

### Reader's guide

#### Report scope and profile

This is a report to ST's stakeholders of how responsibly we have performed as a company in the calendar year 2009. It covers all STMicroelectronics N.V.'s activities and sites, unless otherwise stated. You can find details of ST's structure and countries of operation in the chart on page 2.

For other information you can access reports from previous years at www.st.com/sustainability

#### Change in scope

In February 2009, STMicroelectronics and Ericsson completed a merger of their wireless semiconductor and mobile platform divisions, creating a global leader in wireless platforms and semiconductors. The 50/50 joint venture, ST-Ericsson, is headquartered in Geneva, Switzerland. The company is a key supplier to four of the top five handset manufacturers, which together represent about 80 percent of global handset shipments, as well as to other key industry players, such as mobile operators and manufacturers of dongles, laptops and other connected devices. More than half of all mobile phones in use today are enabled by ST-Ericsson's products and technologies – bringing smarter communication, mobile entertainment, as well as the benefits of access to mobile and broadband connectivity – to more than two billion people around the globe.

ST-Ericsson is an independent company whose financial results are consolidated by STMicroelectronics, but which is managed as an independent organization with a governance seeking to adopt and reconcile the best practices of each of its parents, STMicroelectronics and Ericsson. This report includes data and statements relating to the Corporate Responsibility strategy of STMicroelectronics only. However the financial figures presented in this CR report are based on the Consolidated Financial Statements, included in ST's Annual Report on Form 20-F as filed with the SEC on March 10, 2010, which also includes the ST-Ericsson entities as consolidated by ST.

For more information on ST-Ericsson's Corporate Responsibility strategy and activities, see the html version of this report

#### **Content and accessibility**

This printed Corporate Responsibility (CR) Report presents STMicroelectronics' CR performance, demonstrating how ST integrates Sustainable Excellence into its business strategy and operations.

As in previous reports, we describe our company strategy, the challenges we face, our achievements and the growing company-wide awareness of Corporate Responsibility. The specific examples we use to illustrate our performance are selected to provide a complete and balanced view of ST's group-wide CR strategy and its implementation.

The report is published in English and it is also accessible on the web in both HTML and PDF formats at www.st.com/sustainability along with past CR Reports. Printed copies are also available on request.

#### **Materiality**

In order to define the materiality of report content, we gather feedback from a number of our stakeholders to help us gauge what is of most relevance and interest to our target audiences. These include:

- spontaneous feedback, for example email, web requests;
- telephone interviews with a sample of business partners, SRI analysts, members of the CR community and major companies;
- high-level benchmarking;
- interviews with ST's Vice Presidents who are involved in key aspects of Sustainable Excellence;
- a survey of around 174 employees;
- tracking changes in legislation and regulations.

Our detailed Disclosure on Management Approach, covering each section of this report, is available on the ST website www.st.com/sustainability

#### **Assurance**

As in previous years, Bureau Veritas Certification (BV) has provided assurance of our CR performance, including verification of Health and Safety, Social and Environmental performance data and has reviewed our internal data collection systems. Assurance by Bureau Veritas Certification takes place at two levels; firstly, BV verifies data collection and consolidation processes by checking corporate level data and associated data collection processes. These figures are then verified at local site level. Each year, BV focuses on a different site to carry out a detailed review. This year it was our manufacturing site in Shenzhen. China.

We value the role of external assurance as a means of ensuring the robustness of our data collection processes and the relevance and accuracy of the data published in this report.

You can find details of our verification processes on page 64

#### Adherence to GRI and the UN Global Compact



This report is prepared and presented in accordance with the 2006 Global Reporting Initiative (GRI) G3 Guidelines. We have self declared an A+ application level which has been checked and confirmed by GRI.

GRICHECKERD If G3 indicators are not applicable or relevant to us, we explain why in the text or in the indicator index. ST has been a signatory of the United Nations Global Compact (UNGC) since 2000, which commits it to fulfilling the ten principles of the UNGC. This report describes actions we have taken to implement these principles, and serves as our annual Communication on Progress.

On the back cover, there is an index that references GRI and ST indicators to information in this report.

For more detail, see the html version of the report

#### Indicators and use of symbols

In addition to GRI indicators, we have used our own company indicators to give a complete and accurate picture of our performance. These are all prefixed 'ST'. Also, we have identified a number of Key Performance Indicators (KPIs), which are shown as that provide a high level overview of our most significant performance areas.

High level objectives are all specified on page 7 and then in each section of the report, introduced by 2, with detailed sub-level objectives embedded.

We have used symbols to illustrate our level of achievement against our 2009 objectives:

- In progress
- Target achieved
- No progress

When additional information is available, you will find the following symbols:

- references to the web
- references to another page in the report itself
- references to our Environment,
   Health & Safety Decalogue

#### Give us your feedback

We are committed to improving our CR performance and the ways we engage with our stakeholders.

We encourage questions and contributions from all stakeholders and particularly welcome feedback on the content and presentation of this report – as well as suggestions for next year's report.

In order to obtain your feedback, we have developed an online form, available at www.st.com/sustainability.

You can also contact us directly at corporate.responsibility@st.com or contact:

Kate Cacciatore

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# Value chain how do we create

### Suppliers



we have built strong partnerships with many suppliers and subcontractors from whom we purchase raw materials, equipment, energy, gas, chemicals and services.



Silicon ingot

ST R&D and Manufacturing

### R&D Conception Design

New products conception is the result of several steps: the design of the architecture and electrical layout, electrical and logical simulations, drawing of components and generation of reticles (circuit drawings).



## Manufacturing Front-end



chips is a process of around 400 separate stages in several workshops. Starting with a plain silicon wafer, the Frontend manufacturing results in the etching of several hundreds to thousands of die, depending on the end product and the used technology.



## Final application of our products

ST's sales are well balanced between the industry's five major high-growth sectors:



Communication



Computer



Consumer



Automotive



Industrial

## e a chip

## Electrical Wafer Sorting

This is the operation of electrically testing the die on the wafer.

It is also known as wafer sort or probing.



Wafer sort

## Assembly line & final test Back-end

The die are cut from the silicon wafer before being assembled in a package. The chips are then tested prior to delivery to the customer.



Assembly & test

## Business customers



of products and we serve a wide range of customers that are leading companies in the fields of communications, consumer goods, automobile manufacture, computers and other industry sectors

We offer a broad range



Chip

#### 2009 Focus\*



(\*) From now on, each year we will focus on a different site to present their profile and local activity in a more detailed way.



## **Zoom** on Crolles site...

**Headcount:** 4,287 employees (ST census + temporary workers)

#### Profile:

- 69% of men/31% of women
- Average age: 33 years
- Split by job category: engineers (44%), technicians (27%), operators (29%)
- Domains of expertise: electronics engineers, chemists, physicists, data processing specialists, maintenance, cleanroom operators and many others

#### Main activities:

- Research and Development of the most advanced technologies in the company
- Manufacturing of prototype circuits
- Industrialization and volume production on 8 inches and 12 inches silicon wafers

**Cleanroom area:** 7,000sqm for the 8 inches production line and 10,000sqm for the 12 inches line

**Production:** more than 15,000 silicon wafers processed per week (8 inches equivalent) generating around 10 million Integrated Circuits per week

Site certifications: EMAS, ISO 14001, OHSAS 18001, ISOTS 16949

**R&D partners:** 50 partners

#### Investment over the past years:

US\$ 2.35bn for Crolles 8 inches since 1997 and US\$ 1.55bn for Crolles 12 inches since 2002

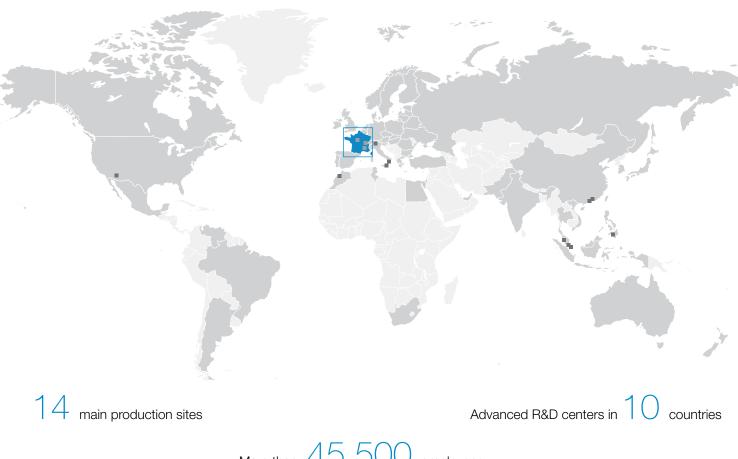
## STMicroelectronics at a glance

ST has two kinds of manufacturing sites: Front-end and Back-end

The Front-end sites produce transistors and integrated circuits on silicon 'wafers' through a series of complex processes that enable the transistors in the silicon chip to process electronic information or control the flow of electrical power. The thin slices of silicon range from 5 to 12 inches in diameter, with more advanced technology being required to produce the larger diameters.

Back-end sites perform assembly, packaging and testing functions. The individual silicon 'die' or rectangles are cut from the wafers and the die are then sealed with wire connections into the 'package' or box that connects the chips to an electronic device. The chips are then tested to ensure quality and proper performance.

For more information on ST's company profile, see www.st.com/company



More than 45,500 employees

Although reasonable efforts have been made to ensure the consistency of the summary financial information for the year 2009 in this report with ST's financial reporting, reliance should only be placed upon the complete financial reporting contained in ST's Annual Report on Form 20-F for the year ended December 31, 2009, as filed with the SEC on March 10, 2010, which can be found at www.sec.gov.

Some of the statements contained in this report that are not historical facts are statements of future expectations and other forward-looking statements (within the meaning of Section 27A of the Securities Act of 1933 or Section 21E of the Securities Exchange Act of 1934, each as amended) based on management's current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those in such statements. Certain such forward-looking statements can be identified by the use of forward-looking terminology such as 'believes', 'may', 'will', 'should', 'would be' or 'anticipates' or similar expressions or the negative thereof or other variations thereof or comparable terminology, or by discussions of strategy, plans or intentions. Some of the relevant risk factors are described in 'Item 3. Key Information – Risk Factors' included in our Annual Report on Form 20-F for the year ended December 31, 2009. We do not intend, and do not assume any obligation, to update any information or forward-looking statements set forth in this report to reflect subsequent events or circumstances

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#### Supporting Sustainable Excellence in ST

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Source of picture page 59: EICC



## Foreword by Carlo Bozotti,

## President and Chief Executive Officer

In 2009, we emerged stronger and better positioned.

2009 was a very difficult year as the world faced one of the most serious economic challenges ever seen. For us at ST, we experienced unprecedented swings in the loading of our production facilities and a steep drop in revenue. And there was little visibility as to what the future would bring. This environment unfortunately impacted many of our employees as it was necessary to respond to the severe changes in demand.

However, during this year of wild twists and turns, I am proud to say that with all ST employees together, we were able to emerge from the global economic crisis financially stronger and better positioned than we entered it, and our commitment to Sustainable Excellence remained steadfast and strong.

#### Here are a few highlights of our achievements in 2009:

- We improved our cash position by nearly US\$ 1bn and resumed positive cash flow generation, despite the economic crisis.
- We outperformed the markets we serve.
- We announced the formation of ST-Ericsson.
- We strengthened our product portfolio and reinforced our position with the introduction of numerous new products and key design-wins
- Employees received 66,000 medical examinations, as part of our company Health Plan.
- A decrease of our direct carbon emissions due to operations (in absolute values) of 58% since 2005, in line with our goal to achieve carbon neutrality on direct emissions by 2012.
- We performed better than our safety targets (we reduced our recordable case rate by 12% and our severity rate by 18%, better than our 10% reduction target for each rate).

Today, our company is more focused than ever on markets and technologies that will keep us in the center of the action for years to come, and doing it responsibly. After the successful execution of our strategic initiatives to refine the company and better equip it for the future, we are squarely aimed at bringing products to market where both demand is growing quickly and where we make a positive impact on the world.

For example, we are developing technologies that save and optimize power, as well as technologies that harness existing and renewable energy: longer battery life; smart metering; hybrid and electric vehicles; the list goes on and on. We are also working with leaders in the medical field to bring more affordable and accessible healthcare to the world using semiconductor technology. Advanced imaging, diagnostic equipment and remote monitoring are just some of the areas where our technology is making a difference.

We are excited about the opportunities ahead. 2010 is a year where we are moving forward on the strategic direction we set a few years ago. Our restructuring and reshaping are behind us. Now, we are preparing for future growth. We will do this by expanding our internal and external manufacturing capabilities, achieving manufacturing and quality excellence, maximizing our investments in the areas of product and technology development, and of course, demonstrating Corporate Responsibility in our operations and through our products.

These priorities will help our company reach a new level of performance, but it is our people who truly make the difference in our success. Our employees' engagement and involvement in our company forms its foundation. As we all work together to bring the greatest value to our customers and the world at large, you can count on us to continue to strive for excellence in everything we do.



al South

Carlo Bozotti
President and Chief Executive Officer of STMicroelectronics

This report has been prepared following the GRI G3 Guidelines. It represents a balanced and reasonable presentation of our organization's economic, environmental and social performance. And it demonstrates our commitment to the UN Global Compact, to which we have been a signatory since 2000.

## Supporting the integration of Corporate Responsibility across ST sites and organizations

Corporate Responsibility is a collective concern and it requires a daily focus on even the smallest details to embed a sustainable approach in all areas of the company's activities.



Corporate Responsibility (CR) has been progressively introduced within ST, starting in the early 1990s with a strong commitment to the environment. In the years 2000 to 2005, the CR approach was enlarged to include health and safety topics, resulting in the publication of the Environment, Health and Safety Decalogue, setting mid and long term targets. ST also realized the importance of having a broader view of its impact and CR issues and decided to integrate a more detailed focus on social and ethical aspects in its annual reporting since 2003. Then in 2006, ST launched its Principles for Sustainable Excellence (The Principles), covering Integrity, People and Excellence, a comprehensive and personalized code of conduct that serves as a framework for the deeper integration of CR into all aspects of the company's culture and activity.

#### Internal network key for cross-fertilization

Many departments and organizations are deeply involved in this process of embedding CR in the company, and the Corporate Responsibility department is a key actor in supporting and facilitating this activity.

The CR department has constituted networks across the company to support organizations and sites in the setting of their CR-related objectives and in making progress on key areas and initiatives throughout the year. These networks generate a broad and comprehensive view of the company's successes and challenges, which in turn help define the evolution of company strategy and performance measurement. The CR department's role in this context includes sharing information and enabling cross-fertilization, and bringing concrete support wherever it is needed in line with company needs and priorities, including in the domain of compliance with the Principles for Sustainable Excellence.

The Sustainable Excellence network consists of contacts and sponsors who are appointed by each site and organization to manage CR-

related activities and act as the main communication channel between corporate and local levels.

#### Zoom on network's responsibilities

The network is responsible for ensuring the achievement of annual Sustainable Excellence objectives, defined and followed-up by the CR department with the input and support of key departments and organizations. These annual targets include those aimed at ensuring:

- employees' awareness of the Principles for Sustainable Excellence;
- local deployment and effectiveness of corpo rate policies and guidelines;
- sites' and organizations' compliance with the Principles;
- employee well-being and development;
- support for company programs linked to the Principles (Quality Excellence, Electronic Industry Citizenship Coalition program de ployment, Environment Health and Safety programs, etc.).

In addition to this, quarterly meetings of the Sustainable Excellence Council are held, focusing on specific topics linked to the company's CR strategy. This is an opportunity for sites and organizations to share their good practices and the challenges they face. An intranet tool is also available for everyone to post their good practices relating to the Principles and read those of their colleagues around the world.

For more information on this Good Practices tool, see page 5

#### Other interactions

The CR department is in regular contact with executive management to conduct various key activities such as the preparation of the annual Corporate Responsibility report, and the company's response to Socially Responsible Investment (SRI) analysts' questionnaires and inquiries, and to customer requirements. Corporate strategies and key programs are also

analyzed from a CR point of view, providing the opportunity to integrate CR aspects into company reflections and activities.

Benchmarks are conducted to stay abreast of important issues and identify those that need to be addressed. Sharing these results internally is a key opportunity to highlight the importance of CR and support managers across the company in their integration efforts.

In this context, conclusions from SRI analysts and rating agencies are shared in detail with these contacts to raise their awareness of the relevance of CR aspects to their activities and to explain the implications of SRI reviews and ratings. In case a specific domain receives unsatisfactory scores, the CR team investigates to better understand these results and support continuous improvement of our performance.

### A win-win approach for business and society

Corporate Responsibility is a requirement for business, but when performed with a focused and strategic mindset it becomes a catalyst for innovation, improved overall performance and a win-win approach for business and society. This report sets out to show our performance in Sustainable Excellence, which takes a myriad of different forms as it is viewed and translated through the lens of each domain and the ST employees who make things happen on the ground.

## Integrating Sustainable Excellence through good practices sharing

The sharing of good practices has been a well-established part of our culture for many years. In 2009 this activity has been formalized by the launch of a new electronic tool.

Until 2009, benchmarking exercises and the sharing of good practices between ST sites were mostly organized directly by the sites themselves or by each corporate department as part of their daily activity to contribute to continuous improvement in sites' practices.

Last year we decided to reinforce the process of good practice sharing between the sites by creating a common framework for this activity through an online web interface. We created a common template to help our Sustainable Excellence contacts throughout the company describe their good practices, defined some participation rules and supported them throughout the year in the process of sharing their innovative projects and activities online. Any ST employee can have access to this section of ST's intranet site and read a 1-2 page synthesis of the good practices going on in ST sites around the world. They can also contact the relevant people responsible for the good practice to exchange and obtain more details.

In order to reinforce the importance of our code of conduct as the framework for our integration of Sustainable Excellence, we classify and present these good practices according to the three chapters of our Principles for Sustainable Excellence (Integrity, People and Excellence). We also encourage sites to use this channel to share their solutions to the risks they identify in their annual 'Principles Gap-Analysis' exercise (to identify strengths and areas for improvement in the context of the code of conduct).

In seven months we collected twenty good practices from various regions of the world and on different topics:

#### **Linked to Integrity**

- Transparency on gifts received: ST Ang Mo Kio (Singapore) created an e-Declaration System where employees declare the gifts and social invitations they receive. The procedure aims at informing the employee's manager and generates greater awareness of the company's position on corruption and gifts.
- Managing conflict of interests and gifts at local level: ST Grasbrunn (Germany) put in place an expert advisor to support employees in understanding and managing potential cases of non-compliance.



World environment day celebration in ST Bouskoura (Morocco)

#### **Linked to People**

- Deploying Health Plan: ST's sites in Singapore shared the 7-step process they followed in the context of the company Health Plan (providing employees with checkups, blood analyses etc.) and to have a wider positive impact on the quality of work life, health, and well-being.
- Integrating employees with disabilities: ST's four main French sites launched a project to integrate employees with disabilities and ensure that all of them work in an environment which allows them to excel and evolve without any risk to their health or well-being.
- Creation of a local nursery: ST Tours (France) participated in the creation of a local nursery, including a financial contribution for its establishment and an ongoing participation in its operating costs.
- On-site first aid training: volunteers in ST Prague (Czech Republic) are trained to be able to give first aid help anytime, anywhere, with the option to train to become professional first aid trainers.
- Ergonomics and wellness at work: in ST Zaventem (Belgium), a campaign focuses on evaluating working practices relating to ergonomics and stress management and training and informing employees on how to achieve a better quality of life and work in this context.

#### **Linked to Excellence**

■ Digital Unify training in jail: ST employees from Agrate and Castelleto (Italy) who are volunteers in the Digital Unify project of ST Foundation have trained prisoners in a local jail on the basic use of computers and internet.

- Applications week: each year at ST Rousset (France), employees participate in an event where they can see demonstrations of products designed and manufactured on site. This event fosters and shares the innovation spirit among ST employees.
- NTUST scholarship program: ST Taipei (Taiwan) has built up a scholarship program with one of the country's major science and technology universities in order to provide basic financial assistance and to encourage students from 'low income' families to pursue their studies.
- World environment day celebration: on the 5<sup>th</sup> June 2009, ST Bouskoura (Morocco) celebrated the environment day in order to sensitize employees and community on the importance of environmental preservation.
- Engaging with high schools and universities: ST Catania (Italy) has involved students in the application of 8D problem-solving methodology, so as to share the instruments and techniques to analyze and solve problematic situations and prevent their recurrence.

Many other good practices are now regularly shared and posted by the sites. In 2010, we plan to advertise this program more widely to ST employees and will launch a communication campaign to collect more good practices and inform employees at worldwide level.

## Significant events 2009



#### **January**

After eight months of construction in 2008, production starts at ST's new wholly-owned Back-end Packaging and Test Manufacturing site in Longgang (China). Following production ramp-up in its first year of operation, by the end of 2009 the new site represented 7.5% of Back-end manufacturing volume.



#### **February**

ST-Ericsson is established as a 50/50 joint venture by ST and Ericsson and is a world leader in wireless platforms and semiconductors. The company is a leading supplier to the top handset manufacturers and its products and technologies enable more than half of all phones in use today.

#### March

ST extends its energy-saving commitment to Set-Top Box (STB) applications by integrating new power control technology into STB chips to support the assessment of STB energy consumption performance.



#### May

ST and Soitec announce an exclusive joint cooperation that will lead to the development of 300mm wafer-level backsideillumination technology for next-generation image sensors in consumer products.



## September

ST and Magneti Marelli sign a memorandum of understanding that lays the foundation for an agreement in the sector of power electronics modules and components to be fitted on hybrid and electric vehicles.

#### July

Celebration at ST's Crolles site of the Nano2012 Framework Agreement; a public/ private strategic R&D program, led by ST, which brings together research institutes and industrial partners with a shared aim of creating one of the world's most advanced R&D clusters for the development of new generations of semiconductor technologies at the nanoelectronic level.



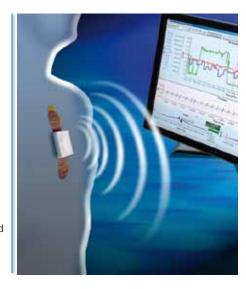


#### October

ST adopts ARM processor cores for upcoming STB and digital TV system-on-chip ICs, providing ST with the scalable high-performance required to enable high-bandwidth broadband and broadcast content to be streamed into homes, significantly improving power efficiency.



ST is chosen by
Enel, Italy's largest
power company,
to provide the
semiconductor
components for new
electronic power
meters which are key
elements of the new
remote management
solution to be installed
by Endesa, Spain's
largest electricity
supplier.



#### November

ST announces expansion of its world-class Micro-Electro-Mechanical Systems (MEMS) portfolio with next-generation micro-machined acoustic devices. These innovative MEMS microphones will use sensor technology from Omron and will significantly raise the bar in sound quality, reliability, and cost-effectiveness for existing and emerging audio applications.

ST and Mayo Clinic, a premier health-care organization, announce their collaboration on a novel platform for the remote monitoring of patients with chronic cardiovascular disease. The platform will provide a comprehensive and unobtrusive solution to monitor physiological parameters that can be used to influence lifestyle choices and treatment options.

## Performance versus objectives in 2009

Target achieved In progress No progress		
	2 <sup>44</sup> 5	pages
, , , , , , , , , , , , , , , , , , , ,		4
decision making	0	5-10
■ Ensure compliance of management population with rules for integrity	0	11
Ensure a robust link between corporate and local governance structures	0	9
Satisfy shareholder expectations through financial and non-financial performance	0	12
■ Create economic value for stakeholders	Ó	18
Create the conditions for sustainable innovation	0	14-15, 19
	ZT.	
	O O	25
	O	22-23
to meet employee and company needs	0	21
Ensure diversity and equal opportunities	$\circ$	20
Proceed to deeper integration of human rights in our management systems	$\circ$	32
Engage proactively with local community and society to create mutual value	0	33
■ Ensure a safe and healthy workplace	0	38
■ Give all employees access to the same level of medical care	0	38
Maintain top class management systems for environment	0	46
Contribute to company efficiency and financial performance	0	46
Continuously improve our eco-footprint according to our Decalogue targets	0	48-50
Progressively achieve carbon neutrality	0	45, 50
Anticipate and respond to customer and legislative requirements for the environment	0	42-43, 46, 62
Comply with our Principles and values to develop responsible products that contribute to society	0	54-55
<ul> <li>Proactively comply with environmental regulations and customer requests when managing chemical product and process quality</li> </ul>	0	42-43
■ Continuously reinforce our product and process quality	0	56
■ Focus on designing eco-efficient products	Ô	52-53
■ Continuously aim to satisfy and exceed our customers' Corporate Responsibility requirements	0	61
<ul> <li>Achieve efficient and socially and environmentally beneficial partnerships with our suppliers and subcontractors</li> </ul>	$\circ$	62
<ul> <li>Actively contribute to the EICC initiative by supporting our suppliers and subcontractors in reaching compliance</li> </ul>	0	63
	<ul> <li>Maintain awareness of Corporate Responsibility throughout the company</li> <li>Ensure integration of company values and Principles for Sustainable Excellence in our strategic decision making</li> <li>Ensure compilance of management population with rules for integrity</li> <li>Ensure compilance of management population with rules for integrity</li> <li>Ensure a robust link between corporate and local governance structures</li> <li>Satisfy shareholder expectations through financial and non-financial performance</li> <li>Create economic value for stakeholders</li> <li>Create the conditions for sustainable innovation</li> <li>Support the company in adapting to its surrounding dynamic context</li> <li>Ensure employee empowerment and engagement</li> <li>Ensure employee empowerment and engagement</li> <li>Ensure strong performance and dynamic career progression, life-long learning and employability to meet employee and company needs</li> <li>Ensure diversity and equal opportunities</li> <li>Proceed to deeper integration of human rights in our management systems</li> <li>Engage proactively with local community and society to create mutual value</li> <li>Ensure a safe and healthy workplace</li> <li>Give all employees access to the same level of medical care</li> <li>Maintain top class management systems for environment</li> <li>Contribute to company efficiency and financial performance</li> <li>Continuously improve our eco-footprint according to our Decalogue targets</li> <li>Progressively achieve carbon neutrality</li> <li>Anticipate and respond to customer and legislative requirements for the environment</li> <li>Comply with our Principles and values to develop responsible products that contribute to society</li> <li>Proactively comply with environmental regulations and customer requests when managing chemical product and process quality</li> <li>Continuously reinforce our product and process quality</li> <li>Focus on designing eco-efficient products</li> <li>Continuously aim to satisfy and exceed our custome</li></ul>	Maintain awareness of Corporate Responsibility throughout the company Ensure integration of company values and Principles for Sustainable Excellence in our strategic decision making Ensure compliance of management population with rules for integrity Ensure a robust link between corporate and local governance structures  Satisfy shareholder expectations through financial and non-financial performance Create economic value for stakeholders Create the conditions for sustainable innovation  Support the company in adapting to its surrounding dynamic context  Ensure employee empowerment and engagement Ensures trong performance and dynamic career progression, life-long learning and employability to meet employee and company needs Ensure diversity and equal opportunities Proceed to deeper integration of human rights in our management systems  Engage proactively with local community and society to create mutual value  Ensure a safe and healthy workplace Give all employees access to the same level of medical care  Maintain top class management systems for environment  Contribute to company efficiency and financial performance  Continuously improve our eco-footprint according to our Decalogue targets  Progressively achieve carbon neutrality Anticipate and respond to customer and legislative requirements for the environment  Comply with our Principles and values to develop responsible products that contribute to society  Proactively comply with environmental regulations and customer requests when managing chemical product and process quality  Continuously aim to satisfy and exceed our customers' Corporate Responsibility requirements  Achieve efficient and socially and environmentally beneficial partnerships with our suppliers and subcontractors  Actively corribute to the EICC initiative by supporting our suppliers and subcontractors

You will find further details on these objectives in each specific section of the report in the performance overview part. Each objective is detailed in sub-level objectives with the results and level of performance achieved.

## Looking forward to 2010... and beyond

We see a world that is changing.



The scarcity of natural resources in the world today and the challenges created by climate change are making it increasingly urgent to significantly reduce energy consumption. Furthermore, connectedness to people and access to information is becoming globally pervasive and vital to all, accelerating the development of emerging economies and making the use of mobile terminals ubiquitous.

ST is well-positioned to benefit from this change in the global picture and to drive positive change further. We are dedicating significant resources to product innovation in the fields of energy efficiency, healthcare and 'anywhere, anytime' connectivity. And we have compelling products that are exciting our customers such as:

- a new generation of set-top box products focusing on 3D graphics applications and low power consumption;
- a new platform for high definition and high quality digital and internet TV applications;
- power management ICs for TV power supply;
- products for stand-by power and efficient energy metering.

...as well as many more products that enrich lives through intelligent, safe and sustainable technology, several of which are featured in this report.

The added value we can offer to our customers and our contribution to society as a whole are growing in importance. Whether it is a highly-efficient refrigerator, a safer, more intelligent car, or a remote health monitoring system, ST products are transforming the world we know.

At ST, we have the right strategy, the most innovative products and technologies, strong partnerships with the influential players in our industry, relationships of trust with our customers and a highly skilled and motivated team of employees.

In short, we have all the ingredients for continued success and we are excited about the future.

## Corporate Governance

Our company is committed to implementing high and commercially accepted standards of Corporate Governance at all levels.

Our company's policies and procedures are upheld by internal controls that are regularly audited and reviewed to ensure their effectiveness.

Our Supervisory Board supports the Principles for Sustainable Excellence, which also serve as the company's Code of Conduct. The Principles are communicated to all employees at ST and ST is committed to ensuring that high standards of Corporate Governance are implemented and maintained throughout the company in order to enhance both shareholder value and the long term value of the company.

For more information on our Principles for Sustainable Excellence see www.st.com/sustainability

Our Managing Board is appointed by our Shareholders upon the recommendation of our Supervisory Board and is supported in performing its tasks by a comprehensive management organization (see new organization chart of the company below). The management organization is coordinated through various formal meetings:



#### A Corporate Staff Meeting

All members of the management organization meet once a quarter during Corporate Staff Meetings to review previous quarter results and achievements, rolling forecast and corporate key programs.

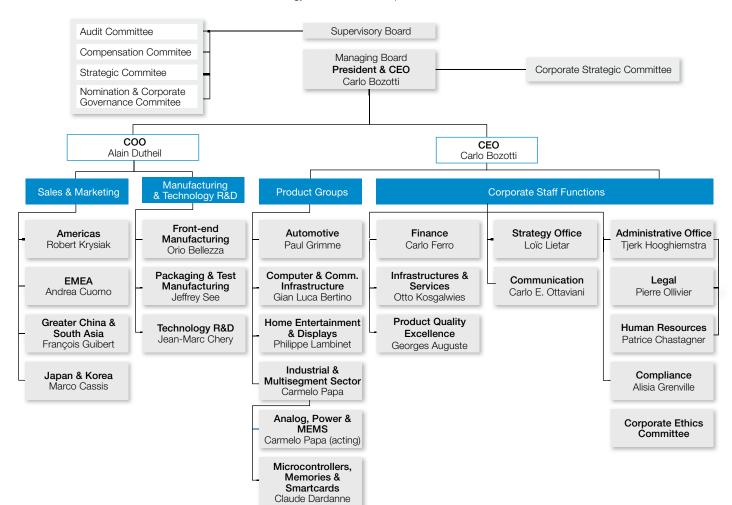
#### A Corporate Operation Review (COR)

The CEO, COO, CFO, and directors responsible for Infrastructures & Services, Manufacturing (Front-end & Back-end), Product Quality Excellence, Regions and Product Groups, Technology Research & Development, meet

once a month to conduct a corporate operation review concerning monthly results and short term forecasts.

