



# High Performance Mixed Signal Innovations for a better tomorrow

Sustainability Report 2009





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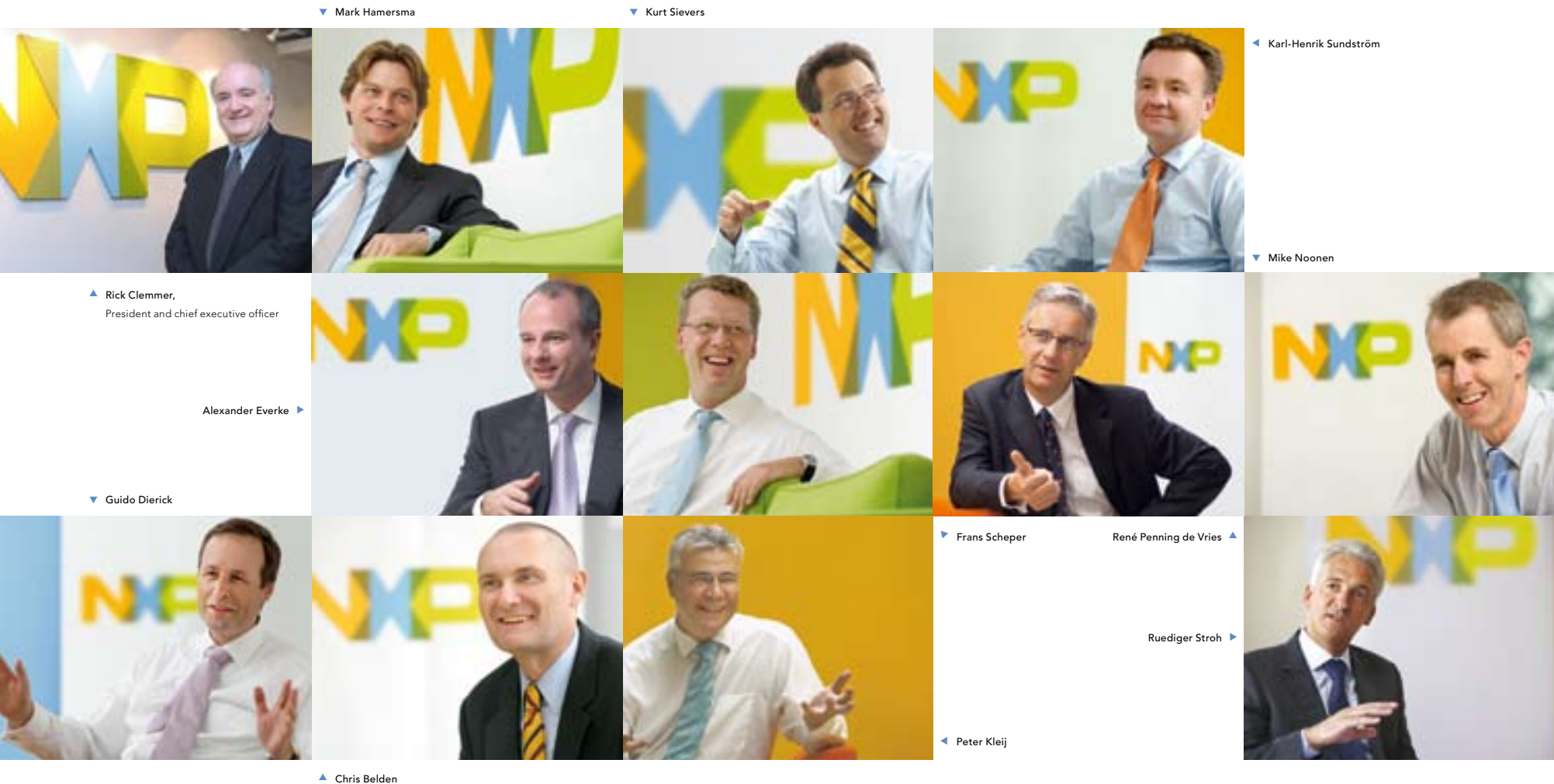
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We believe the semiconductor industry is poised to take on a new set of challenges. Using the latest semiconductor technologies, which produce tiny circuits that can perform advanced functions with relatively low power consumption, our industry can help address some of the most compelling challenges we face as a society – issues relating to energy efficiency, mobile populations, national and personal security, and caring for the health of a growing and rapidly aging world population.

In particular, our industry has the potential to directly address our dependence on fossil fuels and minimize carbon emissions. Semiconductors are already reducing the power consumption of server farms and making consumer appliances operate more efficiently. They're also accelerating the deployment of energy-saving lighting technologies, and helping enable the shift to hybrid and electric vehicles. It is our collective responsibility, as an industry, to continue this trend of being proactive as we create value for consumers, the environment, and society as a whole. We believe that, by building on innovation and providing technologies that directly address societal demands, some of the most exciting times for the semiconductor industry lie ahead.

energy. Our GreenChip AC/DC power-conversion technology boosts the efficiency of notebook power adaptors, and our CFL and LED lighting drivers contribute to the replacement of incandescent light bulbs. Our automotive portfolio is helping reduce vehicle weight – and thus increase fuel efficiency – and is enabling hybrid cars. Our identification technologies help increase security in several ways, making it easier for governments to protect national borders, letting individuals keep private information private, and helping legitimate businesses combat black-market goods and services. And finally, in the area of human health, we help ensure that medicines are genuine and we've developed a way to make hearing aids more effective.

Also in 2009, our employees continued to volunteer their time to help others, working with local charities to raise funds or donate material goods. To show that our commitment to helping people begins at the highest levels of our organization, we made volunteering a part of the NXP Business Leaders meeting held in the Netherlands in June, 2009. During a special breakout session, NXP executives volunteered their time at a local farming community that helps disabled people lead self-sufficient lives. Working in teams, our executives chopped wood, pulled weeds, prepared a vegetable garden, stacked hay, and performed other farming chores. The work was hard but satisfying, and gave our leadership a new way to collaborate while helping others.

# Working for a better tomorrow

## A message from the Management Team

### Our strategy

The NXP of today is positioned to address these many high-priority, worldwide challenges. Leveraging a rare combination of capabilities – a broad range of analog and digital technologies, deep application insights, and world-class process technologies and manufacturing capabilities – we deliver differentiated solutions that address our customer's most demanding requirements for product features, cost, and quality.

Our aim is to continue delivering application-optimized products that minimize power demands, limit our impact on the environment, and balance the cost/performance equation to address the grand challenges in electronics, including energy efficiency, connected mobile devices, security, and health.

This report offers several examples of what we mean. For instance, our products help cellular networks use less

### Ongoing efforts

Our High Performance Mixed Signal strategy goes hand in hand with our continued commitment to good corporate citizenship. We are on track to meet many of the targets defined by our 2006-2010 programs for EcoVision and Health & Safety, and are committed to the hard work required to meeting them all in the coming year.

We've made solid progress with the phase-out of hazardous substances in our products and processes, are finding more ways to recycle our waste, and are using less and less energy and water to produce silicon wafers and packaged products. We continue to hold our partners in the supply chain to the same high ethical standards we keep for ourselves, and continue to monitor our relationships. To address concerns about the relative increase in work-related injuries, even though most of the accidents have been small ones, we have initiated new programs that have already started showing positive results.

### Challenges

In 2009, the ongoing global economic crisis presented our company and our industry with extreme challenges. We have taken these challenges head-on, adapting our organization and making bold decisions to define a clear way forward. As part of this difficult process, we have had to say goodbye to a number of colleagues, and wish them all success for the future. We have also seen that adversity can bring out the best in our people, and are deeply impressed by the unparalleled customer focus and teamwork that our employees have shown across our organization.

In many ways, these challenges have been important factors in helping us renew our commitment to sustainability and redefine our strategic direction. This report is filled with examples that show the progress we made in 2009, and is evidence that we continue to draw on our strengths as a company and a corporate citizen.

Signed,  
The Management Team of NXP Semiconductors

# New directions

## From living faster to living better

Semiconductor technology is entering a new era. Building on the dramatic productivity gains of the past several decades, made possible by increased processing power and storage capacity, semiconductors are now capable of taking on some of society's biggest challenges. Our dedication to High Performance Mixed Signal solutions, combined with our talent for advanced application design, positions us for solid growth in this new era.

People around the world are asking the same questions about the future of our planet. How can we live within our ecological footprint? What's the best way to use the world's limited resources? How can we improve healthcare, and how can we keep people safe while facing new kinds of security threats?

As we search for answers to these questions, one thing becomes clear: semiconductor technology is likely to play an important role in whatever approach we take. This is because today, more than fifty years after they were first introduced, semiconductors are now so advanced that they're capable of helping us, as a society, help people and the planet.

### Building on Moore's Law

One very big reason why semiconductors are now as advanced as they are is because manufacturers have been able to make transistors smaller and smaller. This ability to shrink transistor size is a documented phenomenon, first identified in 1965, called Moore's Law. Named after Gordon Moore, a co-founder of Intel, Moore's Law states that the number of transistors that can be placed inexpensively on an integrated circuit doubles approximately every two years.

Moore's Law has been at the heart of IC development for decades. It's a big part of why desktop computers became a reality in the 1980s, and it's why the functions of an entire desktop PC can now be performed by a tiny microprocessor. Moore's Law helped make mobile phones possible, and it's why today's smartphones are small enough to fit in a shirt

pocket. Moore's Law is also why a portable hard drive, with more than 500 GB of memory, is now an affordable, everyday item.

Moore's Law is still in effect and will continue to produce increased levels of integration at a low cost, but its role as a driving force in development appears to be lessening. Today's engineers, designers, and scientists are beginning to look beyond Moore's Law. They're seeing that the dramatic advances made possible by Moore's Law – that is, inexpensive digital processing and data storage – can be the starting point for a new era of semiconductor design. Building on the foundation created by more than forty years of successfully pursuing Moore's Law, they're taking semiconductors in new directions that promise to make life better in terms of energy, mobility, security, and health.

This new direction involves using a combination of analog and digital circuitry to create what are called mixed-signal ICs. Mixed-signal design isn't new – it's been around almost as long as semiconductors themselves – but semiconductor technology is now at a point where, thanks to Moore's Law, engineers can start combining very high levels of sophisticated functionality in a relatively small, cost-effective format. Mixed-signal ICs with a surprisingly high level of complexity and computing power are finding their way into all kinds of everyday places, from washing machines and gas meters that help save energy to automobiles that make driving safer and ID cards that resist theft.

### Mixing analog and digital

There are several reasons why mixing analog and digital circuitry on a single chip is a good idea. It can save space, because it takes fewer ICs to perform the same function, and that can lead to smaller, more portable designs. It can also increase performance and lower power consumption because functions are physically closer together, and that can mean better, more efficient designs. The main reason for mixed-signal ICs, though, is that the world we live in is analog, and not digital, so we usually need a combination of the two to make semiconductors work in real-world applications.

Digital circuits are binary, which means they typically represent only one of two values, a zero or a one. This makes them excellent calculators – they're unequalled when it comes to pure number crunching – so they're very good for processing and control functions. They're also very good at storing and retrieving data, so they're excellent for things like memories and hard drives.

Where digital circuits begin to run into trouble is when they need to deal with real-world conditions, like temperature, pressure, humidity, or light. This is because these physical conditions aren't, by nature, binary. Our world isn't on or off, black or white – it's filled with variations and gradations that are better represented by analog circuitry.

Analog circuits, unlike their binary digital counterparts, can take on any value in a given range, and each unique signal

value can represent different information. Any change in the signal is meaningful, and each level of the signal indicates a different level of the phenomenon it represents.

As a result, analog circuits are how electronic systems interact with real-world phenomena. Used to measure and sense various environmental conditions, analog circuits are crucial in things like automatically controlled heating and ventilation systems in buildings, energy-saving lighting networks, and safety mechanisms in vehicles. Analog circuits are also an essential part of wireless communications, which means they're used in things like cell phones, remote-control car keys, tap-and-go ticketing schemes, and even medical devices like hearing aids.

A drawback of analog, however, is that it's generally considered harder to design with than digital, often requiring a higher degree of customization, greater skill, and more in-depth knowledge of the intended application. Combining analog and digital circuitry together, in a mixed-signal design, only adds to the challenge. Also, as the demands for mixed-signal performance increase – as applications require more precise readings or higher immunity to signal noise, for example – design complexity can be even greater.

### Proven leadership

NXP, with its history as part of Philips, has a track record of innovation in process technologies, design, and packaging, and is a proven leader in mixed-signal applications. Our design teams have consistently introduced new levels of mixed-signal performance, adding greater speed, accuracy, and efficiency

to a wide range of applications. Our process engineers have been similarly successful, refining the techniques used to manufacture complex mixed-signal ICs.

Today, NXP is positioned as a company dedicated to High Performance Mixed Signal (HPMS) solutions and advanced application design. We are committed to using technology in sustainable ways and already offer a wide portfolio of HPMS solutions that benefit society.

For example, our products are used in smart meters that help consumers save energy, and in new lighting systems that can be controlled for greater efficiency. We're a part of advanced traffic management systems that reduce congestion and help drivers optimize fuel efficiency. We've developed ticketing schemes that make public transportation more streamlined, and we've helped create electronic passports that protect borders while protecting individual identities. We've introduced a new kind of car key that lets the vehicle communicate with the driver, for security alerts and safe tracking of the car if it's stolen, and we're also in healthcare, enabling hearing aids that do a better job of restoring a person's ability to hear.

### The way forward

From our perspective, engineers have only begun to explore the capabilities of semiconductor technology. As developers continue to look at new applications, and we, as a planet, turn our attention to the pressing issues of our time, that's when we'll really start tapping into the true potential of semiconductors in general and mixed-signal in particular.

To be successful in this new era of "value-added" semiconductors, it will take a deep understanding of the application, a willingness to work with customers to develop new solutions, and the ability to tailor technology to meet a new set of requirements. These are things that NXP has always excelled in. Our teams are poised to help meet the needs of society, and our HPMS approach will be a vital part of that strategy.

In the following pages, we give highlights of our HPMS strategy with examples of how we're addressing key challenges and opportunities associated with energy, mobility, security, and health.

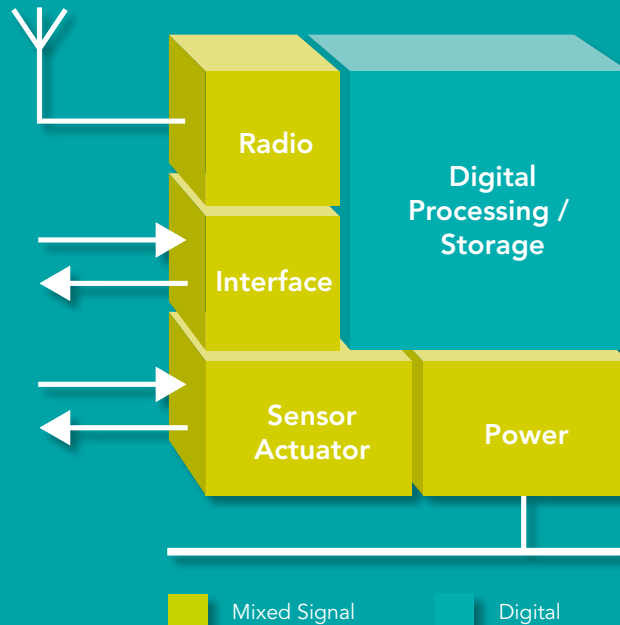
## What is High Performance Mixed Signal?

Mixed-signal design combines advanced digital processing and storage with analog circuitry that lets the electronic system interact with real world. To be most beneficial to society, mixed-signal applications need to combine a high level of functional performance, efficiency, robustness, and versatility.



# High Performance Mixed Signal is the optimized mix of analog and digital

- Functional performance**
  - ▶ Speed, bandwidth, bit-rate
  - ▶ Accuracy, resolution
  - ▶ Gain
  - ▶ Linearity, dynamic range
- Efficiency**
  - ▶ Power
  - ▶ Cost
  - ▶ Autonomy
- Robustness & versatility**
  - ▶ Reliability
  - ▶ Resilience
  - ▶ Flexibility
  - ▶ Adaptability



Examples of NXP's HPMS solutions

Energy efficiency	Connected mobile devices	Security	Health
Sustainable, energy-efficient, ultra low-power	Green, comfortable, efficient, safe	Low-power, fit for purpose, secure & private	Affordable, personalized, self-diagnostic
GreenChip IC for power efficiency, with ultra low-power standby	Telematics for enhanced communications while on the road	ePassports that prevent identity theft and increase border security	Smart sensors for monitoring perishables
Smart metering for energy awareness	High-performance RF to reduce the number of basestations to serve demand	Smart Car Key to make vehicles more secure	eCall for emergency assistance to motorists
FlexRay in-vehicle networking to enable lighter vehicles	Road pricing to reduce congestion and pollution	RFID tags that ensure the authenticity of pharmaceuticals	Lab-on-a-chip, for testing and analyzing very small samples
Dimmable compact fluorescent lamps (CFLs) and LED lights for better energy usage	Automatic fare collection for faster boarding of public transportation	Smart eID to prevent forged ID cards	Wireless connectivity for in-ear and implanted hearing aids
Photovoltaic converters for increased efficiency in solar panels	Near Field Communication (NFC) to enable secure mobile transactions	Product tagging to combat counterfeiting	Biosensors for single-molecule detection



Making a difference  
**Energy**

Some of our latest products are helping cellular networks be more energy efficient and making utility meters smarter. At the same time, our R&D group is developing a new way to make solar panels more productive.

### **Saving energy in basestations**

Basestations are used to connect a mobile phone to its network. Today's basestations support multiple cellular standards, use several transmission bands, and send data at broadband rates. All this takes a considerable amount of energy, so network operators are looking for ways to improve efficiency and reduce costs while maintaining high performance.

Many of the basestation's functions involve a technique, called power amplification, which involves semiconductor ICs. The power amplifier can account for more than half the basestation's power usage, so it's a logical place to start when looking for energy savings. NXP uses several advanced process technologies – including LDMOS, GaAs, LaN, and SiGe:C – to enable power amplifiers with greater linear efficiency and higher bandwidth. The optimized power amplifier performance helps basestation operators broaden their coverage and deliver clearer transmissions – all while using less energy.

### **Making utility meters more intelligent**

In the past decade, utility companies around the world have begun replacing traditional analog meters with new, all-digital devices called smart meters. Equipped with programmable microcontrollers, smart meters track gas, electricity, and water usage more precisely and, when outfitted with components for connectivity, can transmit usage data directly to the utility company. Consumers can log into a website and track their usage hour by hour, pinpointing activities that cause usage to go up and finding times when rates might be lower. Receiving usage data directly from the meter gives utility companies a better, more accurate way to predict energy requirements for a given period, and lets them bring power stations on or off line to support demand. This in turn saves on operating costs and reduces the emission of greenhouse gases. Estimates show that more than 76 million of these new meters have already been installed, and NXP, as a leading supplier of 32-bit microcontrollers and other components for smart meters, is very much in the mix.

### **Increasing the efficiency of solar panels**

Photovoltaic cells are what solar panels use to convert solar radiation into electrical energy. In most panels, the cells are connected together in a sealed, weatherproof package called a module. If even just a few of those cells are exposed to shade – from a tree, an antenna, another building, or even bird droppings – the power efficiency of the entire panel can drop by as much as 20 or 30%. NXP has invented a special kind of power converter that works specifically with individual photovoltaic cells. Now, if there is shade on just one or a few cells, the rest of the cells in the panel can still convert energy at their optimum level. The technology is still in its infancy, but promises to make next-generation panels much more efficient.



Making a difference  
**Mobility**

We offer a number of products that increase vehicle safety, reduce pollution, and make it easier to enjoy the ride.

### **Safer, more precise driving**

Today's cars are equipped with lightweight electronic sensors that add a new level of precision and reliability to nearly every aspect of car operation. Located throughout the vehicle, they can improve fuel economy, reduce emissions, and improve the car's comfort and safety.

NXP's angular magneto-resistive (MR) sensors are designed to perform in the harsh automotive environment and are used for engine-management functions like electronic throttle control (ETC), variable valve timing (VVT), and exhaust gas recirculation (EGR). High precision makes them ideal for systems like electric power steering (EPS) and wiper and pedal positioning, and they're often used in rotational speed applications like anti-lock braking systems (ABS), electronic stability program (ESP), and transmission.

### **Working toward intelligent traffic systems**

The Dutch government is sponsoring a project, called the Strategic Platform for Intelligent Traffic Systems (SPITS), which promises to improve mobility and safety within the Netherlands. NXP, along with several other Dutch companies and universities, is part of the effort, working to meet targets

set for 2020. The project will build on today's automotive telematics systems, known as onboard units (OBUs), which typically combine global positioning system (GPS), cellular communication, and in-vehicle entertainment technologies to enable new applications that use two-way communication with the car.

SPITS includes several different areas of development, including consumer, fleet, and traffic applications, and is designed to be an open, upgradable technology that will evolve over time. As one aspect of SPITS, cars will have a reliable link to the outside world. Drivers will be able to, for example, download real-time traffic information or receive alerts when approaching obstacles, accidents, or sections of roadway that are difficult to navigate. SPITS is also expected to make the existing road network more effective, since it will help the current infrastructure support more vehicles.

In a related project, working with IBM, NXP recently launched the Netherlands' first practical test of road pricing, a system that will tax drivers based on usage. NXP employees are involved in the test, driving cars

equipped with a box that contains NXP's Automotive Telematics On-board unit Platform (ATOP). Participants log into a secure website that shows what route they've taken, what it cost, and whether or not they could have chosen an alternative, less-expensive route.

