the health and safety of its employees. Sick leave among Volvo Cars’ employees in Sweden and Belgium has been decreasing slowly but steadily over the past few years. In 2011, Volvo Cars recorded the all-time low figure of 4.4 percent sickness absenteeism. We also monitor work-related accidents carefully and follow up all injuries, working to achieve improvement and avoid future occurrences. In 2011, we reached a result of 0.7 LTCR (the number of injuries resulting in at least one day of sick leave per 200,000 hours worked). See also GRI/‘Management Approach: Labour Practices and Decent Working Conditions’, and LA7.

### E. Diversity

Diversity issues have a high priority at Volvo Cars. Regarding the gender balance in senior positions, the proportion of women in leadership positions reached 21 percent by the end of 2011. The company’s new diversity plans were implemented in 2010 and include a series of activities to accelerate progress towards increased diversity and to utilise the diversity within the company. See also GRI/‘Management Approach: Labour Practices and Decent Working Conditions’, and LA13–LA14.

### F. Fuel efficiency

Volvo Cars’ development of the powertrain to reduce carbon dioxide emissions has started to pay off. The average emission rate of the company’s car models

in Europe has fallen to 151 g CO<sub>2</sub>/km in 2011, compared to 157 g CO<sub>2</sub>/km in 2010. Volvo Cars works hard to minimise the energy loss by developing efficient engines, transmissions and electrical systems. We seek perfection in aerodynamic shape while at the same time reducing weight and minimising mechanical losses. Electrification will play a major role in taking on the future carbon dioxide challenges, where the foreseen EU goal of 95 g CO<sub>2</sub>/km by 2020 is one objective. Another key development in reaching these goals is our new Scalable Product Architecture (SPA) in combination with the new, internally developed engine range, known as VEA (Volvo Environmental Architecture). Volvo Cars’ customers can now choose between a total of seven models with carbon dioxide emissions below 120 g/km – three of them below the 100 g/km mark. See also GRI/‘Management Approach: Environment’, and EN26.

### G. Environment in production

Volvo Cars has an overall target to continuously reduce our total energy consumption, and our aim is to be climate-neutral. All purchased electricity used by Volvo Cars in Europe originates from renewable sources. Heating originates largely from waste heat and biofuel, via district heating. During 2011, the total energy consumption from direct and indirect energy use was 854,936 MWh, which is slightly less than the previous year. The energy consumption per vehicle decreased by almost 20 percent from 1.61 MWh/vehicle in 2010 to 1.30 MWh in 2011. See also GRI/‘Management Approach: Environment’, and EN3–EN4.

Read more at [www.volvocars.com/sustainability/GRI](http://www.volvocars.com/sustainability/GRI)

## MODEL RANGE

C

S

V

XC





# 2011 IN FIGURES

## EARNINGS BEFORE INTEREST AND TAXES, SEK MILLION

2011	1,636
------	-------

Volvo Car Corporation has transitioned to IFRS accounting principles. As a consequence, 2011 figures are not fully comparable with the figures announced historically.

## SALES FIGURES FOR THE PAST TEN YEARS, NUMBER OF CARS

2001	412,390
2002	406,695
2003	415,046
2004	456,224
2005	443,947
2006	427,747
2007	458,323
2008	374,297
2009	334,808
2010	373,525
<b>2011</b>	<b>449,255</b>

## REVENUE, SEK MILLION

2011	125,525
------	---------

## SALES BY MODEL, 2011

S40	23,621
S60	68,330
S80	14,681
S80L	10,018
V50	45,970
V60	49,820
V70	36,842
XC60	97,183
XC70	26,156
XC90	39,631
C30	27,090
C70	9,913
<b>Total</b>	<b>449,255</b>

## NUMBER OF EMPLOYEES\* (31 DECEMBER 2011)

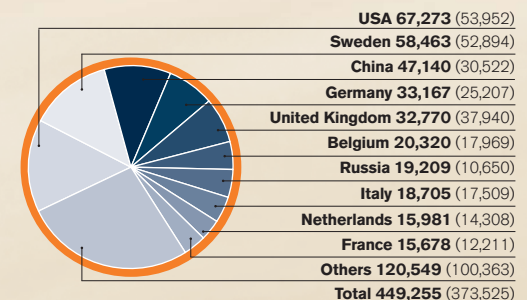
	2011	2010	2009	2008	2007
Sweden	14,550 <sup>1)</sup>	12,917	13,928	16,573	17,616
Belgium (Ghent)	3,981	4,484	3,685	3,791	4,110
Volvo Cars China (incl. China Chongqing)	732	—	—	—	—
Thailand	0	0	0	1	256
Malaysia	341	282	187	228	274
Market companies	1,908	1,831	1,850	2,139	2,128
<b>Total</b>	<b>21,512</b>	<b>19,514</b>	<b>19,650</b>	<b>22,732</b>	<b>24,384</b>

\* Number of employees reflect permanent contracts including long-term absences, but excludes temporary staff and agency personnel.