#### **A Corporate Strategic Committee**

This committee, to be created as of January 1st, 2010, should meet twice a quarter with the objective to define the strategic directions of the company. It is composed of the CEO, COO, CFO, CAO, CTO, CSO and executive officers responsible for the following functions: EMEA Sales, FEM, HED and IMS.



#### Independence and control authorities

·	Supervisory Board	Audit Committee*	Strategic Committee*	Compensation Committee*	Nomination & Corporate Committee*	Managing Board
Members	9	5	6	5	5	1 (CEO)
Mandate	The Supervisory Board (SB) advises the Managing Board (MB) in performing its duties and management tasks and supervises the policies of the MB and the general course of our affairs and business. In discharging its duties, the SB shall be guided by the interests of the company and its business; it shall take into account the relevant interests of all those involved in the company, including its shareholders.	Members with financial expertise     Integrity of financial statements     Compliance with laws     Independence and qualification of independent auditors	Strategic developments in the industry Long term planning and budgeting Mergers & Acquisitions projects Major R&D programs	Remuneration policy for the Managing Board submitted for shareholders' approval Annual remuneration for Supervisory Board members Allocation of stock- based compensation to Executive Officers and Managers Remuneration policy and Executive Incentive Program for Executive Officers and Managers	Selection criteria and appointment procedures for Managing and Supervisory Boards' members     Size and composition of the Supervisory Board     Corporate Governance policies	Appointed by ST's shareholders upon proposal by the Supervisory Board     Comprised of one person: President and CEO
Remuneration	Chairman: 115,000€ Vice-Chairman: 115,000€ Members: 57,000€ + 1,500€ per meeting or 375€ per confer- ence call attendance	Chairman: 115,000€ Members: 7,500€ + 1,500€ per meeting or 375€ per conference call attendance	Members: 3,500€ + 1,500€ per meeting or 375€ per confer- ence call attendance	Members: 3,500€ + 1,500€ per meeting or 375€ per confer- ence call attendance	Members: 3,500€ + 1,500€ per meeting or 375€ per confer- ence call attendance	
Independence & control	Members cannot be on the Managing Board or ST employees. Supervises the structure and management of systems of internal business controls and the financial reporting process.	All members are financial experts and voting members.				
Decision making						
Number of meetings	13	24	1	3	1	NA
Attendance rate	94%	82%	100%	93%	100%	NA
Attendance rate evolution versus last year	+4.5%	+82%	+75%	+93%	+100%	NA NA
Main subjects linked to Sustainable Excellence discussed	The Supervisory Board has discussed several subjects linked to Sustainable Excellence: Board charter, ethics, compliance, internal audit issues, training program. Mr. Georges Auguste, Executive Vice President QES (Quality Education and Sustainable Development in 2009), presented to the SB the overview of the Sustainability program, its goals and long-term initiatives.	The committee reviews our quarterly and annual financial reports as well as our SEC filings and makes recommendations to the Supervisory Board, in areas related to internal controls and reporting.				

 $<sup>(\</sup>mbox{\ensuremath{^{'}}})$  All members are part of the Supervisory Board.

## Business Ethics objectives set for 2010

- Publish ethics objectives for 2010
- Identify and communicate top
   5 risks versus the Principles for
   Sustainable Excellence (identify,
   follow up, close where possible)
- Ensure relevant employees trained on Principles' Compliance
- Ensure all eligible employees signed the Principles for Sustainable Excellence or Business Conduct and Ethics Policy
- Ensure awareness of guidance documents published by the Ethics Committee to the eligible population
- Fully implement policy for harassment

ing with its spirit to foster a pleasant working environment for all of its employees, it was only fitting that a policy, which outlines the company's position on harassment of any type, be endorsed.

The purpose of the policy is to promote a workplace that is free of harassment of all forms, including sexual harassment, and to provide an effective means of eliminating such harassment from the workplace.

With the forthcoming commitment and endorsement of the company's Managing Board, this policy will be communicated to all employees, using various forms of communication, to ensure full understanding, cooperation and compliance.

#### Risk management within ST

In light of the economic uncertainty we face today, boards wish to be aware of the risks their companies encounter on a daily basis and make certain that appropriate risk management practices are in place.

The Supervisory Board of ST is no different and it is with the support of the Audit Committee that it is seeking to ensure the efficiency of the risk managing practices which are implemented and operated under the responsibility of the Managing Board.

STMicroelectronics operates in an industry generally associated with important business risks. To achieve an optimal balance between risk and reward for ST's shareholders, management needs to have a full and objective view of the overall level of risk and take calculated risks in some areas of the business while being more cautious in others.

While management of risk is already embedded into the process of ST's business, and line management and numerous support functions are engaged in risk management activities, no holistic risk reporting and management process exists within the company. ST is planning Enterprise Risk Management (ERM), to better analyze company-wide risk exposures and deploy its resources most effectively in pursuit of an optimal balance between risk and reward for ST's shareholders.

### The benefits of a formal Enterprise Risk Management approach are:

- formalized risk awareness (opportunities and threats) on all management levels;
- clear responsibilities regarding Risk Owner ship, Risk Control and Risk Assurance;
- transparent and consistent basis for the management and reporting of key risks;
- assurance that the risk management process is executed correctly;
- risk management decisions and actions at the right level;
- fewer surprises, but no increase of risk aversion.

## Enterprise Risk Management will help ST achieve Total Risk Coverage through:

- definition of risk-management responsibilities and risk processes;
- standard risk-assessment and reporting driven by Line Management;
- embedding risk discussion in the management process.

#### **Business Ethics**

An electronic signature system ('e-Signature') is in place to allow our managers, from all sites and organizations, to sign our Business Conduct & Ethics Policy on an annual basis.

In 2009, 94.5% of eligible managers have signed this document (eligible = approximately 15% of total population). I S03 I STS01 I

Two channels for non-compliance reporting are available within ST:

- a third-party reporting channel for all cases linked to financial and auditing issues is available to ST employees and managed by an external ombudsman;
- a non-compliance reporting line (pse.contact@st.com) is in place to allow ST employees the opportunity to alert top management of cases of non-compliance with the Principles for Sustainable Excellence that could not be solved at the employee's direct management, site or organization level. This channel is directly connected to the Corporate Ethics Committee.

The Ethics Committee has dedicated time to the development of a global 'Harassment Policy'. ST strives to provide a working environment for its employees that promotes innovation and excellence. Therefore, in keep-



Non-compliance reporting in 2009   SO4   HR4						
	Principles for Sustainable Excellence	Finance & Audit				
Number of cases reported:	13	0				
Number of cases solved and closed:	13	0				
Number of cases still ongoing:	None	None				
Areas of reporting:	Fraud, conflicts of interests, theft					



## **Economic**

## Evaluating our Corporate Responsibility performance

Every 12 to 18 months, ST's Corporate Responsibility strategy, management systems and their concrete implementation are analyzed and evaluated by rating agencies and analysts in the Socially Responsible Investment (SRI) community.

This evaluation takes place in parallel to, or in the context of, the analysis of financial information and covers CR-related

domains such as corporate governance, business ethics, risk management, innovation, labor practices, impact on society, supply chain management, environmental management and stakeholder engagement.

As a result of this evaluation ST is present in the main sustainability indices, including ASPI (France), Dow Jones Sustainability Index (United States, Germany), Ethibel Sustainability Index (Belgium), ECPI (Italy) and FTSE-4Good (United Kingdom). Our inclusion in these indices is based on the evaluation of publicly available information and our responses to specific questionnaires and requests for information.









## The business case for an electrified and intelligent car

It is anticipated that between 2010 and 2015 the automotive semiconductor market will grow by more than 45% to a total market size slightly less than US\$ 30bn. This will be driven by the combination of continued growth in vehicle production and the trend of more electronics, and therefore more semiconductors, per vehicle.

#### **Interview with**

Paul E. Grimme
Executive Vice President, General Manager
Automotive Product Group

This trend is leading the industry from intelligent to responsible vehicles, by improving safety and contributing to reducing the ecological footprint, as well as gaining in infotainment applications. Some of the more significant recent trends in the car market include:

- growth of vehicle sales in new markets such as China, India and other developing countries;
- the integration of complex technologies into car design, such as pre-crash systems employing radar and camera sensors;
- worldwide response to ecological pressure to cut emissions and improve fuel consumption;
- stricter safety legislation;
- convergence of technologies to create an in-car multimedia experience.

Environmentally friendly vehicles require new solutions: reducing weight, optimizing energy consumption and enabling the vehicles to sense their external environment. This presents new opportunities for electronics and microelectronics

#### Impact of electronics on vehicle efficiency

In terms of environmental impact, the main trends in innovation driven by electronics can be summarized as:

- significant improvements in traditional engineering designs, such as the combustion engine, which are made possible by new generation powerful processors and sensors;
- lighter cars e.g. by replacing hydraulic systems with electronic systems.

Components provided by ST are integrated into technologies such as advanced power steering, smart charging, efficient engine cooling, engine start-stop and gasoline direct injection.

There are some concrete benefits coming from the enhancement and electrification of systems:

- small, clean engines with high power and efficiency;
- car systems designed to be light and networked to eliminate redundancies, by sharing computing and sensing power;
- electric motors providing energy-on-demand, and employing fewer, lighter and more reliable moving parts than hydraulic systems.

All this contributes to increased fuel efficiency and offers the potential for electric vehicles to reduce our dependency on fossil fuels, when combined with low carbon electricity generation. This silent revolution coming from many small improvements in our traditional cars will evolve into the real revolution of hybrid and electric

The demand for hybrid vehicles is not growing equally around the world, but most R&D centers of the leading car makers are focusing on the issue. To achieve a wide-scale introduction of electric vehicles, we need to develop more efficient and long life batteries that can be charged or exchanged quickly and conveniently.

Japan and the United States are expected to experience the fastest growth in demand for hybrid cars, but Europe is expected to follow.

#### Electronics contribute to vehicle safety too

In the past, the use of electronics such as ABS (Anti-lock Brake System), ESP (Electronic Stability Program) and airbags has helped reduce the number of accidents and fatalities. However, the proposed EU target to halve fatalities by 2010, compared with 2000 levels, will not be reached, and requires a step further.

The breakthrough in advanced safety is expected to come from the convergence of sensor information processing, navigation and vehicle communication.

Radars and camera sensors will inform the driver about external driving conditions: other cars or pedestrians within close proximity; road lane closures; cars obscured by the mirror blind spot.

'Car to Car' and 'Car to Infrastructure' communications, combined with a Communication Infrastructure will enable the development of a number of safety applications such as traffic congestion relief, assistance and safety.

Advanced maps will provide information to make drivers aware of speed limits and hazards. While most active safety concepts act on risk prevention, new technologies will also improve how cars reach in actual emergencies: precrash systems; wide range of sensors that recognize obstacles, feeding information to a processor which will control throttle, braking and seat belt tension. Crash systems include smarter sensors to monitor acceleration, pressure and sound and to deploy airbags in the safest way. Post-crash systems will automatically use a Global Positioning System to alert emergency services.



ST is in a unique position to develop all the communication and sensor technologies needed and has world-leading application-specific processing platforms. These are the result of twenty years' experience of dedicated complex products for ABS, ESP and airbags.

In terms of safety, the impact of integrating more intelligence into cars is no longer an option but a reality. It will contribute to the Vision Zero concept of eliminating collision fatalities.

#### How can ST contribute?

In this exciting environment, ST has both the opportunity and the responsibility to be one of the main enablers for the transformation of vehicle technology. The integration of electronic systems will be built on silicon technology, and ST is among the very few market players able to provide the suite of technologies necessary for this innovation.

We will go beyond the traditional smart power and digital technologies which made ST successful in today's automotive market. The future will require the deployment of new technologies such as pure power (MOSFET, IGBT), vision sensors, radars and others.

ST's challenge will be to facilitate the migration of these technologies to the new car concept, collaborating with market leaders as well as with Intellectual Property companies to develop innovative and cost-competitive solutions.

Another example of how technology will protect human lives and the environment is 'ecotelematics' which links traffic management systems, eco-routing driving advice, 3D mapping and intelligent adaptive cruise control. These are further connected to applications managing engine, transmission and braking. The car of the future will be capable of intelligently reading road conditions to create an 'eco-safe' driving experience. After this, it is possible that we can create cars that will be virtually able to drive themselves.

## Partnerships in Research, Development and Innovation to build our future

## 50 years of continuous value creation by mastering miniaturization and complexity

Over the past 50 years, our industry has based its solid market growth on its ability to create new applications and new products through continuous miniaturization and performance improvement. This has required a considerable R&D effort industry-wide and throughout the value chain to push back the laws of physics and master higher complexity in system integration on a chip.

Our products, the chips, have become more and more complex and today may contain more than a billion transistors. To make this possible, our manufacturing technologies have become more complex as well. Manufacturing several hundred chips at the same time on a silicon wafer (a 30 cm-wide silicon disk) involves embedding half a trillion transistors into it. Each transistor is a tiny structure around a thousand times smaller than the width of a human hair (i.e. about the size of a virus) and is made of several dozen parts, some being layers as thin as a few atoms. The pace of technological improvement through miniaturization -known as Moore's law- has been consistent as we have been continuously doubling the number of transistors per square millimeter of surface area every other year.

As a result, each new generation of our products can provide new applications with increased speed, storage capacity, and reduced consumption at a reduced price. To illustrate this, if the technology were to be the same as in 1970, your cell phone today would be the size of a house and consume the power of a town of 500 inhabitants. Just over the last 20 years, this has represented a thousand-fold improvement in performance and power reduction,

enabling new technologies and new consumer applications such as 3G smartphones, car electronics, MP3 players, digital televisions and many more.

This dramatic technology evolution has required the development of many innovative solutions, for example in new equipment, materials and methodologies for the observation and integration of 'nanometric' constructions.\* Consequently the cost of developing and manufacturing in this context has increased exponentially with each technology generation.

A key characteristic of ST's strategy in the midst of this technology evolution is the decision to maintain control of the development and manufacturing of its leading edge technology, which allows it to protect its technological independence and be able to develop not only the industry standard technologies but also value-added variations and new, 'disruptive' technologies'.

Technology partnerships have played a strong role in this strategy in the past and continue to do so. This is why we joined the ISDA research alliance, bringing reseachers and resources together with industrial partners to work on the development of the core manufacturing technology, and creating a cluster in Crolles

with IBM, ASML, Mentor Graphics and others to develop differentiated technologies.

A good example is the approach we have developed to bring several domains of research together and funnel them into an industrial and application-oriented approach through supporting the creation of R&D clusters. These clusters include advanced academic laboratories working on specific fundamental research and major research institutes, which act as integration centers, in close cooperation with our own research teams. Examples include our long-term partnership with the CEA-LETI Institute in Grenoble, France, for CMOS technologies and with the University of Catania and the CNR-IMN in Italy for power conversion devices.

### A new breed of innovation to build the products and applications of tomorrow

Today ST is also working on a new kind of innovation, one that is not linked to Moore's law and is less subject to intensive spending on R&D expenses and capital investments. Instead of developing one technology to serve as many applications as possible following Moore's law, this new innovation (referred to as 'more than Moore') focuses on the opportunity to enrich the existing silicon technology through the addition of new materials and structures to create and combine new functionalities. These highly innovative functionalities benefit from the reduction in size and cost and the increase in reliability that silicon chips provide, triggering their prevalence in all kinds of high-volume electronic products. Examples of new generation technologies include Micro-Electro-Mechanical Systems (MEMS) and sensors, polymer electronics, microbatteries and the application of our automotive-quality (zero-defect) manufacturing to new healthcare applications such as portable diagnostic equipment.

These applications respond to nascent market trends in order to create business value and competitive advantage. Being first to massmarket (i.e. in terms of high volume sales) with these new applications is equally important, and ST is well positioned to achieve this due to its background in manufacturing excellence and technology modeling as well as its state-of-theart 'fabs' (production facilities).

The future is indeed bright for the coming years, both in terms of the growing importance of semiconductors in the final product (for

#### Price of 1 Megabit of Memory

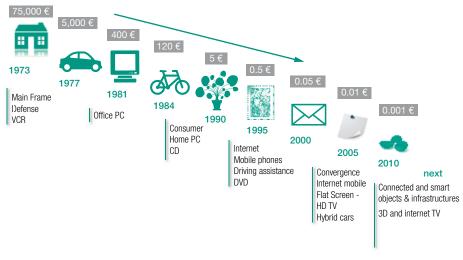


Figure 1 – The miniaturization roadmap has allowed us to reduce the cost of the access to technology, thus enabling new products and new applications in all economic sectors.

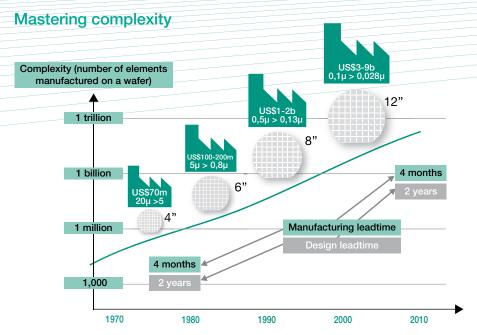


Figure 2 - Mastering complexity: the challenge of the coordinated integration of half a trillion 'nanometric' devices on a silicon wafer. This requires major efforts in manufacturing and design productivity to keep the cycle time constant. Significant investments in R&D and production are also required, as the most recent processes can only be integrated into large manufacturing plants costing several billion dollars each.

example their ability to increase the perceived value and reduce the actual cost of the product) and in terms of society's demand for smart, 'responsible' products. ST has the enabling technologies to create the new products and applications at the heart of tomorrow's societal challenges: the ageing of the population; the energy crisis; climate change; dealing with key health issues at a global level, for example with solutions such as smart grids; green power transformation; alert sensor networks; personalized diagnosis and therapy; virtual doctors, and many more.

### **Building 'ecosystems' of partners to create** the conditions for innovation

To address these new opportunities, ST is expanding its field of expertise fast and far beyond its traditional core competences. Of course, no single company can act effectively alone, either to master and integrate the many different technologies and their combinations or to seize the many existing opportunities for new applications. But it is here that ST can benefit from its long standing flair for innovation through partnerships to create exciting new products that benefit society and reap the resulting economic rewards. As part of this approach, ST is interacting with many universities and research institutes, with large and small companies, evaluating opportunities and building an 'ecosystem' of partners to create channels for what we can call 'evolutionary innovation'.

The ability to build durable partnerships throughout the value chain has been a fundamental strength of ST since its creation. The company's key business successes (including those with customers such as Bosch, Nokia, Seagate, ex-Thomson/Technicolor, Western Digital) have resulted from close collaboration between ST and key players in the industry on new product R&D, delivering their solution

based on our core technologies. In some cases we have created common design centers (for example, with TCEC\*\*\*, Nokia and Western Digital). We tend to focus on establishing R&D partnerships more than equity investments in small companies or start-ups, but we evaluate all of the partnership options available to arrive at the most effective solution for each specific case.

ST also develops 'ecosystems' around its sites worldwide in partnership with public authorities, sharing costs and risks together with industrial partners and public laboratories through funded programs to develop new technologies and applications. Ultimately, ST technology pulses through the local economy, pushing new products and applications to more traditional industries and services.

### So, there are several different ways in which ST innovates through R&D collaboration:

- ST uses collaborative projects to build ecosystems and reduce cost in production and development: at the ST Crolles site in France, for instance, ST collaborates with its suppliers such as ASML or Air Liquide on its manufacturing lines, with their engineers embedded within its own teams so that we can implement solutions rapidly.
- ST uses collaborative projects to create added value in its products: for instance ST works in collaboration with the audio specialist Arkamys, which develops audio 3D enhancement decoding techniques for ST multimedia platforms, and with DxO Labs, which develops simple compact digital lenses for microcameras (these allow smart image processing to replace the traditional more expensive and more fragile mechanical auto-focus).
- ST also uses collaborative projects to create new markets for instance, in its Castelletto site in Italy, ST developed tiny acceleration sensors (MEMS) for hard drives to protect them when they are dropped. By collaborating with Nintendo, we found that they could be embedded in a remote console to allow greater interaction by the player and this feature's originality led to the success of the Wii platform. This created a new market by bringing MEMS technology to the consumer market.

Innovation through R&D partnerships has always been, and will remain, a fundamental part of ST's vision and strategy. We also know that much of tomorrow's innovation will be developed with new partners that we have yet to discover. This is the key to tomorrow's new products and applications that will be designed to better address people's needs and future global challenges. One of the key missions of the Corporate Strategy Office is to seek out and foster these exciting new partnerships and emerging applications and solutions.

- (\*) A nanometer (nm) is 10<sup>.9</sup> m (a billionth of a meter); i.e. a million nanometers can fit within a millimeter.
- (\*\*) "Disruptive" technologies can be defined as those that open up new realms of opportunity.
- (\*\*\*) Joint multimedia design center with Thomson Multimedia.

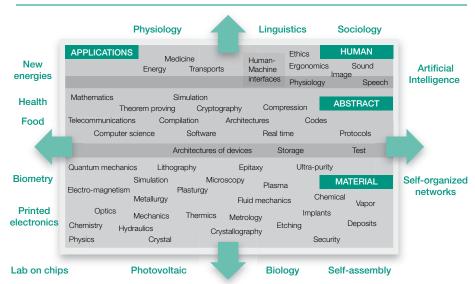


Figure 3 - Sciences and technologies for microelectronics: there is a need for ever-enlarging, networked teams with expanded competences - the new societal challenges and the resulting future business opportunities lie in the ability to integrate.

#### 2 Satisfy shareholders' expectations through financial and non-financial performance

The financial figures presented in this performance overview section are based on the Consolidated Financial Statements, included in ST's Annual Report on Form 20-F as filed with the SEC on March 10, 2010, which also includes the ST-Ericsson entities as consolidated by ST.

### 2009 will be remembered in the history of STMicroelectronics as a very difficult year

The pattern was similar to that of the semiconductor market as a whole, with its unprecedented steep downturn in demand in the early part of the year, followed by a sharp reversal in the second part of the year.

As a consequence, ST's manufacturing organizations had to go through dramatic swings in factory loading, as equipment utilization dropped from the healthy levels of close to 90% as we entered Q4 2008 to as low as 35% at the beginning of Q2 2009. Factory loading rose again, as the recovery, led by Asian markets, started to gain momentum.

The significant under-loading of our factories also brought some important operating inefficiencies, while the drop in demand led to higher-thannormal price pressure. Unused capacity charges and operating inefficiencies negatively impacted full year 2009 gross margin. Furthermore, the company's bottom line was negatively impacted by important restructuring charges and by the early phase of the integration of ST-Ericsson before synergies could occur.

#### However, we finished the year on some positive notes.

After hitting the bottom around the end of Q1 2009 we started to grow revenues sequentially at a very significant rate: 20% in Q2, 14% in Q3 and 14% in Q4. In Q4 we were back to an annual billing run rate well above US\$ 10bn. Moreover, for the total year, we gained share in the markets we serve.

With the increase in revenues, in the fourth quarter of the year came also a significant turnaround in the financial results for the company. Despite an unfavorable currency environment, after a few quarters, we were back to operating profitability before restructuring in the fourth quarter. Indeed this achievement was reinforced by our net operating cash flow reaching 8.6% of revenues in Q4.

Our long-term vision is to step up to double-digit figures in terms of operating margin and net operating cash flow as a percentage of sales, and to consistently provide a return on net assets between 12% and 18%.

For more details please refer to our annual report

#### Rewarding our shareholders

We remain focused on creating value for our shareholders, which we measure in terms of return on net assets in excess of our weighted average cost of capital.

At our annual general meeting of shareholders held on May 20, 2009, the distribution of a cash dividend of \$ 0.12 per common share was approved and/or adopted by our shareholders, to be paid in four equal installments, in May 2009, August 2009, November 2009 and February 2010. Payment of an installment was made to shareholders of record in the month of each quarterly payment. In 2009, the amount of US\$ 158m was paid to shareholders as dividends.

For more details please refer to our annual report

#### Our sales by market segment and region

Our revenues performance in 2009 outperformed the markets we serve. The majority of our market segments was negatively impacted by these difficult conditions and registered declining rates, except for Telecom, which benefited from the additional contribution of the NXP and EMP (Ericsson Mobile Platform) wireless businesses integrated in August 2008 and February 2009, respectively. Such a negative trend in our revenues was driven by the large drop in units sold since average selling prices basically remained flat as a result of an improved product mix.

By product segment, both ACCI and IMS registered double-digit declines, driven by a sharp drop in sales volume. Wireless, however, increased approximately 27%, benefiting from the additional contribution of the integrated wireless business.

By location of order shipment, all regions but Asia Pacific registered a drop in revenues, ranging from declines of approximately 25% and 24% in Japan and Americas, respectively, to approximately 20% in EMEA and 14% in Greater China. Our largest customer, the Nokia group of companies, accounted for approximately 16.1% of our net revenues, compared to 17.5% during 2008, excluding FMG.

Some important new products:

- in the area of MEMs we have two new families: gyroscopes and active microphones;
- we have important families of 32-bit microcontrollers for industrial, automotive and security applications;
- new complex digital ASICs for computer peripherals and communication infrastructure;
- a new generation of set-top-box products focusing on 3D graphics applications and low power consumption;
- a new platform for high definition and high quality digital and internet TV applications, code-named Freeman;
- in wireless, ST-Ericsson, via its T3G subsidiary in China, is partnering with world-leading mobile phone makers to bring advanced TD-SCD MA-based 3G solutions, and is the leader in this fast-growing Chinese market. In addition, the company's U8500 platform has been selected by leading manufacturers to underpin a new generation of smartphones;
- and, of course, a wave of new products in the areas of advanced analog, power and smart-power for all applications.
- For more details please refer to our annual report

#### Our inclusion in sustainability indices

 $\underline{\text{In}}$  2009, ST confirmed its inclusion in the major sustainability indices.

For more information, see page 12

2010 Our objectives

- Satisfy shareholder expectations through financial and non-financial performance
- Create economic value for stakeholders
- Create the conditions for sustainable innovation

ST key	figures   EC1			
		2007	2008	2009
ST1	Net revenues	US\$ 10,001m	US\$ 9,842	US\$ 8,510
ST3	Gross profit	US\$ 3,536m	US\$ 3,560	US\$ 2,626
ST5	Gross profit as a percentage of sales	35,40%	36,20%	30,90%
ST2	Net earnings (losses)	US\$ (477)m	US\$ (786)	US\$ (1,131)
ST4	Earnings (losses) per share	US\$ (0.53)	US\$ (0.88)	US\$ (1.29)
ST6	Market share versus TAM (Total Available Market)	3,91%	3,96%	3,76%

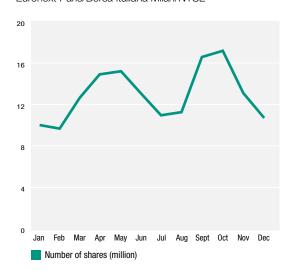
Dividends paid   EC1					US\$m
	2005	2006	2007	2008	2009
Dividends	107	107	269	240	158

Operating income and cash flow   EC1							
	2005	2006	2007	2008	2009		
Operating income	244	677	(545)	(198)	(1,023)		
Net operating cash flow	270	666	840	648*	227**		

<sup>(\*)</sup> Excluding payments for mergers & acquisitions (Genesis and NXP) which totalled US\$ 1,694m. (\*\*) Excluding net proceeds received in business combination (Ericsson Mobile Platform) which totalled US\$ 1,137m.

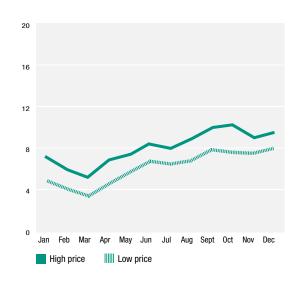
#### Average daily trading volumes | STE8 |

Euronext Paris/Borsa Italiana Milan/NYSE



### Share price 2009, NYSE | STE8 |

US\$



ST sales by market segment*   EC1   2.7   STE9						
	2007	2008	2009			
Automotive	14.4	13.8	12.2			
Computer	12.4	12	12.9			
Consumer	14	13.6	11.5			
Distribution	18.2	18.3	15.8			
Industrial & Others	7.5	9	7.7			
Telecom	33.5	33.3	39.9			

ST Revenues   EC1					US\$m
	2005	2006	2007	2008	2009
ST Sales	8,882	9,854	10,001	9,842	8,510

<sup>(\*)</sup> We have reajusted our sales' presentation by market segment to include the Distribution. We have reconstructed the data over the past two years to give an idea of the trend.

ST sales by region*   EC1   2.7   STE7			%
	2007	2008	2009
EMEA	33.4	30.7	28.4
America	13.4	13.6	11.9
Asia Pacific	20.9	25.2	30.2
Greater China	27.5	25.3	25.0
Japan	4.8	5.2	4.5

- (\*) Regions have been redefined to better take into account our activity. We have reconstructed the data over the past two years to give an idea of the trend.
- Use You can find the full disclosure on management approach on www.st.com/stonline/company/sd/economy/index.htm
- For information on the indicators presented in this section, please refer to the Reader's Guide at the beginning of this report

ST inclusion	T inclusion in the main sustainability indices   STE11											
	ASPI (EU)	DJSI (USA) (Germany)		Ethibel Sustainability Index (Belgium)			ECPI (Italy)		IGOOD Kingdom)	Total		
		DJSI World	DJSI STOXX	DJSI EURO STOXX	ESI Pioneer Global	ESI Excellence Global	ESI Excellence Europe	Ethical Index Euro	FTSE4 GOOD Europe Index	FTSE4 GOOD Global Index		
2009	<b>✓</b>	<b>✓</b>	<b>✓</b>	~	~	~	~	<b>✓</b>	<b>✓</b>	~	10	

#### Create economic value for stakeholders

#### Economic impact on four key stakeholders | EC9 | STE10 |

#### Some key achievements in partnership with our customers

We have a strategy based on four tenets, which we believe will help us gain market share. First, we work with our key customers to identify evolving needs and new applications in order to develop innovative products and product features. We have formal alliances with certain strategic customers that allow us and our customers to exchange information and which give our customers access to our process technologies and manufacturing infrastructure. Secondly, we are targeting new major key accounts, where we can leverage our position as a supplier of application-specific products with a broad range product portfolio to better address the requirements of large users of semiconductor products with whom our market share has been historically quite low. Third, we have targeted the mass market, or those customers outside of our traditional top 50 customers, who require system-level solutions for multiple market segments. Finally, we have focused on two regions as key ingredients in our future sales growth. The first is Greater China and South Asia and the second is Japan and Korea. We have launched important marketing initiatives in both regions.

#### Creating value for our suppliers

While the amount paid to suppliers of tangible assets is an official and audited figure published in our 20-F report, the split of purchases between tangible assets, materials and others is based on different data sources and timeframes. It aims to give a realistic picture of the most important transactions between ST and its main supplier categories, but it should not be considered as official and audited accounting information.

We use three main critical types of suppliers in our business: equipment suppliers, raw material suppliers and external subcontractors. The quality and technology of equipment used in the IC manufacturing process defines the limits of our technology.