### **Reducing noise along the way**

Active noise reduction (ANR) is an audio technique that reduces ambient noise by producing anti-noise with loudspeakers. This enhances ear comfort, improves the music listening experience, and makes speech easier to understand. In cars, it can keep the music levels high for passengers and low for the driver, and in mobile devices, it can protect the listener's ears when used in high-noise environments (like airplanes or factories) for an extended period of time. NXP has all the competencies required to deliver high-performance ANR solutions, and is currently demonstrating a system that reduces noise by 20 dB in the range from 50 Hz to 1 kHz using various in-ear headset concepts.



## Making a difference Security

Our advanced identification technologies increase the security of RFID tags and smart cards, making it harder for criminals to steal identities or profit from the sale of counterfeit products.

### Protecting national borders

In the coming years, many of the 750 million passports currently in use worldwide will be replaced by new ones that use electronics to increase the security of the document. Called ePassports, these new documents look similar to a regular passport but have contactless smart card technology, a secure microcontroller, and an antenna embedded in the cover or inside pages. Critical information is printed on the data page of the passport as usual and, at the same time, stored in the document's electronics. The secure chip controls access to the data and uses highly advanced counter-measures to prevent its forgery or manipulation. As a result, ePassports are a major advance in the prevention of identity theft and are helping make borders more secure. Also, because they can be read electronically, ePassports often reduce waiting times for people traveling across international borders. NXP's secure SmartMX microcontrollers were the first contactless ICs to meet International Civil Aviation Organization (ICAO) requirements for ePassports, and have been designed into more than 85% of the ePassport projects worldwide.

### Preventing identity fraud

Getting a fake ID card made is easier than ever these days, with websites offering inexpensive, overnight services that produce remarkably convincing cards, complete with holograms and magnetic strips. NXP's contactless Smart eID devices are making it harder for people to falsify basic identity documents like national ID cards, voting cards, driver's licenses, and government service cards. Smart eID devices are much harder to duplicate than magnetic strips, and offer security features that prevent tampering or unauthorized access. As a result, they make it easier to verify that people who get behind the wheel of a car, cast a vote, or receive government services are really authorized to do so.

### Combating black-market goods

It's difficult to get an exact number on the impact that counterfeit, black-market products have on the global economy, but experts estimate that these products cost US businesses as much as USD 250 billion in annual revenue. Estimates also show that as many as 100,000 jobs in the EU

and 750,000 in the US are lost to counterfeiting operations in other countries. NXP's radio frequency (RF) ID tags and SmartMX microcontrollers are important tools in the fight against counterfeit products. RFID tags help verify that items come from reliable, authorized sources. This makes it easier for governments to enforce customs regulations and guard against illegal imports, and helps companies protect brand names and retain consumer confidence. In consumer electronics, SmartMX microcontrollers are used to authenticate access to goods and services, so only authorized consumers download music, games, and other digital content.



Making a difference  
**Health**



We help keep people safe by ensuring that medicines are authentic and that perishable goods are safe to use. We're also working on new ways to bring sound to the hard of hearing, and to help doctors be more effective in emergencies.

### **Making sure medicines are authentic**

The World Health Organization (WHO) estimates that up to 10% of the pharmaceuticals sold are not genuine. These counterfeit drugs can range from inactive, ineffective preparations to random mixtures of harmful toxic substances. NXP's ICODE family of high-frequency (HF) tagging ICs lets organizations authenticate the origin of a drug by tracing it through the complete supply chain.

### **Monitoring perishables for safe consumption**

The global annual waste of perishable products – things like food, drinks, pharmaceuticals, vaccines, blood, and chemicals – amounts to around USD 35 billion. Using smart sensors to track these products on their journey from production to end user can eliminate a lot of that waste and can help ensure that perishable products are in fact safe to consume. Sensors placed on products and in shipping containers can measure the conditions that impact a product's longevity, including temperature, humidity, O<sub>2</sub>/CO<sub>2</sub> concentration,

pH balance, mechanical shock, and light intensity. When combined with a Radio Frequency (RF) ID device, real-time monitoring of these values becomes possible and can trigger alarms when readings become unsafe. Expiration dates can be dynamically estimated, based on actual physical conditions, and logistics can become more cost-efficient. NXP's industry-leading ICODE and UCODE families are used extensively in these kinds of smart-tag applications.

### **Helping people hear better**

Studies show that roughly 10% of the world's population suffers from hearing impairments, but less than 2% wear a hearing aid. NXP has a breakthrough technology, based on magnetic induction, that makes hearing aids more effective and, as a result, may encourage more people to wear them. The approach is also much more energy efficient, so the battery lasts much longer, and poses less risk of tissue damage than conventional RF technologies. NXP's solution is currently being used by the Swiss company Phonak,

a leading supplier of hearing systems, and is being evaluated for use in cochlear implants, which are surgically implanted devices that provide a sense of sound to a person who is profoundly deaf or severely hard of hearing. Sometimes referred to as a bionic ear, cochlear implants provide direct electrical stimulation directly to the auditory nerves.

### **Acting quickly in an emergency**

An emerging semiconductor technology, called "lab-on-a-chip," promises to help medical professionals perform detailed tests faster and with smaller samples. NXP is part of one of these development projects, providing semiconductor technology that promises to help doctors quickly determine the blood clotting values of patients. Determining this value can make treatment more effective, especially in patients who have hemophilia (a condition that prevents the blood from clotting), or thrombosis (a condition where blood veins clog too quickly).

# Our Sustainability Policy

## The NXP Sustainability Policy

### Commitment

At NXP Semiconductors, we recognize that sustainable development is one of the most compelling challenges of our time.

For this reason, we foster ethical principles and respect for the environment, people, and our community while we pursue economic prosperity.

Sustainability is a part of the way we conduct business, the way we manage our company, and the way we interact with society at large.

We commit ourselves to sustainability because we're more than just a company – we are a group of people working for a better tomorrow.

### Our Sustainability Policy

Culture	NXP fosters a culture of sustainable entrepreneurship, built on its company values: insightful, engaging, inventive, and delivered with excellence.
Legislation	NXP actively seeks compliance with all applicable legislation, regulations, and codes of practice, and whenever possible and practical, goes beyond specified standards.
Ethics	NXP implements business practices according to defined codes of conduct within the company, its global supply chain, and across the industry as a whole.
Products	NXP is committed to creating products and packages that are safe to use, and ensures that, with each new generation, the environmental impact of their use and disposal is further reduced.
Employees	NXP employs a diverse workforce and invests in its people, creating a workplace where employees can reach their full potential in an environment that is healthy, safe, and free of occupational injury and illness.
Environment	NXP conserves natural resources and reduces the environmental impact of its waste generation and its emissions to the air, water, and land.
Society	NXP believes education is essential to making the world a better place, and uses educational programs to improve people's lives and prepare the next generation for tomorrow's challenges.
Transparency	NXP sets targets for, measures, and verifies its sustainability performance, and publishes the results.
Dialogue	NXP engages in open, ongoing dialogues with employees, customers, investors, the public, and other key stakeholders to continuously improve its sustainability performance.

This policy and its resulting actions are regularly reviewed and updated to meet our stakeholders' needs.

**Signed, The Management Team of NXP Semiconductors**

This report describes the performance of the NXP Group (NXP B.V. together with its group companies) with regard to sustainability. It reports on the sustainability aspects of our consolidated activities\* in 2009, as described in the NXP Semiconductors Annual Report 2009 ([www.nxp.com/investor](http://www.nxp.com/investor)), and highlights notable activities in the first months of 2010.

# in action

We separated from Royal Philips Electronics and became an independent company in September 2006. As a result, we use 2006 as the baseline for all our sustainability data and targets.

This report is divided into three sections. In the first section, "Working for a better tomorrow," we include a message from our Management Team and discuss how our products can help support sustainability by saving energy and improving matters of mobility, health, and security. The second section, called "Our Sustainability Policy in action," is about what we do as a company and as individuals to support sustainability. The third and final section, called "How we manage sustainability," explains how we've built sustainability into our business.

## Our Sustainability Policy

Our Sustainability Policy is fundamental to our operations. The current version, formulated in 2007 and set to be reviewed in 2010, is the result of detailed internal discussions and careful review of stakeholder input. It expresses what we stand for as a company, highlights those areas where we want to be active, and provides a framework for our everyday operations. It influences our decisions and guides our actions.

We have translated our Sustainability Policy into measurable actions. The nine chapters in this second section of the report roughly correlate to the nine focus areas of our Policy:

- ▶ Designing for sustainability
- ▶ Minimizing greenhouse gases
- ▶ Reducing our energy use, water consumption, and waste production
- ▶ Managing hazardous materials
- ▶ Guiding our financial growth
- ▶ Fostering employee development
- ▶ Creating a healthy, safe work environment
- ▶ Ensuring ethical behavior
- ▶ Investing in social programs and supporting volunteerism

In defining these focus areas, we interviewed our stakeholders, researched best practices in the industry, studied customer feedback and the legislative landscape, and reviewed the results of our existing programs and activities, including our employee surveys, the EcoVision and EcoDesign programs, our Health & Safety databases, and our participation in various industry associations.

As a result, each area, and hence each category we report on here, meets three criteria: each issue 1) is greatly significant,

2) has a current or potential impact on the company, and 3) is a matter over which we, as a company, have a reasonable degree of control.

Within each focus area, we follow a framework that helps us identify relevant issues, prioritize topics, review and report results, and take necessary actions. The framework shows our businesses and our stakeholders how issues of sustainability can be made part of our corporate strategy, and ensures that our sustainability reporting focuses on relevant issues. We prepared this report using the G3 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI), using a self-declared GRI application level of A. An overview of the GRI codes and where in this report we have addressed them can be found on our website ([www.nxp.com/profile/corporate/report/gri](http://www.nxp.com/profile/corporate/report/gri)).

This is our fourth sustainability report. Our first report, published in 2006, was an internal report for employees only.

In response to feedback on previous reports, we've expanded our evaluation of CO<sub>2</sub> emissions to get a better and more complete picture of our total carbon footprint. This includes measuring the emissions associated with business travel, and,

\* For the entities and how they're reported, please see "Our governance structure and reporting standards" (page 72).

new for 2009, the impact of product transportation (p. 28). We've also added more details on how we interact with the financial community and the media (p. 78), included an explanation of our High Performance Mixed Signal (HPMS) strategy (p. 6), added more specific information on our hazardous substance management programs (p. 38), and we've been clearer about where information is based on measured, verifiable data and where it's based on estimates.

We welcome comments (npx.sustainability@npx.com) and, moving forward, will continue to monitor feedback and consider changes for future reports.

An extended version of the current report, complete with success stories and more detailed explanations of our sustainability results, is available on our website (www.nxp.com/profile/corporate). Our intention is to publish a report annually.

## Key focus areas for our near-term Sustainability Program

To measure the performance of our Sustainability Program, we've set targets for many of our sustainability indicators and have identified four key areas of our Sustainability Policy – global warming, green products, social engagement, and employees – that will receive special attention over the next several years. In 2009, we reviewed our programs and made changes where necessary.

Our work in these areas promises to maximize our contribution to society while minimizing our impact on the environment. In the area of global warming, for example, more than 80% of our direct and indirect greenhouse-gas emissions result from the electricity we use in manufacturing and the PFC emissions we produce. Meeting targets on energy use and PFC emissions will reduce our impact on global warming. Similarly, by following our EcoDesign principles when we develop new products, we will move toward best-in-class environmental standards, and will supply products that use fewer hazardous substances and can be recycled or disposed of in an environmentally sound way. Also, by emphasizing social involvement and issues of employee health and safety, we improve life in our local communities.

We have defined key performance indicators (KPIs) and have reporting systems in place to provide accurate data for global warming, products, and employees.

Report chapter	Policy statement								
	Culture	Legislation	Ethics	Products	Employees	Environment	Society	Transparency	Dialogue
Designing for sustainability	O	O		X				O	
Minimizing greenhouse gases	O	X				O		O	
Reducing our energy use, water consumption, and waste production	O					X		O	
Managing hazardous materials	O	X		X		X		O	
Guiding our financial growth	O							O	
Fostering employee development	O				X			O	O
Creating a healthy, safe work environment	O	O			X			O	
Ensuring ethical behavior	O	X	X					O	
Investing in social programs and supporting volunteerism	O						X	O	O
Part 2 of the report	O	X	X		O	O		O	X

O indicates relationship  
X indicates stronger relationship

To make clear what our real impact is on the environment and society, we have, wherever possible, made our targets absolute and not relative. In this report, we've included all the KPIs that already have data available.

Our work on KPIs is ongoing. In 2008, we introduced a new KPI, called the Green Design Indicator, which lets us measure how many of our new products were developed using EcoDesign principles. Introducing a new KPI with higher standards made it necessary to adjust our short-term target (explained in the Products chapter). We had planned to publish the first results of this new KPI in the 2009 report, but various changes in our business, resulting from divestments, closures, and the like, are not yet fully reflected in our product databases. The 2010 target for the KPI remains the same.

Recent events, including the global economic downturn, our efforts to redevelop our business, changes in management, closures, and mergers and acquisitions, have led us to reevaluate our KPI for social-engagement activities. To ensure that the KPI continues to be a reliable and measurable indicator, we will refine it to reflect changes in our organization and strategy. We are also considering a longer-term target for this KPI, as 2010 is likely to be too soon to see any real progress. We continue to encourage our employees to participate in existing activities while we perform our evaluation, looking for those programs that will help us, as a company, make the greatest contribution.

#### Key focus areas 2007 - 2010

Key focus area	KPI	Target 2010
<b>1. Global warming</b>		
Reduce and compensate for our direct and indirect greenhouse-gas emissions	PFC emissions	10% below 1995 emission levels for Europe and the USA; total NXP below 400 tons CO <sub>2</sub> equivalent
	Energy consumption	3% below 2006 baseline
<b>2. Green products</b>		
Minimize the environmental and social impacts of all our products, including their content, manufacture, use, and disposal	Hazardous/restricted substances	Phase out all non-critical use in products and manufacturing
	Halogenated (Cl <sup>-</sup> , Br <sup>-</sup> ) flame retardants	Phase out in all products except for some special applications
	EcoDesign	>50% of new products developed following EcoDesign principles and achieving Green Design status
<b>3. Social engagement</b>		
Involve all our employees, at some point in time, in social-investment programs	Not yet defined (work is ongoing)	Not yet defined (work is ongoing)
<b>4. Employees</b>		
Create a workplace that is healthy, safe, and free of occupational injury and illness for all employees	Lost-workday injuries	Below 0.2 per 100 full-time equivalents (FTEs)
	Lost work-time rate	Below 2%

Our company provides High Performance Mixed Signal and Standard Product solutions that leverage our leading radio frequency (RF), analog, power, digital processing, and manufacturing expertise. These innovations are used in a wide range of automotive, industrial, consumer, lighting, medical, computing, and identification applications.

# Products

In our front-end wafer fabrication facilities, our strong heritage of innovation and our unique portfolio of process technologies keep us highly competitive. Similarly, in our back-end test and assembly facilities, our proven track record with innovative packaging technologies helps us enhance production. These front- and back-end advantages, combined with our large portfolio of intellectual property (IP), our extensive sub-system expertise, and our deep application insights – gained from decades of leading-edge design work – create a foundation for delivering new products with improved performance, efficiency, robustness, and versatility.

Our products contribute to society in a number of ways, giving engineers new ways to save energy, enhance mobility, address issues in healthcare, and ensure that sensitive data remains secure and private. Our identification products, for example, are being used in a number of programs that help people access government-provided services. The Egyptian government recently selected our highly secure SmartMX microcontrollers for their new welfare cards. The "Family Card," which gives subsidies on basic nutrition, such as rice and sugar, helps low-income families throughout the country.

We support our design and development processes with a series of guidelines, called EcoDesign, that help us develop products in a sustainable, environmentally friendly way.

## **EcoDesign program**

Our EcoDesign program includes guidelines for using environmental roadmaps as inputs and, where possible, designing for recyclability. It guides us in making economic use of materials and energy in production, and eliminating the use of hazardous materials, even before legislation comes into effect.

EcoDesign helps us take a broader view of product development, by using a "Life-Cycle Assessment" (LCA) approach. We take into account a product's total environmental impact, beginning with raw materials, passing through manufacturing, use of the product, and then looking at all the options for "retirement," from environmentally sound disposal to full recycling. We call this approach "cradle-to cradle," since it goes beyond the typical "cradle-to-grave" approach to include effective reuse of materials.

# Designing for sustainability

In 2008, we introduced a new key performance indicator (KPI) for design and development, called the Green Design Indicator. We will use a Green Design Indicator to mark products that meet our EcoDesign qualifications and support our Green Focus Areas. The process includes comparing the new product with its predecessor or a best-in-class product from the competition. By tracking how many of our products have conformed to our EcoDesign requirements, we will give our customers added information about the environmental friendliness of our products. In 2009, we put the measurement system in place and expect to report the first results in our next report. Our long-term goal is to have all our newly developed products achieve Green Design Indicator status.

We award the title “EcoExcellent” to products that follow EcoDesign guidelines, that achieve Green Design Indicator status, that stand out for their environmentally friendly design or manufacturing, and that provide an environmental benefit, such as saving energy.

Our TJA1021TK product, for example, is an EcoExcellent Product. Designed for use in space-critical automotive

applications such as steering columns, door modules, mirror applications, and roof modules, it is a Local Interconnect Network (LIN) transceiver that combines several features, including ultra-low sleep current, low leakage current, and low operating voltage, that reduce power consumption and limit CO<sub>2</sub> emissions. In 2009, we began offering the TJA1021TK in a more compact and leadless package, the HVSON8. The HVSON8 is 70% smaller and lighter than a conventional SO8 package and uses a “dark green” molding compound that is free of halogens. As a result, the TJA1021TK now gives car makers even more ways to deliver energy-efficient vehicles while minimizing their environmental impact and keeping costs in check.

## Research & Development

Our Research & Development (R&D) community consists of people in many different organizations around the world, all working toward a common goal – to bring innovative ideas to market in the right way and at the right time.

Our engineers establish better methods for developing and delivering new product ideas, and contribute, in several

ways, to our pursuit of EcoExcellent products. For example, they recommend ways to optimize our production processes, making them safer and friendlier to the environment. Their work in product development supports the EcoExcellent approach, with breakthroughs that have led to new ways to help people and the planet.

In lighting, for example, our solutions are helping engineers create high-quality compact-fluorescent lamps (CFLs) that replace inefficient incandescent bulbs. Our microcontrollers are making home appliances smarter and more efficient, with refrigerators that make the cooling system work only when it's really necessary, washing machines that offer more precise wash and spin cycles, and energy meters that can provide consumers with real-time consumption data. In automotive, our technologies are part of the new eCall system in Europe, which improves accident response times and lets operators speak to anyone who's conscious in the car. Our industry-leading products for in-vehicle networking let manufacturers replace heavy wiring systems with lightweight electronics, thereby creating automobiles that offer more advanced safety and control features while

consuming less fuel and emitting fewer greenhouse gases.

In this way, by helping to develop ICs that reduce energy consumption and offset the energy required to produce our ICs, our R&D community yields a significant return on investment. Our R&D community also looks at ways of using less-harmful substances in IC packaging, and has developed solutions that go far beyond what is legally required.

All these activities go hand in hand with our business objectives, with the result that we have one of the industry's largest patent portfolios and are equipped with efficient processes that help us retain our competitive edge.

#### **NXP's R&D community at a glance**

- ▶ Focused investment of about USD 600 million per year in R&D
- ▶ Approximately 3,200 employees in R&D, of which over 2,600 support our High Performance Mixed Signal businesses
- ▶ ~14,000 issued and pending patents
- ▶ 20 R&D centers located in 14 countries
- ▶ Participation in over 65 standardization bodies and consortia
- ▶ Strong links with universities

Note: due to divestments and new partnerships, the R&D data in this report is not one-to-one comparable with data in earlier reports.

### **Today's semiconductors: Greener than ever, and delivering big energy wins**

Thanks to new technologies and new techniques, semiconductors are greener than ever, from start to finish. They require less energy and fewer materials to produce, they save energy in their intended applications, and they minimize their impact on the environment when they're ready to be disposed of or recycled.

In general, depending on the type and size of the device, it typically takes anywhere from less than 0.01 Wh to more than 100 Wh of electricity to produce a single semiconductor. When that semiconductor is optimized for energy efficiency, the amount of electricity it saves while operating in its end application can more than offset the amount used in its production and eventual disposal.

Present-day semiconductors are smaller and lighter, which means it takes less silicon, chemicals, water, energy, and packaging materials to create and ship a single product. There's less waste and fewer greenhouse gases. Compared to just ten years ago, a typical function can now be produced with only 40% of the electricity and, on a per function or per transistor basis, semiconductor manufacturing emits 25% less PFCs than it did in 1995.

Initiatives that have reduced or eliminated hazardous substances, such as lead and certain flame retardants, mean today's semiconductors are also easier to recycle and pose

less of a threat to the environment as electronic waste. New processes use a minimum of energy to recover the maximum amount of materials from a semiconductor, and enable the reuse of scarce and precious materials such as gold and copper.

In every market that semiconductors serve, reducing energy consumption has become a key selling point. The examples given below are just some of the ways that NXP's semiconductors are helping designers create greener, more efficient applications that save energy and reduce emissions.

#### **Retiring incandescent bulbs**

The incandescent light bulb, which has been the backbone of electric lighting since the late 1800s, is being phased out. Driven largely by concerns over energy resources and climate change, people around the world are beginning to use more efficient options, such as compact-fluorescent lamps (CFLs) and light-emitting diodes (LEDs), which are more reliable, last longer, and use less energy than traditional incandescent bulbs.

For a given light output, CFLs use only 20 to 33% of the power of equivalent incandescent lamps. In the US, where lighting accounts for approximately 9% of household electricity usage, widespread use of CFLs could save as much as 7% of total US household usage. CFLs have been available for some time, but consumers haven't always been happy with their performance. They've expressed dissatisfaction with long warm-up times before the lamp is at full brightness, and incompatibility with dimmer switches. NXP is improving this situation, with integrated IC solutions



that help CFLs act more like the incandescent bulbs people are used to.