## CAR PRODUCTION BY MODEL AND PLANT 2011, NUMBER OF CARS

	Gothenburg	Uddevalla	Ghent	Chongqing	Malaysia	Total
S40	—	—	17,359	6,545	276	24,180
S60	—	—	76,122	—	277	76,399
S80	13,018	—	—	—	146	13,164
S80L	—	—	—	10,145	—	10,145
V50	—	—	46,062	—	287	46,349
V60	50,870	—	—	—	67	50,937
V70	36,048	—	—	—	—	36,048
XC60	—	—	100,761	—	561	101,322
XC70	26,919	—	—	—	—	26,919
XC90	40,983	—	—	—	90	41,073
C30	—	—	26,118	—	—	26,118
C70	—	9,640	—	—	—	9,640
<b>Total</b>	<b>167,838</b>	<b>9,640</b>	<b>266,422</b>	<b>16,690</b>	<b>1,704</b>	<b>462,294</b>

## THE TEN MAJOR MARKETS 2011 (2010), NUMBER OF CARS



<sup>1)</sup> Sweden	2011
Torslanda plant	3,258
Gothenburg – Other	7,805
Skövde incl. Floby	2,008
Olofström	1,479
<b>Total</b>	<b>14,550</b>

## BOARD OF DIRECTORS

### Li Shufu

Chairman of the Board. Born 1963, from China. Founder of Zhejiang Geely Holding Group.

### Hans-Olov Olsson

Vice Chairman. Born 1941, from Sweden. Joined Volvo in 1966. Mr Olsson was the CEO of Volvo Car Corporation 2000–2005. He was head of global marketing at the Ford Motor Company 2005–2006.

### Stefan Jacoby

President and CEO of Volvo Car Corporation. Born 1958, from Germany. Previously Mr Jacoby was Company President of Volkswagen in the US and has held several senior positions with Volkswagen and Mitsubishi.

### Winnie Kin Wah Fok

Director. Born 1956, from Hong Kong. Ms Fok has extensive experience of the finance sector. She has worked as an advisor to Investor and is also a Board member of SKF and G4S.

### Dr. Herbert Demel

Director. Born 1954, from Austria. Dr Demel started his career with Bosch in 1984. He has experience from companies such as Audi, Volkswagen and Fiat. Dr Demel is the President of Magna in China, South East Asia, India, Africa and South America.

### Daniel Li

Director. Born 1970, from China. Mr Li was newly appointed to the board in 2012. He is the CFO & Vice President of Zhejiang Geely Holding Group and has extensive experience within the automotive sector, both with manufacturers and suppliers.

### Lone Fønss Schrøder

Director. Born 1960, from Denmark. Ms Schrøder started her career with the shipping company Möller-Maersk. She was the President of Wallenius Lines from 2005–2010. She is currently also a Board member of Handelsbanken and has been a board member of Vattenfall.

### Håkan Samuelsson

Director. Born 1951, from Sweden. Mr Samuelsson has a background as President and Chairman of the truck producer MAN 2005–2009. He has been head of Scania and is also a Board member of Siemens.

### Dr. Peter Zhang

Director. Born 1966, from China. Dr Zhang comes most recently from Geely Automotive Holding, where he was Vice President 2007–2010. Dr Zhang has worked for major multinational companies, such as the BP Group and Shell.

### Glenn Bergström

Union representative (IF Metall). Born 1955, from Sweden. Joined Volvo in 1974.

### Sören Carlsson

Union representative (UNIONEN). Born 1964, from Sweden. Joined Volvo in 1985.

### Marko Peltonen

Union representative (IF Metall). Born 1965, from Sweden. Joined Volvo in 1984.

### Björn Olsson

Deputy union representative on the Board (IF Metall). Born 1963, from Sweden. Joined Volvo in 1981.

### Magnus Sundemo

Deputy union representative (Akademikerna). Born 1954, from Sweden. Joined Volvo in 1979.