Demand for increasingly smaller chip structures means that semiconductor producers must quickly incorporate the latest advances in process technology to remain competitive. Advances in process technology cannot be brought about without commensurate advances in equipment technology, and equipment costs tend to increase as the equipment becomes more sophisticated.

Our manufacturing processes use many raw materials, including silicon wafers, lead frames, mold compound, ceramic packages and chemicals and gases. The prices of many of these raw materials are volatile. We obtain our raw materials and supplies from diverse sources on a just-in-time basis. Although supplies for the raw materials used by us are currently adequate, shortages could occur in various essential materials due to interruption of supply or increased demand in the industry. Because we depend on a limited number of suppliers for raw materials and certain equipment, we may experience supply disruptions if suppliers interrupt supply or increase prices.

#### Our economic contribution to society

We operate in many jurisdictions with highly complex and varied tax regimes. Our tax rate is variable and depends on changes in the level of operating profits within various local jurisdictions and on changes in the applicable taxation rates of these jurisdictions, as well as changes in estimated tax provisions due to new events. We currently receive certain tax benefits in some countries, and these benefits may not be available in the future due to changes in the local jurisdictions.

For more details please refer to our annual report

Payments for purchases of tangible assets   STE1								
	2005	2006	2007	2008	2009			
Purchases of tangible assets	1,441	1,533	1,140	983	451			

All taxes of the year   EC1					US\$m
	2005	2006	2007	2008	2009
Tax expense for the year	122	98	64	49	(34)

#### Other developments

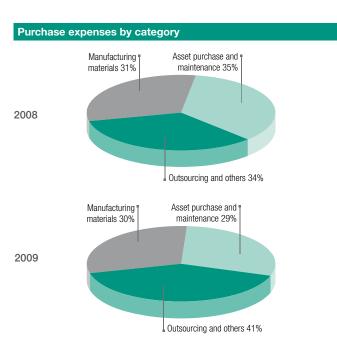
In 2009, we entered into a framework agreement with the French Ministry of Economy, Industry and Employment for the 'Nano2012' Research and Development program. In addition, our manufacturing facility in Crolles (France) houses a R&D center that is operated in the legal form of a French Groupement d'intérêt économique named 'Centre Commun de Microélectronique de Crolles'. 'Laboratoire d'Electronique de Technologie d'Instrumentation' (LETI), a research laboratory of CEA (one of our indirect shareholders), is our partner.

The R2 activity in Agrate (Italy) encompasses prototyping, pilot and volume production of the newly developed technologies with the objective of accelerating process industrialization and time-to-market for Smart power affiliation (BCD), including on SOI, High Voltage CMOS and MEMS. It is the result of an ongoing cooperation under a consortium with Numonyx. Our IP design center in Greater Noida, India supports all of our major design activities worldwide and hosts a major central R&D activity focused on software and core libraries development, with a strong emphasis on system solutions.

All of these worldwide activities create new ideas and innovations that enrich our portfolio of IP and enhance our ability to provide our customers with winning solutions. Furthermore, an array of important strategic customer alliances ensures that our R&D activities closely track the changing needs of the industry, while a network of partnerships with universities and research institutes around the world ensures that we have access to leading-edge knowledge from all corners of the world. We also play leadership roles in numerous projects running under the European Union's IST (Information Society Technologies) programs. We actively participate in these programs and continue collaborative R&D efforts such as the CATRENE, ARTEMIS and ENIAC programs.

Finally, we believe that platforms are the answer to the growing need for full system integration, as customers require from their silicon suppliers not just chips, but an optimized combination of hardware and software. Our world-class engineers and designers are currently developing platforms we selected to spearhead our future growth in some of the fastest developing markets of the microelectronics industry. The platforms include the application processors and integrated modem, set-top boxes/integrated digital TV, which include high definition and 3D capability, and in the area of computer peripherals, the SPEAr™ family of reconfigurable SoC ICs for printers and related applications.

Programme of the progra



#### Creating the conditions for Sustainable Innovation

#### **Research and Development**

We believe that Research and Development (R&D) is critical to our success. The main R&D challenge we face is to continually increase the functionality, speed and cost-effectiveness of our semiconductor devices, while ensuring that technological developments translate into profitable commercial products as quickly as possible.

We are market driven in our R&D and focused on leading-edge products and technologies developed in close collaboration with strategic alliance partners, leading universities and research institutions, key customers, leading EDA vendors and global equipment manufacturers working at the cutting edge of their own markets. In addition, we have a technology council comprised of 15 leading experts to review, evaluate and advise us on the competitive landscape. Front-end manufacturing and technology R&D, while being separate organizations, are under the responsibility of our Chief Operating Officer, thereby ensuring a smooth flow of information between the R&D and manufacturing organizations. The R&D activities relating to new products are managed by the Product Segments and consist mainly of design activities.

We devote significant effort to R&D because semiconductor manufacturers face immense pressure to be the first to make breakthroughs that can be leveraged into competitive advantages; new developments in semiconductor technology can make end products significantly cheaper, smaller, faster, more reliable and embedded with more functionalities than their predecessors and enable, through their timely appearance on the market, significant value creation opportunities.

The semiconductor industry is increasingly characterized by higher costs and technological risks involved in the R&D of leading edge CMOS process development. These higher costs and technological risks have driven us to enter into cooperative partnerships, in particular for the development of basic CMOS technology. We are a member of the ISDA, a technology alliance led by IBM with GlobalFoundries, Freescale, Infineon, NEC, Samsung and Toshiba to develop the CMOS process technology for 32/28-nm and 22/20-nm nodes. Furthermore, in order to maintain our differentiation capabilities through process technology leadership, we are continuing our development of proprietary derivatives of CMOS process technologies and of Smart Power, analog, discrete, MEMS and mixed signal processes, for which R&D costs are significantly lower than for CMOS.

For more details please refer to our annual report

#### Research and Development funding & expenses

STMicroelectronics participates in several programs established by the EU, individual countries and local authorities in Europe (principally France and Italy). Such funding is generally provided to encourage R&D activities and capital investment, industrialization and the economic development of underdeveloped regions. These programs are partially supported by direct funding, tax credits and specific loans (low-interest financing).

In 2009, while we had strong cost-reduction measures in manufacturing, we decided to protect our efforts in R&D, and of course this is going to pay off in 2010 with, once again, the introduction of an important wave of new products.

Our principal investment and resource allocation decisions in the semiconductor business area are for expenditures on R&D and capital investments in Front-end and Back-end manufacturing facilities. These decisions are not made by product segments, but on the basis of the semiconductor business area. All ST's product segments share common R&D for process technology and manufacturing capacity for most of their products.

For more details please refer to our annual report

#### **Product innovation**

We aim to be leaders in multi-media convergence and power applications. In order to serve these segments, our plan is to maintain and further establish existing leadership positions for platforms and chipset solutions for multimedia applications and power applications, which are driving system solutions for customer specific applications. We have the knowledge, partners and financial resources to develop new, leading edge products, such as cellular modems and application processor solutions for wireless, MEMS, digital consumer products focused on set-top boxes and digital TVs, SoC offerings in data storage and system-oriented products for the multi-segment sector. We are also targeting new end markets, such as medical and energy saving applications.

Our advanced R&D centers are strategically located around the world, including in France, Italy, Belgium, Canada, China, India, Singapore, Sweden, the United Kingdom and the United States. In 2008, we entered into an R&D alliance with the ISDA (see paragraph R&D on same page). In this context, five strategic objectives have been established:

- repatriate to Crolles the core CMOS technologies jointly developed under the International Semiconductor Development Alliance;
- accelerate the development of many differentiated SoC technologies, allowing us to take the lead in developing the most advanced nextgeneration SoC solutions;
- develop libraries and perform transversal R&D on the methods and tools necessary to develop complex ICs using these technologies;
- perform advanced technology research linked to the conception of CMOS nano electric functionalities advance devices on 300mm wafers:
- play a major role in local, national and European programmes designed to further promote nano-electronic innovation across all applications sectors.
- For more details please refer to our annual report

Partnerships with the academi	c comn	nunity	SO1   ST	E3   🔾	STS44
	2005	2006	2007	2008	2009
Partnerships with universities, colleges, schools	217	236	335	437	470

R&D expenditures   ♥ STE4					US\$m
	2005	2006	2007	2008	2009
Expenditures	1,630	1,667	1,802	2,152	2,365

R&D engineers and technicians b	y region* ∣	STE	5 l	
	2006	2007	2008	2009
Europe	4,857	6,958	7,011	8,186
Americas	352	407	702	645
Asia-Pacific	1,730	2,399	2,943	3,198
Others	256	489	428	436
Total	7,195	10,253	11,084	12,465

(\*) Excluding ST-Ericsson headcount

R&D headcount evolution   ©	STE5				
	2005	2006	2007*	2008	2009
Overall R&D headcount**	9,700	10,300	10,341	11,162	7,458***
R&D engineers and technicians	6.570	7 195	10 253	11 084	7.389***

(\*) In 2007, we reclassified our employees according to an updated job referential. The impact of this change on total R&D population was minimal, but the split between engineers/technicians and operators changed significantly. This new perimeter also integrates the Numonyx divestiture and the NXP Wireless integration.
(\*\*) Including operators.

(\*\*\*) Excluding ST-Ericsson headcount.

ST applications filed by region   STE6					
	2005	2006	2007	2008	2009
Italy	253	212	152	175	186
France	310	233	204	141	181
Rest of Europe	69	59	49	36	105
Americas	39	41	33	70	61
Asia-Pacific	49	62	59	63	56
Total	720	607	497	485	589



## Implementing Equal Opportunities in Italy

ST's strategy for gender equality has been defined as taking a 'soft cultural approach', based on the findings of a corporate-level working group in 2006. This includes transferring skills and good practice from one region to another, while recognizing the need to tailor activities to local cultural characteristics. Building on the good practices shared with other Italian companies, ST Italy has continued to develop its own comprehensive program on Equal Opportunities since its creation at the beginning of 2008.

The Italian Equal Opportunities Committee holds regular structured meetings aimed at promoting initiatives and fostering a woman's network.

In addition, some concrete actions focused on gender equality have been defined and implemented in 2009, including:

■ Information and awareness activities: Italy's intranet sites have been upgraded to integrate specific tools for the improvement of internal visibility and employee involvement in various activities.

I hese include the 'Events Calendar', aimed at providing information on all kinds of equal opportunities activities occurring locally and nationally (i.e. conferences, meetings, exhibitions, etc.) and the 'Suggestion Tool', aimed at collecting proposals for improving equal opportunities practices.

■ Training activities: Here the focus has been on introducing a 'double gender

vision' in personal development and managerial courses (ensuring that both gender perspectives are considered), and the development of a dedicated management training program, highlighting social rules and practices.

In November 2009, in collaboration with the SODALITAS Foundation, ST Italy signed the 'Equal Opportunities and Equality at Work' charter. This includes a series of principles to which the signatory must adhere, such as: the identification of company functions with clear responsibilities on Equal Opportunities; actions to overcome gender stereotypes; involvement of all levels of organizations in respecting the value of diversity; communication of the Committee's activities to all employees, etc.

## Developing employees' competencies

The development of people has been a strong area of focus for ST in 2009 and this will continue in the future with specific projects and new initiatives.

#### **Interview with**

#### Delphine Segura

Corporate Professional Development Group Vice President & Home Entertainment and Displays (HED) Group HR

## Can you tell us about your role in ST before taking on this new position?

My past experience in ST was mainly as Human Resources Director at ST's Grenoble site and Group HR for HED. In parallel, at France level, I had also taken the leadership of organizational development and was involved in company actions related to leadership and management and the integration process following recent acquisitions.

I took a new job, as Corporate Professional Development Director & HED Group HR, in September 2009, when I came back from maternity leave.

#### What is your new mission?

When it comes to Corporate Professional Development, I have the responsibility to redefine and propose the relevant strategy and policy in this domain for the whole company. This is with the aim of developing people engagement and organizational performance through appropriate programs and efficient tools provided to the different internal stakeholders: ST managers, employees and the HR community. I also support ST top management, responding to their needs in terms of team effectiveness, identification and allocation of strategic resources across organizations, as well as specific requests related to professional development.

The objective here is to ensure the alignment and the consistency of the core people - and organizational - development practices across the company in order to prepare the future and contribute to ST's business success.

### How would you define the underlying strategic intention behind this mission?

My conviction is that ST is a company in which people are really respected and empowered to take the initiative, if they wish, to propose new things. But at the same time, we still have some way to go to master career development and recognition of people's performance at company level. I'm personally convinced that if we succeed in ensuring that people continue to learn in their job, in helping them grow and increase their skills and knowledge, supporting them in evolving to different positions where they will be exposed to new projects and experiences, the whole company will be more dynamic and successful. The aspiration here is to create the conditions that will give all our employees the willingness to develop themselves, to innovate and to continuously improve the way they work. This will give ST an agile and competitive edge and represent a real winwin situation for employees and the company. Managers are, of course, key in this respect, as it is their personal leadership that can make it possible to develop ST's capabilities and potential, and make sure they are recognized.

### Could you share some concrete projects and achievements in 2009?

In 2009, many key projects and programs have been improved or launched.

We moved to a concrete phase of the Leadership and Management program. This initiative was launched in 2008 in order to prepare a new approach to managerial development, after the decision to discontinue the previous generation of ST University's managerial training courses. The Employee Engagement survey results were closely analyzed by the Leadership and Management Council and the Council's considerations led to this new leadership initiative.

For more details, see page 22

We also put in place a new initiative to help top managers deal with significant changes and communicate effectively to their people in order to support and engage them, mainly in that particular period of uncertainty after the 2009 economic crisis. The program has two aspects: a two-day training course and a new quarterly communication booklet, the 'Manager's Guidebook'. The targeted population is the 400 most senior managers of the company.

For more details, see page 23

For our executive managers, we have reviewed the composition of the Corporate Evaluation Committee to match the evolving nature of ST jobs. Its role is to evaluate the highest job positions of the company (job grade 19 and above) and support them in their career development and managerial role.

We also worked on the preparation of the next edition of the Employee Engagement survey and participated in the task force that reviewed and updated all social performance indicators to be more consistent with HR activity and more pertinent to ST's social responsibility. One of the objectives of this taskforce for the HR community was to create a quarterly social dashboard collecting data from all sites (the existing dashboard is currently annual). The results will be sent to the HR community on a quarterly basis for review and to support continuous improvement.

For more details, see page 28

Finally, in the area of competency management and performance appraisal, we have described 49 key job functions out of the 82 identified and the result has been directly applied to the corresponding job functions for their electronic performance appraisal. Now managers and employees are able to discuss and assess the level of the competencies required to master



their job and prepare the individual action plan to ensure competency development.

We have solid processes in place like the Peo-

#### What are your plans for 2010?

ple Review and our Performance Management process. The challenge that we face is to take these processes to the next level and ensure that we collect the maximum benefits from them for our people and for the business. This will take place through the proactive management of people's development based on solid talent identification and attraction, coaching, career management and internal mobility. Specifically in 2010 we will launch the Career Development program for managers with a new process to identify and implement appropriate actions relating to development, such as developmental assessment, 360° reviews, individual development plans and networking. ST University is providing the training part of the Learning & Management program. The next step will be to work on the 'technical ladder' which represents a similar career roadmap for our technical population. We will continue to improve our current processes, our People Review, the Performance Appraisal and the Employee Engagement survey. Key programs will be launched, under the sponsorship of Corporate Vice Presidents, related to major 'bottlenecks' that reduce the efficiency of our key processes for talent & performance management (differentiation, leadership attitudes, development tool box, Identification, attraction and retention of key people, internal mobility) In 2010 we will start to experiment with a new way of managing our people; this will certainly imply many changes in our habits and processes and indeed it will take time to be completed. But we should keep in mind that our employees have expressed their eagerness for this change in the last Engagement survey, and

the company has decided to move forward in

this direction with the aim of helping everyone

to grow and use their talent in such a way that

there are tangible business benefits.

## Supporting managers

## in a complex business environment

ST University's Leadership and Management Council worked in 2009 to define the new 'ST Leadership and Management Corporate Program roadmap', to prepare and strengthen our managers to face the challenges of today's complex business environment.



#### **Interview with**

Carmelo Papa

Executive Vice President, General Manager Industrial & Multisegment Sector

### Why did the Council decide to focus on supporting managers in this context?

The pace of change today is so fast and so demanding that managers across the company need extra support. Take our situation in ST over the past two years; we have seen major changes in the company's profile with new joint ventures, the integration of new companies and the externalization of some activities.

Internally, we also took note of the Employee Engagement survey results, which indicated a drop in the engagement of ST managers and employees overall (the level of engagement is of course influenced by the quality of the job done by managers). The Council and ST University (STU), together with Corporate Human Resources, felt the need to reinforce managers' engagement and motivation to contribute to ST's success and re-address the way we prepare and support our managers to face the challenges linked to the complexity of our changing business environment.

We are taking a fresh approach to management training, particularly in light of the evolution of ST's training strategy, including the decision taken in 2008 to discontinue the corporate management training programs such as 'Fundamentals of Management' and the 'Advanced Management Program', which have been the traditional channels of training for managers over the past years. Instead of having the same programs for everyone, the strategy is evolving towards providing more focused, customized support to different levels of managers working in different contexts.

## How was the Council created? And what process did you follow to arrive at a decision?

In September 2008, STU proposed to me the opportunity to chair the STU Leadership and Management Council, with the goal to define the new ST Leadership and Management Corporate Program Roadmap – and get the validation of the top management to deploy it – following the decision to change STU's approach to training for managers. About 15 directors from Human Resources (HR) and other business-focused functions are involved in the workgroups of the Council, facilitated by STU and Corporate HR. The Council meets each quarter to review and approve the recommendations made by the various task forces.

Discussions within the Council led very rapidly to the idea of building this program roadmap into a global framework for managerial career development, including not only the training itself but a relevant set of criteria for the identification and selection of participants, their assessment and other considerations pertaining to managers' career development.

The outcome of the Council's work was presented to Carlo Bozotti, our CEO, in October 2009. He confirmed the strategic importance of the topic and gave his approval to launch this new Leadership and Management Program Roadmap in 2010.

## What is the target audience for these programs?

We have identified five key managerial levels, from entry manager to executive manager, and a specific program has been tailored for each level

The common focus of these programs is on people management, including all ST management processes such as setting objectives, performance appraisal etc., but also going beyond this to cover the soft skills that every manager must have, such as interpersonal skills, giving feedback and effective communication.

## How will they be deployed? Are they 'one shot' or 'permanent' programs?

The identification, selection and assessment of participants are managed by HR, while all training programs within this roadmap have been developed by STU. The first two managerial level programs will be deployed locally by the sites' training managers and the upper level training programs will be deployed by STU directly. In October 2009 we launched the highest level session for ST's 400 most senior managers. The other sessions will be launched around June 2010. Then, each year, a new batch of managers responding to the selection criteria will be identified and will be invited to participate in these corporate programs.

For more details on the programs see pages 21 and 23

We expect a lot from this important company initiative to strengthen our managers and support them in reaching and sustaining new levels of engagement, which will ultimately benefit everyone in ST and have a positive effect on our overall company results.

## Leading and managing strategic changes

A program to enhance the quality of change management throughout the company

Several triggers led ST's Corporate Human Resources and Education management to develop a program to better equip those senior managers involved in shaping the company's strategy, with stronger skills and competencies in leading and communicating company changes.

ST's internal engagement survey results had deteriorated lately due to a combination of major merger & acquisition restructuring and change in company scope. An analysis of these results showed growing expectations from ST's employees for high quality leadership and management.

Best practices in change management are needed to help employees understand change,

and to see it as an opportunity to move forward and develop their potential. ST has recognized also that it is necessary to improve communication, especially the importance of senior management's role in communicating strategic decisions and explaining how they impact the short, medium and long term company performance.

'Leading and Managing Strategic Changes' is the corporate program that has been created to develop managers' abilities to effectively deal with and communicate change, in a way that sustains an engaging and motivating environment. It has been successfully launched in October 2009 under the sponsorship of the Human Resources Corporate Vice President and the Education Vice President. Over two days, senior managers explore two main themes:

- accepting to become a change leader;
- helping others adapt to change.

They learn first how to deal with change at personal and professional level, then how to communicate change and the company's strategic direction down the line to their people and teams.

A core team of corporate, regional and group HR worked closely with ST University members to design and develop the program in partnership with international consultants.

The program is being deployed from October 2009 to May 2010 within all groups and organizations under the sponsorship of their respective Corporate Vice Presidents. After this first phase, it will become part of the new Leadership & Management roadmap which will extend these skills to a larger managerial population.



Employee engagement is a critical driver of organizational performance to achieve superior business results.

ST's Front-end manufacturing (FEM) management pioneered the engagement program and reports back on its experience and follow-up activities in 2009

#### **Interview with**

Edith Wegel Front-end manufacturing Group, Human Resources Manager

## Can you remind us of the context and goals of the new engagement survey?

In 2008, the company moved from an opinion survey (measuring employee satisfaction) to an engagement-focused survey, providing employees with an opportunity to share their perception of their jobs and ST's work environment.

Being more aware of their direct reports' perception, managers are motivated to work on the issues that are most important to them and develop action plans to improve in areas of opportunity.

## How important is the new survey approach to FEM? And how did you build on the first results to make improvements?

The FEM management, who pioneered the engagement program at ST, is convinced of the connection between a fully engaged workforce and the organization's capability to continually improve manufacturing efficiency.

The 2008 FEM survey results highlighted opportunities to improve engagement, in particular by pulling on specific levers across key chapters or 'indices' of the survey: organization culture,

day-to-day work, direct manager and learning & development. All manufacturing operations within FEM have deployed engagement programs focusing on these areas and managers have worked actively on communicating results, assessing feedback, defining action plans with their teams and ensuring their deployment.

To measure the impact of these actions, FEM participated in the follow-up ('Pulse') engagement survey carried out in October 2009. The year-to-year comparison of results indicates improvements in all aspects of the engagement relationship, in particular for employees' emotional commitment. Among the most notable improvement is a top driver of engagement: "more employees understand how their projects are connected to ST's overall strategy". The Direct Manager Index also improved significantly, with progress evident in the questions 'Clearly articulates organizational goals' and 'Taken action since last survey'.

The comparison with the benchmark indicates that there are further opportunities for improvement that we can work on. FEM management confirms its commitment to increasing engagement, with improvement in the 'Discretionary Effort' index set as one of the FEM's key goals in 2010.

Despite the strong disruptions and challenges faced by manufacturing in 2009, with an abrupt slow down in the first half of the year followed by a steep ramp up in the final part of the year, FEM has been able to demonstrate a high level of flexibility and a strong contribution to the company's overall objectives. This is a direct outcome of the engagement of the entire workforce, which has been a key ingredient of

success.

## Integration activities following a recent ST acquisition

A concrete example in Calamba (Philippines), from NXP to ST.



When launching a large program of mergers and acquisitions, such as those conducted by ST over the past two years with Genesis, NXP and Ericsson, it is important to achieve rapid and effective integration at both company and site level.

In August 2008, as part of the ST NXP Wireless joint venture, a NXP site in Calamba, Philippines participated in a site level integration with ST. At first sight, integration could have seemed particularly challenging as the site was composed of only NXP employees and there were no local representatives from ST.

The communication of ST Senior Management with Calamba Management team has been critical to the success of the integration. Key information has then been cascaded and shared with all employees.

Then, after this first integration step, Calamba Management decided to launch its Management-Decided Separation Program with the objectives to support and accompany employees willing to leave the newly formed company. In order to conduct this sensitive exercise, the management launched a series of activities at site level.

There was a strong focus on ensuring a high level of information and communication, but also on assisting employees if their decision was to separate from the company. Activities included:

plant-wide 'town' meetings, chaired by the General Manager and Human Resources Director with the presence of the full management team;

- departmental town meetings, presided by relevant management team members;
- communication materials were posted, including Frequently Asked Questions;
- a questionnaire was provided to help employees decide whether they should apply for continuation of employment or opt for the voluntary separation scheme;
- a briefing was organized for management team members, managers and supervisors, where they were given guidance on how to communicate the results of their employees applications;
- a group of counselors was formed and trained (selected managers, supervisors and HR team) to help employees come to terms with the results of their applications;
- conducted outplacement/livelihood training programs for employees who were to leave the company; training programs include:
  - starting your own business, practical money management,
  - various livelihood training programs conducted by the local branch of the labor and employment department;
- conducted a mini-survey to understand employee morale and obtain feedback.

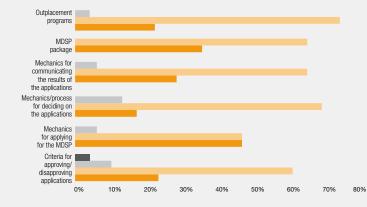
## Overall, 257 employees out of 2,776 decided not to join the venture in August 2008.

In the two first quarters of 2009, site management decided to launch the 'Management-Decided Separation Program' (MDSP) that involved 349 employees.

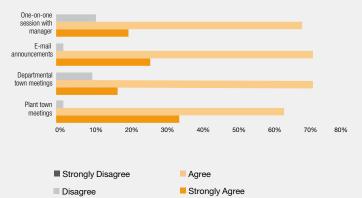
Prior to making their decision about remaining with the joint venture or leaving the company, a group of 51 managers and supervisors and 97 employees participated

in the mini-survey conducted to understand morale and obtain feedback on the process followed. Two examples of questions and results are shown here.

#### "Sufficient information was given about the MDSP"



#### "The communication channels used were effective"



## Restructuring activities during the economic crisis

2009 was a tumultuous year due to the abrupt downturn in the market and unexpected upturn towards the end of the year, but the completion of our 3-year restructuring plan launched in 2007 ultimately softened the blow on our workforce this year.

In 2009 we continued with the reshaping of our product portfolio and substantially completed ongoing restructuring activities (first announced in 2007) related to our US\$ 1bn savings and productivity plan.

In early 2009, we announced that restructuring activities for the year would affect about 4,500 jobs\*. These activities focused predominantly on reducing our costs through the realignment of our manufacturing operations, as anticipated in 2007. This included the closure of our production sites in Carrollton, Texas (USA); Ain Sebaâ (Morocco) and Toa Payoh (Singapore)\*\*. The closure of our facilities in Phoenix, Arizona (USA), which was also a part of the 2007 restructuring plan was partly postponed in order to maintain a minimal activity dedicated to specific customer needs. Planned headcount reductions in manufacturing were also carried out in 2009 in our sites in Malaysia, Malta, Singapore, France\*\*\* and in our newly integrated site in Calamba (Philippines).

At their lowest point during the year, headcount reductions in manufacturing operations globally reached what was targeted. However, by year end the net decrease of census was lower than anticipated, due to the fact that hiring in manufacturing began again in the second half of 2009 to respond to the sharp increase in customer demand that continued throughout the second semester.

As part of the company's continuing strategic focus on ensuring resources are aligned with the status of the market and business priorities as they emerged from the financial and economic crisis of late 2008 and early 2009, some headcount reductions were also planned and executed in 2009 across all product groups, divisions and central functions, affecting employees in a number of countries.

ST's Social Policy ('Sustainable Excellence in Human Resource Management') states that





"whenever the obligation to optimize our organization forces us to redistribute our internal resources, to close sites or to reduce our workforce. ST procedures and practices must show respect for the affected employees and maintain human dignity. Reasonable efforts, at a minimum respecting local legislation, will be made to reduce the social impact of any restructuring within the national and cultural context where the required action takes place". All headcount reductions in ST, including those made in 2009, are subject to this policy. In practice, the way in which reductions are managed varies considerably according to local law and cultural differences. The different programs and actions taken include structured programs to help employees create their own business (France), early retirement (Italy), agreed-upon individual departures (Morocco, Malta), termination of temporary or agency contracts (Malta, Malaysia), voluntary lay-offs ('Management-Decided Separation Plan', Philippines), heavy training and conversion of skills (Singapore) or just natural attrition with no action to replace workers (Malaysia, China).

For more details, see page 24

The United States represents a specific case as a significant retention plan was necessary, once the announcement of the site closures was made in 2007, to ensure that employees remain for as long as production requires their presence.

Globally speaking, restructuring plans were shared and negotiated with unions and employee representatives wherever these are present; schemes were set up for voluntary departures wherever possible; at a minimum, severance packages were always offered to affected employees; and actions were always in full compliance with local laws and regulations. In addition to this, at the height of the crisis, actions were taken to reduce costs without having to reduce headcount further than planned. For example, part-time employment was introduced in ST sites on a rolling basis, whereby employees in manufacturing stopped work for limited periods of time with a reduction of income depending upon the public social protection schemes put in place in each country. This was notably the case in Europe, where 'Chômage Partiel' (France) or 'Cassa Integrazione' (Italy) schemes were extensively used in the early part of the year.

Restructuring activities such as these affect people's lives in a direct way and as a result are never easy to manage. It has been clear to us in 2009 that our long-term restructuring plan – launched in 2007 and managed consistently with the specific intention of finding 'softer' ways of reducing headcount – has helped us avoid much heavier losses during the economic crisis.

- (\*) This article and all the data it contains refer only to STMicroelectronics employees, not to ST-Ericsson employees.
- (\*\*) Back-end production in Toa Payoh ceased in 2009, but testing activities continue.
- (\*\*\*)Only temporary workers were affected.

## Raising microelectronics awareness in Tunisia

When ST opened a new site in Tunisia in 2001, the microelectronics sector in the country was limited to just one laboratory.

Since then, the evolution of awareness about microelectronics and the increase in people pursuing careers in this sector have been dramatic. We now find microelectronics courses in all engineering schools.



Visit of students from the Polytechnics School of Tunis



The site ST created in Tunisia has a worldwide technical support center and 230 employees, most of whom are Research & Development engineers focusing on developing Intellectual Property (IP) and embedded software.

Our local community engagement is very much linked to microelectronics, with the objective of raising awareness of our sector and encouraging the development of local interest and expertise.

ST managers have worked with the microcontrollers division to create a worldwide technical center of excellence for the STM32 32bit microcontroller family based on ARM CortexM3.

Our technological area is located on the outskirts of Tunis, where we have contributed to creating a laboratory and a training class equipped with server and workstation that are freely accessible to teachers and their students from engineering schools.

Four engineering schools have been contacted and are interested in a partnership with ST. The proposal is to have a specific program for each school year supported by practical workshops. Three teachers from each school, twelve teachers overall, have followed a training course given by a local ST engineer who will contribute 20% of his time throughout the year to supporting this project.

ST provides development kits, technical support and will accompany teachers throughout the applied training course. ST engineers have also proposed several technical projects that students could select as practical work.

There are several benefits arising from the program. For the schools, it is an opportunity to gain access to a completely equipped room, where they can carry out dedicated educational projects. For ST, we contribute to raise awareness of the microelectronic sector, hopefully to promote the growth of future engineers, and to establish ST as a company of choice for the best students. Each year, around 30 students have the opportunity to join ST for a one year internship.

150 kilometers from Tunis, ST has recently signed a partnership with ENISO (National Engineering School of Sousse) with a similar objective. A laboratory is under construction and two students have already joined ST's Tunis site for two months to prepare workshops for the next school year, with the support of ST engineers. During the same period, two teachers have spent two weeks to familiarize themselves with these activities and discover the potential of this as a learning environment.

In order to equip this new laboratory, ST sites in Paris, Grenoble and Shenzhen have contributed old development boards and ST Tunis has provided several old PCs.