LEDs, another alternative to incandescent bulbs, offer unprecedented levels of versatility, especially since their color and intensity can be modified to provide the ideal light in all kinds of applications – task lighting in offices, product displays in retail, warehouse lighting, outdoor signage, and even along city streets. NXP's driver and controller ICs for dimmable LED lighting make it easy to bring new lighting features to existing LED lamps. These retrofit lamps are compatible with the majority of dimmers (TRIAC and transistor), offer very long lifetimes, and are ideal for small form-factor applications with closed casings. They're even making it possible to use LEDs in new places, such as recessed lights and inside refrigerators.

### **Making power supplies more efficient**

Inefficient power supplies, used to supply AC mains power to TVs, notebook computers, desktop PCs, and other consumer electronics, are responsible for wasting vast amounts of energy worldwide. Many countries are introducing legislation that would require power supplies to operate efficiently at all times, whether in use or in standby mode. This will essentially ban older supply architectures, so designers are looking for better ways to perform the power-supply function. NXP specializes in this area, with GreenChip ICs that deliver greater than 90% efficiency, meet EnergyStar targets, and exceed global legislation levels for reducing energy losses in the power supply. In the more than ten years since we introduced the GreenChip family, over 500 million GreenChip ICs have

shipped, making it possible for power supplies around the world to save enough energy, in total, to run 20 million regular 60-W bulbs.

### **The next generation of automobiles**

Automobiles currently account for between 10 and 15% of global CO<sub>2</sub> emissions. Experts are forecasting significant growth in the Asian automotive market, especially in China and India, and traffic congestion, which wastes fuel and increases emissions, is a problem just about everywhere (in Germany alone, traffic jams are estimated to generate 70k tons of CO<sub>2</sub> per day). But it's not all bad news.

Semiconductors are helping change cars for the better, making them lighter, smarter, more efficient, and, as they transition away from the internal combustion engine to hybrid and fully electric formats, increasingly green.

Today's electronic components make it possible to replace bulky, heavy mechanics and hydraulics with lighter, more intelligent systems that make the car more responsive, safer to drive, more efficient, and, because the car weighs less, use less fuel. NXP's automotive portfolio includes essential components for these new systems, including in-vehicle networking technologies, precise sensors, and robust actuators.

Electric power steering (EPS), for example, consumes less fuel than conventional hydraulic power-steering systems, and can provide the required level of power assistance when needed, based on vehicle speed and how quickly the steering wheel is turned. Start-stop systems, another feature made possible by electronic circuitry, saves fuel

in times of heavy traffic by automatically switching off the engine every time the vehicle sits idle (waiting at a light or in stopped traffic), and restarting instantly when needed. Similarly, advanced transmission solutions use electronically actuated and synchronized clutches and gearboxes to select the right gear faster and with greater precision. The result is increased comfort and fuel economy with lower emissions.

Intelligent traffic systems, which use two-way communication with the car to improve traffic patterns and deliver real-time information to drivers, are another way to reduce fuel consumption and CO<sub>2</sub> emissions. NXP's technologies are part of pilot programs in Europe, as described on page 13 of this report.

### **A new way to design LCD TVs**

Conventional LCD TVs use a single lamp for backlighting the screen. Light is provided to the entire screen whenever an image is displayed, whether the image uses the light or not. This is inefficient, and wastes energy. NXP offers a different approach, replacing the backlight with an array of LED lamps driven by control ICs. In this set-up, light is provided only where it's needed to build the image, and can reduce energy consumption by as much as 50% or more. Implementing this technique in just a small percentage of the world's existing LCD TVs could save many times more energy than NXP uses in all of its manufacturing.

Semiconductor manufacturing is not considered a major contributor to global warming, but our operations do emit greenhouse gases.

# Global warming

Emissions are reported as global warming in terms of tons of CO<sub>2</sub> equivalents. The factors used for converting greenhouse gases to CO<sub>2</sub> equivalents and for calculating abatement efficiency are given in the Fourth Assessment Report of the International Panel for Climate Change (IPCC). We use the IPCC's 2006 updated Global Warming Potential (GWP) factors to calculate our CO<sub>2</sub> emissions back through 1995.

# Minimizing greenhouse gases

In 2009, because of our reporting rules, the list of sites included in the emission report changed. As a result, the CO<sub>2</sub> figures in this report may differ from those of earlier years. For a full explanation of our current reporting rules and our reasons for changing them, please see chapter III-C, titled "Our governance structure and reporting standards."

## Direct emissions

Most of our direct emissions come from burning fossil fuels to heat buildings, and emissions from the use of perfluorinated compounds (PFCs) in our wafer-manufacturing process. Also included are the fugitive emissions of hydrofluorocarbons (HFCs) from our air-conditioning systems.

Our direct greenhouse gas emissions from the use of fossil fuels have dropped, in absolute terms, by 36% since 2006. This is the direct result of our redesign activities and our use of more efficient technologies that require less fossil fuel and therefore emit less CO<sub>2</sub>.

In 2009, approximately 93% of our direct greenhouse gas emissions came from PFC emissions.

On a normalized basis per square meter of silicon produced, our PFC emissions decreased by 8% compared to 2008, despite the fact that many of our products became more complex, requiring additional manufacturing steps and hence more PFCs. This placed us at about 55% of our normalized PFC emissions from 1995. On a "per transistor" or "per function" basis, the normalized emissions were much lower, at less than 25% of the 1995 numbers.

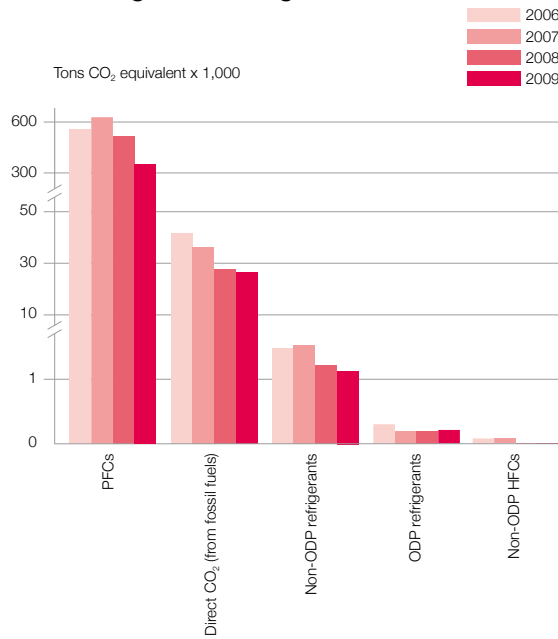
PFCs pose a serious dilemma for every semiconductor company. They are strong contributors to global warming, but, as of yet, there are no viable alternatives to their use in manufacturing high-quality semiconductor devices. We have essentially depleted the cost-effective options of switching to alternative gases and process optimization (without investment in production tools).

In 2010, we expect that our manufacturing redesigns, along with our ongoing investments in abatement systems, which have us replacing existing abatement equipment and installing new Remote Plasma Systems, will result in further decreases in PFC emissions, in both absolute and normalized terms.

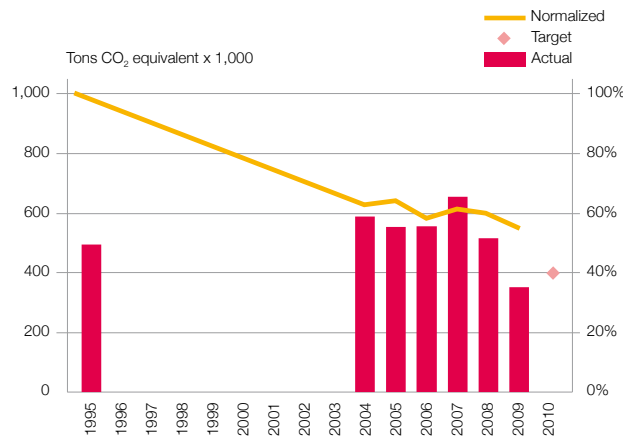
Abatement and Remote Plasma Systems are, at present, the two most realistic options for further reductions in PFC emissions. Unfortunately, both options require significant investment and extensive changes to our plant infrastructure. What's more, abatement efforts don't directly improve our economic performance. Add these factors to the recent slowdown in the industry and the global economic crisis, and the cost of making these changes is, for the time being, especially high.

We recognize the undesirable impact PFCs have on the environment and have joined with others in the semiconductor industry to seek ways to minimize their use. We signed the Memorandum of Understanding in the US and the Memorandum of Agreement in Europe to voluntarily reduce the emissions of PFCs by 10% by 2010 compared to the 1995 baseline. Our industry, as a whole, has already achieved this target in the US and Europe. The 10% goal for both regions will be sustained, despite any significant increase in wafer demand in 2010. We also plan to participate in the new voluntary agreements that the semiconductor industry is considering for a post 2010 program.

### Direct greenhouse gas emissions



### Absolute and normalized PFC emissions



Most of our front-end operations are in regions covered by the two voluntary agreements on PFC emission reduction. Two of our activities, JNSC in China and SSMC in Singapore, are not. For these two, we have internal targets in place that are comparable to the 10% targets in other regions.

PFC emissions in 1995 amounted to 497 kilotons of CO<sub>2</sub> equivalents. Without the implementation of the PFC-reduction program and the ongoing miniaturization of our products, our PFC emissions would have increased by between 7 and 15% annually since 1995, due to production increases and the increasing complexity of our products. Our target worldwide is to bring PFC emissions below 400 kilotons of CO<sub>2</sub> equivalents by 2010, and at the same time meet the targets of the two voluntary agreements. In 2009, our PFC emissions were below 400 kilotons of CO<sub>2</sub> equivalents, but this was partly the result of lower production volumes and the global economic slow-down. We have met our goal in the US and are close to doing so in Europe. We are deeply committed to reducing PFC emissions and will continue to work on reduction programs even beyond 2010.

The European Memorandum of Agreement includes an obligation to report the progress of the PFC-reduction

programs in an intermediate report. The members of the European Semiconductor Industry Association (ESIA) compiled the data and published an intermediate status report in 2006. The report, along with more recent emission data, can be found on the ESIA website ([www.eeca.eu](http://www.eeca.eu)). The next report, due in 2011, will cover data up to and including 2010, which is the end of the agreement period.

The European Union has recognized the semiconductor industry's proactive approach by granting an exemption in the so-called F-gases regulation. It is a voluntary agreement, so no ban on the use of PFCs for critical applications has been imposed on the semiconductor industry in Europe. We are, however, committed to looking for alternatives.

HFCs, another kind of greenhouse gas, are regulated by the Montreal Protocol, an initiative motivated by the contribution HFCs make to ozone depletion and not to global warming. The use of ozone-depleting (ODP) chemicals is prohibited in all our manufacturing processes, and ODP refrigerants are replaced with non-ozone-depleting alternatives wherever possible and practical. Our policy is that, when an air-conditioning system that uses ODP HFCs is scheduled for replacement, we replace it with a new system that doesn't use them.

We discontinued our use of non-ODP HFCs in our manufacturing processes in 2007. No non-ODP HFC emissions were recorded in 2008 or 2009.

Our operations emit small amounts of nitrous oxide (N<sub>2</sub>O), but the amounts are not yet significant compared to other greenhouse gas emissions. Our N<sub>2</sub>O emissions were lower in 2009 than in 2008. We will continue to monitor these emissions and will report them if and when they become relevant.

#### **Indirect emissions**

Indirect greenhouse gas emissions come from such things as business travel, product transport, and the use of purchased electricity, the production of which generates CO<sub>2</sub>. We estimated our indirect emissions for 2009 to be between 550 and 600 kilotons, which is about 50% more than our direct emissions.

2008 marks the first year we began measuring CO<sub>2</sub> emissions resulting from business travel. Using the methodologies, definitions, and factors developed by the World Resources Institute (WRI), DEFRA UK, and the GHG Protocol Mobile Combustion process, we calculated emissions for distances traveled using kilograms of CO<sub>2</sub> per passenger mile. Medium- and long-haul flights emit less CO<sub>2</sub> per passenger

mile than short-haul flights, and rail travel is approximately 50% less CO<sub>2</sub>-intensive per passenger mile than air travel.

Total CO<sub>2</sub> emissions from business travel in 2009 amounted to 17 kilotons compared to 22 kilotons in 2008. This is about 4% of our estimated total of indirect global-warming emissions. We are investigating the addition of more data, such as emissions from buses, cars, and hotels.

In 2009, our CO<sub>2</sub> emissions from transporting semi-finished products between factories and fully finished products to warehouses and customers were estimated, based on kilograms per mile, at 37.5 kilotons.

The use of electricity is reported in the next chapter, II-C, titled "Energy, water, waste."



Making a difference  
**Exceeding targets for PFC reduction**

Dr. Andreas Jantschak, who heads the Hamburg team for reducing PFC emissions in our manufacturing facilities, says that they're already "well below the target" for 2010. That's good news for us and even better news for the environment.

### **Dr. Andreas Jantschak** | *Chemical Lab, Environmental Manager, Hamburg, Germany*

Perfluorocompounds (PFCs) are essential chemicals in today's semiconductor manufacturing processes. When it comes to etching integrated circuitry features onto silicon wafers or cleaning the internal chambers of deposition equipment, PFCs have no equal. Without them, semiconductor companies would not be able to produce the complex, high-performance ICs that have become so essential in our daily lives.

Unfortunately, these same chemicals are highly potent greenhouse gases. They're generally very stable and, when released into the atmosphere, can absorb a lot of heat. As a result, they can have a negative impact on global warming.

In Germany, as in many other countries, industry groups are working to meet government targets for PFC reduction. NXP supports these efforts. Several years ago, we were part

of the voluntary agreement, made between the German government and CEOs of the German semiconductor industry, to achieve a 10% reduction from the 1995 baseline by 2010. That same goal is part of our company-wide EcoVison program, so all our facilities, not just those in Germany, are working toward a common reduction target.

Andreas is co-lead on the PFC task force for the German semiconductor industry. "All of Germany's semiconductor companies have taken action and started successful programs that promise to have a positive influence on the environment. It's looking good for meeting the target."

It's looking especially good at NXP's manufacturing site in Hamburg. Andreas and his colleagues have refined their process technologies, developing a special etch process that makes better use of PFCs. They've also changed gases,

switching to a PFC with a lower global warming potential (GWP). Andreas points out that PFCs are expensive, so using fewer PFCs has the added benefit of saving money, too.

In 2007 and 2008, the site invested in modern PFC-abatement equipment that uses a special burner-scrubber technology to remove PFCs from the exhaust. "They have an efficiency of between 95 and 99%," says Andreas, "and have made a big difference."

In 2009, the economic crisis helped create a drop in PFC emissions because production was scaled back. But Andreas isn't worried. "Thanks to our new abatement systems, we're likely to remain well below our target even if we increase production volume."

# Energy, water, waste

Our environmental action program, called EcoVision, helps us conserve vital resources and increase our efficiency. It covers a variety of topics, such as energy use, water conservation, and waste management, and includes specifics, such as how we handle substances of concern or what to do in case of a chemical spill.

The specific targets for EcoVision are given at the back of this report, in chapter III-E.

In 2009, because of our reporting rules, the list of sites included in the reported data for energy, water, and waste was changed. As a result, figures in this report may differ from those of earlier years. For a full explanation of our current reporting rules and our reasons for changing them, please see chapter III-C, titled "Our governance structure and reporting standards."

## Reducing energy consumption

Our near-term Sustainability Program emphasizes ways to use less energy, with the goal of reducing our energy consumption by 3% (absolute) in 2010 compared to the 2006 baseline.

To track our progress, we measure how our manufacturing sites use electricity, natural gas, and other energy resources, such as technical gases and other fossil fuels. NXP has made great strides in reducing energy and water consumption.

Our operations have already reached industry benchmarks for conservation, so, from this perspective, the 3% target is a realistic goal.

Our measurements show that in 2009, as in 2008, we surpassed our 2010 target, since we achieved, on a comparable basis,

a 19% absolute reduction in our total energy use as compared to the 2006 baseline. The savings came from several areas, including energy-savings programs and efficiency projects at our facilities, the restructuring of our manufacturing operations, and the significant drop in manufacturing output that resulted from the drop in demand during the second half of 2008 and the early part of 2009.

It is difficult to estimate how much of the actual energy reduction came from the lower manufacturing output, since not all energy usage is directly related to manufacturing output. Some usage is fixed for installations, heating, and lighting, and some equipment must be kept running, even when there is no load, to maintain proper temperatures or vacuum conditions. This varies per location and only estimates for fixed/variable ratios are available.

We estimate that the 2009 reduction in manufacturing output accounted for 15% of the savings, meaning that 4% came from our various energy-saving programs. We are confident that we will meet the 3% reduction target, even with higher production volumes in 2010.

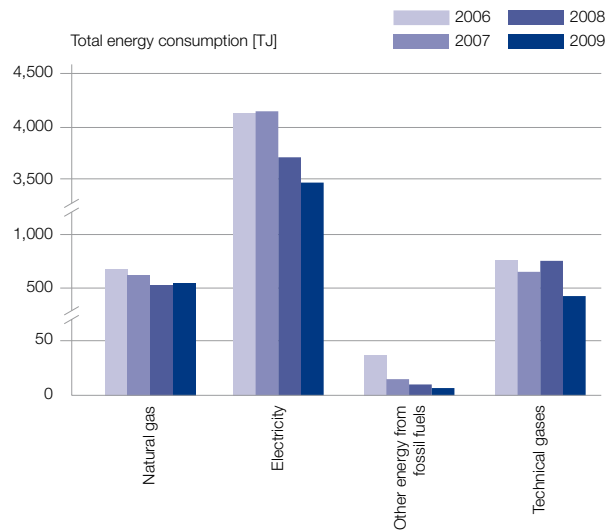
Looking at our use of electricity, our consumption in 2009 decreased by 16% compared to the 2006 baseline. Our records also show that, thanks to several energy-saving programs and efficiency projects in our front-end manufacturing facilities, where we produce our wafers, we're saving electricity in that area, too. For every square meter of wafer produced, we've achieved a normalized reduction of 29% in electricity use since 2001.

Our consumption of natural gas and other fossil fuels also decreased in 2009, down by 19% compared to 2006. The savings were due, in large part, to the company's redesign efforts and energy-saving activities. Relatively cold winters in Europe and the US were responsible for increased usage of natural gas in 2009.

2008 is the first year we started measuring the renewable electricity used in our manufacturing operations. Not all our facilities were ready to report reliable data for 2009, but, of those that could, figures varied: some use none, while others use a significant amount. Of the data that could be internally verified, the highest figure came from Sound Solutions in Vienna, reporting that 60% of their electricity came from a



# Doing more with less



renewable source. Our wafer fab in Hamburg ranked second, reporting 17% usage.

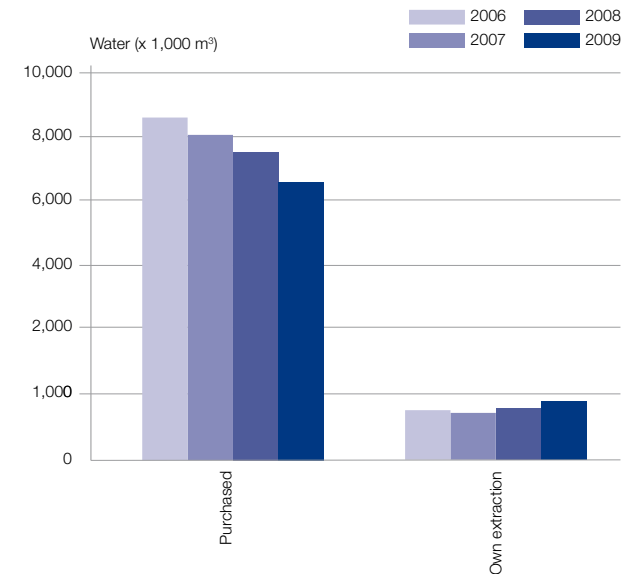
Our consumption of the technical gases needed for semiconductor manufacturing varies according to our product mix and volumes. This is reflected in the table. 2008 is the first year we are reporting the energy consumption related to our use of technical gases. Since 2006, our use of technical gases has accounted for roughly 12.5% of our overall annual energy consumption.

As in other years, most of our sites around the world contributed to reductions in energy consumption in 2009. Examples of these reductions are provided in the online version of this report ([www.nxp.com/profile/corporate](http://www.nxp.com/profile/corporate)).

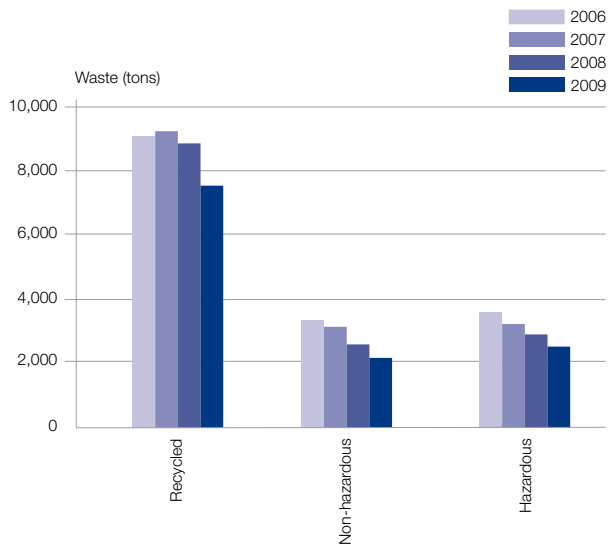
Energy consumption (TJ)				
	2009	2008	2007	2006
Natural gas	548	534	618	644
Electricity	3,481	3,793	4,175	4,157
Fossil fuels	12	17	21	44
Technical gases	478	707	696	723
<b>Total</b>	<b>4,519</b>	<b>5,051</b>	<b>5,510</b>	<b>5,568</b>
Actual reduction	19%	9%	1%	-
Target reduction (2010)	3%	-	-	-

## Saving water

Semiconductor manufacturing is a water-intensive process, and, as a result, our near-term Sustainability Programs places a high priority on water conservation. Our goal for saving water is the same as our goal for saving energy – that is, we aim to reduce our water consumption by 3% (absolute) compared to the 2006 baseline. As with energy consumption, this means an improvement, on a per-wafer or per-product basis, of more than 7.5%.