## EXECUTIVE MANAGEMENT



**Stefan Jacoby**  
President & Chief Executive  
Officer



**Olle Axelsson**  
Senior Vice President  
Public Affairs



**Jan Gurander**  
Senior Vice President  
Chief Financial Officer



**Paul Gustavsson**  
Senior Vice President  
President's Business Office



**Maria Hemberg**  
Senior Vice President  
General Counsel



**Freeman Hui Shen**  
Senior Vice President  
China Operations



**Lex Kerssemakers**  
Senior Vice President  
Product Strategy & Vehicle Line  
Management



**Axel Maschka**  
Senior Vice President  
Purchasing



**Peter Mertens**  
Senior Vice President  
Research & Development



**Doug Speck**  
Senior Vice President  
Marketing, Sales & Service



**Björn Sällström**  
Senior Vice President  
Human Resources



**Paul Welander**  
Senior Vice President, Quality  
& Customer Satisfaction



**Lars Wrebo**  
Senior Vice President  
Manufacturing



# THIS IS VOLVO CAR CORPORATION

**The first mass produced Volvo car rolled off the production line in Gothenburg in 1927. Since then, Volvo Car Corporation has delivered a steady stream of Volvo models equipped with world-leading innovations. Today, Volvo is one of the most well known and respected car brands in the world with sales in more than 100 countries.**

Volvo Car Corporation formed part of the Swedish Volvo Group until 1999, when the company was bought by Ford Motor Company. In 2010, the company was acquired by the Zhejiang Geely Holding Group of China. Part of the growth strategy is to establish China as Volvo Car Corporation's second home market.

The Company's new corporate and brand strategy "Designed Around You" puts people at the centre of all operations in the company. The strategy is a foundation and a guide for the business, the products and the corporate culture.

In 2011, Volvo Car Corporation sold a total of 449,255 cars, an increase of 20.3 per cent compared to 2010. Relative to the strength of the brand, Volvo Car Corporation is a small producer, with a global market share of 1–2 percent. The largest market, the US, represented some 15 percent of the total sales volume in 2011, followed by Sweden (13%), China (10%), Germany (7%) and the UK (7%).

Apart from the main car production plants in Gothenburg, Sweden and Ghent, Belgium, Volvo Car Corporation has since the 1930s, manufactured engines in Skövde, Sweden, parts in Floby, Sweden since 1957, and body components in Olofström, Sweden since 1969. Volvo Car Corporation also produces one of its models in a plant in Uddevalla, Sweden, a joint venture together with Italian Pininfarina.

In 2006, Volvo Car Corporation commenced manufacturing in Chongqing, China, in a company owned jointly by the Chinese company Changan, Ford and Mazda – Changan Ford Mazda Automobile Corporation Ltd.

With a new corporate strategy, combined with Volvo Cars' ambitious expansion plans, the aim is to sell 800,000 cars by 2020.

## **Car production**

Gothenburg, Sweden; Ghent, Belgium; Uddevalla, Sweden (Pininfarina); Chongqing, China (Changan Ford)

## **Assembly plant**

Kuala Lumpur, Malaysia

## **Component manufacturing**

Skövde, Floby, Olofström (Sweden)

## **Design center**

Gothenburg, Sweden. Barcelona, Spain. Camarillo, USA

## **Vision**

To be the world's most progressive and desired luxury car brand.

## **Mission**

Our global success will be driven by making life less complicated for people, while strengthening our commitment to safety and the environment.

## **Head office, product development, marketing, administration**

Gothenburg, Sweden

## **Number of employees (31 December 2011)**

21,512

## **Number of dealers (31 dec 2011)**

Approximately 2,300 local dealers, represented in around 100 countries

## Contact us

This is the eleventh report on sustainability and corporate responsibility published by Volvo Car Corporation. Our aim is to address areas and issues that are important to our stakeholders, and to us as a company. We welcome feedback on the report and will gladly answer any questions you have regarding Volvo Car Corporation's sustainable development programmes.

You are welcome to contact us by e-mail:  
[citizen@volvocars.com](mailto:citizen@volvocars.com) or  
Telephone +46 (0)31-59 00 00.

Contact person: Erica Wikman  
Director Sustainability Communication

Volvo Personvagnar AB  
Public Affairs, Sustainability, PVH 50  
SE-405 31 Gothenburg, Sweden  
[www.volvocars.com/sustainability](http://www.volvocars.com/sustainability)