Generally, throughout the company, ST engineers are encouraged to spend time in their former schools to inform students about their experience and help them to gain an interest in the electronics sector by responding to questions students may have on what it is like to work at ST.

## Volunteers, fundamental to ST Foundation's development

With budget restraints in 2009, the ST Foundation sought to maximize its value to society by focusing on providing continued support for its Digital Unify program.

The Digital Unify (DU) program aims at reducing the gap between those who have access to modern digital technologies and those who do not, commonly termed the 'Digital Divide'. A basic computer course, developed and updated by ST volunteers, is offered free by a network of local teachers, who receive special training by ST employees.

In 2009, 25,000 trainees have completed the Informatics and Computer Basics (ICB) course, bringing the total number of people who have benefited from the program to 81,000. Two new countries, Burundi and France, joined the program in 2009, raising the number of participating countries to 18.

A key achievement this year is the organization of five sessions of 'train the trainer', delivered by ST volunteers. By raising teachers' understanding of how the DU program works and familiarizing them with the ICB course, we achieved very successful launches of new projects and the consistent development of existing ones. These courses play a central role in the development and roll-out of the program around the world. Projects such as this have been made possible thanks to the strong commitment of ST volunteers and the cooperation of their direct managers. Our colleagues have contributed to this initiative partly during working hours but mainly in their personal time.

### Examples of Digital Unify activities in different countries

#### Sierra Leone

The ST Foundation has recently launched a partnership with the NGO 'Shine' in Sierra Leone for the creation of four new computer labs in Freetown. These centers have been installed and equipped in four schools in the capital.

ST colleagues Marco Sambi and Enrico Riva trained new DU teachers in Sierra Leone in January 2009. The results of this pilot have exceeded all expectations, already reaching 3,100 pupils.

## Here are some testimonies from Sierra Leonean pupils:

Gloria: "What you have done for me is so much that 'thank you' is not enough to express my happiness. I am so glad that you touched my life with your generosity and God shall likewise bless you."

**Janet:** "I am so grateful for having such an opportunity to be a computer literate. ... I will go out into the world and teach others what I have learnt."

Kumba: "I want to thank you very much for the program. I really appreciate it. You have done a good work and made a mark. My dream was to become an electronic engineer and you have opened the doorway to my future."



Participants to the DU project in Burundi

#### Burund

The DU Burundi project was launched in March 2009 as a continuation of the fruitful cooperation between ST Foundation and the NGO Witar. The ICB course for trainers was run by ST colleagues, Bruno Stucchi and Andrea Tosoni. The training venue in Ngozi, northern Burundi, enabled local DU teachers and representatives from Congo and Rwanda to attend, in addition to future Burundian trainers.

Bruno Stucchi said: "When I was asked if I was willing to go to Burundi for ICB training, I accepted after some initial hesitation, because I strongly believe in the project that the Foundation spearheads. The course was held in a technical high school. Around twelve participants were almost all teachers and had a very good preparation, and great motivation. Burundi is a beautiful, yet very poor country, and therefore future computer teachers will not have an easy task. However, while initiating our return journey, when crossing a small town, I have seen a meaningful scene: a young woman in a traditional costume standing at the door of her house was grinding something in a huge wooden mortar. Suddenly, she rummaged in her dress, pulled out a cell phone and started talking with a smile. This is Burundi nowadays, and it seems a good sign for the success of this project."

#### Morocco

Digital Unify has been active in Morocco since 2003. There are now 28 laboratories and over 47,000 people have been trained. Last April, a new ICB course was organized in Rabat to expand the existing program and train future teachers.

The organizers reported being impressed by the way ST volunteers managed the classroom, a competence that stems from the quality of training provided by the ICB trainers.

#### Senegal

Following the first year's success in Senegal, the cooperation between ST Foundation and

the National Agency for Youth Employment has been renewed and now aims to open twelve additional centers in urban and rural areas around the country.

Tafsir Diop, a Senegalese colleague, and Enrico Riva, who works at ST Agrate, undertook the challenge of training 48 new teachers to prepare for the project's expansion in August 2009. The training days were exhausting: "teaching started in the early morning and continued until 10pm to allow new teachers to practice and give them all our support" reports Enrico, but he was delighted by the positive results and the participants' eagerness to learn.

The DU has become a national project in Senegal, with the support of the Ministry of Youth. The demand for the courses is booming in 2009 with people now having to join a waiting list to enroll.

5,700 trainees had been trained by December 2009 and the program's target is to open 36 labs in the next three years.

#### France

In September 2009, French speaking ST volunteers from Italy joined their colleagues from the Crolles and Grenoble sites at CARITAS-Secours Catholique's premises to train new teachers for DU France. The newly-established initiative aims to reach Secours Catholique's users; particularly elderly people, immigrants and the homeless.

The trainers' training was held during the weekend to encourage participation. Many participants commented on the enthusiasm that permeated the training and the desire of new volunteers to start teaching.

This project has been put in place thanks to the initiative of a colleague from ST Crolles. 400 people a year are expected to receive free computer literacy and access to the internet as a result of it.

For more information on STMicroelectronics Foundation, please visit: http://www.stfoundation.org/

#### Support the company in adapting to its surrounding dynamic context

Create a set of high level objectives and targets to guide local activities

#### Disclosure on management approach

In 2009, we reviewed and updated our social performance indicators to ensure they are relevant, meaningful and useful, both for our internal Human Resources (HR) community, in line with our HR strategy, and for our external audience. This project lasted for several months and involved HR managers from various sites and regions in a task force led by the Corporate Responsibility department. The results were reviewed, finetuned and validated by Corporate HR management.

All new indicators are marked as 'new'. Some additional indicators may be used in the future, but needed a pilot year to ensure their accuracy. As a result of this review, some changes have been made to our high level social objectives (shown at the top of each sub-section in this performance overview and summarized on page 7).

In order to strive to maintain a five-year view on social data trends, where possible we have included the past years' results even for new indicators, based on existing data that has been calculated accordingly.

Note that social indicators often refer to different categories of employees, including: 'professionals', employees who hold positions normally requiring graduate or post-graduate education and who are not eligible for overtime compensation; 'others' who may hold administrative or technical positions and who are eligible for overtime compensation; and 'operators', who work in production facility 'clean rooms' and are also eligible for overtime compensation.

In 2009, most of our sites have participated in the social reporting campaign, covering 94% of our employees\*. As usual, very small sites (up to 10 employees) are not included in the data collection process: Moscow (Russia), Warsaw (Poland), Madrid/Barcelona (Spain), Johannesburg (South Africa) and Tel Aviv/Netanya (Israel).

- For the full disclosure on management approach, see www.st.com/sustainability
- The reporting perimeter in 2009 does not include approximately 5,000 employees who left ST to join ST Ericsson during the course of the year.

#### Ensuring the right resources are in the right place

#### Headcount evolution and restructuring

The company's overall headcount has decreased in 2009 as a result of three main factors:

- The joint venture with Ericsson: the newly created company, ST Ericsson, integrated 5,000 employees from ST.
- The reduction of our headcount in the first quarter in line with our restructuring plans announced in 2007. These restructuring activities included the planned closure of production sites in Carrollton, Texas (United States), Ain Sebaâ (Morocco) and Toa Payoh\* (Singapore), as part of the company's 'fab lighter' strategy.
- The timing of reductions also took into account the company's needs as it faced the economic crisis. This decrease in headcount was counterbalanced in the fourth quarter by hiring in some sites to respond to the first signs of business recovery.

Restructuring activities in 2009 affected approximately 4,500 employees, as announced earlier in the year. Thus at the end of this program, in the US, Manufacturing organizations represented in Q4 2009, 525 people

(-70% compared to Q1 2008), and in Morocco the headcount was 2,590 people in Q4 2009 (-35% compared to Q1 2008).

For more on our restructuring activities in 2009, see pages 24-25

(\*) Back-end production in Toa Payoh ceased in 2009, but testing activities there continue.

Looking forward to 2010, now that restructuring activities are complete. we anticipate a stabilization of the headcount at worldwide company

#### Attraction and recruitment

Our HR strategy aims to ensure the right level and kind of hiring, and retention, to match the company's evolving requirements in terms of profiles, competencies and the dynamic integration of new people.

Job hires in 2009 were kept to a minimum given the challenging economic conditions (we hired about 10 times fewer engineers and managers compared to 2008), with the exception of operators in manufacturing facilities. The number of operators hired reflects higher turnover in some countries (notably those in Asia) requiring more regular hiring on the one hand, and an increase in hiring in the second semester to respond to the increase in production on the other.

Two of our new indicators in 2009 show that ST employees hold full time, permanent contracts in the vast majority of cases (close to 98% in both cases). Even in difficult economic times, ST keeps a low level of temporary contracts.

Another new indicator shows that 92% of jobs (operators for the most part in manufacturing operations) are filled through external recruitments. Newly hired employees are introduced to the company through newcomer programs to ensure their smooth integration (72% in 2009).

#### Retention

In 2009 the overall turnover rate was 11.6% with some considerable differences between the regions. In the Asia Pacific region the rate was high at 23.9%, while Japan region was at low 4%. The Mediterranean region was at 7.5% and the US region at 2.1%, while Europe was the lowest at 0.7%. These differences are particularly influenced by the local economic and cultural context, but actions have been taken where relevant and possible to make necessary adjustments.

In order to reflect on the turnover rate in a more meaningful way, we have introduced a new indicator in 2009 that focuses on the relationship between voluntary turnover and career length, as the two are closely linked. Looking at the results, for employees who have been with the company for less than 2 years, the turnover is very high. This rate mainly concerns employees in China specifically and Asia-based manufacturing operations generally and is due to societal characteristics linked to culture, national laws and economic development. We are working to address these challenges to the extent that this is possible.

For employees who have been with ST for between 2 and 5 years, turnover is around 13%. There is some need for reduction of this rate in regions like the Mediterranean and Asia. Finally, for employees whose career with ST is over 5 years, the rate of turnover is very low and even lower than the previous years. This is also the result of the economic context in the US and Europe. In any case some increase of the turnover in certain areas and specific jobs is desired in order to maintain our agility.

New

Hires by job type   LA1   C	ST12				
	2005	2006	2007	2008	2009
Engineers and managers	1,605	2,312	1,775	5,224	538
Technicians and administrators	749	1,154	774	1,163	639
Operators	3,189	4,088	3,663	5,502	5,984
Total	5,543	7,554	6,212	11,889	7,161

				New
Workforce by employment type   L	.A1			%
Percentage of employees by contract type	2006	2007	2008	2009
Full time contract	98.25	98.17	98.04	97.88
Part time contract	1.75	1.82	1.95	2.12

Newcomers induction prog	gram   S	TS18			
	2005	2006	2007	2008	2009
Percentage of newcomers who participated in a formal induction session (e.g. Newcomers Seminar) during their first year of employment	77.6	83.95	84.25	92.72	72.35

					New
Workforce by employment	contra	ct   LA1			%
% of employees by employment contract	2005	2006	2007	2008	2009
Regular contract	94.7	95.11	96.24	97.77	97.41
Temporary contract	5.3	4.89	3.76	2.23	2.59

2009

18,338

1,802

4,533

20,847

45,520

2008

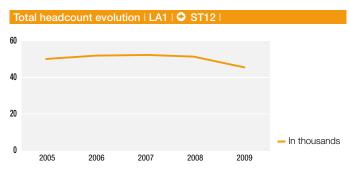
21,271

3,210

5,848

21,409

51,738



	IVEVV
Career length and voluntary turnover rate   LA2	%
Total voluntary turnover vs career length	2009
% of voluntary turnover of new hires (below 2 yrs)	44.87
% of voluntary turnover of employees from 2 to < 5 yrs	13.12
% of voluntary turnover of employees from 5 to <10 yrs	3.4
% of voluntary turnover of employees from 10 to < 20 yrs	1.86
% of voluntary turnover of employees from above 20 yrs	1.21

Headcount evolution by region | LA1 | ○ ST12

2005

22,405

3,120

6,906

17,602

50,033

2006

22,527

3,277

7,336

18,596

51,736

2007

22,341

3,122

6,995

19,685

52,143

Average turnover rate   L	A2   🗘 ST	12			%
	2005	2006	2007	2008	2009
Average turnover rate	7.8	8.79	8.81	10.12	11.65

11.65	Europe
	Americas
New	Mediterranean
	Asia Pacific

Total

	New
External hires in manufacturing   STS2	
	2009
Percentage of jobs filled externally vs overall jobs filled	92

#### HIGH LEVEL OBJECTIVE

#### Ensure diversity and equal opportunities

Objectives 2009 © Encourage all ST sites to have a formal program for equal opportunities and document best practices

ST's strategy for equal opportunities, with a particular focus on gender equality, was defined in 2006 as taking a soft, cultural approach. Since then formal equal opportunities programs overseen by relevant committees have been launched in France and Italy, covering approximately 38% of all ST employees.

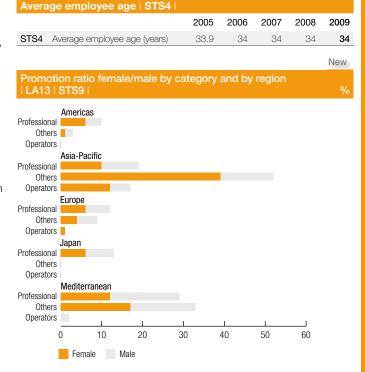
 $\square$  For more information on the progress of Italy's Equal Opportunities Committee, see page 20 Other less formalized programs exist in different ST sites in line with our culture for Sustainable Excellence.

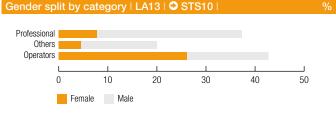
In 2009, the percentage of women in senior and executive management increased slightly in line with the trend of the previous years. In order to better evaluate the equality of opportunities between the genders, this year we have introduced a new indicator that shows the promotion rate by gender, region and category of employee. The data indicates that women are generally promoted to an equal extent compared to men, with the exception of professionals in the Mediterranean area. The fact that there are more men than women in the professional and non-professional categories (as indicated in the chart showing this breakdown), needs to be taken into consideration here. The higher percentage of promotions in Asia Pacific region for non-professionals and operators also reflects a larger presence of women in these categories.

Ensuring equal opportunities for disabled employees is another important aspect of our strategy, and there has been steady progress in this area over the last few years. In 2009 the percentage of disabled employees has risen slightly to 0.95 from 0.89 in 2008. This year we have introduced a new indicator showing the budget invested by our sites in programs to support the integration of disabled people, which was US\$ 3.5 million.

Wome	n in management   LA13					%
		2005	2006	2007	2008	2009
STS11	% of women in senior management (JG17 and above)	6.60	7.04	7.89	8.02	8.90
STS12	% of women in Executive management (JG19 and above)	4.10	5.65	5.92	6.78	7.60

Disabled employees   LA13   STS12b					
	2005	2006	2007	2008	2009
STS12b Disabled people employed as % of total workforce	0.48	0.62	0.61	0.89	0.95
STS12c Budget spent on disability programs (US\$k)					3,489





Number of nationalities in corporate staff   LA13   STS8					
	2006	2007	2008	2009	
Different nationalities represented in the corporate staff	7	8	9	7	

### Ensure employee empowerment and engagement

Objectives 2009

Support local creation of operational action plans based on the Employee Engagement survey results

#### **Employee engagement level**

Employee engagement is a critical driver of organizational performance to achieve superior business results. In 2008, the company moved from an Opinion Survey (measuring employee satisfaction) to an engagement-focused survey, providing employees with an opportunity to share their perception regarding their jobs and ST's work environment.

The engagement relationship is measured through the survey according to the following chapters or 'indices': Discretionary Effort (overall employees' willingness to go 'above and beyond the call of duty'); Intent to Stay (overall employees' intent to stay and prediction of retention); Rational Commitment (the extent to which employees believe their skills are being developed and their careers advanced); Emotional Commitment (the extent to which employees enjoy their jobs and are proud of their work).

The feedback provided is a unique opportunity for ST to respond by making continuous improvements to the working environment and for managers to improve their effectiveness (defined by their relative strength across key underlying competencies), identifying where and how they can act to improve business results with their team. Being more aware of their direct reports' perception, managers are motivated to work on the issues that are most important to them and develop action plans to improve in areas of opportunity related to effectiveness.

2009 was a year of action plans and implementation following the 2008 survey (the first following the new engagement focus) and the 'pulse' survey feedback gathered in 2009.

For more details, see page 23

In addition, we are using the areas for improvement identified by the new engagement-focused survey as inputs for our employee development strategy. In 2009, we focused on initiatives that foster the leadership qualities of our top management and our leaders' ability to deal with significant change.

For more details on these initiatives, see pages 22-23

In order to engage and involve our employees, we are maintaining a focus on our longstanding suggestion scheme, measuring the percentage of accepted suggestions that are implemented. In 2009 this rate dropped a little to 53% from 61% in 2008, but remains stable when seen within the trend of the past few years.

Improve the internal communication of our strategy and results, involve the managers in its deployment

Our strategy also includes the intent to maintain our recognition activities even during challenging economic times. Recognition has been a key element of our culture since the days of Total Quality Management, and remains firmly embedded in our culture of Sustainable Excellence. In 2009, the budget of local sites available for recognition activities dropped quite significantly, but the number of people recognized with this reduced budget (due to the economic crisis) was at the same level as 2008.

#### Compensation and benefits

#### Remuneration

2009 was a challenging year and the difficult economic conditions meant that the company's salary policy was put on hold. In practice this meant that there were virtually no annual increases in salary for the vast majority of ST employees. The few increases that occurred were primarily the result of contractual obligations in certain countries.

Our new indicator shows that 87% of employees are above the ST minimum range of salary for their job grade according to company policy. (Note that the ST minimum salary is defined by the company as the minimum level required to remain competitive versus the market. It does not refer to national minimum wage). Each year a dedicated budget is assigned to reduce the percentage of those who do not reach this minimum of the salary range of their job grade.

#### Benefits, bonuses and Unvested Stock Awards

In 2009, around 23% of eligible employees (from the professional population) received Unvested Stock Awards, compared to 33% in 2008. This is in line with the company's desire to deliver stock awards to a limited population as a strong recognition and retention tool for key contributors.

Although ST's incentive plans vary throughout the world based on local market practices, there is a consistent element applicable to all relating to company performance. For top management/executives, 50% of the incentive is conditional on the achievement of the targeted company performance level, while for all others 25% is subject to this measure. Due to the challenging economic environment in 2009, the company did not fully achieve the performance target and the incentive payments were impacted accordingly.

Employees survey - Engagement rate	I ♦ STS28a I	
	2008	2009
Overall participation rate (%)	80	-
Rational Commitment Index	0.16	-
Emotional Commitment Index	0.35	-
Discretionary Effort Index	0.43	-
Intent to Stay Index	0.34	-

Formal recognition   STS28   STS26   STS34							
		2005	2006	2007	2008	2009	
STS28	Overall recognition budget of all sites (USk\$)	1,613	1,031	2,684	2,161	1,644	
STS26	Number of people recognized*	41,676	77,390	50,171	38,805	38,373	
STS34	% of accepted suggestions which were implemented	57	39	62	61	53	

(*) Can include more	than one recognition	for one employee	over the year

Unplan	ned absenteeism   STS28	b l				%
		2005	2006	2007	2008	2009
STS28b	Unplanned absenteeism	3	3.05	2.9	3	2.47
						New
Remun	eration   STS30a   STS30b	STS	88			%
						2009
STS30a	employees above the ST minim	um salary	scale in	their job	grade	87
STS30b	employees below the ST minim	um salary	scale in	their job s	grade	12
STS38 employees covered by annual individual salary increase					NA*	

Benefits, bonus & USA   S	TS47				%
	2005	2006	2007	2008	2009
Unvested Stock Awards (USA) % of eligible (exempt > JG 12) employees receiving unvested stock awards	41	34	35	33	23
Unvested Stock Awards (USA) Number of employees rewarded	7,189	6,000	6,300	5,700	3,670

#### Ensure strong performance and dynamic career progression, life-long learning and employability to meet employee and company needs

#### Performance and assessment of potential

Each year employees' performance is assessed through the 'ePA' or electronic Performance Appraisal, which is an opportunity for the employee to sit down with his or her direct manager and review the extent to which key objectives for the year have been achieved, to define the key objectives for the year to come, and to discuss about the employee's progress in the context of career development. This electronic process has been embedded throughout the company over the last 2-3 years, replacing an earlier paper-based process, and is now well established. 78% of employees (excluding operators) and 89% of professionals performed the ePA in 2009.

We are also in the process of integrating an individual development plan into the ePA process, which will add a more extensive career development dimension to this tool. The existing characteristics of the tool allow the manager and his/her direct report to identify the employee's strengths and areas for improvement by selecting from a list of key competences that have been defined as important for the company. These are then used as a basis for targeted training or development activities.

In 2009 we launched a new electronic tool to support the collective People Review process. The percentage of eligible employees (professional population) who have been assessed by a collective people review using this new tool, which collects and records the relevant information into our People Soft data warehouse, was 21%. The overall percentage of eligible employees assessed by both the new electronic tool and the previous manual collection method is likely to be closer to the 2008 result, but this consolidation is not yet complete. The introduction of the new tool represents a good first step in the upgrading of the data collection process.

#### Career development

usually filled internally.

Average training hours | LA10

Professionals'

Operators

(\*\*) Including training on equipment and outside training.

Others

C) STS15

Total\*

STS16

STS17

We have introduced three new indicators in 2009 to better evaluate the effectiveness of our career development process. These show that over 8% of employees had a promotion during the year, while 27% had a change in their job function (i.e. a move to a new position without an increase in job grade). Over 51% of professional employees now have a formal individual development plan. As explained above, this percentage should increase once the development plan is fully integrated in the ePA. The decrease in the percentage of jobs filled internally, to 48% from 84% in 2009, reflects the sharp drop in internal mobility that is a direct result of the economic downturn in 2009. There was a much lower level of recruitment for professionals and managers in 2009, and these posts are

In 2009, we saw a drop in the number of training hours for professionals, from 35 to 27. This again reflects the impact of the economic downturn. However, the number of hours for the operator population increased from 61 to 72 hours on average. This increase reflects both mandatory training on equipment and procedures, often linked to certification or re-certification of operators, but also the training provided to new hires. Training hours for other non-professionals is stable at 41.

In the domain of training, we have introduced another new indicator showing the percentage of employees by category who are enrolled in formal external schooling programs paid for by ST. This applies to just over 10% of ST employees in total and represents a significant investment by the company in the development of its employees.

2% of ST employees are formally recognized as ST University 'Associate Trainers', qualified to train other ST employees on key programs and subjects. The opportunity to become an Associate Trainer is a source of motivation for employees, as it provides an avenue for career progression. It is also of great value to the company in the implementation of its training programs.

Perforn	nance assessment   LA12	□ ST	S21   S	TS21b	I	%
		2005	2006	2007	2008	2009
STS21	% of employees having completed the annual ePA					78.36
STS21b	% of exempts assessed during a collective people review in the past 2 years	43	59	62	53	21

	New
Career development   STS23	%
	2009
% of employees that had a promotion over the year	8.50
% of employee having a job function change in the year	27.37
% of exempts having a formal individual development plan	51.53

	New
Career development   STS23	%
	2009
% of employees that had a promotion over the year	8.50
% of employee having a job function change in the year	27.37

	New
Schooling programs*   LA11	%
	2009
Professionals	2.76
Operators	2.75
Others (non-professional)	4.69
Total	10.2

2005

37

80

53

53

2006

30

91

43

43

2007

30

61

44

44

2008

27

72

43

2009

26

94

41

51

(\*) % of employees following ST supported external schooling programs vs total number of employees.

It refers to employees who hold managerial roles and are exempt from overtime compensation.

Internal mobility   STS14					%
	2005	2006	2007	2008	2009
Jobs requiring experience filled internally	85	61	78	84	48

	New
Associate trainers   LA11	%
	2009
% of associate trainers	2

#### Proceed to deeper integration of human rights in our management systems

#### Working time and overtime

2009 was marked by the significant drop in production that was a direct result of the economic crisis, and this is reflected in the average overtime per employee, which dropped to 1.97 compared to 2.22 in 2008. It would have been lower still if production had not increased significantly in the second half of the year to respond to strong customer demand.

The increase from 42.58 standard working hours per week in 2008 to 48 hours per week in ST Muar, Malaysia reflects the decision taken by site management to align the working hours in Muar with the maximum limit permissible within the local labor regulations.

#### Freedom of association | HR5 |

We estimate that 75% of our workforce is covered by union or employeeelected representation.

Effective communication with employees is particularly critical in a difficult year like 2009. We note that the number of communication meetings held by ST sites has increased, from 10 to 15 on average, reflecting the fact that management has responded to the economic crisis and its impact on ST by reinforcing communication activities.

#### **Collective bargaining**

Number of meetings for the

discussion

organisation/site management to present

company/organisation/site results to

all employees allowing time for open

This year we have introduced a new indicator to better reflect the collective bargaining activity going on in our sites around the world in terms of the number of formal agreements. 2009 sets the baseline reference at 59 agreements signed. For example, in France, agreements have been signed between management and unions on equal opportunities, disability, seniors and medical insurance. In Italy, agreements were more focused on holidays, training, working calendar and meal tickets. There were also two agreements signed with unions in Brazil, both relating to pay.

#### **Human Rights management systems activity update**

Over the last three years we have consistently focused on strengthening our management systems for human rights, based on different inputs. In 2009, our activities in this area included:

#### Social/ethics objectives and social data dashboard

In 2008 and 2009 we published social and ethics objectives to all ST sites and organizations as planned. We have also prepared and will publish social and ethics objectives for 2010. Our 2009 review of social indicators included actions to make our internal data reporting process more robust and prepare the ground for quarterly visibility on key indicators.

#### Policy for harassment and harmonized disciplinary framework

In 2009, the Compliance Office introduced a framework for harmonized disciplinary measures and drafted a policy for harassment, which was approved by the Corporate Ethics Committee in December 2009. These will be implemented in 2010.

#### Continue communicating, training and stakeholder engagement

In 2009, ST continued in its full membership of the EICC (including representation on the EICC's Board of Directors). The EICC's Learning & Capability Building Workgroup is now working on the development of training on worker-management communication, including workers' rights (for use by all EICC members and suppliers in the electronic supply chain), with the aim to work in partnership with relevant key stakeholders in the development and implementation process. ST's plan is to use this training for internal training needs and the company has committed to join the sub-team responsible for the training development in 2010. In 2009, ST continued to participate in the business network Entreprises pour les Droits de l'Homme (EDH) and attended the first trial of a training course on human rights commissioned by EDH (target audience middle to high-level management).

As part of its involvement in the EICC, ST also participated in stakeholder engagement on human rights and labor topics. This included interactions with the Good Electronics and MakelTFair stakeholder networks and a special educational session on freedom of association and collective bargaining given in person by the Executive Director of the International Labor Organization (ILO) and the acting Director of the ILO's Better Work Program (ST was directly involved in the organization of this session).

For a full update on activities to strengthen our human rights management systems, see the html version of this report

Average weekly working time in selected countries

STHR4 | STHR6 |

					New	
Collective bargaining   LA4   ST	HR5					
					2009	
Number of collective agreements signed	in the year				59	
					New	
Percentage of employees work	ing part	time b	y gend	er %		
					2009	
Women working part-time by gender					84.77	
Men working part-time by gender					15.23	
Communication meetings   LA5   STS34a						
	2005	2006	2007	2008	2009	

10

North America					40		
110111111111111111111111111111111111111	1,62				40		
China	3.59				40		
	3.33						48
Malaysia	5.11						
Singapore						44	
omgaporo	4.02				00.5		
France	0.23				38.5		
Italy	0.23				40		
Italy	0.82						
Malta					40		
	2.78						
Morocco	1.15					44	
					40		
(	J	10	20	30	40		50
	ST standar	rd working time	Overtime				

Working time and overtime hours   STS36   STHR7						
		2005	2006	2007	2008	2009
STS36	Employees with regular worktime less than 48 hours per weeks (%)	100	100	100	100	100
STHR7	Average weekly overtime (hours per employee)	1.24	4.17	3.12	2.22	1.97

10

9

10

15

### Engage proactively with local community and society to create mutual value

Objectives 2009

Create a methodology for evaluating the effectiveness of local community organisms and initiatives

#### ST's commitment to the local community

Engaging with the local community at all of our sites around the world remains a strong aspect of our culture. Many site-based initiatives and activities have a charitable aim, either social or environmental. In May 2009, we launched a good practices website to help sites formalize their actions in this and other areas, thus supporting cross-fertilization across the company. At the end of the year, 20 good practices had been documented and uploaded in the system. All employees can access this online tool and read the good practices launched by the sites. Commitment of the sites to the local community represents 35% of the good practices shared and 44% if we include practices linked to environmental awareness and protection.

For more details, see page 5

It is important to note that many initiatives involving the academic community are closely connected to our core business activities, notably research and development. Engaging with the local community in a variety of different ways is considered a vital activity by our sites, and the company overall, to make business sustainable in every sense.

#### Partnerships with the academic community

As mentioned above, our engagement with key stakeholders in the local community includes strong, strategic partnerships with academic institutions, including for joint research and also for hiring purposes. In 2009, for the fifth consecutive year, the number of partnerships has continued to increase – to 470 compared to 437 in 2008 – and this remains a key strength of the company.

For more details on innovation and value creation through strategic partnerships, see pages 14-15

#### Charitable donations

Cash and in-kind donations to support charitable activities continued to increase in 2009, together with the number of employee hours dedicated to non-business activities.

Donations are made directly by ST sites, which define and implement their local strategy for community involvement in line with local needs and culture, but within the overall framework of Sustainable Excellence. Employee hours dedicated to charitable activities include ST employee volunteers who participate in the Digital Unify (DU) program.

#### **Corporate Responsibility awards**

In 2009 there were 26 awards received by ST sites for excellence in Corporate Responsibility (CR), compared to 87 in 2008. In order to ensure accuracy and consistency in our evaluation of external recognition of our CR activities, in 2009 we modified the definition of a CR award, limiting it to an official external award recognizing an effort in one or more specific Corporate Responsibility domains and formalized by an official prize. This accounts for the drop in the number of awards between 2008 and 2009. We are now more confident in the accuracy of this indicator and will follow it on this basis from now on.

#### ST Foundation

Despite the economic crisis, the STMicroelectronics Foundation was able to count on a solid financial situation in order to ensure the continuation of ongoing initiatives and pursue new ones as part of its Digital Unify program.

In 2009, activity was focused on the training of trainers, an update of the Informatics and Computer Basics Course and the expansion of the DU program to two new countries: Burundi and France. Existing projects have been reinforced and expanded, and DU figures have reached an unprecedented yearly record of over 25,000 trainees.

DU courses started in 2003, and by 2009 more than 81,000 trainees have benefited from them. More than 80 computer labs have been equipped in Bolivia, Burundi, Cambodia, Democratic Republic of Congo, France, Ethiopia, India, Italy, Malaysia, Thailand, Tunisia and Uganda. ST volunteers from France, India, Italy, Malaysia, Malta, Morocco, Thailand and the United States have contributed to ST Foundation activities throughout the years, partly on their own time and partly on ST's time. Looking ahead to 2010, the improvement of the economic context makes us confident that we will be able to expand the DU program to include new countries such as the Dominican Republic and Congo Brazzaville.