Water consumption (x 1,000 m³)				
	2009	2008	2007	2006
Purchased	6,698	7,520	8,033	8,519
Own extraction	892	783	714	778
<b>Total</b>	<b>7,590</b>	<b>8,303</b>	<b>8,747</b>	<b>9,297</b>
Actual reduction	18%	11%	6%	-
Target reduction (2010)	3%	-	-	-



In 2009, we achieved, on a comparable basis, an 18% absolute reduction in our total water consumption compared to the 2006 baseline. These savings were largely the result of water saving programs and efficiency projects in our facilities, and the restructuring of our manufacturing facilities. Reductions in manufacturing output had an estimated 9% effect on the savings, which means that we're likely to meet our 3% reduction target even as manufacturing output begins to increase again.

The water we extracted from our own boreholes has increased since 2008. At the end of 2008, our back-end facility in Seremban, Malaysia, began using their own water-extraction facility. This raised the consumption of extracted water and significantly reduced the amount of purchased water. At the other sites where we have our own extraction sources, water consumption has remained stable since 2006.

As with our efforts to save energy, several water-saving programs and efficiency projects in our front-end manufacturing facilities have produced significant results, amounting to a normalized reduction of more than 50% in water consumption, by square meter of wafer produced, since 2001.

Reliable data on recycled water is now being provided through our EcoVision monitoring system. In 2007, a survey showed that 78% of the water used in manufacturing was being reused or recycled. The number provided by EcoVision for 2008 was 84%, and for 2009 was 66%. Lower production volumes in 2009 meant there was less process water available for reuse or recycling.

Recent droughts in southern Taiwan have prompted companies in the science industrial zone to buy water from local farmers to keep operations going. The zone's administration has urged companies to conserve water, and has cited NXP, which recycles up to 80% of its waste water, as an example for others to follow. When Typhoon Morakot affected the water supply, our water reserves saved us from asking for external support.

Specific examples of how our sites around the world have reduced their water consumption are provided in the online version of this report ([www.nxp.com/profile/corporate](http://www.nxp.com/profile/corporate)).

### Managing waste

Our policy is to, whenever possible, recycle or dispose of waste locally. For waste that requires specialized handling, we comply with local and national legislation and only ship it to countries equipped with the knowledge and expertise to properly reclaim, recycle, or destroy it.

In 2009, we delivered 62% of our regular waste to external contractors for recycling (an increase of 5% compared to 2006). By 2010, we aim to increase that number to 70%, but current economic conditions may make this difficult to achieve. Transporting waste to a recycling facility is sometimes more expensive than having it incinerated or sent to a landfill. Some of our chemical waste is used by cement manufacturers. Since construction has slowed in many countries, demand for that waste has also gone down. We remain committed to recycling and reuse, though, and are looking for alternatives.

Waste (tons)				
	2009	2008	2007	2006
Non-hazardous waste delivered to landfill	1,361	1,684	2,250	2,382
Non-hazardous waste delivered for incineration	813	896	1,023	987
Hazardous waste delivered to landfill	1,107	1,420	1,593	1,666
Hazardous waste delivered for incineration	1,381	1,463	1,693	1,922
Materials delivered to external contractor for recycling	7,564	8,818	9,257	9,055
Total waste	12,226	14,281	15,816	16,012
Percentage for recycling	62%	62%	59%	57%
Target recycling (2010)	70%	-	-	-

The remaining 38% of our regular, non-recyclable waste was incinerated or sent to landfill. About half was hazardous. Local legislation determines whether waste is qualified as hazardous or non-hazardous.

In absolute terms, our waste is down 24% compared to 2006; this reduction meets one of our EcoVision targets. The figure excludes one-time waste, which amounted to 0.1 kilotons in 2006, 0.2 in 2007, 0.3 in 2008, and 0.2 in 2009. Most of the one-time waste has come from the dismantling and decommissioning of buildings, and more than 75% of it has been recycled. Due to our reporting rules, the one-time waste from our former facilities in Calamba, Philippines and Caen, France have been excluded. As a result, the figures in this report differ from those in earlier reports.

Throughout the company, various initiatives are underway to reduce our total waste. Examples are given in the online version of this report ([www.nxp.com/profile/corporate](http://www.nxp.com/profile/corporate)).

### Sustainable pack-and-ship methods

Semiconductors are fragile, so we use special packaging materials to protect them when we ship them to our customers. None of our packaging materials are received by consumers, since we only deliver to other businesses.

We are committed to using sustainable pack-and-ship methods, and use specially designed packaging tubes and shipping trays that are easy to recycle. In 2009, we ensured that 98.9% of the packaging materials we used could be reused or recycled, and succeeded in beating our 2010 target of 98%. We advise our customers on the possibilities

for recycling, and know that most of our larger customers already have recycling programs in place, but we don't have accurate figures for how much of the packaging is actually recycled.

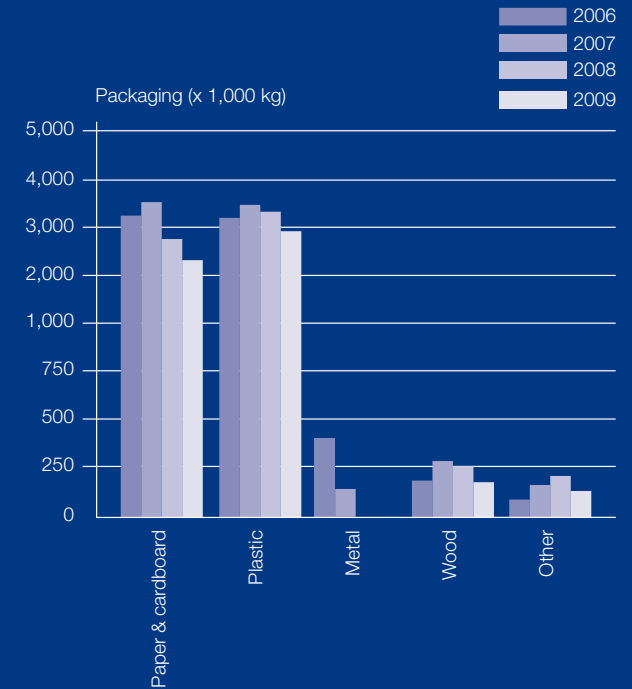
Our product mix and production volumes influence our use of packaging materials. On a per-product basis, the use of packaging material has gone down by more than 7% since 2006. This is because semiconductors are getting smaller, and newer packaging formats use less material.

### Raw materials

In 2009, NXP purchased about USD 500 million in raw materials (excluding diffused wafers) from a pool of more than 400 suppliers located in more than 20 countries.

Unprocessed, substrate silicon wafers are the most important raw material we purchase. They need to meet exact specifications and are only available from a limited number of industry-wide suppliers. We typically source other raw materials, such as high-purity and process chemicals, lead-frames, wires, substrates, and molding compounds, from a similar but more diverse group of industry-wide suppliers.

We pursue mutually beneficial relationships with our suppliers and seek to award business to those suppliers who share our commitment to acting fairly and with integrity toward stakeholders, observing applicable rules of law, and supporting and respecting internationally proclaimed human rights. Our Supplier Sustainability Program is described in more detail in the Ethics chapter of this report.





Making a difference  
**It pays to recycle**

Chandramogan Kunjambu and his colleagues are finding that their recycling programs are doing more than one might expect. They're not just reducing waste and lessening the facility's impact on the environment – they're helping boost the bottom line, too.

## **Chandramogan Kunjambu** | *Facilities Management, Seremban, Malaysia*

"We've had recycling programs in place since 2000, when we obtained ISO 14001 certification," he says. "The certification process helped us structure our efforts and gave us controls for monitoring performance." The facility now has a comprehensive program in place, with documented processes for training, collecting, sorting, recycling, disposal, and cost-benefit analysis.

All new employees receive training that emphasizes the importance of recycling and introduces best practices. Brightly colored containers, located throughout the office and warehouse spaces, make it easy for employees to set aside material for sorting.

"We collect materials daily and process them for further separation," explains Chandramogan. The team collects a wide range of items – cardboard boxes, office paper, plastic, scrap from finished goods, excess copper from lead frames,

and wood shipping palettes – and stores them in neatly organized areas on-site until they are ready for transfer.

Many of these items can be sold to recyclers who prepare the material to be used again, and the proceeds of these sales can add up quickly. In 2009, for example, the total earnings from recycled items came to nearly USD 800 thousand. The leftover copper strips from lead frames are the largest single contributor to the total. Depending on the site's production volumes, their monthly sale of copper can range from USD 4,500 to 10,500. "We're seeing that recycling really brings revenue to the company," he says.

Chandramogan and his colleagues are looking for more ways to increase that revenue. For example, they already recycle the wafer remains attached to Mylar plastic, but are working with the purchasing team to find a potential buyer or resale

opportunity. Similarly, they would like to start recycling their used molding compound, but have yet to secure a partner. "Our facility is not very big," explains Chandramogan, "so we need to find a recycler that will accept smaller quantities."

Seeing that recycling brings revenue to the company has given employees one more reason to feel good about their efforts at running a green facility. According to Chandramogan, "our programs have created a recycling mindset, and our employees know they're making a real contribution to the company as a whole."

Semiconductor manufacturing is a complex, delicate process that requires a number of specialty chemicals and materials. We have several programs in place that regulate our use of hazardous chemicals – in fact, we follow some of the toughest practical standards in the industry for protecting our employees and the environment.

# Substances of concern

We carefully monitor the use of hazardous substances in our product and processes. As part of our near-term Sustainability Program, we have committed to a 100% reduction, by 2010, in all hazardous substances that aren't categorized as "critical use." This means that we aim to discontinue use of all hazardous substances except those that are indispensable to the manufacture of our devices and don't yet have a proven alternative.

We comply with, among others, the European Union's Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS), which went into force in 2006, and the so-called China RoHS (or ACPEIP: Administration on the Control of Pollution caused by Electronic Information Products), which was introduced in 2007.

Based on expected future legislation, trends in the electronics industry, and new information about the environmental, health, and safety impacts of certain substances, we updated our lists of hazardous substances in 2008 and expanded them in 2009. As a result, we now report on more substances and, wherever possible, provide historical data for the new items.

Our Chemical Management program lets us track company-wide usage of chemicals. We maintain centralized databases that register and classify the more than 400 or so substances we use in roughly 2,500 process chemicals and preparations, along with the more than 2,000 product-related materials and sub-parts used by our manufacturing operations. We update these databases frequently to be sure they reflect the latest information.

All our employees, worldwide, who deal with these items can access the databases to view helpful information, including material safety data sheets, workplace instructions cards, warning labels, baseline occupational health and environment information, and instructions for exporting, transporting, handling, and storing a given substance.

We maintain two lists of hazardous substances; one for products and one for processes. These lists contain thousands of substances that we prefer not to use because they are potentially harmful. Any use or emission of these substances must be pre-authorized, so, to streamline operations, we are actively searching for alternative substances. We cover

these particular substances with a special system of internal dispensation. A dispensation implies conditional use and makes it mandatory to use the best available risk management measures (RMMs) to protect humans and the environment. We make each dispensation site-specific so that RMMs can be adapted to the local situation. In general, our procedures and processes are typically stricter than what local or global laws specify. Our dispensations fall within these regulations as well.

At the end of 2008, we had internal dispensations for 49 combinations of substances, applications, and locations. In 2009, we withdrew eight dispensations because we managed to introduce alternative materials or processes that use no listed substances, and added nine dispensations due to additions to the hazardous substance list. We ended 2009 with 17 items from the hazardous substance lists that we continue to use in a total of 50 dispensations. Although we continue to search for replacements, some of these items have no available alternatives. Some kind of invention or scientific discovery will be needed before they can be replaced.

# Managing hazardous materials

We were one of the first semiconductor companies to make use of lead-free packages and were the very first to list all the chemical contents of our products on an easy-to-access web page that also shows compliance with legislative requirements from various regions and countries. In 2009, we began including detailed information on the chemical contents of packaging as well.

We successfully eliminated lead (Pb) from the terminations of our product packaging well ahead of any legislation, and thereby made it easier for our customers to follow the path to green, Pb-free soldering processes. Taking the next step, we are removing antimony oxide and halogenated flame retardants from our packaging and offering a new series of products labeled “Dark Green.” The Dark Green portfolio is expanding rapidly, having grown from less than 20% of the portfolio in early 2007 to about 50% at the end of 2009. The program has a KPI of reaching 100%, with a few exceptions for specific applications, such as those requiring high resistance to flammability, by 2010. Due to lower production volumes in the second half of 2008 and early 2009, part of the conversion to Dark Green packaging has been postponed. We’re now at

over 50%, but the volume of Dark Green products shipped is higher than 70%.

We continue to work on the elimination of lead in so-called “exempted” applications – that is, areas still allowed under current legislation. This includes removing lead from solders with a high melting point, which are used in several applications. In particular, these solders are used to attach the die of a power device to its lead-frame. We recently formed a consortium, called the Die Attach 5, or the DA5, to address this issue. Working with Bosch GmbH (Division Automotive Electronics), Freescale Semiconductor, Infineon Technologies, and STMicroelectronics, we will jointly investigate alternatives for high-lead soldering and will work to standardize the acceptance of those alternatives throughout the semiconductor industry.

## Beyond baseline requirements

We have procedures in place that ensure we follow all the relevant local, regional, and global laws that govern our business, including the regulations that require producers and importers of chemicals to register their substances

along with the information needed to use them safely. One example is REACH (Registration, Evaluation, and Authorization of CHemical substances), which is European law with effect from June 1, 2007. In 2008, to ensure a continuous supply of chemicals governed by REACH, we audited our supply base for pre-registered chemicals. We performed additional checks in 2009, confirming that the substances we use are supported by the correct REACH notifications. We also updated our centralized databases with REACH data for all relevant substances.

As of March 2010, the REACH Substance of Very High Concern (SVHC) candidate list contained 31 substances. All 31 are already on the NXP hazardous substance list and none of these substances are present in NXP products.

Cobalt-dichloride (CoCl<sub>2</sub>) is one of the substances listed as a candidate for the REACH SVHC. NXP has, like many other semiconductor companies, used cobalt-dichloride in Humidity Indicator Cards (HICs). These cards are placed in packaging materials to detect changes in relative humidity and indicate whether a package has remained moisture-free during

transportation. As of the end of 2009, we phased out the use of cobalt-dichloride and began using new, more environmentally friendly HICs that don't contain cobalt-dichloride.

In a number of areas, we go beyond baseline laws and regulations to support voluntary agreements that promote industry-wide sustainability. For example, we comply with the World Semiconductor Council's (WSC) Voluntary Agreement for PFOS (perfluorooctyl sulfonates). In early 2009, after three years of deliberation, the Stockholm Convention COP4 discussions on PFOS finished by listing PFOS in Annex B, which means it can still be used for a few critical applications, including semiconductor manufacturing.

We are using only small amounts of PFOS for exempted applications, having reduced our emissions in Europe from 24 kg in 2006 to only 0.16 kg in 2007 and 0.10 kg in 2009. Worldwide, our PFOS emissions in 2009 were 0.11 kg. By the end of 2006, all non-critical PFOS use, and by consequence, the emissions from this non-critical use, were discontinued as specified in the WSC Voluntary Agreement.

Since alternatives to PFOS have recently become available, we've challenged ourselves to be completely PFOS free by 2014. Of the four remaining locations still using PFOS, two will deplete their remaining material stocks and phase out use in 2010, followed by a third in 2011. The fourth will need more time for the phase-out, due to required process and customer qualifications. As we eliminate PFOS, we also aim to avoid using perfluorooctanoic acid (PFOA) next to other suspected substances. PFOA is toxic, persists in the environment, and can accumulate in the food chain.

PFOA and PFOS have both been placed on our hazardous substance list.

### Hazardous substances

In addition to PFOS, our semiconductor processes involve 1,2-dimethoxyethane, lead, arsenic, xylene, toluene, carbon monoxide, formaldehyde, concentrated (>5%) tetramethylammonium hydroxide (TMAH), an industrial biocide water treatment formulation containing Kathon 886, and hydrofluorocarbons (HFCs).

The use of 1,2-dimethoxyethane, currently employed as a solvent for spin-on-glass applications at two of our sites, will be phased out in 2010.

Lead is still used for some exempted applications under the European Union's RoHS initiative.

We use arsenic, an essential dopant in semiconductor manufacturing, in tiny (atomic) amounts. We use it only in closed systems and within stringent manufacturing guidelines. There are, at present, no alternatives to its use. We report arsenic emission data based on a worst-case scenario; expected emission levels are much lower.

The use of xylene and toluene is under investigation for possible replacement. Emissions of toluene stopped with the closure of our Fishkill site in mid-2009, but other locations are still using it with negligible emissions.

Reporting of pure carbon monoxide (CO) emissions proved to be more difficult than anticipated, since carbon monoxide

is also a byproduct of various processes. We are looking for a reliable reporting mechanism.

One of our back-end sites uses small amounts of formaldehyde in an electroless plating process. It is a closed system and measures have been taken to prevent worker exposure.

TMAH was added to the list of hazardous substances in 2008 because it poses an acute safety risk when concentrated above 10%. Special measures have been taken to protect employees while handling concentrated TMAH. Emissions of TMAH are not relevant, and have therefore not been included in the emissions table.

We stopped using hexavalent chromium in 2008, when we closed our Boeblingen, Germany operations.

The fugitive emissions of coolants (HFCs) from air-conditioning systems into the air are reported as a global warming item in terms of tons of CO<sub>2</sub> equivalents, so they're not included in the table. We stopped using HFCs in our manufacturing processes in 2007.

In 2009, we added the following substances, which we use, to the dispensation and hazardous substances list: copper sulphate, methanol, beryllium oxide (no emissions), silver powder, perfluoralkylsulfonate (PFAS), cyanides (no emissions), n-methyl-2-pyrrolidone (NMP), and isobornyl acrylate/acrylic acid (no emissions). Reporting protocols have been or are being established for these newly added substances. Even with the addition of these new substances,



though, we are on track to achieving our goal of phasing out all non-critical use of hazardous substances.

NMP, isobornyl acrylate/acrylic acid, and methanol are currently being investigated for phase-out. The use of beryllium oxide is prohibited for new products but it's still being used in some older products because replacing it is economically infeasible and volumes are limited. Use of the other newly added substances is classified as critical since there are no alternatives currently available.

### Relevant substances

Emission of relevant substances occurs under controlled circumstances and in compliance with local legislation.

Emissions of ammonia, hydrofluoric acid, nitric acid, nitrogen oxides, and volatile organic compounds pass through air-cleaning systems before being released to the air.

Emissions of ammonia, bromide, fluoride, nitrates, volatile organic compounds, and phosphates are being collected and treated as waste or undergo wastewater purification processing prior to discharge in sewers.

Roughly 22% of our nitrogen oxide (NOx) emissions is generated from heating buildings. The remaining 78% comes from our manufacturing processes.

More examples of how we're reducing our use of substances of concern are included in the online version of this report ([www.nxp.com/profile/corporate](http://www.nxp.com/profile/corporate)).

Emission (in kg)	2009		2008		2007		2006	
	To water	To air	To water	To air	To water	To air	To water	To air
<b>Hazardous substances (kg)</b>								
1,2 Dimethoxyethane	-	2	-	3	-	9	-	50
PFOS*	0.11	-	0.15	-	0.26	-	24	-
Lead (exempted applications)	9	2	9	4	12	4	21	8
Arsenic**	-	< 0.5	-	< 0.6	-	< 0.7	-	-
Formaldehyde	-	3	-	2	-	2	-	NA
Kathon 886***	2.0	-	1.7	-	NA	-	NA	-
Copper sulphate	12	-	NA	-	NA	-	NA	-
Nickel compounds****	67	-	71	-	NA	-	NA	-
Hexavalent chromium	0	-	0	-	0	-	2	-
Xylene	-	603	-	858	-	835	-	916
HFCs in processes	-	0	-	0	-	49	-	35
Toluene	-	8	-	11	-	9	-	7

Emission (in kg)	2009		2008		2007		2006	
	To water	To air	To water	To air	To water	To air	To water	To air
<b>Relevant substances (kg)</b>								
Nitrate	138,517	-	185,529	-	204,306	-	176,193	-
Phosphate	195,701	-	189,664	-	203,902	-	202,473	-
Volatile organic compounds	-	150,563	-	104,729	-	144,705	-	197,749
Ammonia	91,456	5,173	97,156	5,863	98,543	10,616	93,000	9,831
Nitrogen oxides (processes)	-	55,660	-	80,257	-	76,932	-	67,322
Fluoride (F <sup>-</sup> )	37,603	-	46,234	-	49,062	-	39,904	-
Nitrogen oxides (heating)	-	16,811	-	18,336	-	22,976	-	23,806
Nitric acid	-	2,944	-	3,751	-	3,653	-	2,769
Hydrofluoric acid	-	2,311	-	3,045	-	3,279	-	3,193
Bromide (Br <sup>-</sup> )	862	-	3,166	-	2,876	-	2,805	-

\* PFOS emissions are calculated based on consumption data and using the calculation protocol agreed on by the World Semiconductor Council. 2006 PFOS data is for Europe only

\*\* No 2006 data for arsenic is available. Data from 2007 onwards is calculated using purchased amounts and is based on a worst-case scenario; all emissions are far below legal limits

\*\*\* New calculations revealed that Kathon 886 emissions reported in 2008 were overstated. This has been corrected in this report.

\*\*\*\* In the 2008 report, not all sites reported their nickel compound emissions correctly. Figures in this report include the updates and changes for the 2008 data.

NA = no (reliable) data available

2009 saw a decline in sales, mainly attributable to the global financial crisis and the weak economic environment, which affected all business segments.

# Financials

Sales were USD 3,843 million in 2009 compared to USD 5,443 million in 2008, a nominal decrease of 29.4%, and a comparable decrease of 21.1%. Wafer sales to ST-Ericsson of USD 149 million are included in the 2009 sales figure, compared to USD 85 million in 2008 (August – December 2008). The divestment of wireless activities in July 2008 lowered 2009 sales by USD 792 million.

The global financial crisis had a particularly severe effect on sales in the first and second quarter of 2009. Sales partly recovered in the third and fourth quarter, due to supply chain replenishment, but sales were still lower than in the pre-crisis period. 2009 sales were also affected by the unfavorable currency effects of USD 66 million compared to 2008.

R&D investments were USD 777 million in 2009 and focused on areas of product innovation that will directly support our businesses. This included looking for new ways to save on the cost of development, such as reducing the number of redesigns and shortening time-to-market.

Full details of the company's financial performance are provided in the NXP Annual Report 2009 ([www.nxp.com/investor](http://www.nxp.com/investor)).

We recorded no significant spills in 2009, nor did we receive any significant fines or sanctions in connection with non-compliance of environmental or Health & Safety laws and regulations.

## Financial Code of Ethics

As part of our ongoing efforts to comply with the highest levels of transparency and accountability, we include a Financial Code of Ethics in our Business Code of Conduct (BCC), and apply it to certain senior officers, including the CEO and CFO, and to all employees performing accounting or financial functions. (Full text of the Financial Code of Ethics can be found at [www.nxp.com](http://www.nxp.com)).

Through the Audit Committee of NXP's Supervisory Board, there are appropriate procedures in place for handling complaints received by NXP regarding accounting, internal

accounting controls, or auditing matters, and for the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters. In 2009, as guided by the BCC, which states that bribes in any form are unacceptable, we conducted several investigations and found no evidence of possible corruption or bribery.

## US Sarbanes-Oxley Act

We have been a registrant of the US Security and Exchange Commission (SEC) since 2007. This makes us subject to certain provisions of the US Sarbanes-Oxley Act, which requires companies registered with the SEC to disclose whether or not they have in place standards or a code of ethics to promote honest and ethical conduct and to ensure proper public disclosures and compliance with applicable laws and regulations. To meet this requirement, NXP management regularly assesses the design and operating effectiveness of our financial reporting controls, especially as they relate to section 404 of the Sarbanes-Oxley Act and US Generally Accepted Accounting Practices (GAAP).

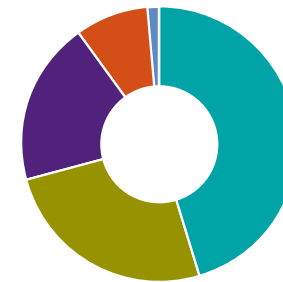
# Achieving success, investing in the future

In reviewing the year ending December 31, 2009, NXP management identified a deficiency, related to the accounting and disclosure for income taxes associated with acquisitions, and concluded that this deficiency constituted what is defined by the US GAAP as a material weakness. To correct this matter, management has done several things. They've conducted a full review of the income taxes related to acquisition accounting and have re-evaluated operating effectiveness as it relates to income tax accounting controls. Key financial and tax personnel are being trained on these matters, and NXP is enhancing its tax resources. As a result of these remedial actions, management now believes that the consolidated financial statements for previous years conform with US GAAP.

## Financial highlights of 2009

- ▶ Total sales of USD 3,843 million
- ▶ Adjusted earnings before interest, tax, depreciation and amortization (EBITDA) of USD 336 million
- ▶ Year-end cash position of USD 1,041 million
- ▶ USD 777 million invested in R&D in 2009

2009 sales by market segment  
(2008 sales)



Total USD 3,843 million  
(USD 5,443 million)

**MultiMarket Semiconductors**  
1,749 (2,129)

**Automotive & Identification**  
976 (1,285)

**Home**  
744 (836)

**Manufacturing Operations**  
324 (324)

**Corporate & Other**  
50 (77)

**Divested wireless activities**  
- (792)



Making a difference  
**Persistence pays off**

As Dr. Martin Justinek sees it, sustainability is about "being fit in the market." It means always looking for new, better ways to do things, so the company can succeed long term. His recent work with a new wire-bonding process is a perfect example.

## **Dr. Martin Justinek** | *Process Engineering, BL Sound Solutions, Vienna*

Several years ago, when Martin joined the company, BL Sound Solutions was already a recognized leader in loudspeakers for mobile applications, using state-of-the-art production lines that had already created billions of successful products.

But Martin and his colleagues in process engineering saw room for improvement, especially with the resistance soldering process used to connect coil wires to a speaker. "The process was difficult to control because it was sensitive to fluctuations in material quality," explains Martin. "We wanted something more stable with respect to the process itself, so we could achieve higher yield."

Wire bonding, a technique used throughout the silicon industry, was an option they considered early on. They approached several manufacturers, but found they had special requirements that standard wire-bonding machinery

couldn't meet. "Our process uses an enameled wire with isolation on it. That makes a huge difference," says Martin.

They started looking at other options, but couldn't find anything better than what they already had. Finally, they found a Swiss supplier experienced in wire bonding with insulated wires. "They supplied manufacturers in Asia, but not in the same volumes we have here. What we're doing is new."

They started with a semi-automated process, then transitioned to a fully automated one. They found that, even running in high volume, the new technique is more predictable and more consistent than the old one. The electrodes used in soldering are replaced with thermodes, which are easier to work with. There's less machinery down-time, and that saves time, money, and energy. An expensive tin-plating process has been eliminated, so the plating process is simpler and cheaper. "Our contact supplier uses fewer chemicals and has

less waste to dispose of. Also, since the new contact design has a simpler geometry, our supplier uses less stainless steel and performs fewer punch and bend steps."

Martin points to other benefits, too. The new contact system is more compact, which is a big bonus in today's miniaturized designs. "Wire bonding lets us create a broader portfolio with new formats, such as printed circuit boards and flexible printed circuits. It also offers the possibility to improve sound performance and, because it's very heat resistant, paves the way for a reflow-solderable speaker."

From Martin's perspective, the time spent searching for alternatives and experimenting with different techniques was worth it. "The new process gives us the right products at the right time, and that's part of being a sustainable company."

Our employees are the ones who put our corporate values into daily practice. The dedication, ingenuity, and creativity they bring to their work enable us, as a global organization, to be insightful, engaging, inventive, and committed to excellence. To ensure that all our employees are treated fairly and with respect, we include specific commitments to our employees in the Business Code of Conduct (BCC).

# Employees

In 2009, the number of employees, measured as full-time equivalents (FTEs), reduced to 28,150 compared to 30,174 at the end of 2008. The reduction was mainly the result of the restructuring activities announced in September 2008 and that will last until the end of 2010. Our reporting includes employees in joint ventures where we have a majority share. By the end of 2009, we employed roughly 2,300 people through third-party agencies that provide onsite manufacturing labor at our own facilities.

To help employees who have been made redundant by our redesign activities, we have implemented various support programs to help them find new work. In the Netherlands, for example, we established NXTJob, a program that provides employees with one-on-one coaching, weekly support groups, training on resume and interview skills, and access to job listings for up to six months after their redundancy. In 2009, 269 candidates participated in the program and, when asked to rate their experience, gave the program an average score of 7.6 out of 10.

From a regional perspective, about two thirds of our employees are now located in Asia, including China. Almost 10% of all NXP employees are non-local, meaning that they have nationality in a different country than where they work. About half of these employees are located in Europe, the other half in Asia Pacific, including Greater China.

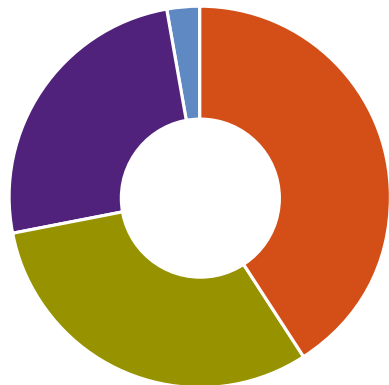
In 2009, 31% of our employees were below the age of 35, 47% were between 35 and 45, and 22% were over the age of 45. The 2008 divestment of our Calamba, Philippines operation, which employed a high number of women, lowered our number of women employees. In 2009, 40% of our employees were women (as compared to 42% in 2008, 41% in 2007, and 44% in 2006), and women held 5.6% of the senior management functions, the same as in 2008 (4.7% in 2007 and 4.9% in 2006).

## **Opportunities to learn**

The global economic downturn continued to have a substantial impact on 2009 spending for People

# Fostering individual growth

Employees (FTEs) by geographical area as of Dec 31, 2009



<b>Asia Pacific</b>	11,529 (40% male / 60% female)
<b>Europe and Africa</b>	8,734 (85% male / 15% female)
<b>Greater China</b>	7,159 (39% male / 61% female)
<b>Americas</b>	728 (77% male / 23% female)

Total 28,150 (60% male / 40% female)

Employees (FTEs) per sector as of Dec 31, 2009 (Dec 31, 2008)



<b>MultiMarket Semiconductors</b>	9,511 (9,524)
<b>Manufacturing Operations</b>	8,223 (9,819)
<b>Home</b>	4,589 (4,878)
<b>Corporate &amp; Other</b>	4,105 (4,225)
<b>Automotive &amp; Identification</b>	1,722 (1,728)

Total 28,150  
(Total 30,174)

Development. As part of the NXP Redesign (aimed at lowering the cost base), the People Development budget was cut by more than 60% compared to 2008.

However, even in these difficult times, we continued to invest in core technical training, as well as training on health, safety, and regulatory issues. We also funded re-employment support for employees who lost their job. Moreover, we continued to use informal methods, including on-the-job training, professional networks, development discussions, and coaching, to ensure that employees are supported in the development of their personal skills and competencies.

The global economy showed signs of recovery toward the end of 2009, and we renewed many of our People Development activities from the last quarter of 2009 onwards. The revitalized People Development programs are in line with our overall corporate strategy. Semiconductors are a knowledge-intensive, highly competitive industry. Investing in our people makes NXP more attractive in the international labor market and helps us retain valuable employees.

People Development targets every level of the organization and encompasses everything from formal classroom training to professional networking, coaching, learning on-the-job, and more.

### **Career programs and development**

The global economic downturn has also restricted our spending on career programs and development. We have, however, continued with two programs that have been running successfully for some years now: the Dual Ladder Program and The Project Management Program.

The NXP Technical Career “Dual Ladder” Program recognizes engineers for their technical competence and, since 2000, has allowed talented technical people at NXP to enjoy career opportunities that rival those in the business and commercial sectors. The program now includes some 110 role-model engineers in the highest ranks of our organization. Technical competence is a critical factor in our ability to stay competitive and helps us embed societal trends into our technology roadmaps.

Since 2006, we have encouraged our project managers to seek external certification, via a 10-module curriculum, from the Project Management Institute. We now have roughly 100 certified Project Managers, and 18 candidates are nearly done with their training. To support this program, several former NXP employees who completed the program but left the company, due to reorganizations or divestments, have been re-hired as contractors. To support these managers further, and to embody the learning organization, we also have local networks in place that help managers coach each other and share best practices.

### **Talent programs**

The global economic crisis also prompted us to put our Talent Programs on hold for 2009. In 2010, we will launch a comprehensive Talent Management program, focusing on talents in both business and functional roles. The continuous development of these talents is critical to ensuring continued success with our key positions in the industry.

### **Performance management**

Offering opportunities for professional growth is an important part of attracting and retaining quality employees. We use our global Performance Management (PM) process to assess employee performance and help employees develop their careers by giving them continuous formal and informal feedback along with development opportunities. PM also helps align our business objectives with the personal objectives of individual employees. In this way, our employees can have a clear understanding of their competencies and what is expected of them. The result is continuous improvement, on both a personal and a corporate level, and thus better business performance. The easy-to-use, web-based PM tool is currently available to almost 5,500 employees, including all senior managers. In 2009, 98% of the employees who had access to the tool concluded the entire PM cycle. We continue to expand coverage of the PM tool and, as a result, expect the number of employees using it to increase.



Over the course of 2010, we plan to make several improvements to the PM process, including more rigorous "360-degree" feedback for senior managers, and implementation of new leadership values. We also aim to have all indirect employees (roughly 10,000 people) using the tool. A concise, paper-based version of the tool is available to all remaining employees. Results of the paper version are kept at local sites and not collated centrally.

### Employee Engagement Survey

In 2007, as part of our Employee Management Process, we conducted our first company-wide survey to gauge employee attitudes and compared our results to similar surveys conducted in 2004 and 2005, while we were still Philips Semiconductors.

For 2008, we took a different approach. Each quarter, we emailed a survey to a representative group of 10,000 employees chosen at random. To maintain links with previous results, the survey included many of the same questions as the original Employee Engagement Survey and added some new questions about specific initiatives and our strategic direction. We published the results in our employee newsletter, *Let's Go!*, so everyone could learn what the responses had been, and we discussed the findings in our quarterly Business Review Meetings with our Management Team. This way, Management was able to pinpoint those areas that needed improvement, define their focus for the coming period, and deploy actions that would further strengthen our performance-driven culture.

Results of the 2007 and 2008 employee surveys have been published in earlier sustainability reports.

We did not conduct an employee survey in 2009, due in part to changes related to the Trident and Virage deals, the new organizational structure of NXP, and the initial roll-out of our High Performance Mixed Signal (HPMS) strategy.

For 2010, we will conduct a new survey with a new partner. After five years of partnering with Kenexa, we have enlisted Gallup, a worldwide leader in this field, to conduct a revised program called the Employee Excitement survey. Gallup will help us understand what drives our results and will propose follow-up and action plans using latest benchmarking insights. Results of the 2010 survey will be included in the next sustainability report.

### HPMS event

Since 2010 will be a key year for the deployment of our new High Performance Mixed Signal strategy, we are making sure that our employees understand and commit to this strategy early on. We have scheduled dedicated HPMS employee events at all NXP sites worldwide. Organized locally, these events offer a unique opportunity for employees to experience a snapshot of NXP's innovations in the area of HPMS. Our first event, held at our headquarters in Eindhoven in February 2010, included a presentation that explained the concepts of analog, digital, and mixed-signal

computing in general, and summarized NXP's commitment to High Performance Mixed Signal in particular. After the presentation, there was a showcase that gave employees the opportunity to see, first hand, how NXP's HPMS solutions are used in real-world applications.

Our goal is to create a workplace that is healthy, safe, and free of occupational injury and illness for all employees.

Our Health & Safety Database, a web-based tool, connects all our industrial and non-industrial sites worldwide, providing consistent, reliable Health & Safety performance data for the company as a whole.

# Health & Safety

Since 2006, our Health & Safety Registration System has covered 95% of our employees. We increased coverage to 99% in 2009, and at the same time met our target for 2010.

To bring our reporting methods in line with Occupational Safety and Health Administration (OSHA) standards, we have changed the way we track lost-workday injuries. As of 2008, we report per 100 full-time equivalents (FTEs) instead of per 1,000 FTEs. The figures for previous years have been converted to the new format.

Because of data changes made in 2009 for the year 2008, the figures in this report may be different from those given in previous years.

Our 2010 target for lost-workday injury cases is fewer than 0.20 per 100 FTEs. The number of occupational injuries went down from 151 in 2008 to 91 in 2009, making the 2009 case rate at 0.41. Over the second half of 2009, we implemented a stricter monitoring program for industrial injuries. We modified our reporting procedure, and the Sustainability Office now reviews site injury records at least

once per quarter. These changes have led to several new initiatives, including placement of extra safety covers on equipment, posting of signs that indicate dangerous areas, and availability of personal protective equipment (PPE). At some sites, we increased the number of safety-awareness sessions and made one-point lessons for certain injuries to communicate best practices more easily. These actions began showing positive results very quickly, with the number of injuries reported in the last quarter of 2009 dropping significantly. We continue to look for additional programs to lower the injury rates even further.

2009 was also the beginning of our efforts to benchmark our health and safety data with other semiconductor companies. Comparisons show that we're about average, and that has spurred us to do better. We aim to be one of the best performers for health and safety in our industry segment.

The number of hours of sick leave decreased in 2009, going from 1.2 million in 2008 to 1.0 million in 2009. The number of hours lost due to occupational illnesses also went down, from twenty-eight thousand in 2008 to twenty-four thousand

in 2009. These decreases are partly due to a workforce reduction of 7%.

The Occupation Health and Safety Assessment Series (OHSAS) 18001 certification program specifies the requirements for an occupational health and safety management system. These specifications help organizations control their risks and improve their performance. As of December 2009, we have received OHSAS 18001 certification at all our industrial sites.

To ensure that everyone at our sites has the right skills and disciplines to minimize the risks of illness and injury, we provide roughly one million hours of employee training worldwide each year. A range of educational schemes covers on-the-job training and there is specialized training in environmental matters, quality controls, and chemical health and safety. We even have training courses that help our employees conserve water and energy when they're away from work.

Chemicals are essential to our manufacturing processes, so we give special attention to emergency-response skills related to chemical spills. We conduct regular

# Creating the right work environment

evacuation exercises and routinely practice for emergency situations. Many of our employees are volunteer members of Emergency Response Teams and receive dedicated training. We also have, at some locations, employees with professional-level emergency skills, especially in firefighting.

Examples of our Health & Safety initiatives can be found online, in the full text of this report ([www.nxp.com/profile/corporate](http://www.nxp.com/profile/corporate)).

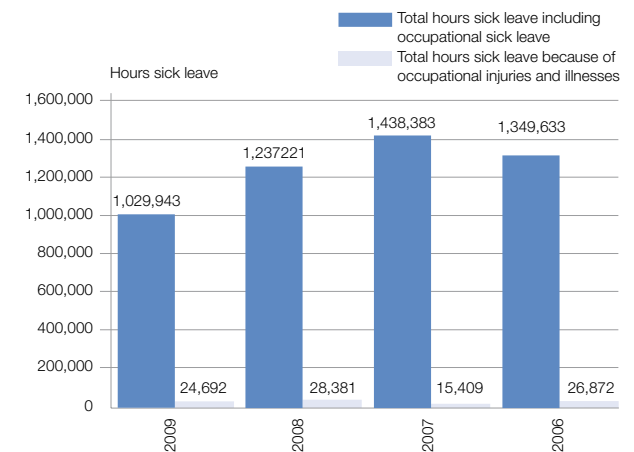
## Excellence week in Thailand

Using the theme "Passion to Win," our assembly plant in Bangkok dedicated an entire week to issues of health, safety, and the environment. The event underscored the importance of quality, sharing best practices, and taking personal responsibility for things like error proofing and incident-free workdays. There were speeches from executive staff and informational booths, created by cross-functional teams, that addressed environmental safety, innovation in quality assurance, ways to ensure quality in manufacturing, and how to handle various materials. There were also question and answer sessions, games of skill, and an essay

contest, along with workshops on healthy living, therapeutic massage, and growing vegetables.

## Award for excellence in Germany

The Hamburg Bureau of Occupational Health and Safety has, for the second time, recognized NXP Hamburg for its "exemplary" dedication to Health & Safety and its systematic approach to maintaining healthy, accident-free work environment. The site currently has an injury rate that is less than half the industry average in Germany and has several programs in place that encourage employees to participate in regular fitness activities. Twenty-five teams took part in the site's 2009 bike-to-work challenge, and roughly 100 employees have competed in triathlons, marathons, or bicycle races.



## Key Health & Safety figures

	2010 (target)	2009	2008	2007	2006
Lost work-time rate (%)	1.75	1.78	1.77	1.95	1.85
Lost-workday injuries per 100 FTEs	0.20	0.41	0.33	0.25	0.23
Total number of recorded injuries	-	91	151	170	145
Total number of occupational illnesses	-	26	43	43	71



Making a difference  
**A shared commitment**

They've passed stringent international audits and have an exceptional record for worker safety. How has the Jilin site achieved so much in so little time? For Grace Jianping Guan and her colleagues, the answer is simple: teamwork.

## **Grace Jianping Guan** | *Facilities & EHS Management, Jilin, China*

It's been only five years since the Jilin manufacturing site came online for NXP, but they've already received four very important certifications: ISO 9001 for quality management systems, ISO 14001 for environmental management systems, OHSAS 18001 for occupational health and safety management, and the Sony Green Partner certificate, awarded by Sony's procurement group.

"We began with a good management team," says Grace. "They brought experience with international standards and trained us on world-class requirements." For each certification, Grace and her colleagues in Jilin's Environment, Health & Safety (EHS) department "organized several meetings with different departments to get suggestions and identify actions." That way, the whole company had one goal – to work together effectively and pass the audit. "We needed every employee to participate."

As Grace explains, "the ISO and OHSAS certifications have several common elements, such as management review, document control, corrective action, and the requirement for trained personnel. Achieving these certifications is a significant milestone for any company, because they show that our management has a good orientation."

The Sony Green Partner certification went exceedingly fast, requiring only two months from start to finish. They had a dedicated project team, carried out company-wide training, and updated work processes. The certificate is expected to help solidify Jilin's existing supply relationship with Sony and prepare them for new business from other customers who recognize the importance of Sony certification.

Grace highlights the OHSAS certification, which focuses on employee safety. "As the saying goes," she points out,

"safety is there only to take you home every day." It would seem that all 300 of Jilin's employees would agree with her, since they recently passed an important milestone in worker safety, reaching two million incident-free work hours. That is, their production line has worked continuously for the equivalent of two million man hours without losing any time due to worker injury.

Recognizing the outstanding effort and commitment that the two-million mark represents, the entire site celebrated with outings to scenic Songhua lake. "All our employees participated," she says. "It's important to recognize everyone at the site for their hard work, dedication, and commitment. Our success would not have been possible without this high level of professionalism."