For more details on the Foundation's activities, see page 27

STMicroelectronics donations   S01   EC1						kUS\$
		2005	2006	2007	2008	2009
STS39	Total cash donated to charitable associations	1,645	271	444	463	474
STS39a	Estimated value of in-kind donations to community and society	655	772	250	188	268

Partnerships with the academic community   S01   EC1   STS44								
	2005	2006	2007	2008	2009			
Partnerships with universities, colleges, schools	217	236	335	437	470			

Corporate Responsibility awards   2.10   STS43							
	2005	2006	2007	2008	2009		
Number of recognitions or awards received for excellence in CR	85	68	76	87	26		

#### STMicroelectronics Foundation | S01 | EC1 2009 2005 2006 2007 2008 645 Total new trainers 112 171 120 72 Total trainers from beginning of 393 564 1,209 1,329 1,401 program Total trainees 7,945 12,915 15,118 15,178 25,851 Total trainees from beginning of 12.060 24.975 40.093 55.271 81.122 program

2010 Our objectives

- Publish social objectives for 2010.
- Consolidate people management processes into a comprehensive corporate talent/performance management platform.
- Establish a learning infrastructure as a key strength of ST with an offering of state-of-art programs in all critical domains for all employees.
- Establish a continuous improvement cycle at all levels in the organization and measure it through our engagement survey.
- Prepare for deployment of EICC training on worker-management communication.



## Environment, Health & Safety training and awareness

In 2009 we have continued to increase Environmental and Health & Safety (EHS) training and awareness, providing over 155,000 training hours. This represents a 40% increase compared to 2008, even greater than our target. Our longer-term objective is to double the number of training hours by 2012, compared with a 2008 baseline. In 2009 many sites organized a number of health and safety events and we also celebrated the 'world day for safety and health at work' on 28 April.

These events involved the creation of stands with posters or panels, games, films and activities. Practical exercises were also organized to raise awareness and focus on risk prevention, and also to highlight safe behaviors and share positive achievements. Some of the topics covered were: ergonomics and the handling of materials; industrial safety and protective equipment; hazard identification; safety in office areas; first-aid and emergency response teams; safety suggestions; the briefing of contractors;

road/driving safety and safety at home. These events have been a great success and play an important role in drawing attention to the importance of making ST a safe and healthy place to work. Employees also had the possibility to win health and safety-related gifts like smoke detectors, fire extinguishers, roadside safety kits.

## Health & Safety awards

#### Calamba, Philippines

ST's Calamba site, integrated by ST in 2008, won a safety milestone award in 2009 from the Philippines Department of Labor and Employment for achieving five million safe work hours without a lost time accident.

#### Longgang, China

ST's new Back-end manufacturing site in Longgang, China was recognized as a Leading Enterprise in Work Injury Prevention for 2008. It received the award in 2009 from the Social Security Administration and Work Safety Administration of Shenzhen Municipality.

## Constantly enhancing our safety approach

Safety at work is a fundamental part of ST's business culture that has an impact on every part of the company. Our position is never to compromise on the health, safety and well-being of employees and co-workers.

In 1995, ST published its first Environmental Decalogue, a set of 10 targets created to help us reduce our impact on the environment. Ten years later, ST published a new edition, which includes specific and ambitious health and safety targets. Our vision is to become a corporation that strives for zero accidents in the workplace.

In order to meet these targets, Damien Tisserand, Corporate Safety and Loss Prevention Manager, is in charge of defining the framework and the strategies to be world-class in Safety and Loss Prevention. Part of this role is to follow local safety teams' activities and performance and support them in their path towards safety excellence.



#### **Interview with**

#### **Damien Tisserand**

Corporate Safety and Loss Prevention Manager

## This corporate safety function was created in 2003; what were its initial objectives?

In 2003, we started the process of certifying our manufacturing sites. The first activities were to structure the company's health and safety management systems and to support sites for this ambitious program. Based on the international safety standard, OHSAS 18001, we defined ST policies, strategies and objectives. One of the objectives was to propose a uniform methodology for all sites and then to have all our manufacturing sites certified.

## And what is the outcome of this program, six years later?

The most significant result is that 22 of ST's larger sites\*, including all 14 manufacturing sites, are certified to the OHSAS standard. Today I believe that ST sites have robust health and safety management systems. However, we are continuously improving our approach so our goal is to continue to go beyond existing standards and regulations. In 2008, we have worked toward the adoption of a new self-assessment

tool, adapting it to ST's needs. In 2009, two ST sites agreed to pilot this tool and we plan to deploy it more widely in 2010.

For more information on the self-assessment tool, see page 39

## What else can be done to go beyond standards and regulations?

Well, while being based on the OHSAS standard, ST's safety policies and procedures actually go beyond these requirements. The corporate EHS function visits manufacturing sites every two years to conduct internal reviews and control the appropriate implementation of company rules and procedures. These on-theground inspections provide the opportunity to focus on specific issues and to remind people of key safety messages. But above all, they provide the opportunity for cross-fertilization: we share useful information with them from other sites and external benchmarks and we also collect sites' good practices.

And we have several other programs that demonstrate how we go beyond regulations.

For example, in 2005 we carried out an assessment of more than 20,000 workstations and chemicals in use following strict internal EHS guidelines, with dedicated action plans and budgets. And still now any new chemicals are screened and evaluated before being used. In 2003 we launched the Loss Prevention pro-

gram which is carried out on an annual basis to ensure that each site has an appropriate level of protection against fire and associated hazards (smoke, corrosion, heat and water).

- For more information on chemical workstation assessment, see the html version of the report
- For more information on other programs (health plan) see page 38

However, it is obviously important to constantly ensure that we remain in line with regulations. In addition to the sites' own self-evaluations, follow-up, local regulatory audits are organized every three years with an external agency to check we remain in compliance with complex legislation. The closing of non-conformities is managed locally and monitored at corporate level.

## How do you work with sites on a regular basis?

Locally, safety teams work with their site managers to translate corporate objectives into local ones and launch safety programs that are compliant with ST guidelines and national regulations. Throughout the year I ensure that site activities are in line with corporate directives, that these rules are well understood and implemented and that we maintain a high company-wide safety performance.

With this goal in mind, I look at their safety programs to facilitate regular cross-fertilization. I also propose and define specific programs to help them go further in improving their safety results. The BRI (Behavioral Risk Improvement) program, which was designed to identify safe and at-risk behaviors, is one example, together with additional training, awareness sessions and ergonomics assessments. In addition, I track several safety indicators that give a view of sites' performance and of ST's ability to protect employees' health and safety and maintain their safety awareness and skills.

## Today, how would you summarize ST's safety performance?

Safety is an integral part of the company culture. We reached our best ever annual safety results in 2009 with ST now in the Best-in Class group when benchmarked against the electronics industry and all US companies. The recordable case rate for work-related injury and illness has decreased by a factor of three over the past seven years, while the severity rate has been reduced by a factor of four. Most of the accidents are minor and similar to those that could happen at home such as trips and falls, especially when going down stairs. Now it is important to focus more on training and twoway communication so that safety becomes even more a part of everyone's daily activity. Our objectives in terms of training are intensified every year, safety programs that involve employees are encouraged and communication is strengthened at both corporate and site levels.

(\*) Agrate, Ang Mo Kio, Bouskoura, Bristol, Calamba, Castelletto, Catania, Crolles, Edinburgh, Greater Noida, Grenoble, Kirkop, Longgang, Marlow, Muar, Naples, Phoenix, Rousset, Shenzhen, ST Incard, Toa Payoh and Tours.

## Greater Noida, **high safety standards** at a non-manufacturing site

Greater Noida is one of ST's main R&D and design centers, employing 2,000 employees and many subcontractors. The site decided to raise the intensity of its safety program.

#### Interview with

Vivek Sharma Site Manager, Greater Noida, India



Greater Noida decided to adopt the safety procedures and systems primarily implemented for ST's manufacturing sites. This resulted in the site being certified OHSAS 18001 in 2007 and in very good safety results with a recordable cases rate of 0.06 in 2008 and 2009 (which correspond to only one accident per year).

## What motivated Greater Noida to adopt these more stringent safety standards?

Due to our large internal and external population and to the different jobs being performed it was of the utmost importance to the organization to have a systematic focus on occupational health and safety. Respecting high safety standards at Greater Noida demonstrates in a tangible way that management cares for employees. At the same time it minimizes safety-related incidents and the resulting loss of work time.

## When it comes to safety management, what is the difference between a manufacturing and a non-manufacturing site?

Safety can never be compromised in any job or at any site. However having said that, there are some fundamental differences. In a non-manufacturing environment the employees are primarily involved in office jobs, so health and safety issues are essentially related to working with computers and to ergonomic aspects. Some examples of such risks include eye strain, carpal tunnel syndrome or back pain. Also since non-manufacturing sites are perceived to have a lower risk level this can sometimes lead to a

certain feeling of complacency from employees towards safety, hence a greater need to continuously conduct health and safety awareness campaigns.

## So how do you ensure everyone respects safety rules?

Everyone, whether a ST employee or not, has to adhere to a basic level of safety rules. At the site, we all have to consider safety as our individual responsibility towards others. Depending on the job, an additional set of safety precautions may be necessary. Some examples of regular health and safety training conducted at our site include stress management, ergonomics, fire safety, lifestyle-related diseases and safety videos relating to fire, driving or mobile phone usage. Employees' adherence to safety rules and good health practices is maintained through regular health and safety campaigns such as Electrical Safety Month, Fire Safety Month, Preventing Dehydration. These campaigns always go beyond daily working activity to include safety messages that are also useful

## As the site manager, how are you involved in safety management?

I have ultimate responsibility for the site's health and safety performance and so I am fully integrated at various levels of our health and safety framework, sponsoring all health and safety training and campaigns. Not only do I have to demonstrate management commitment to safety but also ensure excellence in its execution.

To guarantee the robustness of our health and safety management system and its continuous improvement, I am the owner of the documentation and review it regularly. I also personally conduct site visits at least every six months, checking for safety preparedness.

I chair several meetings during which our health and safety activity and results are reviewed such as Emergency Response Team meetings, Management Review and Sustainable Excellence Operation Review. Through these I am continually informed of the site's performance and take part in decision-making relating to health and safety.

## Facing the worldwide pandemic alert

2009 has been marked by the worldwide influenza A (H1N1) pandemic. Facing such an event is always difficult but, from the very beginning, based on international information, ST set a framework for anticipating impacts and preparing the company at all levels.

The Corporate Security Department worked on this potential crisis for several months to refine the business-continuity action plan. The objectives were to protect the health of our employees and to minimize disruption of our service to customers.

Corporate Security created a dedicated pandemic emergency response team, consisting of representatives from all business units and key company functions, and put in place a set of measures to minimize potential propagation.

ST sites received information compliant with the World Health Organization guidance, while in terms of awareness for employees, a world-wide e-learning program was deployed and key messages were communicated. Monitoring and reporting of abnormal illness and absenteeism, compared to previous years, were set in place to react quickly in the case of propa-

gation. The company purchased a number of protective materials and equipment such as masks and antiseptic gels. Collaboration with local health authorities was also crucial to be constantly in line with national directives and to benefit from their expertise.

In order to ensure business continuity, communication and networking capabilities were reinforced to allow a large number of employees to work from home. Purchasing and Logistics departments also worked closely with suppliers and subcontractors to ensure that ST's supply chain and distribution channels would not be disrupted.

In parallel, ST kept close contact with its customers to inform and reassure them of ST's ability to protect the business and the interest of all stakeholders.

## **Prevention** is the foundation of safety

Safety is a state of mind where excellent safety performance in a group results from every member's attention being focused on achieving this goal.

ST's Shenzhen site has been OHSAS 18001 certified since 2003 and it has been audited for the last two years with zero non-conformities.

The plant has been putting emphasis on prevention in the context of a strong sense of responsibility.

In order to enhance their safety mind-set, on their first day with ST, employees are trained on safety and the individual's responsibility is formalized through a personal declaration of commitment. This empowers each individual to own responsibility for safety when doing their work

Safety training materials target different groups, considering their educational background and the manufacturing environment. To ensure everyone receives regular refresher training in safety awareness, an automated process is used to track, monitor and signal training needs of employees throughout their career via ST Human Resources.

Employees are also directly involved through ST's Employee Suggestion Scheme, which is a large part of the safety alert program. The site

safety team drives the process, tracking and monitoring hazard identification and rewarding improvement plan proposals. This scheme is supported by management and suggestions that are implemented are rewarded by approximately 10% of the employees' monthly salary. In 2009, 307 suggestions relative to safety have been received.

Employee awareness and commitment are crucial to prevention, but they are just one part of the picture. The plant management has a lot of responsibilities, including ensuring a safe working environment and equipment. For the installation of any new facility and manufacturing equipment, there is a check of the fulfillment of safety requirements. Any old equipment that is transferred is inspected and safety covers and sensors with alarms are installed to bring them up to today's safety standard. And in any changes planned for the site, safety is the prime governing rule to guide the plant management's decisions and actions.

An internal safety audit team also regularly visits every corner of the plant to identify and correct



any unsafe situations and ensure prevention actions are efficient. This audit team is composed of people with different profiles: EHS, manufacturing, human resources and facilities. Small, mixed groups with audit checklists are dispatched within the site to perform safety inspections. After the audit they work together to review and consolidate their observations, which are then presented to the top management for action plan decision-making. In 2009, Shenzhen reached an excellent safety performance with a recordable case rate of

performance with a recordable case rate of 0.06 and a severity rate of 2. The objective is to continue to strive for zero accidents through a key focus on prevention.

## Employee Annual **Health Examination** in ST Taiwan

The healthcare of our employees is one of ST's key Corporate Responsibility priorities.



Every year, as part of the company's global Health Plan, ST Taipei (Taiwan) conducts voluntary health checks for employees during the last quarter of the year. In 2009, following a survey of qualified health centers, 'United Safety Medical Group' (United) has been selected to manage this project.

For more information on ST Health Plan program, see page 38

In addition to general checks such as body weight, body temperature, pulse rate, respiration rate and blood pressure, 20 other items are reviewed during the health consultation making use of high technology medical equipment such as cardio vascular and tumor screening devices. As a result, employees' potential health problems can be detected early enough to treat them effectively. In case of need for subsequent health care, the National Health Insurance and the medical insurance provided by ST partially cover these additional fees.

When the health examination is completed, United distributes a detailed report to every employee, which is followed by an individual meeting. Employees have the opportunity to consult the doctor from United with any further questions they may have on the results, and the doctor also provides suggestions based on each individual's specific situation.

Medical checks are held annually so that both the health service provider and employees can review the evolution of results. This helps people to be more aware of their own state of health; importantly, they also learn how to stay healthy. The purpose of the program is 'prevention is better than cure' and it aims to remind every individual of the importance of focusing on good health throughout the year, not only when problems occur.

### Ensure a safe and healthy workplace

Reduce recordable cases rate to 0.37 and severity rate to 5

#### Disclosure on management approach

We manage our health and safety performance and systems to the international OHSAS 18001 standard, which is widely recognized as the most rigorous international standard for Occupational Health and Safety. 22 of our sites, (including all 14 manufacturing sites), covering 91% of our employees, are certified to OHSAS 18001. Three additional sites were certified in 2009, including our new manufacturing site in Longgang, China.

You can find the full disclosure on management approach at http://www.st.com/sustainability

The safety performance data presented in this section covers 94% of our employees (including some sites that are not OHSAS 18001 certified). The remaining 6% work in functions and locations unrelated to manufacturing\*. In 2008 and 2009 we extended the scope of our reporting by using a new online company reporting tool to track, record and investigate all work-related injuries and illnesses. It also allows internal benchmarking and the calculation of related indices necessary for performance monitoring. This online tool will also make it possible to increase the existing 94% coverage to 100% in 2011.

#### 2009 safety results

We are pleased to report that since we began keeping company-wide records in 2004, there have been no work-related fatalities. There was further improvement of our performance in 2009, with a 12% decrease in the recordable case rate for work-related injuries and illness, going beyond our 10% reduction target. The overall improvement since 2002

Our severity rate decreased by 18% in 2009, which also beats our 10% reduction target. The overall improvement since 2002 is an impressive 71%.

The impact of these results can be seen in the decrease of the estimated cost (see graph) to the company by 15% in 2009 compared with 2008. In total, the improvements since 2002 have resulted in savings of more than US\$ 29 million.

Reduce the rate of injuries with days lost for our contractors by 10%

In 2009 we continued to expand a number of initiatives and programs, in particular in the areas of communication, awareness and training.

We also continued the implementation of behavioral risk improvement processes and other programs. This has resulted in a 30% decrease in the rate of on-site domestic cases, which are not directly linked with industrial activity. (In ST we split recordable cases into two main categories: 'industrial' and 'on-site domestic', to allow a more effective approach to improvement)\*\*.

For more information on our safety programs, see the interview on page 35 For more information on our training and awareness programs, see page 34

#### Contractor safety

In 2007 we started to track one element of recordable cases - injuries with lost time - incurred by our main contractors at all our manufacturing sites and our main non-manufacturing sites. There was a decrease in this injury rate during 2009 of 16%, better than our 10% target. This includes more than 5,000 contractors. The overall improvement since 2007 is 26%.

#### Chemical workstation assessment | STEV67 | STEV68 |

Each workstation using chemicals has been assessed using an internal methodology called ST Chemical Risk Assessment. ST has a comprehensive approach to ensure the identification of hazards associated with chemical storage, usage and disposal, with rigorous actions to control all such risks to an acceptably safe level.

For more details, see the html version of this report

#### Heath & safety topics covered in formal agreements with trade unions | LA9 |

For details, see the html version of this report

- (\*) The employees not yet covered by the safety performance data presented in this section work in small ST offices in different countries around the world (ranging from 1-3 people per location to a site with 300 employees). The goal in 2010 is to reach 98% reporting coverage.
- (\*\*) 'Domestic' recordable cases are on-site cases with a fall or slip on stairs/floor/ground/outdoors, while walking, struck by or against door/chair/building and structures/trees etc. This is based on OHSA event classification followed by ST. See the chart on the html version of the report.

HIGH LEVEL OBJECTIVE

### Give all employees access to the same level of medical care

Ensure 20,000 employees benefit from available tests and services

#### ST Health Plan approach

For ST, the health of our employees is very important, both within and beyond the workplace. It is therefore part of our Corporate Health Policy to provide voluntary health promotion programs designed to enhance

ST's Health Plan sets an ambitious target to provide the same level of medical care to all ST employees, wherever they are located. The plan has been developed by sharing successful initiatives and extending them

The health promotion strategy is global, but programs are customized to address local needs and cultures. Four key blocks constitute this Health

- regular medical examinations for all ST employees, at least every 18 months, with check-ups performed by a doctor or clinician;
- specific tests or examinations, based on risk factors, for early diagnosis and disease prevention. These can include blood analysis, mammography, chest X rays, colorectal cancer tests, nutrition and weight counseling, or stress management:
- biomonitoring for employees working in manufacturing areas (and especially on some specific maintenance operations) to measure potential exposure to hazardous substances;
- educational programs based on identified health concerns such as: physical inactivity, obesity, smoking, stress management.

In addition to this, ST's Corporate Environment, Health & Safety department collects and consolidates six global health indicators from each site (respecting the confidentiality of individuals) in order to help identify and address specific health issues across the company.

#### 2009 Health Plan deployment

In 2009, despite the difficult economic circumstances, the corporate expenses for ST's Health Plan were US\$ 880,000, which paid for 20,687 check-ups and about 46,000 single examinations and tests.

Based on our stated 18 month check-up frequency, the average number of people who should have been offered a health check last year covers two thirds of ST's employees: 43,000\*\*\*, i.e. 28,700 employees. The corporate intermediate 2009 target was to ensure that at least 20,000 employees benefited from the plan.

Since this is a voluntary program, people have the choice whether or not to take part in the plan. In some cases we are facing some cultural barriers to people taking up this benefit. So, in order to be sure that we are measuring the right aspects of the plan, including the efficiency of local deployment, we now track the number of invitations sent to employees. In 2009 more than 47,000 invitations were sent, and 20,687 employees had their check-up.

In most sites, communication campaigns are used to raise people's awareness about health matters and this offers some support to those who do not want to undergo medical checks.

(\*\*\*) ST total population minus the US which participates in the Health Plan but does not disclose any information about health for legal reasons.

## Recordable cases rate

## 0.5 0.4 02 0.51 2006 2007

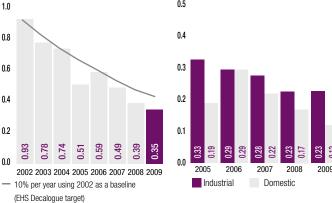
Recordable cases rate

Injuries/illness cost

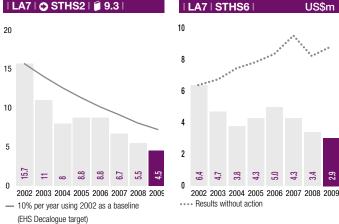
LA7 | STHS11 | STHS12 |

breakdown: industrial/domestic

## | LA7 | 🔾 STHS1 | 🥤 9.1 |



#### Severity rate | LA7 | STHS2 | 9.3



#### Lost work day case rate (LWDC) for ST subcontractors | LA7 | STHS13 |

	2007	2008	2009
Lost work day case rate	0.99	0.87	0.74

### Self-assessment to strengthen our EHS management system

ST has adopted a new tool aimed at measuring, improving and illustrating sites' Environment, Health and Safety (EHS) performance. This tool, developed by a consulting company, takes into account international best standards and good practices in EHS. It has been adapted to ST's needs and was deployed at two pilot sites in 2009.

This self-assessment gives a full picture of how effectively EHS is being managed, illustrating 15 elements that are essential to robust EHS management systems,

such as leadership, risk assessment, training and communication. The tool encourages sharing and synergies with other departments, which contributes to enhancing EHS culture throughout the company. It integrates elements that go beyond international standards and regulations, together with good practices from the industry, to ensure continuous improvement.

Crolles site (France), see the html version of the report

#### **EHS** fines

Among the EHS inspections we had this year by various EHS regulatory agencies, only the following fines were recorded.

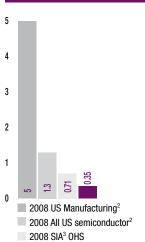
Location	Туре	Violation	Fine
		The Fire Fighting Bureau issued a notice for the fire accident at dipping duct and scrubbers on 24 February 2009.	
Asia China	Safety	The fire was caused by accumulated combustible material (evaporated solder oil and flux) in the exhaust duct, ignited by evaporated tin melting material from the tin furnace.	US\$ 3K
Europe Italy	Health	An employee opposed the qualification assessment and turned to the public authority. Public authority wrote 'incorrect assessement of employee's capacity vs assigned job' and a fine was received.	US\$ 1K

For more information on corrective actions and their status, see the html version of the report

#### Health Plan - Medical examinations 2007 2008\* 2009 Total Number of invitations sent NA NA 47.818 47.818 to employees\*\* Medical Examinations 62.500 35,730 50.134 148.364 ■ Check up with a physician 23.700 14.057 20.687 58.444 Blood analyses 17.000 9.287 12.287 38.574 (including biomonitoring tests\*\*\*) ■ Chest X rays 8,500 3,788 7,205 19,493 ■ Colorectal cancer immuocult test 1,400 754 851 3,005 ■ ECG / EKG 6,300 5,019 5,257 16,576 ■ Mammography 1,700 1,160 1,138 3,998 ■ Pap smear tests 2,800 1,488 2,084 6,372 ■ Prostate cancer screening 1,100 470 786 2,356 Screening test 9,028 11,923 20,951 Immunization 1,041 3,121 4,347 8.509 Total services provided

- 2008 results have been updated in 2009 due to delays in some sites' reporting.
- (\*\*) The Health Plan reporting system is still improving and in 2009, the 'number of people who took at least one exam' has been replaced by the 'number of invitations sent to employees' to better evaluate sites' commitment to encourage people to participate in this voluntary program.
- \*) These tests are dedicated to employees working in manufacturing areas (and especially on some specific maintenance operations)

#### Recordable cases rate benchmarks1



- 2009 ST
- (1) Latest data available (2) Bureau of Labor Statistics

tor Industry Association (SIA).

(3) Semiconductor Industry Association

This chart shows ST's recordable cases rate compared to US manufacturing and US semiconductor industry. The source of data is the US Bureau of Labor Statistics (BLS) and the Semiconduc-

- Reduce recordable cases rate to 0.32 and severity rate to 4.2
- Reduce the rate of contractor lost time injuries by 10%
- Deploy ST new self assessment tool to main manufacturing
- Continue company health plan deployment
- For more information on the indicators presented in this section, please refer to the Reader's Guide at the beginning of the report
- For definition of the safety indicators presented in this section, please see the html version of the report



## Supporting the production of energy-efficient photovoltaic panels

In 2009 ST prepared to join the existing strategic partnership between Enel Green Power and Sharp to develop and manufacture triple-junction innovative thin film photovoltaic panels in Italy. This new development in photovoltaic energy is able to maintain a very high level of energy conversion efficiency even in very hot climates.

ST will bring manufacturing capacity to the partnership, with production expected to start in Catania (Italy) in 2011. The site represents an ideal manufacturing facility as it takes full advantage of an existing semiconductor plant and related facilities as well as a workforce that is highly skilled in silicon-based manufacturing. In addition, Catania hosts Conphoebus, an Enel research center dedicated to renewable sources. Moreover, Sicily is one of the key regions in the Mediterranean area for the

development of solar farms and provides a unique location for all logistics necessary to reach the neighboring

This innovative move reinforces ST's commitment to environmental protection.

For more information on our partners, please visit Enel Green Power's web site at www.enelgreenpower.com an Sharp's Web site at http://sharp-world.com/index.html







## Sustainable water management in Longgang site

In China, waste water pollution has had a huge impact on the environment, society, and agriculture. It is a critical issue as it impacts overall water pollution and safe access to drinking water for millions of people.



Longgang Facility Team

The water pollution crisis in China has further highlighted the need for efficient waste water treatment methods to help reduce pollution. China is promoting the use of recycled water in urban areas; for example, cities are urged to use recycled water for toilet flushing and gardening. Increasingly, roads are built with materials that can allow rainwater to permeate into the soil to avoid a concentration of pollution in the waste water treatment collection system. Many landmark buildings for the Beijing 2008 Olympics showcased the most advanced water-saving construction standards in the world.

## Respecting the most stringent regulations

Starting in 2007, for ST's new Back-end site in Longgang, the Shenzhen Environment Protection Bureau required ST to meet the most stringent regulation, the Grade 1 standard code of DB44/26-2001, with the objective to discharge effluent at a minimum recycling level of 60%. ST Longgang uses industrial water for its manufacturing and facilities processes. This waste water is then treated by the site waste water treatment plant, to a level of purity that exceeds the local regulations and ST's own standards.

The site's waste water treatment plant was built in 2008 and occupies a ground area of over 347m². The plant comprises 12 treatment tanks, each of 1,018m³ volume, to remove chemicals used during the manufacturing process and meet the local regulations mainly in term of heavy metal, chemical oxygen demand and suspended solids. This new installation has been equipped with an emergency tank to capture and hold 36 hours of effluent volume in the event of an incident.

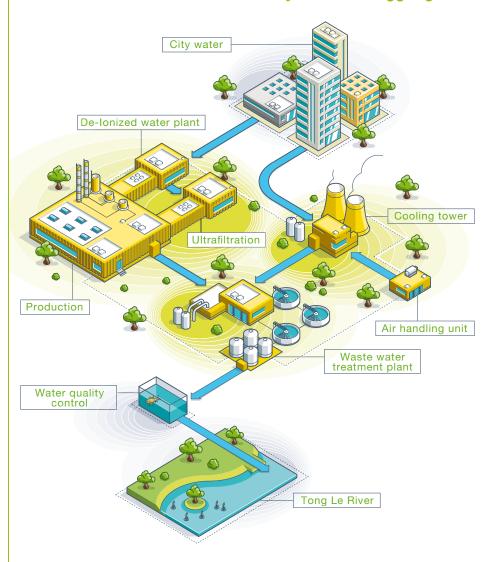
The treated effluent is finally discharged to the Tong Le River, and it is of sufficiently high quality to enable us to reuse it within our premises to reduce our fresh water consumption.

Since the site's creation and ramp-up in production, the following recycled/reused water projects have been completed as stated below:

- 100% or around 4 to 5 m<sup>3</sup>/h of Die-Saw waste water has been recycled since May 2009;
- around 96 to 168 m³/h of condensated water has been used as cooling tower water (100% of water used) since April 2009;
- around 4-5 m<sup>3</sup>/h of effluent from waste water treatment plant has been used for general outside cleaning since July 2009.

The recycled water will be used in cooling towers, scrubbers and for the purpose of general building cleaning.

### Overview of waste water reclaim system in Longgang



## Product 'Chemical Identity Card':

## A multi-disciplinary approach for managing the decla



#### Interview with

Nada El Graoui Corporate Materials Declaration and Environment Health and Safety Customer Support Manager

## What is Materials Declaration and why has it become so important?

For almost a decade, the electronic industry has been addressing the need to provide information about the chemicals we use, in response to global regulations and enquiries from customers. Concerns about chemical substances contained in electronic applications explain a large part of this trend. As our customers deal directly with these requirements (including pressure from end users and NGOs), they in turn require their suppliers, like ST - an electronic component supplier - to provide them with information regarding the compliance of their products.

#### Why was this specific project launched?

Originally, Materials Declaration responses had been provided on a case by case basis and in a number of different customer formats. Not only was it time-consuming, but it was difficult to find the right contact with reliable information, and the demand was constantly increasing.

So in 2008, a major program was deployed, under the leadership of the EHS department, to build a standard process for product Materials Declaration and improve the cycle time of our response to customers. We restructured the way information is made available to establish a chemical composition identity card of each product and we created a robust process throughout ST and beyond (also addressing how the company interacts with suppliers).

#### Specifically how did you proceed?

First we standardized the minimum requirements and formats, choosing to adopt the most widely used international format, IPC 1752, as the standard for reporting declarable substances and materials.

☐ See more on www.st.com/leadfree

Then, we created a multi-disciplinary team with champions and experts from each level of the manufacturing process. Experts defined the rules and standards for the declaration of substances, their weight measurements and reporting etc. Central and technical departments supported the process to ensure robust data storage and accurate communication. Together the team designed the standard for Materials Declaration based on the characteristics of production processes and the way chemicals are utilized.

For more information on how ST creates a chip, see inside flap cover

In parallel, the people managing ST's suppliers and subcontractors also involved themselves in the program to ensure the substances entering the company comply with ST standards, especially with ST's controlled substances list, which is reviewed annually to include applicable customer requirements and international regulations.

Moreover a careful chemical products selection process is performed in order to ensure that chemical products used in the manufacturing processes do not contain unwanted substances. Subcontractors that supply ST with semi-finished products provide their own Materials Declaration forms. Documents are stored on a dedicated database.

## And how is the information made available at the end of the process?

For each of ST's products, data relating to chemicals is converted into IPC 1752 format, stored in ST's database and posted on ST's public website. By the end of 2009, about 80% of published products have Materials Declaration data available online. The generic documents are progressively updated on the website as soon as new versions become available.

The Materials Declaration process is now well in place to support customer demand more effectively. It defines how we report the material composition of products and trace levels of banned, exempted or declarable substances according to the IPC 1752 standard.

And, importantly, Materials Declaration has become a compulsory document in the list of deliverables. Each product will have its own specific chemical composition identity card which will be made available to customers before its mass manufacturing launch.