The fundamentals of our environmental, social, and ethical standards are laid down in our Business Code of Conduct (BCC) and its directives, our Financial Code of Conduct, and our Purchasing and Supply Management Code.

# Ethics

## Implementing our code of conduct

The BCC governs all our business decisions, including finance, purchasing, and supply management, and specifies policies for a wide array of subjects, such as corporate gifts, child labor, International Labour Organization (ILO) conventions, working hours, sexual harassment, free-market competition, bribery, and the integrity of our financial reporting. A worldwide network of regional compliance officers monitors our implementation of the BCC, and we have introduced BCC training programs. We also have a clear set of BCC directives to guide our business engagements with third parties outside NXP. In 2009, we made no changes to the BCC or its directives.

We regularly inform our employees about the BCC and its contents and we have held special sessions that communicate the BCC to our legal, financial, and purchasing communities, as well as certain country managers. These sessions summarize the BCC as a whole and, depending on the audience, put special emphasis on certain directives, such as the Financial Code of Ethics and the Purchasing & Supply Management Code. We have also made the BCC a regular part of our annual Compliance Statement on Business Controls, a yearly commitment that the management of each location has to sign.

We recognize and respect the freedom of our employees to establish or associate with organizations, including labor unions. In 2009, more than 50% of our employees were covered by collective bargaining agreements. In all NXP locations, there is regular contact between management and employees on labor-related issues, and there are systems in place that let employees deal with issues and grievances without fear of reprisal, intimidation, or harassment.

Our Whistleblower Policy lets employees submit complaints, either anonymously or not, regarding violations of the BCC. In 2009, roughly 25 complaints were raised (similar to the number of complaints in 2008). All of these complaints led to investigations and have been settled. The BCC Review Committee monitors these complaints, gives updates to the NXP Board of Management and, when necessary, implements corrective actions to prevent the reoccurrence of similar complaints. At present, it is unclear whether all BCC violations have been reported properly. Some cases may have been settled locally, without the case being properly registered or reported to a compliance officer. Work on a more reliable registration system is ongoing. NXP has not found any cases within its operations involving a breach of human rights or the use of forced or child labor.

NXP expects its employees to be fully dedicated to the proper fulfillment of their jobs, and expects them to avoid any conflict between their personal or business activities and the financial interests of their job commitment. Any activity that could give rise to such a conflict, including engagement outside NXP or a financial interest (direct or indirect, such as via a family member or acquaintance), should always be promptly disclosed to the next level of management.

### Overtime

To meet delivery schedules, balance production capacity, or respond to unforeseen challenges, such as power outages, NXP's factory workers are often asked to work overtime.

We seek to balance several things in our approach to overtime, including our operational needs, the strong desire of some of our employees for overtime, current practices, and international labor laws. In most of the countries where we operate, there are legal limits for overtime. Also, the Organization for Economic Cooperation and Development (OECD)-ILO provides for a limit of 60 hours worked in a single week.

In principle, we limit factory overtime to the local legal maximum. If the ILO limit is higher than the local maximum,

we allow overtime up to the ILO limit if the situation meets three criteria. There has to be a legally acceptable business or economic reason for the overtime, management has to request the additional time, and the workers have to put in the extra hours voluntarily (as confirmed in writing by the workers themselves). Overtime hours are always compensated, in accordance with local law, with the required pay premiums or with days off.

### Key suppliers and other third parties

Since 2006, we have used the NXP Sustainability Code for Suppliers (“The Code”) to ensure that our suppliers join us in our commitment to sustainability. The Code is laid down in two documents, the NXP Supplier Declaration on Sustainability and the NXP List of Hazardous Substances in Products and Packaging.

Since 2008, the Declaration has followed the exact text of the Electronic Industry Citizenship Coalition’s (EICC) Code of Conduct, which includes statements on the supplier’s environmental record, health and safety (such as the provision of safe working conditions), and human rights. It also includes additional, NXP-specific requirements on the right to organize, collective bargaining, and environmental-management systems.

The List of Substances specifies substances that are not permitted in materials, parts, semi-finished goods, or products at levels above our established threshold. This ensures that the products we deliver to market are free of substances that are restricted by law or other regulations, including the European Union’s Restriction of Hazardous Substances (RoHS) Directive. While most substances on the List are not permitted by law, a number of them are there for our own reasons. For example, there are substances we list in anticipation of upcoming legislation, or because they limit recycling, are scarce, have a high environmental impact on mining,

can have a detrimental impact on society, or have a potential impact on health and safety.

The List also contains a number of restricted substances that are allowable in specific applications. Lead is one of these items. Its use is forbidden in all our products and processes except those exempted under the European Union Directives 2002/95/EC (RoHS) and 2000/53/EC (ELV), and their amendments. Polyvinylchloride (PVC) and PVC blends are also restricted. Their use is forbidden in all products except for some dedicated packaging solutions for which there are currently no suitable alternatives.

To address issues in the mining of metals, we support the List of Principles on the Extractive Phase of the Electronics Supply Chain published by MakeITFair. We have asked our suppliers to disclose the sources of any metals or metal parts they supply, and aim to increase the traceability of these metals down to the extractive phase. In particular, we require that any tantalum purchases do not include coltan from the Democratic Republic of Congo (DRC). We ask that our suppliers certify the information they provide us about substances in their raw materials, parts, or products. To ensure the accuracy and completeness of this information, data must be gathered using appropriate methods, such as with internal design controls, declarations, or analytical testing.

We encourage our suppliers to use a self-assessment that examines their organization’s implementation and deployment of the Declaration. The self-assessment is required for all key suppliers in countries where legislation is out of line with key conventions of the ILO. Due to reorganizations in the supply chain and, in some cases, discontinued business, the number of these suppliers changed from 27 in 2007 to 22 in 2008 and 23 in 2009. These suppliers are spread across three countries. Suppliers that have not yet completed the self-assessment because they have been recently added or

have not responded to earlier requests (one case) have been required to do so in 2010.

We perform our own audits to verify that the Declaration is indeed deployed in our suppliers’ organizations. As a minimum, subcontractors and material suppliers follow a three-year cycle. In 2009, due to business circumstances, we performed one sustainability audit in a risk country. The audit revealed no non-conformities and brought the total number of current audited suppliers in risk countries to 20, or 87% of our total (compared to 80% in 2007). We aim to achieve 100% in 2010. To improve our audit process, we have renewed the sustainability training for auditors in 2008. We have also standardized the scoring and registration of findings, and have developed follow-up rules. More information on how NXP works with suppliers can be found at [www.nxp.com/profile](http://www.nxp.com/profile).

Our commitment to ethical conduct extends to the people who design with and use our products. We’ve signed a number of agreements with several of our customers to address ethical and environment, safety, and health issues, and regularly seek opportunities to join global or industry initiatives for sustainability among our peers and suppliers.

### Product ethics

Applications such as road pricing, smart cards, smart metering, and automatic fare collection offer significant benefit to society, but can raise concerns about privacy. We have an enabling role in these applications, because we develop and provide many of the products that makes these applications possible, and are aware of the privacy concerns. Our position is that such applications should always properly respect the legal and ethical rules pertaining to the rights of the user. NXP is therefore willing to play a role in the discussions that regulate the use of data in such an application, and will look for technological improvements should they be required.

As a global organization, we strive to improve people's lives, particularly in the communities where our company operates. We emphasize education and have established programs for social investment.

# Society

We provide international sponsorships for students who want to explore the scientific world outside their home country, and offer college scholarships for students looking to specialize in particular technologies, like nanoelectronics. For higher-level pursuits, our well-established and highly respected University Relations program provides a range of opportunities, including dedicated funding for research projects. For example, we offer technology scholarships at the Technical University of Hamburg-Harburg, in Germany, and sponsor students at the Technical University Delft and Eindhoven, in the Netherlands.

Within our company, we encourage volunteerism and support our employees who participate in outreach programs during working hours. We have dedicated programs in place, such as our Community Action Teams (CATs) in the US, that connect our employees with volunteer opportunities, and we continue to explore options for future initiatives. In 2009, with their "Keep Out the Cold" campaign, NXP's US CAT teams provided blankets, coats, hats, and gloves, donated by NXP employees, to local organizations that help the less fortunate stay warm throughout the winter. In San Diego, CAT teams helped organize a charity event for a local program that

provides food-insecure school children with nutritious snacks. The event, which raised USD 750, had employees fill a piggy bank with spare change and then decorate the bank for a "best-dressed" competition.

NXP volunteers are involved in a wide variety of community-based efforts, and our sites give to a wide range of charitable organizations. Children are often the focus of these efforts. In Brazil, for instance, NXP employees regularly donate warm winter clothing to a home that cares for 41 children without families. In India, our Hyderabad site sponsored a children's drawing contest and then auctioned the drawings to raise money for their school. As another way to help students, volunteers at the NXP development center in Hamburg, Germany, invited a group of physics teachers to learn how to build mini robots so they could in turn introduce their advanced high-school students to the concepts of electronic design. The program encourages students to pursue physics and electronics as careers and has gained the attention of several schools and universities in the area.

The Christmas holidays are an especially popular time for giving, and many of our sites, including those in France,

Germany, and Brazil, collect gifts for children's organizations. This year, our offices in France expanded their Christmas efforts by collecting clothes and perishable food for the Red Cross and donating desks and computers that helped the organization work through the busy holiday season. In Hungary, as part of their Christmas donations to a local orphanage, our site in Budapest scheduled a night of entertainment for the children, complete with NXP employees playing instruments and leading songs. Our French sites collected clothes and perishable food for the Red Cross and donated office equipment to the organization to help keep it running during the busy holiday season.

Several sites around the world have donated used computer equipment to local schools and charities. In the Netherlands, we support Close the Gap, an organization that helps bridge the digital gap between the West and developing countries by offering communities access to much-needed information and communications equipment. As part of our pledge to donate two-thirds of the superfluous PCs from our Netherlands offices to the organization, Close the Gap has received 600 PCs from us since 2008. The remaining PCs are donated locally, to institutes in Nijmegen and Eindhoven.



In Germany, NXP Munich disposed of outdated notebook computers in a different way – they sold them to interested buyers and donated the resulting EUR 3,100 (USD 4,215) to Kinderhaus AtemReich (the Children's Respiratory Empire), a foundation that assists small children who need medical equipment to breathe.

The NXP crew was the second largest in the competition, totaling 131 cyclists, and took first place by logging 343,367 kilometers (213,358 miles) – and thus preventing more than 68 tons of CO<sub>2</sub> emissions. As part of the initiative, NXP also donated funds, based on distance cycled, to sustainable development projects run by Oxfam-Novib partners in the Third World.

## Improving people's lives

Many of our sites raise funds for charity through athletic events. Our Hazel Grove site in the UK, for example, assembled a team of riders to participate in a 60-mile (96.5-km) charity bike race from Manchester to Blackpool. For the second year in a row, the NXP team rode for Christie's, an organization that raises money for one of Europe's largest cancer-treatment centers. The team consisted of 130 riders (nearly 25% of the site's employees), with a fundraising target of GBP 10,000 (USD 15,280). Similarly, in the Netherlands, an employee who is also a fan of ice hockey organized a benefit game that collected EUR 11,000 (USD 16,525) for the children's cancer wards of two Dutch hospitals.

In Germany, employees were encouraged to participate in a community-based contest that has people use a bike, instead of a car, to commute to work. NXP helped employees get their bikes in riding condition by making a team of mechanics available onsite. The mechanics were from a local group associated with a charitable organization, dedicated to helping disabled and disadvantaged people, that NXP also supports. In the Netherlands, NXP supported employees who participated in the COS Netherlands Cycling Scores initiative, a program that encourages people to use their bikes for transportation.

To promote innovative "green" solutions and support development of alternative energies, NXP donated microcontrollers and engineering expertise to the 2009 World Solar Challenge. The Challenge, which is held every two years and involves engineering students from 17 countries, has teams build a solar-powered car and race it 1,864 miles (3,000 km) across Australia. NXP supplied a group from the Delft University of Technology, called the Nuon Solar Team, and a team from Stanford University in California. The Nuon team finished second overall.

Several of our sites set aside time to raise awareness of sustainability topics such as energy conservation, healthy living, and ways to keep safe. In France, our sites dedicated an entire week to sustainability, with a series of events that included screenings of Al Gore's movie "An Inconvenient Truth" (which discusses global warming), demos of electrically assisted bicycles, and an exhibition highlighting the results of NXP France's various sustainability activities.

In Austria, nearly a dozen NXP managers participated in Brückenschlag (Bridging the Gap), a personal-development program that has managers from local businesses undertake

five-day placements in social institutions or other non-profit organizations in order to broaden their horizons, improve their social skills, and deepen their understanding of society as a whole. The program exposed NXP managers to the issues and challenges faced by people who work with drug addicts, the mentally ill, the poor, and displaced youth.

Participants claim that the experience is extremely positive and enriching and encourages closer networking of the economic and social sector.

Details on these and other social initiatives are provided in the online version of this report ([www.nxp.com/profile/corporate](http://www.nxp.com/profile/corporate)).



Making a difference  
**Small steps build big results**

Zsófia Vérten and her colleagues in Budapest have seen that little things can lead to big results. What started as a few casual conversations at lunchtime has become an organized, management-supported approach to community service.

## **Zsófia Vérten** | *Customer Service, Budapest, Hungary*

"I really believe that small actions add up," says Zsófia, "and that good examples encourage people to do more." She puts those beliefs into practice, with regular charity work that includes volunteering at a local hospital to play with children undergoing treatment.

She found that many of her coworkers shared her point of view and liked the idea of working together to improve their community, but weren't sure how to start. "In Hungary, companies aren't really used to these ideas," she explains. But NXP was different. "We made some suggestions to management and got a positive reaction. Our ideas found a home."

Zsófia formed an employee board that meets monthly to "brainstorm, discuss ideas, share, motivate, initiate. It's a great employee forum and opens a new communication channel with our management."

Based on employee suggestions, they began by making their office a greener place to work. They started sorting their trash and replaced plastic drinking cups with glass ones that can be reused. "Once our ideas got flowing, and more people heard what we were doing, more people wanted to participate," she says.

Some planted trees along the street near the office, others participated in a UNICEF-sponsored program to donate coins that would soon be discontinued. With management's support, the office now submits the company's old mobile phones for recycling, and employees are encouraged to join a government-initiated "Bike to Work" competition.

At Christmas, when Zsófia and her colleagues proposed arranging an evening at an orphanage, the response was overwhelming. Nearly everyone donated something – clothing, toys, candy – and a few employees with musical talent offered

to play guitar and sing with the children. "We just asked around, and people volunteered," says Zsófia. "It was unforgettable."

The biggest undertaking to date was the renovation of a local kindergarten. Roughly 100 people helped paint playground equipment, repair fences, and improve the garden. "The kid's eyes weren't the only ones sparkling – the volunteers really enjoyed themselves and felt a part of something."

For Zsófia, volunteering with coworkers generates a sense of accomplishment and builds teamwork. "It's nice to socialize with colleagues after work, but this has added meaning. Helping the community helps strengthen our own team."

# How we manage sustainability

In this section, we give our basic approach to sustainability as a concept and describe how we make sustainability a fundamental part of our operations. When we established ourselves as an independent company, we embedded sustainability into our processes and the overall structure of our organization. Moving forward, we have retained our deep commitment to sustainability and have continued to refine our approach. At the management level, our Sustainability Board and its operational arm, the Sustainability Office, guide our sustainability activities. Our Sustainability Policy is fully endorsed by our Management Team, as is our near-term Sustainability Plan. The near-term plan identifies four focus

areas – global warming, green products, social engagement, and employees – and sets specific targets to be reached by 2010. It also includes detailed targets for our EcoVision and Health & Safety programs.

This section also provides a broader view of who we are as a company. We discuss our approach to risk management, and highlight our primary areas of business. We outline our governance structure, define our reporting standards, and summarize the many ways we address the stakeholder community.

## NXP's worldwide leadership positions include:

### Automotive

- ▶ #1 in CAN/LIN/FlexRay in-vehicle networking
- ▶ #1 in passive keyless entry and immobilizers
- ▶ #1 in car entertainment
- ▶ #3 in magnetic sensors

### Identification

- ▶ #1 in eGovernment
- ▶ #1 in transport and access management
- ▶ #1 in NFC
- ▶ #1 in radio frequency identification (RFID)
- ▶ #3/4 in banking

### Wireless infrastructure, lighting and industrial

- ▶ #2 in High Performance RF
- ▶ Strong in lighting drivers
- ▶ A leader in multi-market 32-bit ARM microcontrollers

### Mobile, consumer, and computing

- ▶ #1 in TV and set-top box (STB) silicon tuners
- ▶ #1 in mobile speakers and receivers
- ▶ Top 3 player in interface, leader in specific niches
- ▶ #2 in digital logic
- ▶ A leader in notebook AC/DC power adaptors

### Standard products

- ▶ #1 in speakers and receivers for mobile phone handsets
- ▶ A strong supplier of integrated discretes and modules, which are used for interface signal conditioning, filtering, and ESD protection in consumer and computing applications and mobile phones
- ▶ #2 supplier of small-signal discretes, with one of the broadest product portfolios in the industry

### NXP Software

- ▶ Independent software vendor (ISV) for mobile multimedia software solutions
- ▶ More than 650 million devices use LifeVibes™ software

Taking risks is an important part of remaining entrepreneurial and succeeding in business, but, at the same time, it's crucial that we manage our exposure to risks to ensure sustainable growth.

# Our business risks and opportunities

We believe adequate corporate governance based on solid internal control and high ethical standards is critical to our success. We use internal, risk-based operational audits, inspections of financial reporting controls, and compliance audits to ensure the quality of our policies and principles for risk management and business control. An overview of our approach to risk management, including a detailed description of the nature and extent of our risk exposure, is given in the NXP Annual Report 2009 ([www.nxp.com/investor](http://www.nxp.com/investor)).

We recognize there are many different kinds of risk. For example, the success of our long-term partnerships and our ability to protect our intellectual property can affect our strategic direction. Also, unexpected developments resulting from internal processes, people, or systems can impact the actual running of our business. Similarly, failures to follow appropriate guidelines could, among other things,

negatively impact the reliability of our financial reporting, and failure to comply with relevant laws could seriously hamper our operations. We use specific policies and procedures to address issues within each risk category.

To address potential risks with our suppliers, our Sustainability Office and our Supply Chain Management Team have established a Supplier Declaration of Sustainability. Based on the Electronic Industry Citizenship Coalition's (EICC) Code of Conduct, it includes statements about environmental practices and their record on labor safety. We verify conformance by using audit methods based on international standards. In general, we have found that our suppliers have rules and procedures that meet our sustainability standards. Our audits have uncovered issues regarding working hours and meeting our environmental standards, but these issues have been corrected. More on how we work with our

suppliers and subcontractors can be found at [www.nxp.com/profile/corporate/sustainability/suppliers/sustainability](http://www.nxp.com/profile/corporate/sustainability/suppliers/sustainability).

Normal fluctuations in the semiconductor industry can make it difficult for the company to meet short-term goals. To compensate for these fluctuations and identify trends, we establish four-year sustainability plans that include longer-term targets for Environment and Health & Safety.

As the semiconductor industry matures, consolidation has become a regular part of business. To remain competitive, we must add activities that strengthen our position and need to exit those areas where we don't play a leading role. This ongoing process of transformation can present challenges as we continue to align with and meet our overall sustainability targets.

## Opportunities in ESH

For some time, the semiconductor industry has recognized the importance of being proactive in protecting the environment, and NXP supports these efforts. Our opportunities lie in designing products that help solve societal problems, and in developing and manufacturing products with the lowest environmental impact. That way, we can remain competitive while contributing to a better world and at the same time meeting national and regional environmental requirements.

We believe that when environmental, safety, and health (ESH) laws and regulations are necessary, they should be technologically feasible, coordinated, and effective in achieving environmental protection. We take a proactive role in helping define these regulations and are currently involved in several such projects.

As a company that operates globally, we're subject to regional laws and regulations covering ESH issues. These issues include emissions of pollutants to the air, wastewater discharges, the use and handling of hazardous substances, waste disposal, the investigation and remediation of soil and groundwater contamination, and employee health and safety. For some of our operations, we are also required to obtain environmental permits and other authorizations or licenses from governmental authorities. If we violate or fail to comply with any of these laws or regulations, we run the risk of being fined or otherwise sanctioned by regulators. We track these requirements and did not receive any significant fines or sanctions in 2009.

Climate change poses regulatory and physical risks that could impact our business. For example, government regulations that limit or prohibit the use of certain substances could increase our manufacturing costs. Similarly, our costs could go up if utility companies increase

their rates based on carbon taxes or if we become part of emission cap-and-trade programs.

## Anti-counterfeiting efforts

Counterfeit products are a serious problem in the semiconductor industry. Estimates show that up to 10% of technology products and up to 7% of semiconductors sold may be counterfeit.

To help contain this unlawful practice, it's important to stay one step ahead of counterfeiters. That means implementing best practices, such as designing security measures into product technology and packaging, having secure supply chains, and educating people on issues related to counterfeiting. To address this issue head on, NXP has appointed an Anti-Counterfeiting Team to update and implement our strategy.

The strategy has three distinct elements: prevent, protect, and pursue. This covers taking actions to ensure our ICs and technologies are not compromised by counterfeiters, and providing employees, end users, and channel partners with recommendations for protecting our brand identity. In the event we determine our products are being counterfeited or otherwise misappropriated, we will take necessary measures to stop the activity, including working with all law enforcement and customs agencies towards criminal prosecution. We have already successfully dealt with several such cases.

## Trade compliance

The current political and economic climate has sharpened the focus on compliance. Export controls, supply-chain security, and customs are subject to increased attention from authorities. We believe that the continued threat of

global terrorism requires companies to secure assets as they move through the supply chain. We also believe that the right way to strengthen overall supply-chain security involves a cooperative approach as outlined by the Authorized Economic Operator (AEO) and the Customs-Trade Partnership Against Terrorism (C-TPAT) programs. NXP is certified for both programs and plans to join similar programs in other regions. To deal with the variety and complexity of export-control regulations in a consistent, efficient way, NXP operates a company-wide System on Export Controls, which incorporates all applicable national and international laws and embargoes. Following this framework is mandatory for everyone in the company.

Import/export regulations have a significant impact on cross-border trade. The variety, complexity, and volatility of these regulations pose a major challenge for our company. Having a solid framework of compliance is a prerequisite for staying in business. Our business partners require us to have compliance programs in place, and we ask the same of our suppliers. The NXP Corporate Trade Compliance (CTC) group offers clear guidance on the NXP System on Export Controls, NXP standards, and customs regulations. The CTC also ensures that all NXP businesses can understand the environment in which they operate, comprehend all the applicable customs requirements, and implement them.

Every NXP location housing NXP employees, resources, assets, goods, or materials is physically secure to limit access to authorized personnel only. The NXP Security Standards document provides the security and process requirements and guidelines necessary for successful implementation of NXP's Supply Chain Security (SCS) policy.

With net sales of USD 3,843 million in 2009, we are a global semiconductor company and a large and long-standing supplier in the industry, with over 50 years of innovation and operating history.

# Our organization

Our company was created on September 29, 2006, when the Royal Philips Group sold the Product Division Philips Semiconductors and its related software-development activities. The company is now a separate legal entity, owned by a consortium of private investment companies (Kohlberg, Kravis Roberts and Co., Bain Capital, Silver Lake Management Company, Apax Partners Europe Managers, AlInvest Partners, and others), and Royal Philips Electronics.

In April 2010, NXP B.V. announced that its holding company, which will be converted into a public company and named NXP Semiconductors N.V., has filed a registration statement with the Securities and Exchange Commission in the United States for a potential initial public offering (IPO) of its common stock. The number of shares to be sold and the price range for the proposed offering have not yet been determined.

In the short time that we have been operating independently, we have gained strong brand recognition worldwide. We support our success with several important alliances and partnerships that help us pursue our business goals.

In 2009, we continued to execute on our company redesign, as part of our goal of achieving industry benchmarks in process, cost, quality, and operational excellence. In response to the expanded and continuing adverse market conditions in the first half of 2009, we took steps to accelerate certain aspects of the Redesign Program and expanded it to include new restructuring initiatives. The program is ahead of schedule. In the course of 2011, we expect to realize savings in excess of USD 650 million, compared to the original target of saving USD 550 million by the end of 2010. The costs for the Redesign Program are now estimated to be no more than USD 750 million by the end of 2011, as opposed to the USD 700 million previously estimated by the end of 2010. USD 433 million of these costs have been paid out through the end of 2009.

As part of the Redesign Program, we ceased our Fishkill, New York operations in July 2009, after an unsuccessful search for a suitable buyer. We sold parts of our Caen, France operations in May 2009, launching a new company backed by NXP and the French government. The new company, established in June 2009 and called IPDIA, will mainly produce LED bases and integrated passive devices.

We are on track with our programs for transferring products and process technology from our wafer fab in Hamburg and our ICN5 facility in Nijmegen to our other, remaining wafer fabs.

The Redesign Program has been expanded to include the employee-termination costs relating to the Trident Microsystems deal, which combined our TV systems and set-top box business lines as of February 8, 2010. We have also expanded the Redesign Program to include the closing of an additional wafer fab, our ICN6 facility in Nijmegen, which is scheduled for early 2011.

Excluding mergers and divestments, our Redesign Program has impacted about 5,000 employees, who left the company in 2008 and 2009.

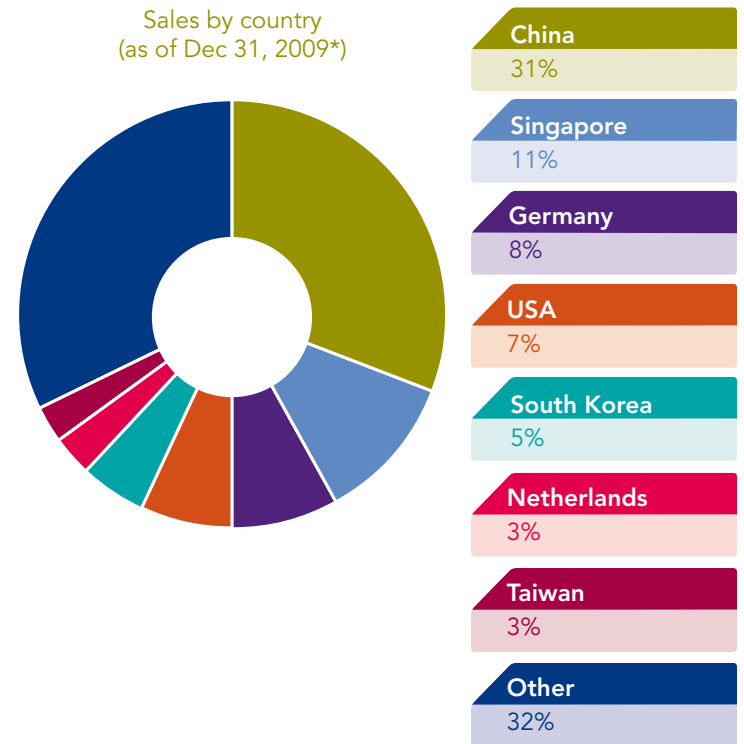
Further details on the Redesign Program and its restructuring can be found in the NXP Annual Report 2009 ([www.nxp.com/investor](http://www.nxp.com/investor)).



<b>Established</b>	2006 (formerly a division of Philips) 50+ years of experience in semiconductors
<b>Headquarters</b>	Eindhoven, the Netherlands
<b>President &amp; CEO</b>	Rick Clemmer
<b>Net sales</b>	USD 3.8 billion in 2009
<b>R&amp;D</b>	<ul style="list-style-type: none"> <li>▶ Focused investment of about USD 600 million per year in R&amp;D</li> <li>▶ Approximately 3,200 employees in R&amp;D, of which over 2,600 support our High Performance Mixed Signal businesses</li> <li>▶ Engineering design teams in 23 locations</li> <li>▶ ~14,000 issued and pending patents</li> </ul>
<b>Employees</b>	Approximately 28,000 people at the end of 2009 in more than 25 countries
<b>Manufacturing facilities</b>	16 manufacturing sites in 2009
<b>Joint ventures and other major participations*</b>	60% share in Trident Microsystems Inc. 55% share in NuTune (JV with Thomson) 61% share in Systems on Silicon Manufacturing Company Pte.Ltd. 60% share in Jilin NXP Semiconductors Ltd. 40% share in Suzhou ASEN Semiconductors Co.Ltd. 27% share in Advanced Semiconductor Manufacturing Corporation Limited 10% share in Virage Logic Corporation
<b>Customers</b>	Leading Original Equipment Manufacturers (OEMs) worldwide

\* Some of these holdings are rounded.

Sales by country  
(as of Dec 31, 2009\*)



### **Markets, applications, and products**

We sell two categories of products. The first category, High Performance Mixed Signal product solutions, consists of highly differentiated application-specific High Performance Mixed Signal semiconductors and system solutions. The second of our product categories, Standard Products, consists of devices that can be incorporated into many different types of electronics equipment and that are typically sold to a wide variety of customers, both directly and through distributors.

### **High Performance Mixed Signal**

We focus on developing products and system and sub-system solutions that are innovative and allow our customers to bring their end products to market more quickly. Our products, particularly our application system and sub-system solutions, help our customers design critical parts of their end products and thus help many of them differentiate themselves based on feature performance, advanced functionality, cost, or time-to-market. We leverage our technical expertise in the areas of radio frequency (RF) communications, analog, power management, interface, security technologies, and digital processing across our priority applications markets. Our strong RF capabilities are utilized in our high-performance RF for wireless infrastructure and industrial applications, television tuners, car security, and entertainment products, as well as our contactless identification products. Our power technologies and capabilities are applied in our lighting products, AC-DC power conversion, and audio power

products, while our ability to design ultra-low power semiconductors is used in a wide range of our products, including our consumer, mobile, identification, and healthcare products, as well as our microcontrollers. Our high-speed interface design skills are applied in our interface products business, and also in our high-speed data converter and satellite outdoor unit products. Security solutions are used in our identification, microcontroller, telematics, and smart-metering products and solutions. Finally, our digital-processing capabilities are used in our automotive digital signal processors (DSPs), the products leveraging our Coolflux ultra-low-power DSPs, such as our mobile audio and hearing aid business, and our microcontroller-based products. In addition, digital processing knowledge is required to design High Performance Mixed Signal solutions that leverage other suppliers and digital processing products. We focus on developing High Performance Mixed Signal solutions for automotive, identification, wireless infrastructure, lighting, industrial, mobile, consumer, and computing applications.

### **Standard Products**

Our Standard Products business supplies a broad range of standard semiconductor components, such as small-signal discretes, power discretes, and integrated discretes, and mobile-device speakers and receivers, which we largely produce in dedicated in-house high-volume manufacturing operations. Our small-signal and power discretes businesses offer a broad portfolio of standard products, using widely-

known production techniques, with characteristics that are largely standardized throughout the industry. Our Standard Products are often sold as separate components, but in many cases, are used in conjunction with our High Performance Mixed Signal solutions, often within the same subsystems. Our products are sold both directly to Original Equipment Manufacturers (OEMs) as well as through distribution, and are primarily differentiated on cost, packaging type, and miniaturization, as well as supply-chain performance. Alternatively, our sound solutions and integrated discretes businesses offer “design-in” products, which require significant engineering effort to be designed into an application solution.

### **NXP Software**

Our activities in NXP Software and Intellectual Property (IP) Licensing are reported separately from our other businesses. NXP Software, a fully independent software vendor, is a leading provider of innovative multimedia software solutions that help manufacturers of mobile devices deliver vibrant, easy-to enjoy multimedia experiences with outstanding performance based on industry standards. NXP Software is a member of the NXP Partner Program for software, systems, and design, so customers have direct access to their industry-leading LifeVibes applications and products. Our LifeVibes software has been incorporated into over 650 million mobile devices produced by the world’s leading manufacturers.

### Acquisitions and divestments

In early 2009, the DSP Group (DSPG) repurchased the 16% outstanding common stock of DSPG, at the time held by NXP, which was obtained in 2007 following the divestment of our Cordless & VoIP Terminal operations.

In February 2009, STMicroelectronics and Ericsson announced the closing of their agreement to merge Ericsson Mobile Platforms and ST-NXP Wireless into a 50/50 joint venture. To start this joint venture, STMicroelectronics purchased NXP's 20% stake in ST-NXP Wireless, which was created in August 2008 by merging the wireless communication businesses of STMicroelectronics and NXP.

On November 16, 2009, we completed our strategic alliance with Virage Logic Corporation and obtained approximately 9.8% of their outstanding common stock. This transaction included the transfer of our Advanced CMOS Semiconductor Horizontal IP Technology and Development Team, in exchange for the rights to use Virage's intellectual property and services. Virage Logic is a leading provider of both functional and physical semiconductor intellectual property for the design of complex integrated circuits.

On October 5, 2009, we signed an agreement to sell the TV systems and set-top-box business lines, which were included in our business segment Home, to Trident Microsystems, Inc. This transaction was completed on February 8, 2010.

### How our manufacturing facilities worldwide comply with environmental (ISO 14001) and health and safety (OHSAS 18001) standards in 2009



Wafer fabs	ISO 14001	OHSAS 18001
Caen, France*	Yes	Yes
Fishkill, USA**	Yes	Yes
Hamburg, Germany	Yes	Yes
Nijmegen, the Netherlands	Yes	Yes
SMMC, Singapore	Yes	Yes
Jilin JNSC, China	Yes	Yes
Hazel Grove, UK	Yes	Yes

\* Our Caen site was sold in June 2009  
 \*\* The Fishkill site closed in July 2009

Test and Assembly	ISO 14001	OHSAS 18001
Bangkok, Thailand	Yes	Yes
Cabuyao, Philippines	Yes	Yes
Kaohsiung, Taiwan	Yes	Yes
Beijing, China	Yes	Yes
NuTune, Indonesia	Yes	Yes
Vienna, Austria	Yes	Yes
Guangdong, China	Yes	Yes
Hong Kong, China	Yes	Yes
Seremban, Malaysia	Yes	Yes

We now own approximately 60% of the outstanding common stock of Trident. As a result of the terms and conditions agreed between the parties, NXP will only retain a 30% voting interest in participatory rights and a 60% voting interest for protective rights only. NXP will account for its investment in Trident under the equity method.

### Alliances, joint ventures, and partnerships

To support our development and manufacturing activities, we participate in a number of alliances, joint ventures, and partnerships that bring us a variety of benefits. They help speed development, reduce time-to-market, and give us access to a greater variety of technologies. They also support our asset-light strategy, since they let us reduce fixed costs and let us share R&D expenses with third parties.

NXP has a roughly 60% interest in two front-end facilities, Jilin NXP Semiconductors Ltd. (JNS), and Systems on Silicon Manufacturing Co. Pte. Ltd. (SSMC). We also have a 27% share in Advanced Semiconductor Manufacturing Ltd. (ASMC), a joint venture with several Chinese partners that operates three wafer fabs.

In 2008, we combined the operations for our can tuner modules with those of Thomson. The resulting joint venture, named NuTune, is 55% owned by NXP, with the remaining 45% owned by Thomson.

The recently formed partnerships with Trident (2009) and Virage (2010) extended our alliances.

### Software partnerships

Software plays a critical role, in terms of innovation and quality, in differentiating devices and services. We augment our own multimedia software activities at NXP Software by leveraging mutually beneficial partnerships with third-party hardware and software companies. These partnerships ensure optimum flexibility, ease of integration, and interoperability between the hardware and software platforms, and let us quickly translate innovative ideas into highly differentiated consumer products.

### Certifications

Our current EcoVision target for ISO 14001 certification is to have 100% of all industrial activities certified by 2010. We met this target in 2007. Similarly, for Health & Safety, our current target for OHSAS 18001 certification is to have 100% of all industrial activities certified by 2010. We met this target in 2009, when our wafer fab in Nijmegen received OHSAS 18001 certification.

In 2007, we introduced a company-wide ISO 9001 quality management system named the One Management System. It provides an integrated approach to our work and puts into practice the so-called Highway to the Customer. It is

a top-down system, covered by a single certificate issued by Kema in December 2007, and includes a company-wide business manual and one process implementation. As a result, all our procedures are connected and our entire organization is covered by one audit plan. In 2008, we emphasized process management and converted from site-based ISO/TS16949 certification to an integrated corporate scheme. The first certificate was issued to Hamburg in February 2009. We have continued the program, introducing a sustaining organization that makes the One Management System even stronger. Kema completed the initial corporate auditing scheme for ISO/TS16949 in 2009 and all certificates have now been issued under the corporate scheme.

# Awards received

In 2009, various NXP sites and NXP people were recognized for their achievements. The following is a partial list; details are given in the online version of this report ([www.nxp.com/profile/corporate](http://www.nxp.com/profile/corporate)).

- ▶ NXP in China: 2009 Golden Supplier Award from Huawei
- ▶ NXP in China: Outstanding supplier award from Yanfeng Visteon Trim
- ▶ NXP in China: Three EDN Innovation Awards
- ▶ NXP in France: Best student paper for Pierre Guyot at Microwave National Days
- ▶ NXP in France: The Jean-Pierre Noblanc prize for Caen BLAZE project
- ▶ NXP in Germany: Best Customer Support Award from Huawei
- ▶ NXP in Hungary: Mitsubishi Electric Digital Television: Outstanding Supplier
- ▶ NXP in Hungary: Sanmina-SCI Outstanding Performance Award
- ▶ NXP in the Netherlands: Roelof Salters awarded Dutch Royal Honour "Officer in the Order of Orange -Nassau" for his contribution to the development of memory ICs
- ▶ NXP R&D: ICCE 2009 Best Paper Award
- ▶ NXP in Taiwan: 2009 Best Partner Awards from Gigabyte
- ▶ NXP in Taiwan: Best Partner Award from ASUSTek
- ▶ NXP in the UK: National Micro Electronics Institute (NMI) Annual Awards 2009: Outstanding Innovation (PNX85500) and Young Engineer of the Year (Anna Gilbert)
- ▶ NXP in the USA: the JEDEC Technical Recognition Award to Paul Melville, for his significant role in projects involving moisture sensitivity, solderability, and tin-whisker testing
- ▶ NXP: "Outstanding Performance" Supplier Award from Sanmina-SCI Corporation
- ▶ Sound Solutions, Vienna, Austria: The Golden Cross of Honor for Economic and Humanitarian Effort (das goldene Ehrenkreuz für Verdienste der Wirtschaft und Humanitäres) to Franz Obenhaus
- ▶ Sound Solutions, Vienna, Austria: special award for its customer focus as part of the European Foundation for Quality Management (EFQM) Excellence Award
- ▶ Sound Solutions, Vienna, Austria: Vienna Environmental Award 2009



Making a difference  
**Award-winning efforts**

For Yat Fung "YF" Chow, helping employees and contributing to the local community makes good business sense. But it's also nice when those efforts start winning awards.

## Yat Fung "YF" Chow | *Facilities Management, Hong Kong*

NXP's Hong Kong site, a facility with about 1,000 people in manufacturing, sales, and development, has a longstanding commitment to employee Health & Safety issues and to supporting the local community.

The organization has been ISO 14001 certified since 1997, OHSAS 18001 certified since 2003, and is active in programs sponsored by the Hong Kong Occupational Health & Safety Council. The site also participates in a long list of charitable activities each year.

YF Chow, who has been with NXP for more than 30 years and chairs the Hong Kong facility's Health & Safety Committee, sees all this as an essential part of doing business. "By promoting our corporate image and fostering our reputation in society, we demonstrate that NXP is a company that cares about its employees and the community," he says.

"It shows that NXP is committed to being a responsible part of society, and that's good for business."

It's an approach that has helped everyone involved, and, in recent years, has started winning awards.

Since 2002, NXP has earned the WasteWi\$e logo, a symbol of the Hong Kong Awards for Environmental Excellence. The site has consistently met targets by purchasing recycled paper and printer cartridges, and by reducing or recycling materials used in the office and production, such as paper, moulding residues, and production packing materials.

Since 2006, the site has also earned the CaringCompany logo from the Hong Kong Council of Social Services, showing that the Council has verified and evaluated the site's charitable activities.

In 2009, St. James Settlement, a diversified charity organization, presented NXP with a certificate of appreciation, thanking them for their many years of support.

The charitable activities that YF likes most are those that employees can share with their families. He particularly enjoyed the Walk for Millions event, a fundraiser for Hong Kong's Community Chest organization that involved nearly 30,000 people walking across the landmark Stonecutters Bridge. Having his wife and two children by his side on the walk made the event especially memorable.

YF also notes the personal satisfaction that comes from committee work, which exposes him to experts and ambassadors from other companies. "We may be from different companies with different cultures," he says, "but we can learn from each other."

We use certified management systems to ensure that our sustainability reporting activities are conducted regularly and in line with industry norms.

# Our governance structure

## Management Team



Note: Excludes JVs



# and reporting standards

We issue our sustainability report once a year and use the Global Reporting Initiative (GRI) guidelines as the main reference for content. This sustainability report includes the total of consolidated activities described in the NXP Annual Report 2009 ([www.nxp.com/investor](http://www.nxp.com/investor)), and omits entities in which we have a non-controlling stake (less than 50% of the voting rights).

## Governance structure

We use a two-tier corporate structure under Dutch law. This consists of our Board of Management, which is embedded in the Management Team, and our Supervisory Board. Under the chairmanship of the Chief Executive Officer (CEO), our Board of Management is entrusted with the general management of the NXP Group. This includes setting strategies and defining policies, aimed at achieving the NXP's Group's objectives and results, that are deployed by the Management Team.

The Management Team consists of members of the Board of Management plus heads of NXP's business segments,

core processes, and support functions. Those members of the Management Team who do not sit on the Board of Management report to and are appointed and dismissed by the Board of Management, and hold office until they are removed or replaced by the Board of Management. Members of the Board of Management are appointed and dismissed by the General Meeting of Shareholders, upon proposal of the Supervisory Board, and are accountable to the Supervisory Board and the General Meeting of Shareholders. Major decisions of the Board of Management require the approval of the Supervisory Board, including decisions relating to NXP Group's operational and financial objectives, and the strategies it uses to achieve those objectives.

The Supervisory Board does several things. It supervises the policies of the Board of Management and oversees the general course of the NXP Group's affairs. It also advises the Executive Management on these same issues. In the two-tier corporate structure, the Supervisory Board is a separate body, independent of the Board of Management. Acting in our interests and those of the NXP Group, the Supervisory Board

takes several things into account, including the interests of the Company's stakeholders. The Supervisory Board also supervises and advises the Board of Management as it performs management tasks, and sets the direction of the NXP Group's business, including achievement of our objectives, our corporate strategy and the risks inherent in the business activities, the structure and operation of the internal risk-management and control systems, the financial reporting process, and compliance with legislation and regulations. Major management decisions and the NXP Group's strategy are discussed with and approved by the Supervisory Board.

The Supervisory Board also determines the remuneration of individual members of the Board of Management, within the established remuneration policy.

The Supervisory Board retains overall responsibility while assigning certain of its tasks to three permanent committees: the Operating Committee, the Nominating and Compensation Committee, and the Audit Committee.

The Supervisory Board consists of Sir Peter Bonfield (Chairman), Johannes P. Huth, Nicolas Cattelain (who became a member of the Supervisory Board in February, 2010, replacing Adam H. Clammer), Michel Plantevin, Ian Loring, Egon Durban, Richard Wilson, and Eric Coutinho. The Supervisory Board met ten times in 2009, compared to ten times in 2008 and five times in 2007. Present at the meetings were members of the Board of Management and, if requested, members of the Management Team. The Supervisory Board passed several resolutions, taking into account advice it received from the Board of Management on the direction of the company. In addition to the regularly scheduled meetings, members of the Supervisory Board had regular contact with the CEO and other members of the Board of Management.