## Does this program bring added value in other domains?

The Materials Declaration process has a dual benefit; on the one hand it allows ST to support customer enquiries and, over the longer term, it will provide valuable information to help us define the life cycle assessment of our products.

 $\hfill \Box$  For more information on life cycle assessment in ST, see page  $\hfill 53$ 

**Customer Request** 

ST controlled substances lists specification (Around 1600 substances)

#### **Interview with**

#### Sébastien Wurtz

Central Front-end Manufacturing (FEM), Quality Management System Manager and FEM Materials Declaration Coordinator

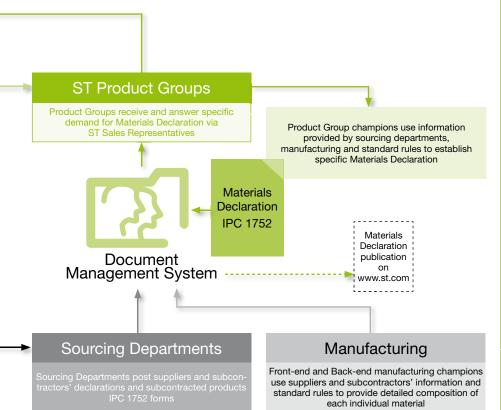
## Why is Front-end so critical to the Materials Declaration process?

Front-end manufacturing requires the processing of many chemical substances to produce silicon wafers. FEM's contribution to the Materials Declaration process allows ST to support customer demand in a shorter timeframe, with product groups now having easy access to FEM chemical information.

### How did you support the program and what added value does it bring you?

We deployed the program with the support of designated FEM champions. First, we made people aware of the importance of the program. Then we created a user-friendly template, and a common file containing information provided with the support of our colleagues in operations. As a result, in FEM we now have a very useful central database which gathers all chemical substances (around 50) for all our process families.

## ration of chemical substances



#### Interview with

#### Helene Hein

Customer Requirements Management, Automotive Business Unit Europe

## How has the Materials Declaration program helped in your activity with customers?

We are also reaping the benefits of the major effort we put in place to provide our customers with accurate data regarding the material composition of our products in a timely and efficient manner. The IPC 1752 standard adopted for this purpose is well received. The information provided in these declarations includes useful data on our manufacturing process as well as details on the material content. This allows easy verification of compliance to RoHS (including the use of RoHS exemptions) and other applicable regulations.

In the automotive industry, we are currently getting more requests linked to the European

Legislation of Vehicles (ANNEX II of Directive 2000/53/EC), but also an increasing number of more general requirements for compliance to various regulations and banned substances lists, which often emanate from application areas much broader than semiconductors. While it is reasonably straightforward to state what we do use for a given product, it is much more challenging to guarantee the exclusion of substances we have little reason to be using in the first place. A further improvement in dealing with customer requirements has been the rationalization of their internal processing with a clearer flow and responsibility ownership resulting in better synergies and reduction of duplication of work.

#### **ECOPACK®**

In 2000, ST launched a voluntary and strategic program called ECOPACK®. Besides responding to applicable regulation requirements (e.g. RoHS, Lead ban), the program is aimed at progressively removing polluting and hazardous substances from our manufacturing lines and products, based on ST's controlled substances specification. This list of substances (currently including 1600 substances) is updated annually in order to reflect the evolution of customer requirements (e.g. the elimination of brominated flame retardants).

ST products have been classified into three specific ECOPACK® categories:

- Non ECOPACK® (13% of products);
- ECOPACK®1 (61%): Compliant with RoHS directive and 'lead free\*';
- ECOPACK®2 (26%): ECOPACK® 1 + free of brominated and chlorinated flame retardants.

For more information on this program, see www.st.com/leadfree

In 2009, key progress has been made internally to define several further 'eco-levels' among ECOPACK® products. These new parameters are used to identify and control whether no, one or more RoHS exemptions\*\* have been used in ECOPACK® products. So, ST ensures full access to information for customers by including environmental grades in products' Materials Declaration forms.

- (\*) With adapted reliability for soldering at higher temperature, as some exemptions are necessary mainly for the automotive market.
- (\*\*) RoHS regulation allows some exemptions when no technical solutions exist to remove some substances

#### The next environmental frontier for products

ST's next challenge is to minimize the environmental footprint of its products.

The footprint must consider the product's overall life cycle (from raw material supply to end of life), including:

- product design in order to reduce energy consumption;
- manufacturing process design in order to reduce water, energy and chemicals consumption;
- the substitution of chemicals with a 'high footprint';
- the optimization of the transportation of finished and semi-finished products;
- the packing design (material in which we pack our products for transportation).

An eco-design program has been launched with the ambition to have 100% of our new products eco-designed within a time frame of 5 years.

For more information on this program, see page 53

# A holistic approach to mitigating the environmental impact of chemicals in ST's Front-end sites

ST has been engaged in the continuous improvement of its environmental management since the early 1990's. ST's environmental vision, communicated through its Decalogue, is to strive for zero environmental impact of its activities.

In the process of manufacturing microchips, ST's Front-end sites are the most important of ST's internal consumers of chemical substances, used to etch the silicon squares that form the heart of microchips. All Front-end sites are engaged in environmental programs to reduce their chemical consumption and related environmental impacts. ST's three French Frontend sites; Crolles, Rousset and Tours; are at the forefront of our worldwide efforts in this area. Their environmental departments act on four axes, covering all environmental impacts and opportunities from the introduction of raw materials to waste valorization (a term used to describe the re-use of waste materials in commercial processes).

#### **Reducing consumption**

The motto of the environmental departments is 'the fewer chemicals we use, the less pollution we need to treat'. We constantly endeavor to minimize the use of chemical substances and where possible, to find safer substitutes for the most hazardous ones.

These considerations are taken into account as early as possible in our purchasing processes, for example in the selection of manufacturing equipment. Strict environmental criteria are built into our supplier requirements and ST sourcing departments play a role in regularly reviewing and communicating the company's green procurement procedures.

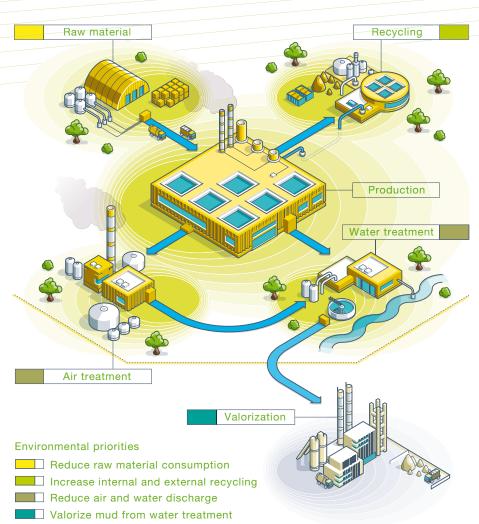
In the daily activity of sites, internal experts work on optimizing manufacturing processes to reduce the need for use of chemical substances. There is also prolific cross-fertilization and collaboration among sites also to share good practices.

www.st.com/cr\_report08

#### Increasing recycling

Under the slogan 'the more we recycle, the less pollution we need to treat', ST constantly seeks recycling solutions, both internally and externally.

Internally, infrastructures to facilitate recycling have been embedded in the construction of more recent sites like ST Crolles and ST Rousset. These sites are now equipped with waste water treatment plants that are engi-



neered to safely process substances released by the factory. The ST Tours site has contributed financially to the construction of the local town's waste water treatment plant to adapt it to treat discharges from the factory.

Externally, several chemical substances are recycled. The manufacture of microchips requires the use of ultra-pure chemical products, which means that, at the end of the production processes, many of them are still of high enough quality to be used by other industries; for example recycled phosphoric acid is reused in the water treatment industry to promote the bacterial growth needed for water purification. Sulfuric acid is also reused by many industries, generally as an additive to balance water acidity.

#### Reducing emissions and discharges

ST environmental experts define three kinds of air emissions: Volatile Organic Compounds (VOCs), Perfluorinated Compounds (PFCs), and other gases. ST manages these in the following ways:

VOCs are incinerated to reduce their global warming effect by converting them into CO<sub>2</sub>.

PFCs are potent greenhouse gases, but still need to be used in low quantities for certain essential processes. Sites have invested in dedicated abatement systems to incinerate these gases. Then exhausts are treated via water scrubbing to transfer a large part of this pollution from air to water. Air pollution resulting from the use of other chemicals such as sulfur and nitrous oxides is also treated via water scrubbing. The resulting water from these PFCs and other gases processes is then treated to obtain a sufficient level of purity to discharge into rivers, seas, etc. A by-product of this treatment is the production of various kinds of inert sludge.

#### Valorizing waste

Where possible we seek opportunities to work with commercial organizations to valorize our processed waste products, selling them for re-use where they act as substitutes for raw materials. Agreements have been signed with companies authorized to reuse the types of waste we generate. ST provides technical guarantees to assure the stability and composition of the waste we sell.

## Taking a high-level look at our

## reforestation program

As part of its environmental commitment, ST launched a large reforestation program in 2002 to offset its carbon emissions. After several years of growth, it is now time to evaluate the program's impact on ST's CO<sub>2</sub> neutrality strategy.

As stated in our Environment, Health & Safety Decalogue, (chapter 3) our company strategy for carbon neutrality includes reforestation as a means of limiting our global impact on climate change.

#### **Areas reforested**

Between 2002 and 2005, ST planted trees in Australia, Italy, Morocco and the United States. Over the course of the program to date, the reforestation has cost US\$ 18m, including the plantations and their maintenance.

In each case, our strategy has been tailored to the individual country and its local context:

- in Australia, the land is owned by the State, represented by the Forestry Commission of New South Wales (Forests NSW); ST paid for the plantation and its maintenance, and is the owner of the carbon rights and the timbers;
- in Texas, ST bought the land, planted the trees, and then donated the planted land to a local foundation, retaining the carbon rights;
- in Morocco, the land is owned by the State.
   ST paid for the plantation and its maintenance and retains the carbon rights;
- in Italy, ST owns the land and pays for plantation and maintenance under an agreement with the Lombardia region. ST owns the carbon rights.

## How do we estimate our CO<sub>2</sub> sequestration?

For Australia, we receive an annual report from the Forests NSW including information on any incidents that may have occurred during the year (storm, fire, etc.) and the estimation of carbon sequestration based on their own recognized methodology.

The estimation of our other forests is calculated following the Weibull method (annual sequestration rate during the growth period with differentiations according to the kind of trees in the plantation).

For more detail on the annual total CO<sub>2</sub> sequestered, see page 50



ST reforestation program in the USA

#### Sequestration validation

We are currently working in collaboration with the University of Texas to arrive at a more accurate methodology than the Weibull's to estimate sequestration. We expect to use this method for all our plantations from 2010 onwards.

We also plan third party validation of the sequestration of our overall reforestation program in 2011.

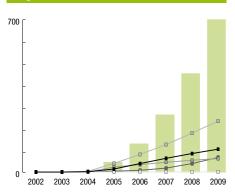
In 2009, total  $CO_2$  sequestered through this program compensated 70% of ST's direct  $CO_2$  emissions (scope 1 of the Greenhouse Gases Protocol). We expect to reach carbon neutrality for our direct emissions in 2012.

For more information on ST carbon neutrality strategy and results, see page 51



Reforested area (ha)									
	2002	2003	2004	2005					
Morocco		256	2,106	2,447					
Italy	17	0	0	0					
USA	577	0	820	0					
Australia	0	1,557	1,051	0					
Total area	594	1,813	3,977	2,447					
Cumulative area ha	594	2,407	6,384	8,831					

#### CO, sequestred



CO<sub>2</sub> sequestred in kTons/year

- Total CO<sub>2</sub> sequestred (kTons/yr)
- Australia
- -USA
- □ Italy
- Morocco
- Cumulative CO₂ (kTons)

### Maintain top class management systems for environment

Objectives 2009



## Maintain EMAS validation on all ST manufacturing sites

#### 

At ST, we manage our environmental performance using ISO 14001 and Eco-Management and Audit Scheme (EMAS), which are widely recognized as the most rigorous relevant international standards. Our environmental reporting covers 80% of our employees, and all our manufacturing sites. At the end of 2009 the data collection process for environmental performance indicators covered 14 manufacturing sites, including our new sites in Calamba (Philippines) and Longgang (China). We are pleased to note that Calamba maintained the ISO14001 certification during the year of its integration with ST and that Longgang achieved it after only one year of activity.

For the full disclosure on management approach, see www.st.com/sustainability

## Impact of the 2009 economic crisis on production and environmental performance

The 2009 economic crisis had a very strong impact on our level of production. Indeed, the decrease of production between 2008 and 2009 was around 30% in terms of wafers out. Nevertheless we limited our Back-end decrease in production by reducing the level of subcontracting. The effect of this situation on our environmental performance translates globally into good results in term of absolute values (consumption of energy, CO<sub>2</sub> emissions, etc.), but worse results when expressed in normalized terms (e.g. per unit of production).

#### Environmental Burden methodology | EN16 | EN20 |

Since 2001, net emissions to air and water have been reported using the Environmental Burden methodology, to give a complete overview of the environmental impact of ST's activities independently of the variation in production capacity. After the significant impact that occurred in 2008 due to the carve-out activity linked to the creation of Numonyx, in 2009 a further reduction in these results occurred mainly due to lower production as a result of the economic crisis and also the planned closure of our site in Carrollton, Texas (United States).

#### Emissions to air | EN16 | EN17 | EN19 | EN20 |

In 2009 we reinforced the accuracy of our data by introducing 24 hour sampling of air emissions and by defining common worldwide minimum values for the limit of detection. In 2009 all the indicators related to emissions to air show a significant decrease due to lower production levels.

Our emissions of greenhouse gases decreased by 11% due to less energy being used and reduced consumption of perfluorinated compounds (PFCs) and some other chemicals.

For more detail on the reduction in greenhouse gas emissions, see page 50

In 2009 our program to eliminate ozone-depleting substances was almost complete, resulting in the impressive emission reduction of about 87%. Emissions of Volatile Organic Compounds (VOC) and photochemical oxidant creation emissions significantly decreased by 30% and 28% respectively. Overall air emissions toxicity and atmospheric acidification emissions decreased by about 12%.

#### Emissions to water | EN21 |

We reinforced the accuracy of our emissions to water data by defining common minimum values for the limit of detection, which partially explains the significant decrease in our results, along with the general reduction of production. Eutrophication and aquatic oxygen demand also showed a significant decrease of about 25%. Aquatic ecotoxicity decreased by 12% and heavy metals emissions by 14%.

#### Environmental incidents 2009 | EN23 |

A minor case of soil contamination by solvents occurred in Tours (France), in 2006. Investigations were completed in 2007 and remediation is still ongoing.

A groundwater organic contamination identified at our site in Rennes (France), in 2006 has been investigated in collaboration with local authorities. A remediation plan was launched in early 2008 and is still ongoing. No other environmental incidents occurred in 2009.

#### HIGH LEVEL OBJECTIVE

### Contribute to company efficiency and financial performance

Objectives 2009

Ontinue to save money through effective environmental management (net savings of US\$ 112m in 2009)

#### **Environmental accounting**

#### Expenses

The table on page 47 presents the total costs versus savings for the three key resources used in our industrial processes (energy, water and chemicals).

The costs include all environmental expenses for water, waste water and air treatment, recycling of water and chemicals, waste transportation and disposal, as well as costs related to environmental management systems, audits, permits and remediation.

They also include sampling and analysis of water, waste water, recycled chemicals, ground, air and external noise as well as the depreciation of equipments and investment in the upgrading of environmental facilities.

#### Savings

On an annual basis, we calculate our savings as follows: we set a base-line using a 1994 model (2000 for chemicals) with the assumption that there are no installation enhancements. This baseline is projected each year and compared with the yearly value to show actual savings. In 2009, our total savings were US\$ 160m with net savings of US\$ 112m once costs are deducted. The decrease in total saving is linked to the decrease of production volume.

#### **Environmental investments**

Despite the fact that our environmental investments have decreased compared to 2008, we have continued to upgrade our infrastructure in order to comply with our environmental requirements (defined in our Decalogue).

#### Programs for the reduction of natural resources | 2.0|

ST's programs to reduce the use of energy, water and chemicals at all sites are the foundation of our longstanding eco-efficiency approach to environmental stewardship and they have saved the company around US\$ 1,200m over eight years. Once established and identified in any given site, environmental good practices are deployed in other manufacturing plants and building installations across the company. Most of the projects have a pay-back threshold below three years, meaning that the money invested to increase equipment-related and other kinds of efficiency should be recouped within a three-year period.

As part of our culture of spreading good practice across the company, many resource-efficient projects have been implemented in other sites in 2009:

- heat recovery on de-ionized water in Muar, Malaysia;
- an electricity correction factor at Kirkop, Malta;
- new heat exchangers for heat recovery at Kirkop, Malta.

Environmental burden: net valu	es   EN16   EN17   EN19	EN20   E	N26   STE	V21   🧊	4.1   🗐 4.3	🗐 4.4
	Units	2005	2006	2007	2008	2009
Emissions to air						
Global warming*	MTCE	626,420	563,363	478,884	404,319	358,167
Ozone depletion	Kg R11 Eq	78	135	171	62	8
VOCs	Tons	311	290	262	244	170
Atmospheric acidification	Kg SO₂ Eq	81,509	72,951	58,178	63,142	55,370
Photochemical oxidant creation	Kg ethylene Eq	46,767	65,974	15,761	48,969	35,044
Air emission toxicity**	Kg PH₃ Eq	7,532	3,737	4,881	4,720	4,101
Emissions to water***						
Eutrophication	Kg (P+N)	387,051	385,031	381,889	414,730	305,502
Aquatic oxygen demand	Kg COD****	443,870	354,965	351,967	834,032	626,835
Heavy metals to water	Kg heavy metals	17,522	13,279	13,277	10,354	8,934
Aquatic ecotoxicity	Kg Cu Eq	11,490	13,964	10,398	7,598	6,698

- Includes direct greenhouse gas (GHG) emissions from our manufacturing plants and indirect emissions from energy consumption and transport, reported in Metrics Tons of Carbon Equivalent (MTCE). Does not include GHG emissions from subcontractors and foundries.
- Emissions of substances are considered only if they exceed the minimum threshold of 3ppm, expressed in phosphine equivalent. For Volatile Organic Compounds, Atmospheric Acidification, photochemical oxidant creation and air emission toxicity the Particulate Matter is not covered.
- (\*\*\*\*) Domestic waste water is included.
  (\*\*\*\*) Total Chemical Oxygen Demand (COD).

#### Environmental awards 2009 | STEV19 |

In 2009 ST won four environmental awards. The Ang Mo Kio site won the Singaporean President's Award for the Environment as a result of its continuous involvement in environmental protection.

The Calamba site received the Seal of Approval award by the Department of Environment and Natural Resources under the Philippine Environment Partnership Program, recognizing its ability to go beyond compliance in the continuous improvement of its performance.

ST's sites in the United States also received awards. Prior to its closure, ST Carrollton won the Certificate of Recognition from the City of Carrollton for consistent compliance with industrial water pretreatment regulations for the year 2008-2009, and Phoenix was awarded with the City of Phoenix 100% Wastewater Compliance Award.



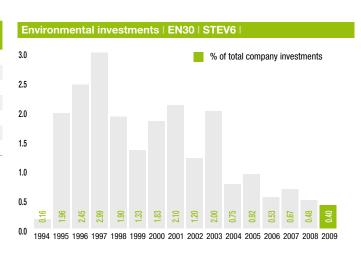
Calamba site General Manager, Melba Cuyahon, receiving the Seal of Approval award from the President of Philippines, Gloria Macapagal Arroyo

Environmental costs versus savings   EN30   STEV8   STEV35   STEV58						
Indicators	2005	2006	2007	2008	2009	
Total costs	34	35	28	41	48	
Energy savings	107	129	201	192	87	
Water savings	22	26	27	25	15	
Chemical savings	74	82	90	86	58	
Total saving	203	237	318	303	160	
Balance (cost savings)	179	202	290	262	112	

#### The method used to calculate the savings shown in this table is the following:

- 1) we set a baseline using the 1994 model with the assumption that there are no installation enhancements, except for chemicals for which the baseline is 2000:
- 2) this baseline is projected each year (in relation to the quantities produced):
- 3) each year, the actual value is compared to this projection; and
- 4) the result shows the theoretical benefits due to the installation improvements concerning the savings for energy, water and the use of chemicals.

Total costs cover expenditure of environmental management areas (including waste and remediation) and yearly net investment and equipment depreciation.



#### Continuously improve our eco-footprint according to our Decalogue target

Objectives 2009

$\bigcirc$	Re
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duce energy consumption by 5%\*



Reduce water consumption by 5%\*



Reduce chemical consumption by 5%\*

(\*) Per unit of production/year compared to the 1994 baseline.

#### Overall reduction in consumption of resources

In 2009, for all ST manufacturing sites, consumption of resources in absolute values decreased significantly: electricity use by 7%, water use by 10% and use of chemicals by 30%. The consumption of resources per unit of production has been strongly impacted by the overall decrease in production due to the economic crisis. Nevertheless the impact varies according to the kind of resource.

Electricity in normalized values is much higher in 2009 than in 2008 because of the very specific conditions we need to maintain on a constant basis in our manufacturing sites (a given level of temperature, hygrometry, etc.), which results in a consumption of electricity that is not related to the level of production. For chemicals and water, the impact is lower because of the proportionate relationship between consumption and production. The charts opposite show two values for the consumption of key resources in 2009: first is the actual global consumption per unit of production for the whole year 2009; the additional column shows an estimate for the year 2009 based on the results of the fourth quarter, which were closer to normal.

#### Consumption of energy

#### Consumption of electricity per unit of production

In 2009, the overall trend since 1994 for electricity consumption reduction, based on our EHS Decalogue target to achieve a cumulative reduction of 5% per year (per unit of production), has not been maintained. The 2009 result versus 2008 is in fact an increase by 43%. The decrease of production due to the economic crisis brought us back to a level comparable to 2002 results. However, if we take the best performing quarter (Q4) as the basis for a calculation of the year's estimated results, we would see an increase of only 12%.

#### Consumption of natural gas

Natural gas represents approximately 10% of our total energy use and is mainly used for air heating, for cooking at on-site canteens and for abatement systems. The graph on page 49 summarizes the results of natural gas consumption per unit of production. The 2009 value versus 2008 shows an increase of 29%. Again, an estimate of the year's results based on Q4 shows a theoretical increase of only 7%.

#### **Energy saved**

The energy saved reported on page 49 is calculated as follows: a baseline is set every year and the expected consumption for the following year is determined with the assumption that no improvement actions will be taken, which means that the expected consumption will be strictly proportional to the variation of manufacturing volumes. Every year the real consumption is measured against the expected consumption to show actual savings. Based on this calculation method and due to the significant decrease of the level of production, in 2009 we did not make any energy savings despite the efforts made by each site. Nevertheless thanks to the consistent investments made over the past years, the savings continue to be positive in the context of the 1994 baseline (see table for indicator EN5).

Our calculation method will be used for the 2010 report but taking into account the year 2008 as the baseline and not 2009

#### Consumption of chemicals | 🗐 5.1 |

Our manufacturing processes require significant amounts of chemicals, especially in Front-end activities. Since some chemicals have a potential impact on the environment and also carry health and safety risks, we work hard to keep their use as low as possible.

For more detail about our chemical management, see pages 42-43

Unlike electricity, the use of chemicals for manufacturing equipment has a more proportionate relationship to the level of production. Since 2000, the overall trend of decrease is around 6% per year versus the Decalogue target, which is a reduction of 5% per year. Viewed from this perspective, in 2009 the trend of chemicals used continues to be positive versus the 2000 baseline. An estimate of the year's results based on Q4 shows a theoretical increase of 24% versus 2008. Consumption of chemicals in absolute terms shows a reduction of 30% compared to the 2008 value.

#### Consumption of water

This is another area where we continue to make good progress. We have consistently exceeded our EHS Decalogue target, reducing water consumption per unit of production by an average of 6.7% per year since 1994. The chart on page 49 plots our performance against the EHS Decalogue target of 5% reduction since 1994 and shows that the reduction of water consumption per unit produced has been much faster than

The reduction in water consumption is achieved through continuous improvements in our processes and through a reduction in water draw down, but also thanks to recycling practices that are shared between different sites. As a company, our water recycling and reuse rate is 36.2%, but reaches 53% in Catania (Italy), 68% in Kirkop (Malta) and 40% in Muar (Malaysia).

We monitor our complete water cycle, which consists of a number of stages. Water is drawn from relevant sources and is used, reused and recycled for use in our manufacturing processes and services at our sites. During these processes some water is lost through evaporation and the remaining water is discharged in waste water sewage systems or as part of liquid waste (such as salt water solutions, solvent solutions or sludge).

All of our water is treated either internally with a waste water treatment plant or externally. Since 2008, we disclose the percentage of waste water treated internally.

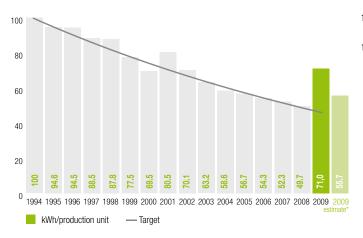
For more information on our sites' initiatives in water management, see page 41

While none of our manufacturing sites is located in sensitive biological areas, or in any special wetland environments, every care is taken to keep the environmental impact of our activities on our surroundings to a minimum, I EN12 I

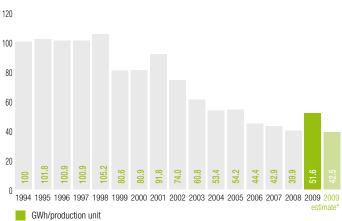
Consumption: absolu EN1   EN3   EN4   EN8			2.2	2.3	
	2005	2006	2007	2008	2009
Electricity (GWh)	2,341	2,469	2,482	2,127	1,986
Water (1,000m³)	21,834	22,215	21,729	18,194	16,346
Chemicals (Tons)	18,669	21,378	20,498	17,883	12,451
Natural gas (GWh)	307	277	279	234	214

(\*) The graphs on this page show two values for the consumption of key resources in 2009: first is the actual global consumption per unit of production for the whole year 2009; the additional column (2009 estimate) shows an estimate for the year 2009 based on the results of the fourth quarter, which were closer to normal.

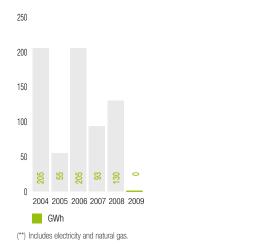
## Consumption of electricity (per unit of production): normalized values | EN4 | ◆ STEV31 | ■ 2.1 |



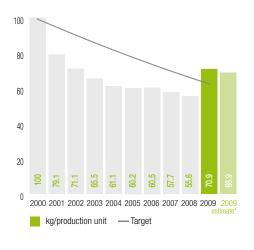
### Consumption of natural gas (per unit of production): normalized values | 2.1 |



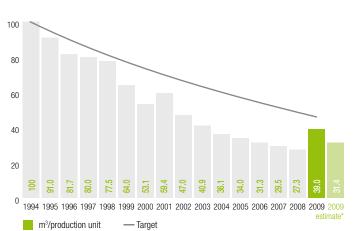
#### Energy saved\*\*: absolute values | EN5 | 🥤 2.1 |



#### 



## Consumption of water (per unit of production): normalized values | EN8 | ◆ STEV56 | € 2.2 |



Total water discharge   EN21				
	Units	2007	2008	2009
Water discharge	(1,000m³)	17,934	14,931	12,867
Treated in ST waste water treatment plant	%	54	76	75
Treated in external waste water treatment plant*	%	59	51	43

<sup>(\*)</sup> Part of this water has already been treated in ST waste water treatment plant, meaning that 100% of water discharge is treated whether internally, externally or both of them.

Recycled and reused total water   EN10   2.2						
	2007	2008	2009			
Total water used (1,000m <sup>3</sup> )	29,567	27,791	25,622			
Water recycled and reused rate (%)	26.51	34.53	36.20			

#### Continuously improve our eco-footprint according to our Decalogue target

#### Objectives 2009

- Reduce pollution from VOCs by 10%\*
- (\*) Per unit of production/year compared to the 2001 baseline
- 80% of waste to be reused or recycled
- Reduce pollution from heavy metals by 10% \*
- <5% landfill waste versus total waste</p>
- Reduce pollution from acidification by 5%\*
- Reduce pollution from eutrophication
- Reduce our eco-footprint below 0.95

#### Waste

In 2009, the total waste production was reduced by 28% compared to 2008, with only 3.3% of this waste sent to landfill. All other waste was reused, recycled or burned to produce energy. The reduction of landfill waste has been achieved by selecting appropriate waste recycle and reuse activities. We organize regular audits to control the waste recycling conducted by our subcontractors.

As a result of our program to reduce landfill waste, reused and recycled waste (measured as a percentage of total waste) has increased steadily over the years. In 2009, we reused or recycled about 87% of waste generated. Recycled and reused waste at our sites varies between 99% in Malta to 50% in Phoenix according to the local technologies available and specific waste characteristics.

The hazardous waste, in very general terms, is the waste resulting from the production process, which can include such things as chemical substances, some contaminated plastics and light-bulbs. This waste showed a reduction of about 26% between 2009 and 2008.

Most hazardous waste is recycled or reused and the remaining waste is disposed of safely by specially authorized companies to avoid environmental contamination. Most of our hazardous waste is treated in the same country that it was produced, unless there is no authorized treatment plant. The safe transportation of hazardous waste to a location where it can be treated occurs for two of our sites, in full accordance with the Basel Convention.

#### ST's eco-footprint

In 2009, we decided to stop publishing our eco-footprint results because this complex composite indicator was too difficult to explain and its real added value was for its internal use, as it allows our sites to evaluate themselves against corporate targets and other manufacturing sites.

Our objectives for VOC, acidification, eutrophication and heavy metals

Our objectives for VOC, acidification, eutrophication and heavy metals were previously disclosed in this eco-footprint indicator. In 2009 only VOC and heavy metals reduction targets were achieved, but not for acidification and eutrophication.

#### HIGH LEVEL OBJECTIVE

#### Progressively achieve carbon neutrality

Objectives 2009

Achieve carbon neutrality on our direct emissions by 2012

🔀 Increase use of renewable energy to 15% of total energy use by 2010 (3% in 2009)

#### Summary of greenhouse gas emissions | 3.0 |

We consider global warming as a critical issue and work hard to decrease the level of greenhouse gases (GHG) released into the atmosphere through our manufacturing activities. In our last revision of the EHS Decalogue in 2005, we defined an ambitious Carbon Roadmap which targeted  $\rm CO_2$  neutrality for ST by 2010. Further to changes in ST's reporting and the financial crisis of 2009, we are redefining our strategy in order to target neutrality for direct emissions by 2012. Our ability to reach this target is linked to the need for the installation of abatement equipment for perfluorinated compounds (PFCs) in sites that are not yet equipped.

For the time being, our direct emissions (absolute values) have decreased by 58% since 2005 and in 2009 the decrease is greater than usual, due to the decrease in production, which is also responsible for the increase in normalized emissions.

The 2009 net emissions of PFCs were reduced by 143 ktons of  $CO_2$ , but we forecast an increase in 2010 that is consistent with the anticipated increase in production. In parallel and independently of the level of production, the sequestration of carbon emissions by our forests has increased in 2009 by 30% compared to 2008.