Sustainability has been assigned as one of the responsibilities of the Executive Vice President Operations. The Sustainability Board establishes strategy and sets targets for sustainability, while the Sustainability Office performs operational functions. These include managing environmental, health, and safety conditions, overseeing the management of chemicals, monitoring and controlling data, supporting customers and contracts, coordinating social investment, liaising with industry associations, and delivering internal and external communications on sustainability, including the annual Sustainability Report.

Our Business Code of Conduct (BCC) specifies the rules of behavior that we, as individuals and as an organization, commit to. The BCC states that we are dedicated to being a responsible social partner and to working in a way that is

economically, socially, and ethically sustainable. The BCC Review Board maintains the BCC, proposing revisions and managing the processes related to its implementation.

Our Risk and Safety Board is, among other things, responsible for standards, policies, and improvement plans that relate to risk and health and safety. It is supported by our Insurance and Risk Management Department, our Business Continuity Management Office, and our Environment, Safety & Health (ESH) Councils, which consists of senior ESH managers from our worldwide sites and the Sustainability Office.

### Management changes

Richard Clemmer succeeded Frans van Houten as President & CEO in January 2009. Marc de Jong, General Manager of the Automotive & Identification Business left NXP in March 2009. Ruediger Stroh joined NXP as General Manager of the Identification Business in May 2009. Christos Lagomichos, General Manager of the Home Business, left the Management Team of NXP to become President of Trident Microsystems, Inc. In October 2009, NXP extended the Management Team with the appointments of Kurt Sievers as General Manager for the Automotive Business and Frans Scheper as General Manager for the Standard Products Business. For more on the NXP Management Team, including individual profiles, go to [www.nxp.com/profile/management](http://www.nxp.com/profile/management).

### Reporting standards

We use our EcoVision monitoring systems to gauge our performance in ESH categories. Our Reporting Manuals

contain reporting instructions for these systems, including definitions, procedures, and calculation methods. Our reference year is 2006, when we separated from Philips.

In 2006, environmental data was reported and validated by the Sustainability Office half yearly. From 2007 on, it has been reported quarterly and validated every six months. Data is reported on every manufacturing facility that a) we own, rent, or leases and manage, b) has 50 or more people working in production, and c) is consolidated for our financial reporting.

To make the structure of reporting organizations in the previous year comparable with that of the current year, we include the previous year's data for new reporting organizations but don't include data for reporting organizations that were divested in the current year unless, as in some cases, the data from the divested organization is too deeply embedded with other data to be subtracted. We note these special cases and will extract the extra data when it can be reliably removed from the current and previous years. For reporting organizations that were closed as part of an efficiency operation in which production was transferred to another NXP reporting organization, we include the previous year's data so the data for overall NXP activities remains comparable. Due to reporting obligations we have as part of voluntary agreements, PFC data always includes all current and previous reporting organizations. In 2009, 16 sites met the above criteria and collected environmental data that was validated by the Sustainability Office.

Health & Safety data is reported monthly and validated by the Sustainability Office twice yearly. Within a current reporting year, data for new reporting organizations is added to the totals in the first quarter the information is consolidated, and data for divested reporting organizations is subtracted from the totals in the first quarter the information is deconsolidated.

In previous years, data reported covered 95% of our full-time equivalents (FTEs), including employees in sites where we have a minority share. We raised that number in 2009 to cover 99% of FTEs. We did this by upgrading existing registration systems and evaluating ways to address the non-registration of temporary FTEs. We aim for 100% coverage.

When a relevant indicator is not covered by an existing system, we've used local systems and questionnaires to gather data. While we're confident that the resulting data is reliable overall, we recognize that there is some degree of uncertainty due to the limitations of our methods. Where these uncertainties are significant, we have noted them. We conducted several internal data audits and validation checks for EcoVision and Health & Safety in 2009. In a few cases, these audits and checks have led to small changes in the reported 2006, 2007, and 2008 figures.

Since 2007, demographics data has been collected through a new module in the Health & Safety reporting database that included over 99% of our employees in 2009. Although the data did not differ significantly from the data gathered by earlier collection methods, we now have a means for validating the reported figures.

In 2009, NXP closed the Fishkill site in the US. Since production from the site was transferred to other NXP sites or discontinued, the site's historical environmental data is included in this report. The Caen site in France was divested in 2009, so the 2009 and the historical environmental data have been excluded from the report. Health & Safety data include the Fishkill and Caen figures up to the actual closure and divestment.

We divested the Calamba site in the Philippines in 2008, but, due to limitations in reporting, we included the site's environmental data in our 2008 report. In this 2009 report, for purposes of comparison, data for 2008 and earlier years has been excluded.

NuTune, the NXP/Thompson joint venture for can tuners, was established in September 2008. From that date onwards, the Health & Safety numbers include data from the combined operations. In previous reports, only environmental data for the NXP part of NuTune was included. In this 2009 report, the environmental data for the complete joint venture, along with historical data, has been adjusted for the purposes of comparison.

The Health & Safety numbers for 2009 reflect the incremental changes related to the Trident and Virage Logic deals. Employees moved to the new organizations in stages, and the data reflects this.

## Validation

The Sustainability Office validates data and information entered in the EcoVision and Health & Safety databases according to the frequency given in the reporting standards.

Validation consists of the following steps:

- ▶ Check for completeness of data (locations and parameters)
- ▶ Compare data from the reporting period with data from previous periods
- ▶ Determine whether changes in data are significant
- ▶ Seek explanations for significant data movements
- ▶ Compare linked data (e.g. number of illnesses and injuries versus lost work days)
- ▶ Investigate notable events

At least twice a year, the Sustainability Office performs a thorough review with all industrial sites. During these reviews, we examine the results from our EcoVision and Health & Safety databases, discuss the progress of improvement projects, and set expectations for the next period.

To ensure reliable, accurate, and complete reporting, the Sustainability Office also conducts internal data audits of the industrial sites and the larger office and R&D sites. The audits check for proper reporting procedures and data trails and, in some cases, are supported by representatives from the quality and/or the ESH community.

# Continuous dialogue with

Stakeholder	Interaction
Customers	Customer Loyalty Program Customer meetings Customer support Joint R&D Joint strategy development Exhibitions and tradeshows
Employees	Town meetings Print and web-based media Employee surveys People Performance Management (PPM) Employee councils, union meetings
Suppliers, subcontractors	Supplier Declaration on Sustainability Supplier meetings Supplier audits
Communities	Information meetings Newsletters Community projects Local networking
Local, national, and international regulatory bodies	Industry associations Advisory bodies (Local) networking / lobby activities
Investors	Supervisory Board meetings Ad hoc involvement
Bondholders	Quarterly results call Financial presentations, meetings
Media	Interviews Product and competence presentations Financial presentations, conference calls
Electronics / semiconductor industry	Industry associations Standards committees
Non-governmental Organizations (NGOs)	Ad hoc involvement
Academia	Joint R&D Local networking

We operate in and ship products to almost every country in the world, and have close relationships with customers, other multinational electronics companies, national governments, and industry associations.

Our business brings us into contact with a very wide range of stakeholders and requires that we be sensitive to those interactions. We believe that dialogue leads to mutual understanding, and with it a mutual commitment to sustainable development. We conducted workshops to analyze our contact patterns and identified our stakeholder groups. We made stakeholder dialogue a part of our management processes and use these dialogues to help guide our business strategy. To underscore the importance of these dialogues with the stakeholder community, we have made stakeholder communication a part of our Sustainability Policy.

We address the interests of each group through various methods and make regular assessments of our effectiveness. We continue to strengthen our approach, creating additional structure where needed and improving the overall quality of each interaction. Some examples of our stakeholder interactions are given here.

Our technologies mostly work behind the scenes to improve people's lives, but our company, as a global organization, is very much in the forefront. In many of the places where we operate, we have a major presence as an employer and make a significant contribution to the local economy.

# our stakeholders

## Our employees

We communicate and have ongoing dialogue with our employees in several ways, using print and web-based media along with face-to-face events. For instance, we have company-wide circulation of a weekly email news bulletin (*Let's Go!*), and we share recent external and internal news items on NXP's intranet home page. Many of our operations have their own news bulletins and intranet sites, populated with local and global NXP news. We deliver regular communiqués from our Management Team under the banner of MT Update. Employees are invited to send comments or questions to the Team. The Team's feedback and answers are then posted online where they can be read by all employees.

Our Quarterly Town Meetings are a particularly effective way for us to deliver information to everyone in the company. Feedback shows that employees appreciate these meetings, which give them the opportunity to interact with colleagues, hear about the company's plans, and pose questions or express concerns directly to senior management. Alongside this form of open discussion, we conduct regular employee surveys that measure the clarity and effectiveness of our communication and capture feedback for direct application within the organization. Results of such surveys are reported in the chapter titled "Employees."

## Our customers

To ensure that we develop products that meet or exceed customer expectations, our Marketing and Sales teams work closely with our key accounts to align our development roadmaps. They evaluate customer satisfaction on behalf of the total organization and define a follow-up process involving the appropriate Businesses and support organizations.

Our Customer Loyalty program uses vendor-rating surveys and dedicated customer meetings to verify that we are delivering with excellence and satisfying our customers.

The vendor-rating surveys include questions on environmental and social responsibility, so we can identify areas of concern and implement corrective actions. Customers rank us on various aspects of our operations, including product quality, business fulfillment, and business creation. In 2009, our overall vendor rating with our top fifty accounts dropped two points to 81 out of 100 (2008: 83, 2007: 81); the gap to best-in-class remained stable at 7 points (2008: 7, 2007: 8). On questions about the environment and social responsibility, we scored 86 out of 100, down one point from 87 in 2008 and 2007.

We closed the gap to best-in-class by two points, bringing it down to 3 in 2009 (2008: 5, 2007: 4).

We use face-to-face meetings to create close relationships with our customers, and extend those relationships through our website and with appearances at industry tradeshows and other events. These events are an effective way to show our latest product developments to existing and potential customers, and give us the opportunity to exchange ideas with our colleagues, track industry trends, and discover new ideas. Members of our Management Team often deliver keynotes and presentations at these events, highlighting how we address key issues associated with energy, mobility, security, and health. Copies of these presentations are available at [www.nxp.com](http://www.nxp.com).

With Sony, one of our key customers, we have achieved Green Partnership status for all of our manufacturing locations. Sony designates suppliers that cooperate in the production of environmentally sensitive products as Green Partners. This designation is required for all suppliers looking to do business with Sony, and Green Partners are expected to maintain and upgrade their environmental management systems. Sony places an extra emphasis on reducing and eliminating substances that can harm the environment.

## Industry organizations

We are a member of a large number of industry organizations, participate in more than 65 standardization bodies and consortia, and are active in several other initiatives around the world. Where relevant, we help define specifications, establish new markets, promote fair trade, protect the environment, and ensure health and safety in the workplace. Throughout 2009, we conducted a thorough review of these activities and brought them in line with our new strategic business objectives. This included joining some new groups and discontinuing our participation in others. Our participation in industry organizations lets us interact with governments and regulatory bodies on a number of key issues, including environmental subjects such as greenhouse-gas emissions and the use of perfluorinated compounds (PFCs), as well as the use of hazardous substances and perfluorooctyl sulfonates (PFOS). We often advocate stringent regulations but occasionally lobby to prevent bans on substances that are essential to our processes and currently have no alternatives. Instead, in such cases we typically recommend seeking commitments to strictly minimize use and emission until viable alternatives are found.

We chair the European Semiconductor Industry Association (ESIA) committee for Environment, Safety & Health (ESH). The committee is involved in several cooperative technical projects and addresses such issues as chemical management and preparation for the EU's REACH program, energy savings, use of PFCs, health and safety, quantitative targets, and EU legislation.

Through the ESH committee, we helped publish the ESIA's 2009 Sustainability Brochure, a document that summarizes the ways that semiconductor products facilitate a more sustainable approach to life. The Brochure also profiles how the European and global industry – including NXP – cooperates to agree on common goals for promoting

resource conservation and reducing the environmental footprint of semiconductor production processes.

In the first half of 2009, as part of the EU's "Green Week" event in Brussels, we participated in ESIA's booth, demonstrating how our Solid State Lighting (SSL) solutions save energy by enabling dimmable LED luminaries and more efficient streetlights. The annual event attracts VIPs from throughout Europe, and gave us the opportunity to show high-level officials – including the EU Commissioner for the Environment and the EU Council President – that technology plays a crucial role in preserving the environment.

Another ESIA effort we participate in is the Task Force Smart Grids. Smart grids are advanced networks that use digital information and control technologies to improve the transmission and distribution of electricity. They promise to reduce the emission of greenhouse gases, make the supply of electricity more reliable, secure, and efficient, and, from a consumer standpoint, make the distribution of electricity more interactive. The European Union is encouraging member states to modernize their energy networks and consider implementing smart grids that make energy generation cleaner and less centralized. The task force's mission is to advise the European Commission (EC) on policy and regulatory directions at an international level and to use the provisions of the EC's Third Energy Package to coordinate the first steps of smart-grid implementation.

As a member of the ESIA, we are also a member of the World Semiconductor Council (WSC), an organization that participates in several kinds of outreach activities.

## Other groups

To address other stakeholder groups, such as public authorities, industry analysts, bondholders, and the media, we use a global in-house team that cooperates closely with

a few strategic partners, such as a PR agency. In external relations, we use a worldwide "hub-and-spoke" network of people, including experienced specialists in government and industry relations, who actively approach selected representatives of our stakeholder groups. In this way we can, for example, influence the definition and authorization of relevant regulations and optimize the execution of their resulting programs and legislation. We also influence the way industry analysts report on our activities by having open discussions with them about the Company. Through our spokespeople, we aim to ease public concern resulting from internal and external risk factors, particularly in countries and regions where we have significant interests in R&D, sales, or manufacturing. Finally, we have ongoing dialogue with our bondholders. Our media and investor relations departments are in regular contact with this group, and we invite them to the announcements of our quarterly results. At these events, NXP's CEO and CFO discuss our most recent financial performance and discuss expectations for the next quarter.



# Our key memberships worldwide

- ▶ World Semiconductor Council (WSC), participating through the European Semiconductor Industry Association (ESIA)
- ▶ European Electronic Component Manufacturing Association - European Semiconductor Industry Association (EECA-ESIA)
- ▶ Cluster for Application and Technology Research in Europe on NanoElectronics (CATRENE)
- ▶ Germany: Zentralverband Elektrotechnik-und Elektronikindustrie e.V. (ZVEI)
- ▶ USA: TechAmerica
- ▶ Microelectronics Development for European Applications (MEDEA+)
- ▶ Association for European Nanoelectronics Activities (AENEAS)
- ▶ Advanced Research & Technology for EMbedded Intelligence Systems Industrial Association (ARTEMISIA)

## Setting standards

In the world of technology, R&D groups often work closely with standardization bodies to ensure that innovative ideas have the market acceptance they need to succeed. This is because industry agreed-upon standards can help facilitate interoperability, reliability, and predictable performance. NXP is active in dozens of standards bodies and we have a steering role in those areas where we are a market leader. Basestations and Near Field Communication are two examples.

## Basestations

NXP is a leading supplier of semiconductors for basestations, which we categorize as one of the High Performance Mixed Signal application areas. The Antenna Interface Standards Group (AISG) defines the communication of control information between current and future basestations, amplifiers, filters, and antennas. The standardization work is targeted at improving interoperability between the different components of a basestation. NXP participates in AISG, together with system integrators (such as Nokia Siemens Networks, Ericsson, and Huawei), equipment manufacturers (such as Kathrein and Powerwave), and mobile operators.

## Near Field Communication

Near Field Communication (NFC) is a short-distance wireless transmission protocol that NXP helped to invent. NFC is poised to enter large-scale applications like eTicketing, ePayment, and electronic keys, and as a result needs to meet globally accepted standards for interoperability. NXP is an active part of several industry efforts to develop these standards: the European Computer Manufacturers Association (ECMA), the Joint Technical Committee 1 of the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC JTC1), and the NFC Forum, a group that NXP helped establish. The NFC standard for advanced security protocols (NFC-SEC) was ratified by ISO/IEC JTC1 in early 2010. The NFC interoperability standard (NFC-FEC) was issued by the ECMA in late 2009 and is expected to be ratified as a formal ISO/IEC standard in 2010.



Making a difference  
Finding common ground



In his role as Sustainability Officer, Eric-Paul Schat participates in international task forces concerned with the semiconductor industry's impact on the environment. He's found that protecting the environment is an area where people can find common ground, no matter what their affiliation.

## **Eric-Paul Schat** | *Sustainability Office, Eindhoven, The Netherlands*

Semiconductor manufacturers were among the earliest to embrace environmental sustainability and, in the past twenty years, have been heralded by regulatory authorities in Europe, the US, and Asia for their pioneering efforts in achieving concrete global agreements to reduce environmental footprints.

The European Semiconductor Industry Association (ESIA) and the World Semiconductor Council (WSC) have helped frame many of these global agreements, with environmental, safety, and health (ESH) task forces that encourage industry-wide cooperation.

"As a company, you can't do everything yourself," says Eric-Paul, who has chaired the ESIA ESH task force since 2006 and is the ESIA delegation chair for the WSC ESH task force. "We need global cooperation, especially when it comes to addressing important topics like resource conservation and emission reduction."

Industry task forces give companies a way to share knowledge, outside of the competitive arena, on subjects that concern everyone. "We may come from different regions, countries, cultures, and companies, but we all have the same basic goal in mind – we want to protect the environment."

The challenge, he says, comes in uniting these different points of view into a common plan of action. More often than not, though, he finds that "there's a genuine willingness to make progress."

He points to the voluntary agreement on PFC reduction, which promises to meet its 2010 target for reducing emissions by 10% of the 1995 baseline. The PFC working group is close to establishing a post-2010 program, too. He says that another voluntary agreement, this time for PFOS reduction, was put in place very quickly. "It was done in just one year, and has more than 95% of the industry on the same line."

Other cooperative efforts currently underway include looking at energy consumption in semiconductor manufacturing, and defining industry-wide metrics that will help establish measurable targets for reducing energy, water, and waste.


Eric-Paul admits that it can sometimes take a long time to achieve a result, and there are areas where they still haven't reached a consensus. "We're still competitors, so sometimes there are limits to what we can do together."

Working with industry task forces is just one aspect of Eric-Paul's job. As Sustainability Officer, he's involved in just about everything relating to NXP's pursuit of sustainability. It's work he finds both interesting and challenging, and believes has real relevance. "I go home each evening knowing that I've made a small contribution to making the world a better place."

# Our targets for EcoVision and Health & Safety

<b>NXP Environmental Action Program (2007 - 2010)</b> <b>EcoVision targets</b> <b>Reference year 2006</b>	<b>Relevant substances (Category III)</b> Maintain performance of 2006	<b>NXP Health &amp; Safety Action Program (2007 - 2010)</b> <b>Health &amp; Safety targets</b> <b>Reference year 2006</b>
<b>Global Warming</b> 3% reduction of energy by 2010 10% reduction of PFC use by 2010 with 1995 baseline	<b>Packaging</b> 98% recyclable materials by 2010	<b>Coverage Health &amp; Safety Database</b> 99% by 2010
<b>Water</b> 3% reduction by 2010	<b>ISO 14001 certification</b> 100% for all industrial activities by 2010	<b>Lost-workday injury cases</b> Below 0.2 per 100 FTEs by 2010
<b>Waste</b> Maintain performance of 2006 70% recycled fraction by 2010	<b>Remarks:</b> 1) All targets are to be achieved by 2010 compared to base year 2006. 2) Targets are absolute and results are not corrected based on production fluctuations. 3) The structure of the reporting organizations in previous years will be made comparable with that of the reporting year. Data for new reporting organizations for the current year are added to the company totals of the previous years, with the same absolute data per parameter as reported in the current reporting year. Absolute data for reporting organizations divested in the current reporting year are removed from the company in all reported years. 4) The emission of Restricted and Hazardous substances is only permitted when a dispensation has been granted by the NXP Sustainability Officer.	<b>Lost work-time rate</b> Below 1.75% by 2010
<b>Restricted substances (Category I)</b> 100% reduction of all non-critical uses by 2010		<b>OHSAS 18001 certification</b> 100% for all industrial activities by 2010
<b>Hazardous substances (Category II)</b> 100% reduction of all non-critical uses by 2010		

## Report application levels

	2002 In accordance	C	C+	B	B+	A	A+
Mandatory	Self-declared		Report externally assured		Report externally assured		Report externally assured
Optional	Third-party checked		Report externally assured		Report externally assured		Report externally assured
	GRI checked		Report externally assured		Report externally assured		Report externally assured

## Excellence in reporting

In selecting and developing content for this report, we have used the Global Reporting Initiative (GRI) Reporting Principles of materiality, sustainability context, stakeholder inclusiveness, and completeness.

A comprehensive GRI index, utilizing the GRI G3 Sustainability Guidelines, is provided as a cross-reference to the report's content on the NXP Corporate Social Responsibility website ([www.nxp.com/profile/corporate](http://www.nxp.com/profile/corporate)). The self-declared GRI Application Level is A.

***“Our High Performance Mixed Signal solutions help solve critical societal issues related to energy efficiency, connected mobile devices, security, and healthcare.”***

Rick Clemmer, President and Chief Executive Officer, NXP Semiconductors

**Your comments are welcome**

Feedback is a valuable way of helping to improve our reporting process.

We invite you to email your comments to the NXP Sustainability Office via [nxp.sustainability@nxp.com](mailto:nxp.sustainability@nxp.com).

[www.nxp.com](http://www.nxp.com)

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