- For more information on our initiatives to reduce greenhouse gases (EN18) see the html version of the report
- For more information on our reforestation program see page 45

Total transportation emissions in 2009 were about 104 kTons CO<sub>2</sub>.

#### **Green energy**

Our wind farm located in the south of France produced only 22.7GWh in 2009, due to adverse weather conditions that damaged the equipments.

The total green energy used by ST consists of electricity that is either purchased or generated by renewable sources and accounts for about 3% of total energy consumption. Our efforts to increase the percentage of renewable energy to 15% have been hampered by difficulties negotiating an acceptable price with suppliers of green energy. We anticipate that we will not be able to meet our 2010 target and we will review our strategy for 2010 and beyond.

The electricity produced by ST's wind farm accounts for about 1% of total energy consumption, while the small contribution of photovoltaic and solar thermal energy accounts for about 0.01%. In addition to this, the electricity purchased from nuclear sources is about 22%, making the total energy used that is free of CO<sub>2</sub> emissions stable at 25% in 2009.



Waste   EN22				Tons
	2006	2007	2008	2009
Total hazardous waste	15,647	13,205	12,756	9,391
Total waste	44,364	43,628	46,367	33,439

Recycled waste   EN22   STEV72   6.1							
2005 2006 2007 2008							
Waste recycling & reuse	78	80	83	89	87		

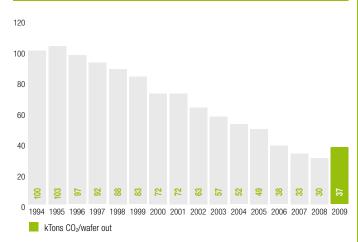
Waste under Basel Convention   EN24			
	2007	2008	2009
Hazardous waste transported (as a % of total hazardous waste)	0.09	0.02	0.003

#### Summary of net CO<sub>2</sub> emissions | EN16 | EN17 | EN18 | EN29 | **3.1** | **3.2** | **3.4** | kTons

		2005	2006	2007	2008	2009
	Direct emissions	808	792	532	482	337
STEV46	Direct emissions due to PFCs	747	728	481	439	296
	Direct emissions due to boilers	61	64	51	43	41
	Indirect emissions (purchased electricity)	1,096	975	1,029	882	876
STEV48	Other indirect emissions (transportation*)	242	242	107	89	104
STEV47	Total emissions**	2,146	2,009	1,668	1,453	1,317
STEV52	Sequestration due to the implementation of reforestation projects	40	81	126	179	235
	Total direct net emissions	768	711	406	303	102

(\*) The transportation emissions value is a global estimate of employees' transportation and transportation of goods. (\*\*) Transportation emissions are integrated in the total emissions.

#### CO<sub>2</sub> emissions: normalized values | EN16 | 🧻 3.0 |



Direct and indirect energy consumpt I EN3 I EN4 I STEV37 I   3.3 I	ion by p	rimary	source
	2006	2007	2008
D   .			

EN3   EN4   STEV3/     3.3				
	2006	2007	2008	2009
Breakdown of energy consumption (GWh)				
Electricity consumption	2,462	2,482	2,127	1,986
Natural gas consumption	274	279	234	214
Others sources	41	1	0	0
Total energy consumption	2,777	2,762	2,361	2,200
Percentage of energy consumption due to electricity	88.66	89.86	90.09	90.27
Breakdown of energy sources (%)				
Green electricity purchased	9.51	3.01	2.04	2.63
Electricity produced by ST's windfarm	0.96	1.10	0.92	1.03
Photovoltaic and thermal solar electricity produced by ST	0.004	0.01	0.01	0.01
Electricity purchased from nuclear (CO <sub>2</sub> free)	29.84	25.60	28.78	22.15
Electricity purchased from fossil fuel sources	48.35	60.18	58.34	64.48
Natural gas	9.87	10.10	9.91	9.70
Other fuels	1.47	0	0	0
Total	100	100	100	100

Electricity produce		ned windfa	arm		GWh
	2005	2006	2007	2008	2009
Electricity	33.1	23.7	30.0	21.7	22.7

## Our objectives

- Initiate our forest CO<sub>2</sub> sequestration certification by third party.
- Initiate a Life Cycle Assessment modeling approach for Front-end manufacturing process.
- Review the transportation emissions reporting rules.



## **Energy consumption and saving** of ST products in use

Since 1995 and the first publication of its Decalogue, ST has stressed its commitment to reduce the energy consumption of its products. Increasing energy savings through technical advances continues to feature among the annual key corporate objectives defined by our CEO, Carlo Bozotti.

In 2009, two comprehensive studies were conducted on ST products when in use in their final applications: one to establish how much energy ST products consume, the other to estimate the energy savings made possible by ST products.

The first study evaluated the amount of energy consumed by ST microchips in their final applications (e.g. a fridge or set-top-box). 80% of ST products sold in 2008, including all the highest energy-

consuming products, have been taken into account in this study. The evaluation of the annual energy consumption of these ST microchips in their final applications (just the microchips, not the final applications themselves) while in operating and standby modes amounted to 3.41TWh. This is equivalent to the annual energy consumption of a town of a million inhabitants and represents 1.6 times ST's own energy consumption in 2009.

The second study focused on the energy savings made possible by the new generation of ST products (corresponding to 10% of ST sales in 2008), comparing their consumption to that of the former generation. In this case both the reduction of energy consumed by the ST microchip itself and the reduction of en-

ergy consumed by the final application as a direct result of the ST microchip were found to result in savings of around 30TWh. For instance, the new generation of products used in lighting enabled a saving of around 13TWh, and a new generation chip for automotive (the 'stop and start' system) induced a saving of 22TWh (equivalent to 13 million barrels of oil).

Although ST's impact on climate change and the depletion of natural resources via the operations of its sites is minimal, our ability to reverse the trend and contribute to the reduction of worldwide energy consumption is far greater.

## Towards 100%

## eco-designed products

ST is on the path towards reaching the objective of 100% of new products being eco-designed by 2015.

ST has been addressing and reducing its environmental impact for almost 15 years. The company's environmental management strategy covers a number of different areas, with a traditional focus on its manufacturing operations, including reducing consumption of key resources (water, chemicals, and energy), emissions (greenhouse gases, water effluent) and waste. Product design for the environment has also been a key element of the strategy since the mid 1990s, with a very strong focus on the ability of ST's components to save energy within the products they 'animate' and enable the final products themselves to save energy.

In 1998, ST's annual environmental report already mentioned ST products' contribution to the reduction of energy consumption of domestic appliances and lighting, and the reduction of pollution from cars. It also highlighted ST's first steps in Life Cycle Assessment (LCA)\* and Life Cycle Inventory (LCI)\*\*. Since then, ST has progressively expanded the characteristics of its products throughout their life cycle, to mitigate environmental impacts, with a particular focus on the use of chemicals. Over the last two years, the Corporate Environment Health and Safety (EHS) department has been preparing corporate guidelines on this subject with the goal of having 100% of ST's new products 'eco-designed' by 2015.

Through this objective, ST wants to ensure that multiple environmental considerations are integrated in a structured way in the earliest stages of product design and throughout the product development process. The aim is also to constantly improve the environmental performance of ST products throughout their lifecycle, from the choice of raw materials through their manufacturing, transport and usage to their end-of-life disposal\*\*\*.

In 2009, several pilot LCAs have been carried out as a further concrete step towards ecodesign by identifying and defining the product life phases and flows that have the greatest impact (see graphs). Conducting a complete LCA requires the involvement of many actors within the company, such as designers, application engineers, manufacturing engineers and facilities or sourcing departments. It also requires the collection of a great deal of data:

- inputs (e.g. raw materials energy and semi-finished products);
- outputs (e.g. waste and emissions to air and water);
- environmental impact of products in use.

Gathering the data and ensuring its reliability represent the main challenges in producing a LCA. Once gathered, the data is processed using a special software program to calculate the environmental impact of each flow (i.e. use of raw material, air emissions, impact on the environment and impact on health) and each step (e.g. manufacturing, transport, usage).

Results from these first LCA exercises have already highlighted some challenges to address as a result of integrating multiple environmental considerations in the product development decision-making process. For instance, some raw materials can only be purchased a long distance from manufacturing sites due to their scarcity, resulting in a higher impact due to transport. And in some cases chemical substances with a significant impact on the environment cannot be substituted due to their unique nature or technical properties.

In the meantime, the Corporate EHS department is preparing standards for the company defining the methodology to use when producing a LCA. The aim is to have a normalized format and presentation of information for all LCAs in order to better respond to customers' requests.

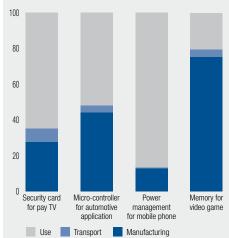
By the end of 2009, ST had dedicated two people with specialized doctorates on this subject to the new definition of ST's eco-design methodology and strategy. Both have joined the Research and Development department and work closely with a laboratory in Grenoble (France) specialized in eco-design. A third engineer from the Polytechnic Institute in Milan is also working on this topic in ST's Agrate site (Italy).

Over the next three years, ST will put a strong emphasis on eco-design, focusing on three main steps: a deep analysis of the results of the pilot LCAs; defining and implementing an eco-design methodology; and training ST's internal actors of eco-design.

- (\*) Investigation and evaluation of the overall environmental impact of a product during its life cycle.
- (\*\*) One phase of LCA consisting of data collection and the analysis of a product's process units.
- (\*\*\*) End-of-life does not appear in ST products' LCA exercises because ST has little influence over this phase, which is managed by its customers. However, it takes this step into account in its choice of raw materials, giving priority to recycling and the avoidance of harmful materials that could remain in the product at the end of its life.

#### LCA on four ST products: Comparison of global impact on the environment of life cycle phases

Results obtained with the IMPACT 2002+ method (using eco-points, a normalized unit for comparison) and Simapro software (%)

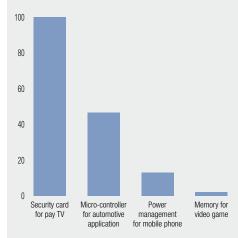


The results of the pilot LCAs show that products have very different impacts, in terms of both the kind of flows and the nature of life phases. Environmental impact depends heavily on the chip's individual characteristics, including its size and weight, the type of package it is contained in and the complexity of its technology. The final application it serves is also a determining element.

As a result of these differences, we cannot have a generic LCA for all ST products; each chip is unique and requires a specific set of decisions to mitigate its environmental impact. This reinforces the idea that eco-design has to remain a wide domain addressed with an open-minded approach, and which acknowledges the importance of measuring the 'environmental cost' of each decision in the product development process.

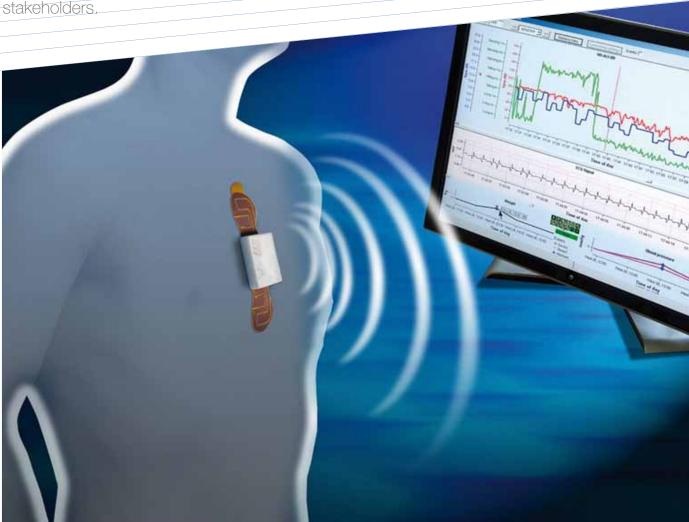
#### LCA on four ST products: CO<sub>2</sub> emissions as a result of product manufacturing, transport and usage

Results obtained with the IPCC method and Simapro software (baseline 100 on security card product)



## Recognizing the **Sustainable Excellence** of our products

In 2009, ST performed its annual STAR recognition program, which highlights the sustainable added value of teamwork, innovation and the benefits these bring to ST and its



Each year, ST launches the company-wide request for applications demonstrating outstanding teamwork and innovation to create value for stakeholders, referred to as the STAR (ST Annual Recognition) program. This annual effort is a key pillar of the company's Sustainable Excellence culture in its emphasis on the ability of cross-functional and cross-cultural teams to push the boundaries of innovation by combining breakthroughs and benefits for different stakeholders into a business-focused solution for customers. Although the focus is not exclusively on products (any team effort that combines business value creation with social and/or environmental value creation can be submitted) many of ST's most innovative and sustainable products have been inspired and recognized through the entrepreneurial team spirit that STAR sets out to foster and reward. In 2009, 78 teams applied for a STAR award, and 21 finalists were selected by juries representing different regions and organizations. In

early 2010, ST Corporate Vice Presidents will select the gold, silver and bronze winners, and the six gold finalists will be invited to the annual recognition ceremony, where the winning team will receive the prestigious CEO award.

Among the finalists were two teams whose contribution to the company and to Sustainable Excellence were particularly noteworthy from the perspective of product responsibility.

#### **Remote Health Monitoring System**

This project involved the close collaboration with Mayo Clinic, a premier healthcare organization in the United States, on a novel platform for remotely monitoring patients with chronic cardiovascular disease. The platform will provide a comprehensive and unobtrusive solution that monitors person-specific data and physiological parameters, as well as influencing lifestyle and treatment choices.

The project started with the identification of market opportunities and business models

reflecting the fundamental social value underlying the concept of 'telemedicine'. Telemedicine allows medical professionals to monitor or treat patients even when they are not in the same location and is widely recognized as an essential step in reducing the escalating cost of healthcare. Instead of entering a hospital or visiting a doctor for check-ups, the patient wears a small device that continually monitors a number of relevant physiological parameters. This approach has many potential benefits, including maintaining wellness, earlier detection of developing health conditions, improving lifestyle, and lowering healthcare costs.

This platform is the result of an R&D collaboration that combines ST's expertise in developing innovative solutions using its advanced sensor, microprocessor and communication products and Mayo Clinic's best-in-class medical expertise. It uses a combination of sensors, ultra-low-power microcontroller and wireless modules, and interfaces to provide information about the

patient's heart rate, breathing rate, physical activity and other measurements; wirelessly obtained from external medical devices.

Telemedicine is expected to play an increasingly important role in helping solve the growing costs of healthcare monitoring and delivery, especially in the context of an aging population (it is estimated that moving from hospitals to independent living communities or to homes, the reduction in cost is in the range of one order of magnitude). In addition to better service to the patient, the potential benefits of remote monitoring may include:

- lower costs due to reduced physician visits for routine check-ups;
- earlier diagnosis of impending health problems, leading to earlier intervention, in turn reducing hospitalization costs and enhancing the probability of successful recovery from illness:
- lower environmental burden due to reduced necessity for travel;
- acquisition of comprehensive and integrated data for epidemiology, drug safety, and other research studies to advance medical knowledge regarding diseases.

The team based their work on the assumption that this platform represents a common basis for any remote monitoring application, including chronic diseases, elderly people and health & wellness domains. In this context, ST is ready to take advantage of exciting market opportunities in the future.

#### Success of Callpod's next generation 'Chargepod V2' driven by ST's battery charger design

Another finalist in the 2009 STAR program was the ST team supporting the development of Callpod's 'Chargepod V2' solution. This application allows Callpod's end-user customers to charge cell phones, notebook computers, cameras, and other electronic devices simultaneously, eliminating the need for multiple chargers. It provides a proprietary voltage

regulator technology and circuit protection within each charging port to safely and securely determine the correct voltage for each device. This multi-charger for portable devices is based on ST's silicon technology and has revolutionized the charger market, winning the Best of Innovations award at the 2009 Consumer Electronics Show.

From an environmental and health and safety point of view, 'Chargepod V2' combines various functions into a single unit, reducing the need for new chargers, thereby reducing landfill waste. It also reduces the risk of fire and electric shock, which is important as the use of various battery-based products in the office or household environment increases.

However, the most significant positive impact, from an environmental perspective, comes from this product's reduction of 'vampire power', i.e. the idle power consumption of phantom loads. 'Chargepod V2' consumes only 0.5W of idle power compared to about 4W by each of 8 equivalent chargers that it replaces. With 200,000 units of projected sales, this will result in 6 MWh of energy savings over a 1 year period. For coal-based power plants, 6MWh of energy generation is approximately equivalent to 5.7 metric tons of CO<sub>2</sub> emissions.

On a global scale, the steady increase in electronic devices and their chargers has a profound impact on the environment, but the 'Chargepod V2' can substantially reduce this problem.

The STAR recognition program is a catalyst for entrepreneurial teamwork, continuous improvement and innovation breakthroughs that serve the market needs of the future with sustainable solutions that are win-win for the company and for society. It also provides a great opportunity for employees across the company to share in the pride of their colleagues at contributing to a better world by using the company's collective technological and business expertise intelligently and with a sustainable mindset.



## Energy efficient solutions for street lighting

The move from traditional lighting to LED offers the opportunity to save 60% of the electricity used for lighting, a major advance given that lighting represents around 20% of the total electricity consumption in the world.

An additional 10% of street lighting electricity can be saved thanks to dimming solutions provided by electronics.

Over the years, ST has created a broad range of products dedicated to the lighting market with the objective to contribute significantly to the general reduction of electricity consumption.

High power street lights are now starting to be based on LEDs. The key success factors for this technological solution are its robustness, increased lifespan and efficiency, which together contribute to a number of additional advantages:

- reliability and safety
- improved technical solutions
- energy saving
- lower cost
- environmentally-friendly
- easy maintenance
- improvement of light quality

ST offers comprehensive electronic solutions to respond to and improve some of the limitations of the current market offering:

- Lifetime of the solution: in current implementations, after 1.5 years failures in LEDs and power supplies can be experienced. One of the most critical components in this power supply consideration is the electrolytic capacitor (E-CAP).
  - When street lighting is linked to the mains network, ST offers various solutions where the E-CAP may no longer be required. These solutions can lead to a conversion efficiency of up to 95%.
  - When street lighting is in isolated areas or in areas where the electrical network is not available, ST also proposes solutions mainly based on solar power supply;
- Operation in a wide range of temperatures: ST's solutions in this area resolve many problems relating to adverse weather conditions and power dissipation (ST components are tested for extended temperature range);
- Market maturity: While ST solutions are set to contribute to the transformation of the market, they are still themselves subject to the evolution of the market. This business represents a very high potential but it is still in the phase of creative response to demand. Adoption of the new technology by local governments will be critical in determining how the market grows.

ST's goal is to lead the way in providing energysaving and environmentally-friendly solutions for the new LED lighting sources, in support of our Corporate Responsibility strategy.

## ST's approach to Quality Excellence

We strive to delight our customers through a rigorous adherence to quality and consistent zero-failure performance.

The ST Quality Policy aims to reinforce the message that quality is a shared responsibility within the company. With customer satisfaction as the ultimate objective, our policy focuses on five essential areas:

- Customer relationship management to understand and meet or exceed the current and future expectations of our
- Robust products to achieve built-in quality throughout the product development process.
- Robust processes to ensure flawless execution, prevent failures and recurrences, and continually improve the way we work.
- Systems, tools and methods to improve quality performance through a process approach.
- People, who must be empowered, skilled, competent and dedicated to quality.









Customer satisfaction

#### Internal audit process revamped

This 2009 program focused on the third and fourth quality policy areas with the objective of improving audit process efficiency and effectiveness.

Internal audits are a powerful management tool to help senior managers improve their organization. This is an essential step of the PDCA\* cycle which is the foundation of continuous improvement.

During 2009, company internal audits based on VDA 6.3\*\* were introduced throughout ST. All product groups, staff functions and manufacturing operations have participated in these audits. In previous years these audits were based on various methodologies, different evaluation schemes and reporting. Moreover, multiple and often redundant audits created unnecessary disturbance of production lines. All this resulted in low customer confidence in ST's audits. In early 2009, a strategy was defined by Corporate Quality and then validated by top management. Auditor competence on VDA 6.3 was developed through dedicated training sessions and a common audit evaluation scheme was designed by four separate working groups

was developed through dedicated training sessions and a common audit evaluation scheme was designed by four separate working groups consisting of auditors and technical experts coming from different ST sites and entities. A worldwide audit program was designed based on the status and importance of the processes and areas to be audited and finally this new concept was validated through conducting VDA 6.3 audits, both on ST sites and outsourced activities, covering manufacturing as well as product development domains.

There was global consensus on this new approach among all ST's product groups and manufacturing operations. Redundant audits were eliminated as the same audit perimeter as in previous years was covered but using 69% fewer audit days during 2009. More importantly, the seriousness and added-value of the approach was recognized by key customers. Whilst improving customer confidence in ST's internal audits, this program also helped to improve the efficiency and effectiveness of these audits. From a simple idea, this new concept became a reality in 2009.

(\*) Plan Do Check Act.

(\*\*) VDA stands for Verband der Automobilindustrie e.V. (Association of the German Automotive Industry).

#### QUEST Quality Excellence through Skills Training

This 2009 program focused on the fifth quality policy area with the objective of enhancing employees' competences and strengthening their commitment to quality.

In 2009, a dedicated team designed a new quality program within the framework of the School of Quality. The purpose is to improve quality results by training employees on how to efficiently and effectively perform ST quality processes. This program is composed of four progressive steps and is customized for each site to address its specific needs and issues.

The first step aims at obtaining full commitment of site management to quality and the QUEST training program. The significance of quality is underlined during a classroom session by comparing customers' feedback to managers' perceptions and raising managers' awareness about the impact of their behavior on product quality.

In the second step, employees are encouraged by their managers to be trained on specific quality tools and methods. A network of certified trainers is being built, with ST University validating their teaching approach and subject knowledge.

For the third step, a network of local coaches is being created. The objective is to have experts available on each site to support employees throughout the year in using these tools and methods rigorously.

The final phase is regular management control to ensure that progress in quality is sustainable. In 2009, phase one of the program was deployed in a pilot site in Muar, Malaysia. The objective for 2010 is to deploy the complete program in all of our Back-end sites and in one product group.

#### **Quality Excellence in Practice**

In 2008, ST launched the Quality Excellence in Practice campaign to ensure that employees have the required skills and knowledge of ST quality tools, methods and procedures in order to excel in the five ST quality process areas. As part of this program, each organization nominates participants to attend specific e-learning courses based on the quality processes they must master in their job.

In 2009, the program was widely deployed with the following results:

- quality processes: 57.8% of the eligible population trained;
- quality tools and methods: 56.5% of the eligible population trained.





#### Product Responsibility performance overview

Quality (baseline 100 in 2004)   PR5   STPR2   STPR3   STPR4						
	Q4' 04	Q4' 05	Q4' 06	Q4' 07	Q4' 08	Q4' 09
Customer complaints	100	86.2	71.6	64.2	82.6	61.5
Cycle time to process failures analysis	100	72.7	62.6	71.9	62.2	65.4
Customer returns	100	41.1	38.3	40	33.7	30.8

#### **Quality Excellence**

In 2009, ST's ISO 9001 certification has been renewed according to the ISO 9001:2008 revision. ISO/TS 16949 renewal, for activities relative to automotive, is ongoing under the ISO/TS 16949:2009 revision. Such a large audit program (over seven months) is the opportunity to find new areas for improvement of the robustness and efficiency of our processes and quality management system.

Quality excellence and customer satisfaction are essential to the sustained success of ST's business. As disclosed in the chart above, ST quality indicators have generally been improving over the last few years, and several improvement plans have been launched in 2009 to maintain these positive trends and respond to customers' increasing demands.

For more information on 2009 Quality programs, see page 56

In 2009, ST pursued the deployment of its Quality Excellence in Practice programs, providing more than 40,000 e-learning sessions on quality tools, methods, skills and procedures.

For more information on QEP program, see page 56

#### **Product Stewardship**

Our product stewardship focuses on three main categories: responsible environmental and social applications of our products, including in particular energy-saving and healthcare products; the chemical content of our products; and responsible military use of our products.

#### Products for energy saving | EN26 | EC2 | STPR1 |

At the IIC-China 2009 trade fair in Shenzhen (China), in February 2009, ST demonstrated a rich array of energy efficiency products and solutions under the theme of 'Green Power'. More than 30 product demonstrations showcased ST's most advanced power management solutions which reflect ST's commitment to help customers reduce their environmental footprint.

In industrial applications, where ST is the world's number one semiconductor supplier, the company has shown a broad spectrum of solutions ranging from a green air-conditioning inverter to an eBike. Power consumption in these applications is reduced thanks to the use of ST's low-power microcontrollers. ST has demonstrated how the 32-bit STM32 microcontroller enables intelligent compressor control in air-conditioning systems by using inverters in home-appliance electric motors to achieve a 30-40% decrease in energy consumption.

ST has also presented the 8-bit STM8S single-chip Flash controller with true embedded EEPROM and calibrated RC oscillator, enabling significant cost effectiveness in the majority of applications, among which the eBike is the most successful in China.

For power supply applications, ST has showcased a product which offers asymmetrical half bridge topology for adapters/chargers over 90W compliant to Energy Star 2.0, and the L6566A for 75W mobile PC adapters/chargers compliant to Energy Star 4.0 regulations.

One particular solution has been developed by ST Greater China Competence Center is the Solar LED street light solution. It is composed of two modules: an 85W solar charger and a 25W LED driver.

ST has also demonstrated the one-chip LED backlight drivers which are effective for applications of large- and medium-sized displays, such as digital TVs, PCs and panels used in factory automation. These products supply a current of 30 or 85mA to each row of up to 60 white LEDs.

An important step to minimize environmental impact has been taken in the set-top box (STB) segment. ST's strategy focuses on reducing waste energy by including flexible power management features that monitor and adjust the energy consumed by components within the STB environment. These components can be outside the STB, in the case of the low-noise block (LNB) within a satellite dish, for example, large subsystems within

the STB such as a hard disk, or even individual modules within the silicon devices themselves.

#### **Products for Health**

In November 2009, ST and Mayo Clinic (a premier healthcare organization) announced their collaboration on a novel platform for remotely monitoring patients with chronic cardiovascular disease.

Telemedicine, which allows medical professionals to monitor or treat patients even when they are not in the same location, is widely recognized as an essential step in reducing the escalating cost of healthcare. Instead of entering a hospital or visiting a doctor for check-ups, the patient wears a small device that continually monitors a number of relevant physiological parameters. This approach has many potential benefits, including maintaining wellness, earlier detection of developing health conditions, improving lifestyle, and lowering healthcare costs.

This platform is the result of an R&D collaboration that combines ST's expertise in developing innovative solutions using its advanced sensor, microprocessor and communication products and Mayo Clinic's best-in-class medical expertise. It uses a combination of sensors, ultra-low-power microcontroller and wireless modules, and interfaces to provide information about the patient's heart rate, breathing rate, physical activity and other measurements wirelessly obtained from external medical devices.

For more information on this project, see pages 54-55

#### Military use of our products

STMicroelectronics position on military use of its products is stated in our Code of Conduct, the Principles for Sustainable Excellence: "We will not sell products that we know are to be included in weapons."

To give some guidance, our Corporate Ethics Committee (CEC) published a position paper in 2007 detailing the definition of what we consider as a weapon and how we can check the end uses of our products. The committee is aware that situations may be complex or sometimes very specific, and in case of doubt the CEC is available to provide advice when sales representatives require some specific guidance or a high level decision on this specific issue.

#### Materials Declaration | PR1 | STEV78 | STEV79 |

Materials Declaration has been a key focus in 2009. At company level, we have developed our management process and reinforced its robustness. This activity is featured in detail elsewhere in this report.

For more information on Materials Declaration, see pages 42-43

### WEEE | EN27 |

As a supplier of components to the electronics industry (and not manufacturers of electronic equipment), we are not directly affected by the European Directive 2002/96/ EC Waste of Electrical and Electronic Equipment (WEEE).



## Ensuring ST's business sustainability

2009 was a year marked by the financial crisis and activities to mitigate the potential impact of the influenza A (H1N1) pandemic. In response to these events, and as part of continuous improvement in the way we evaluate supply chain risk, ST Sourcing departments launched a major program to upgrade the risk assessment methodology applied to key suppliers and subcontractors.

As a full member of the Electronic Industry Citizenship Coalition (EICC), ST automatically evaluates key suppliers and subcontractors on Corporate Responsibility risks (labor, environment, health and safety, ethics and management systems) using the EICC Risk Assessment level 1 tool. Depending on the result of this first evaluation, further analysis is conducted using the EICC

Self-Assessment Questionnaire. Validated EICC audits may be conducted on resulting high-risk suppliers.

 $\hfill\Box$  For more information about EICC risk assessment tools, see page 63

In 2009 we have built on the foundations of the EICC Risk Assessment level 1 tool to ensure we have a complete overview of other kinds of risks. Questionnaires were sent to 120 business partners to request details of their own risk management program, including: identification and evaluation of potential causes for disruption; existence of business continuity, disaster recovery and contingency plans; management of multi-sourcing and geographical diversification of production, etc.

Detailed financial risk analyses for 170 key ST suppliers are now followed-up on a monthly basis to identify their potential impact on ST activity (considering business volume with the company and existing back-up solutions). Whatever the risk, when critical cases appear, deeper analyses are carried out and dedicated action plans are proposed and followed to support our suppliers in their improvement process.

ST's combined approach to Corporate Responsibility and wider business sustainability represents a win-win situation for the entire supply chain. By ensuring sustainable growth of our suppliers and subcontractors, ST ensures sustainable growth for itself, its employees and its customers.

## Embedding Corporate Responsibility in our purchasing and sourcing management

ST's commitment to Sustainable Excellence increasingly involves the whole value chain.

In its approach to Corporate Responsibility (CR), ST has progressively embedded Social, Environmental, Health and Safety (EHS) and Ethics in its management processes. Sourcing and Purchasing organizations are well advanced in this respect.

Starting in the 1990's with environmental issues, the scope has been progressively enlarged to now address EHS, Ethics and Labor. The approach taken has also moved towards encouraging suppliers and subcontractors, not only to abide by the law and customer requirements, but also to be proactive so as to avoid potential risks, including disruption of supply.

Sourcing and Purchasing organizations\* have now completely integrated ST's CR programs in their daily activities. They have developed and deployed their own approach for monitoring these issues with dedicated managers supervising and supporting advances and achievements. These people work in close collaboration with the internal sourcing and purchasing community to evaluate suppliers' and subcontractors' CR performance and deploy key CR programs. These include initiatives such as REACH, compliance to ST's regulated and banned substances specification, Materials Declaration and deployment of the Electronic Industry Citizenship Coalition (EICC) initiative. They also reinforce community awareness and skills on these subjects by various means, including through regular e-learning courses.

In the quarterly senior management reviews of daily activities and achievements, CR results, objectives and issues are discussed and managed. Regular meetings are also organized with other internal departments such as Corporate Environment or Corporate Responsibility for coordination on some common topics.

For more information on CR programs managed with suppliers and subcontractors, see pages 62 and 63

CR issues are also addressed with key suppliers and Back-end subcontractors through the annual or bi-annual Supplier Performance Evaluation (SPE) and through Score Card exercises for Front-end subcontractors.

Materials and equipment suppliers, and Back-end and Front-end subcontractors are assessed on four main areas:

- quality and service:
- purchasing and accounting;
- Sustainable Excellence;
- technical aspects and operations.

The Sustainable Excellence section covers CR items such as deployment of the EICC initiative to suppliers, EHS standards certifications, compliance to REACH, and fulfillment of ST's regulated and banned substances specification. Evaluation criteria are regularly reviewed to adapt to the current situation and, over the last few years, the Sustainable Excellence section has become larger in order to better engage and evaluate suppliers/subcontractors on these topics. These comprehensive evaluations are sent as a report to suppliers and subcontractors with the scoring details by area (e.g. manufacturing, EHS, R&D, quality, sourcing). When both parties agree on the results, suppliers and subcontractors have to launch action plans on every criterion with a low score, with a follow-up at corporate level.

The Supplier Performance Evaluation and Score Card exercises are strategic tools in working



EICC event in Shenzhen (China)

with key suppliers and subcontractors. Results are reviewed in face-to-face meetings, during each quarterly business review, where action plans are set for improvement on low or deterioriating scores. This is an opportunity to reinforce ST's expectations in terms of CR and find solutions for win-win relationships. The global score of the SPE is one of the indicators used by ST to attribute market share to suppliers and subcontractors.

ST is also taking a proactive approach to the deployment of the EICC initiative in its supply chain. In 2009, 16 key suppliers and subcontractors were invited by ST to participate in an event in Shenzhen to raise their awareness about the details of this program. And in 2010, ST plans to continue involving its business partners in the EICC, including making the EICC's e-learning courses available to them.

- For more information on our deployment of the EICC initiative, see page 63
- (\*) Two organizations manage suppliers and subcontractors within ST: Company Infrastructures and Services (CIS) for suppliers and Back-end subcontractors, and Wafer Foundry Organization (WFO) for Front-end

### ST's overall commitment to the EICC

ST's commitment to the EICC includes the deployment of the approach to its own operations as well as its deployment to suppliers and subcontractors. In 2009 our EICC activities and achievements included the following (in addition to supply chain deployment):

- fulfillment of EICC full member requirements;
- participation in EICC workgroups and task forces:
- ST's Corporate Responsibility
   Director continued to represent
   ST on the EICC Board of
   Directors, with oversight
   responsibility for External
   Relations (since 2007);
- all ST production sites have an updated EICC Self-Assessment Questionnaire on the E-TASC industry database; Average overall score:

91.6%

 ST's new production site in Calamba, Philippines filled in the EICC Self-Assessment Questionnaire.
 Overall score:

89.9%

## Traceability as a competitive advantage

In the semiconductor industry, the traceability of products and components is a fundamental feature required by customers and overseen via international standards.

Robust systems for traceability allow ST to ensure product integrity, coordinate information on product performance and provide customers with accurate and timely responses to questions relating to quality. Internally, it contributes to continuous improvement in the quality of our supply chain. Advanced traceability also helps prevent counterfeiting and ensures that genuine products can be easily identified.

The semiconductor industry is highly complex, with a large product portfolio based on a wide range of technologies. There are many levels in the supply chain, from raw material sourcing to final packing.

In ST, traceability is built into our supply chain strategy, as a key enabler for the improvement of product quality. This advanced traceability program provides us with a solid foundation to understand in fine detail the links between the manufacturing process and the performance of our products, enabling us to continuously monitor and improve our quality and manufacturing.

This traceability program consolidates data from all Front-end and Back-end sites, as well as from logistical systems and subcontractors, to build product 'family trees' (genealogy) that allow deeper visibility at lot, wafer or die level\* and also to identify material used in the product package, including its source and lot identification

ST uses sophisticated Information Technology to coordinate information that is timely, accurate and accessible to all supply chain parties. It is





fundamental that we can ensure the continuity of data availability as well as its integrity, and to guarantee that the flow and capture of manufacturing information precisely reflects the manufacturing process at any given time.

A program conducted over the two past years has allowed the optimization of existing manufacturing processes and information labels. These latest advances have contributed to the development of a high-performance traceability framework with many benefits to customers, for example more effective product recall management.

If we take the example of a lot originating in the Front-end (where silicon wafers are manufactured) up to its delivery to a customer, we are able to pinpoint in less than 24 hours where it has been produced, check all production steps to identify potential problems, notify potentially affected customers and, finally, rectify any quality issues that may have been identified.

In the spirit of Sustainable Excellence, the success of this corporate program depends on the commitment and contribution of all the internal supply chain participants (Front-end, Back-end, logistics, product groups, sales etc.) as a collaborative core team. It is essential for us to continue to improve traceability as it can lead to more efficiency in identification, authentification, product life cycle, recalls, product integrity, inventory management, transportation and logistics. Together these give ST a concrete competitive advantage.

(\*) Lot, wafer or die level: lot refers to a package of several silicon wafers, a wafer is a silicon disk on which die are engraved, dice is the single chip before it is packaged.

## Pilot tested on traceability of a single component in 2009

A partnership between the
Automotive Product Group,
the Back-end manufacturing
teams and the Corporate
Packaging Automation
department has conducted
a pilot test to trace a single
component. After facing
several challenges, they collec-

tively found breakthrough solutions to identify the component in question.

The benefits are numerous, with positive impacts for our stakeholders:

- customers: timely and accurate information, possible isolation of die identification and minimization of product recalls;
- employees: encouragement to develop innovative solutions to overcome problems, positive experience and knowledge enhancement during the project;
- environment: minimize scrap units
   when a quality problem is identified by
   using single marking code which pinpoints
   a problem at unit level.

### Continuously aim to satisfy and exceed our customers' Corporate Responsibility requirements

Objectives 2009

Maintain our level of performance in on-time delivery

Maintain our level of performance inmeeting our customer demand while optimizing our inventory turns

#### **Customer service performance**

In 2009, we suffered a marked decline in on-time delivery and service level to some customers, as a result of the reduction in the level of component inventory being held in stock, combined with unforeseen market volatility.

The year can be split in two phases: in the first half of 2009 we experienced a severe downturn in the market which led to a decrease in production of between 40% to 50%. The second half of the year registered a rebound in customer demand, which was as sharp as the experienced downturn and outstripped our 'slimmed down' component inventory.

The speed with which our customers resumed ordering was faster than we anticipated, driven in part by stimulus programs that some Asian countries, in particular China, put in place to enhance the consumption of electronics goods. Western countries are now adopting the same approach, and we are now seeing this upward trend in more advanced technologies and products. Although this is very positive news for ST, it has resulted in a temporary imbalance between supply and demand, which we expect will continue into the first months of 2010.

We are working closely with our customers to manage their requests. However, it is taking time to re-size our production capacity. Significant effort is currently being made by our colleagues in Front-end and Backend manufacturing to respond to the upturn as rapidly as possible. We are hiring manufacturing staff and prioritizing building and assembling the right products as quickly as we can to minimize delays.

We are also closely monitoring the evolution of demand so we can be better prepared to meet future demand fluctuations.

#### **Customer requirements on Corporate Responsibility**

Our customers continue to show a strong interest in our Corporate Responsibility policies and performance.

The table below shows the number of social, ethical and environmental requirements that have been addressed by ST's Customer Requirement Review Process. The figures shown only reflect formal requirements treated at corporate level that fit specific criteria, for example contractual agreements, questionnaires etc\*. Other less formal requests for information are treated throughout the year but are not included here. In 2009, social and ethical requirements roughly doubled. While it is possible that the economic crisis had an impact on customers' interest and concerns relating to these topics, we are observing a consistent increase in the attention that companies in the electronics supply chain give to Corporate Responsibility topics. We have also noted that approximately 40% of social and ethics-related requirements now refer explicitly to the Electronic Industry Citizenship Coalition (EICC), its tools and processes.

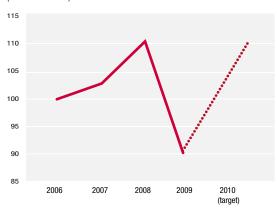
As a full member of the EICC, ST benefits significantly from sharing standards and tools with other companies in the sector with a corresponding reduction in the time and resources dedicated to responding to customer requirements for Corporate Responsibility.

Regarding environmental requirements, the figures in the table suggest a slight decrease in requirements. This is because most of the environmental questionnaires and letters treated at corporate level in 2008 related to declarations of conformity for specific products and requirements linked to Materials Declaration (specifying the precise chemical content of our products). These are now managed by ST's Product Groups according to the new process in place for Materials Declaration. These data are not included here. In general, we notice a steady increase in customer specifications linked to environment as the overall market pressure increases. We have a robust process in place to manage these requirements and gain in efficiency and cycle time.

For more information, see pages 42-43

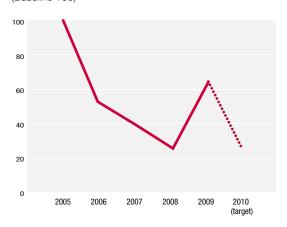
### ST ability to meet customer demand: delivery date in line with customer request





#### On-time delivery: reduction of delivery delays

#### (Baseline 100)



## Customer CR requirements | STSC9 | 2005 2006 2007 2008 2009 Number of customer requirements\* 165 144 157 277 252

(\*) This data includes only customers' Corporate Responsibility requirements (Social, Ethics and Environment) received by our corporate level departments for review and approval. Day to day customer requests arriving in the course of business between ST and the customer are not included. Note: Environmental requirements correspond to 78% of total CR requirements in 2009.

## **2010** Our objectives

 Re-attain the 2008 level (measured as on time delivery vs customer request and vs ST commitment) while keeping inventory under control (measured as inventory turns).

### Achieve efficient, socially and environmentally beneficial partnerships with our suppliers and subcontractors

Objectives 2009

Progressively integrate additional EHS indicators in the supply chain evaluation based on customers' needs

#### Achieve 80% compliance of suppliers and subcontractors to new ST hazardous materials requirements

Continue to encourage our suppliers and subcontractors to be certified to IS014001 and 0HSAS18001

#### Chemical management

Corporate Sourcing and Purchasing departments work throughout the year with ST's Corporate EHS department and its Corporate Chemical Management Working Group to continuously enhance ST's requirements to suppliers in terms of overall chemical management. Each year, ST's list of banned, exempted\* and declarable\*\* substances is updated to reflect technical progress, the evolution of legislation and new customer requirements. This list refers to substances used in ST processes and also contained in preparations and components we purchase. ST's corporate policy was also updated in 2009 to include requirements relating to REACH (see paragraph below).

Corporate and local sourcing departments are responsible for addressing this corporate policy to every supplier and subcontractor. Partners are expected to sign a Statement of Acknowledgement (SoA) of ST's requirements and provide analysis data proving their compliance to the ST list of banned, exempted and declarable substances. By the end of 2009, 90% of key material suppliers, 94% of Back-end subcontractors and 100% of Front-end subcontractors had completely fulfilled these requirements.

#### Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

Since the 1st January 2009, 100% of suppliers of materials and chemicals (including importers) to ST's European sites have pre-registered their substances to the European Chemical Agency (ECHA). A lot of internal work was necessary to ensure this phase was completed in time for ST to continue using all the substances needed for production processes (substances that are not pre-registered are no longer available in the European market).

In 2009 the next phase of REACH started, requiring the registration of exposure scenarios by suppliers. These scenarios define the different uses allowed for a given substance and describe how to use it safely, as well as the measures needed to control risks to people or the environment. ST's key role in this phase is to communicate to its suppliers the way chemicals are used within ST in order to ensure that appropriate exposure scenarios will be registered with ECHA. These documents will be compulsory to maintain compliance with REACH. One person from the Corporate EHS department, along with some key suppliers, participates in working groups, led by the ECHA in Helsinki (Finland), to work on these definitions of use.

The first deadline is November 2010 for CMR\*\*\* substances and substances with an annual output of over 1,000 tons. ST is concentrating its efforts on ensuring suppliers take its chemical usage into account and to register within the regulation timeframe.

In 2009, the corporate policy for chemical substances was modified to include a statement about REACH compliance in suppliers' SoA. The list of banned, exempted and declarable substances has also been updated to include new substances of very high concern (SVHC) defined by the

#### **Materials Declaration**

In 2009, the Materials Declaration process has been upgraded to provide our customers with comprehensive product 'chemical identity cards'. Sourcing departments have been involved in this program through the collection of suppliers' data certificates (based on the list of banned, exempted and declarable substances) and subcontractors' Materials Declaration forms (IPC 1752), 100% of Front-end subcontractors and 95.4% of Back-end subcontractors had completed their Materials Declaration forms by the end of 2009.

For more information on Materials Declaration see pages 42-43

#### Certifications

ST is committed to work with suppliers and subcontractors that are compliant with stringent Environment, Health and Safety standards. Through bi-annual performance evaluation (Supplier Performance Evaluation and Score Cards), ST strongly encourages and supports its partners to be ISO 14001 (or EMAS) and OHSAS 18001 (or equivalent) certified.

At the end of 2009, 81.5% of suppliers were EMAS or ISO 14001 certified, as well as 97% of Back-end subcontractors and 100% of Front-end subcontractors.

OHSAS 18001 or equivalent certifications remained high for Back-end and Front-end subcontractors (91% and 80%); but despite an increase by 14% in the certification rate (taking the average of the two categories of suppliers covered), we recorded only 32.6% of suppliers certified. The reason for this low rate is that there are several health and safety standards, many of which are not recognized internationally (only within one industry or one country). It is too complicated to check if these standards are in line with OHSAS 18001, so companies adhering to them are not considered in line with ST requirements.

- Substances meeting the criteria set out in the banned substances list but allowed only for one special use due to a proven lack of a technical alternative.
- Substances not banned but subject to potential future restriction or specifically requested to be declared to customers if contained in their product
- (\*\*\*) CMR means Carcinogenic, Mutagenic or toxic for Reproduction.

Suppliers' and subcontractors' environmental performance   ○ STSC1   STEV17   ■ 8.3											
	Num	ber of sup	opliers/su	bcontract	ors	ISO 14001 certified/EMAS validated (%)					
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	
Suppliers of materials	97	108	112	107	108	64	73	82	83.7	81.1	
Suppliers of equipment	61	61	61	40	40	76	76	76	85	82.5	
Total	158	169	173	147	148	68.6	74.1	79.9	84.1	81.5	
Subcontractors Back-end	NA	NA	56	59	65	NA	NA	91	97	97	
Subcontractors Front-end*	NA	NA	22	11	10	NA	NA	100	100	100	

(\*) The total number of Front-end subcontractors can change from one year to another, based on our response to the market evolution. This list is updated each month versus planning data in order to give an interactive overview

Suppliers' and subcontractors' health and safety performance │STSC2 │ € 8.3 │									
	Number of sup	pliers/subcontr	actors	OHSAS validated (%)					
	2007	2008	2009	2007	2008	2009			
Suppliers of materials	112	107	108	30	37	41			
Suppliers of equipment	61	40	40	NA	6	10			
Total	173	147	148	NA	28.56	32.6			
Subcontractors Back-end	56	59	65	80	92	91			
Subcontractors Front-end*	22	11	10	95	82	80			

(\*) The total Front-end subcontractors can change from one year to another, based on our response to the market evolution. This list is updated each month versus planning data in order to give an interactive overview

## Our objectives

- Continue to encourage our suppliers and subcontractors to be certified ISO 14001 and OHSAS 18001
- Full compliance to REACH program by all our suppliers and subcontractors
- Progressively integrate additional EHS indicators in the supply chain evaluation based on customers' needs

## Actively contribute to the EICC initiative by supporting suppliers and subcontractors in reaching compliance

#### Objectives 2009

- Launch 1 to 2 EICC audits
- Obtain commitment to the EICC from our Front-end newcomer subcontractors
- O Deploy the EICC supplier engagement model to logistics suppliers
- O Double the number of SAQs completed
- O Invite suppliers, Front-end and Back-end subcontractors to the EICC Shenzhen supplier membership event
- Obtain completion of SAQs by the 2 major Front-end subcontractors
- Obtain completion of SAQs by an additional 10 Back-end subcontractors
- Launch a training for internal involved departments to reinforce knowledge on requirements
- Increase the agreement for material suppliers to comply with EICC (target 85%)
- Enlarge the population for equipment suppliers to comply with EICC (target 50%)
- Integrate EICC criteria in the evaluation process (score card) for Front-end subcontractors

ST has been a full member of the Electronics Industry Citizenship Coalition (EICC) since 2005 in order to benefit from and support a shared and standardized approach to Corporate Responsibility management within the electronic industry supply chain.

The EICC approach, is composed of four steps:

Phase 1: Introduction – EICC Code of Conduct introduction and Risk Assessment level 1 (RA1);

**Phase 2:** Self assessment – Risk Assessment level 2 (Self Assessment Questionnaire) and use of E-TASC, the industry online database;

Phase 3: Validated assessment – Validated Audit Process (VAP) with standardized audit tools and resources;

Phase 4: Corrective action and continuous improvement – training and capability building efforts.

ST's road map to comply with the EICC program has progressively involved the majority of business partners. The program has been extended further in 2009 with the decision to launch phase one of a selection of seven logistics service providers.

In 2009, a major focus was put on the second phase, self assessment. Priority has been given to companies located in countries considered at risk, based on the RA1 tool. Over the last two years, 79 invitations have been sent to suppliers and subcontractors to complete their Self-Assessment Questionnaires (SAQs) using the E-TASC online tool. In the second half of 2009, 27 companies agreed, resulting in 60 SAQs filled in on E-TASC (companies have to complete several questionnaires, one at corporate level and one for every manufacturing site that produces materials, equipments or products for ST). Based on these results, the Sustainable Excellence Programs Director in the Sourcing department provided these companies with a detailed report that included: a summary of corpo-

rate and sites' results; a summary of the main non-conformities, and an improvement plan proposal.

A follow-up is made on the actions taken by the companies, leading to an evaluation of their risk status.

In 2009, ST defined its criteria for launching third party EICC audits. Based on the results of the SAQ follow-up process, a validated EICC audit would be requested from the supplier if the company remains in the overall high risk category once the process is complete. In 2009 ST could not launch the two expected audits (those identified as high risk) due to resource constraints, but plans to launch them in 2010.

The engagement of local suppliers was pursued in 2009 with a focus on the 30 significant local suppliers not managed centrally (at corporate level).

Internally, the EICC's first e-learning for Purchasing Managers was deployed towards the end of 2009 to relevant managers in our internal community to reinforce their knowledge of the EICC framework and requirements; 167 people enrolled. In addition, 16 suppliers and subcontractors have been invited to participate in the EICC training event for suppliers in Shenzhen. In 2009, the performance evaluation system, including Corporate Responsibility (EICC and EHS) criteria, was expanded and is now deployed to material suppliers, equipment suppliers and Back-end subcontractors. Front-end subcontractors are also evaluated through a Score Card that integrates Corporate Responsibility criteria; from 2009 this included EICC criteria.

For more information on how ST manages suppliers and subcontractors, see page 59

## 2009 EICC SAQs: Major non-conformities and distribution of non-conformities by domain | HR2 |

- Child Labor Avoidance
- Labor and Ethics Management System Elements
- Labor and Ethics Policy and Procedures
- Freely Chosen Employment
- EHS Management System Elements



## **2010** Our objectives

- Enlarge the population for equipment and services suppliers to comply with EICC (target 50%).
- Obtain completion of 16 additional SAQs in E-TASC by suppliers and Back-end subcontractors.
- Deploy improvement plans for critical issues, based on SAQ results.
- Halve the number of SAQ nonconformities, based on SAQ results.
- Launch EICC audits based on defined criteria (with a minimum of 2).

- 60% Sourcing department managers trained on the EICC e-learning.
- Deploy EICC e-learning to suppliers and subcontractors\*.
- Obtain commitment to the EICC from our Front-end newcomer subcontractors.
- Obtain completion of SAQs in E-TASC by 2 additional Front-end subcontractors.
- Update Score Card EICC evaluation criteria versus Front-end subcontractors' advancement in the EICC process.

(\*) Once modules are fully available.

Suppliers' compliance with EICC					Ph	ase 1 - II	ntroductio	n		Ph	ase 2 -A	ssessmer	nt
	Tarç	Target Number		Agreement to comply with EICC (%)		EICC Risk Assessment 1 performed (%)		Invitation to E-TASC sent		EICC SAQ completed**			
	2007	2008	2009	2007	2008	2009	2007	2008	2009	2008	2009	2008	2009
Suppliers of materials	117	108	108	52	81.5	82.4	100	100	100	17	46	18	42
Suppliers of equipment/facilities/IT	NA	104	104	NA	34	41.4	NA	34	41.4	0	0	0	0
Subcontractors Back-end	28	40	39	69	97	98.5	100	100	100	9	7	11	17
Subcontractors Front-end*	22	11	10	0	86.4	90	0	100	100	0	2	0	1

<sup>(\*)</sup> The total Front-end subcontractors can change from one year to another, based on our response to the market evolution. This list is updated each month versus planning data in order to give an interactive overview.

<sup>(\*\*)</sup> The number of SAQs is not the number of suppliers/subcontractors that have filled in SAQs. One supplier or subcontractor has to fill in one company level SAQ and SAQs for all their manufacturing sites that produce materials/equipment/products for ST.

## Bureau Veritas verification statement to the management of STMicroelectronics NV

Bureau Veritas Certification France was engaged to provide assurance services to STMicroelectronics

#### Introduction

Bureau Veritas Certification, France has been engaged to provide assurance services to STMicroelectronics.

This Attestation Statement applies to the STMicroelectronics 2009 Corporate Responsibility report (the 'Report'). The preparation of the Report and its content is the responsibility of STMicroelectronics. Our responsibility is to attest to the validity of the data reported herein within the confines of the scope of work set out below.

#### Scope of work

The scope of our work was determined following discussions with STMicroelectronics, as follows:

- Review of the environmental and social performance data for the period 1<sup>st</sup> January 2009 to 31<sup>st</sup> December 2009
- 2. Information reported, including that against the GRI indicators
- 3. Review of systems and procedures for the collection, compilation and consolidation of Health & Safety, environmental and social data based on 2 visits: corporate level in Geneva (Switzerland), site level in Shenzhen (China)
- 4. Review of internal quality and consistency controls against such data

#### **Exclusions from the scope of our work**

The following exclusions apply to the scope of our work:

- data falling outside the 2009 reporting period, as defined above;
- the information hyperlinked from the 2009 Sustainable Report.

#### Basis of our opinion

Our work was planned and carried out to provide reasonable, rather than absolute assurance and we believe that the work conducted as described in the scope of work above provides a reasonable basis for our conclusions. We relied on the representations made to us during the course of our work by STMicroelectronics personnel through interview, selective sampling and review of documentary evidence incorporating visits to the Geneva and Shenzhen sites of STMicroelectronics.

#### **Assurance conclusions**

It is our opinion that:

- the management of safety, environmental and social data for inclusion within the Report is based on systematic procedures and controls;
- such systems are adequately embedded at the STMicroelectronics sites we visited, to ensure quality and consistency of reported information;
- during the course of our work nothing came to our attention to indicate that there was any material error, omission or misstatement;
- the reported data is reliable and free from significant error or bias and provides a fair representation of STMicroelectronics' environmental, health & safety and social performance.

#### **Considerations and limitations**

In relation to our work and conclusions the following considerations and limitations should be noted.

- Certain information is excluded from the scope of our work, as stated above.
- Environmental, health & safety and social data are subject to inherent limitations due to their nature and the methods used for determining, calculating or estimating such data. Therefore this independent attestation statement should not be relied upon to detect all errors, omissions or misstatements in the reported data.
- Attestation of data relating to greenhouse gas emissions does not provide a level of verification sufficient for the purpose of emissions trading.

## Statement by Bureau Veritas Certification of independence, impartiality and competence

Bureau Veritas Certification is an independent professional services company that specialises in Quality, Health, Safety, Social and Environmental management with over 180 years history in providing independent assurance services.

Bureau Veritas has implemented a code of ethics across the business which is intended to ensure that all our staff maintains high ethical standards in their day-to-day business activities, we are particularly vigilant in the prevention of conflicts of interest.

Competence: Our team completing the work has extensive experience in conducting assurance of environmental, social, ethical and health and safety information, systems and processes and have over 10 years combined experience in this field.

Bruno LABARRE
Vice President, Bureau Veritas Certification France



## 2009 Key Performance Indicators

	ST's indicators	2006	2007	2008	2009
Company					
Percentage of eligible employees who signed the Business Conduct and Ethics Policy (%)	STS01	NA	88	92	94.5
Economic					
Net revenues (US\$m)	ST1	9,854	10,001	9,842	8,510
Gross profit (US\$m)	ST3	3,523	3,536	3,560	2,626
Gross profit as a percentage of sales (%)	ST5	35.8	35.4	36.2	30.9
Net earnings (US\$m)	ST2	782	(477)	(786)	(1,131)
Earnings per share (diluted) (US\$)	ST4	0.83	(0.53)	(0.88)	(1.29)
Market share vs TAM (%)	ST6	NA	3.91	3.96	3.76
R&D expenditures (US\$m)	STE4	1,668	1,802	2,152	2,365
R&D overall headcount evolution	STE5	10,300	10,341	11,162	7,458
R&D engineers and technicians	STE5	7,195	10,253	11,084	7,389
ST patent applications filed by region	STE6	607	497	485	589
Social					
Rate of employee turnover	ST12	8.79	8.81	10.12	11.65
Job creation: hires by job type	ST12	7,554	6,212	11,889	7,161
People recognized	STS26	77,390	50,171	38,805	38,373
Accepted suggestions which were implemented (%)	STS34	39	62	61	53
Average number of meetings in each organization or site during which management presents company/organization/site results to all employees allowing time for open discussion	STS34a	9	10	10	15
Average training hours (total)	LA10	43	44	43	51
Percentage of employees having completed the annual e-PA	STS21	-	-	-	78.36
Professionals by gender (Men/Women)	STS10	80/20	79/21	78/22	79/21
Employee engagement survey - overall participation rate	STS28a	NA	NA	80	-
Number of partnerships with universities, colleges, schools	STS44	236	335	437	470
Total cash donated to charitable associations	STS39	271	444	463	474
Health & Safety					
Recordable case rate	STHS1	0.59	0.49	0.39	0.35
Severity rate	STHS2	8.6	6.7	5.5	4.5
Environment					
Consumption of electricity (per unit of production): normalized values (kWh)	STEV31	54.3	52.3	49.7	71
Consumption of water (per unit of production): normalized values (m³)	STEV56	31.3	29.5	27.3	39
Landfill waste (% of total waste)	STEV73	4.8	5.5	3.6	3.3
CO <sub>2</sub> emission (PFC+energy+transportation) (kTons)	STEV47	2,009	1,668	1,453	1,317
Product Responsibility					
Customer complaints (per million units shipped) (baseline 100 in 2004)	STPR2	71.6	64.2	82.6	61.5
Cycle time to process failure analysis (in days) (baseline 100 in 2004)	STPR3	62.6	71.9	62.2	65.4
Customer returns (as a percentage of billings) (baseline 100 in 2004)	STPR4	38.3	40	33.7	30.8
Supply Chain					
Suppliers environmental performance (% of suppliers certified)	STSC1	74.1	79.9	84.1	81.5



This index shows where to find full or partial information relating to the Global Reporting Initiative (GRI) elements and indicators in this report. This index also shows where to find information relating to ST's own performance indicators. These are all prefixed 'ST' and shown in black print. ST has identified a number of Key Performance Indicators (KPIs), which are shown as . All KPIs have been verified and validated by Bureau Veritas Certification, France.

Information about the Global Compact Principles can be found in the html version of this report.

Indicator reference	Content	Pages
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1.1	Chief Executive statement	3
1.2	Key impacts, risks and opportunities	3, 8, 25
2	Organizational profile	Reader's guide, inside front cover, 1, 7, 9, 16, 25, 28-29
3.1-3.4	Report profile	Reader's guide
3.5-3.11	Report scope & boundary	Reader's guide, inside front cover, 1, 16-19, 28-33, 38-39, 46-51, 57, 61-63
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 $<sup>\</sup>begin{tabular}{ll} \blacksquare \end{tabular}$  The html Indicator Index gives more detailed information with:



This report is in accordance with the 2006 Global Reporting Initiative (GRI) G3 Guidelines, with an A+ self-declared rating checked and confirmed by GRI.

additional references to these indicators (html report, 20-F, www.st.com)

<sup>=</sup> references to additional ST and GRI indicators

<sup>=</sup> explanation when GRI indicators are not reported on.

### Glossary

APG	Automotive Products Group
APM	Analog, Power and MEMS
ASIC	Application Specific Integrated Circuit
BLS	US Bureau of Labor Statistics
CA0	Chief Administrative Officer
CCI	Computer and Communication Infrastructure
CE0	Chief Executive Officer
CF0	Chief Financial Officer
CMOS	Complementary MOS (Metal Oxide Semiconductor)
CMR	Carcinogenic, Mutagenic, toxic for Reproduction
COD	Chemical Oxygen Demand
C00	Chief Operating Officer
CR	Corporate Responsibility
DFE	Design For Environment
Ecopack®	Lead-free labelling for RoHS-compliance (the EU Directive on Restriction on Use of Hazardous Substances)
EDA	Electronic design automation
EFQM	European Foundation of Quality Management
EFTA	European Free Trade Association
EHS	Environmental, Health & Safety
EICC	Electronics Industry Citizenship Coalition
EMAS	Community Eco-Management and Audit Scheme
EMEA	Europe, Middle East & Africa
EMP	Ericsson Mobile Platform
EMS	Electronic Manufacturing Services providers
ePA	electronic Performance Appraisal
ERM	Enterprise Risk Management
EXC0	Executive Committee
EWS	Electrical Wafer Sort
FEM	Front-end Manufacturing
GeSI	Global e-Sustainability Initiative
GHG	Greenhouse Gases
GRI	Global Reporting Initiative
HED	Home Entertainment & Display
HR	Human Resources
H&S	Health & Safety
ICB	Informatics & Computer Basics
ICT	Information and Communication Technologies
IGBT	Insulated Gate Bipolar Transistor
ILO	International Labor Organization
IMS	Industrial & Multisegment Sector
In-Check™	ST Lab-on-Chip platform
IP	Intellectual Property
IPCC	Intergovernmental Panel on Climate Change

ISO	International Organization for Standardization
KPI	Key Performance Indicator
LCA	Life Cycle Assessment
LCI	Life Cycle Inventory
MB	Managing Board
MEMS	Micro-Electro-Mechanical Systems
MMS	Microcontrollers, Memories & Smartcards
MOSFET	Metal Oxide semiconductor Field Effect Transistor
MTCE	Metric Tons of Carbon Equivalent
NGO	Non-Governmental Organization
ODM	Original Design Manufacturers
ODS	Ozone Depleting Substances
OEM	Original Equipment Manufacturers
OHS	Occupational Health & Safety
OSHA	Occupational Safety & Health Administration in the United States
OHSAS	Occupational Health & Safety Assessment Series (OHSAS 18001)
PFCs	Perfluorinated Compounds
PF0s	Perfluoro-octane Sulfonate
R&D	Research & Development
R11	ChloroFluoroCarbon (CFC) and is also called CFC 11. It is an Ozone Depleting Substance. Its chemical name is Trichlorofluoromethane
REACH	Registration, Evaluation and Authorization of Chemicals
RoHS	Restriction of Hazardous Substances
SAM	Serviceable Available Market
SB	Supervisory Board
SE	Sustainable Excellence
SEC	Securities and Exchange Commission
SIA	Semiconductor Industry Association
SoC	System-on-Chip
SOX	Sarbanes-Oxley Act
SRI	Socially Responsible Investment
STB	Set Top Box
STU	ST University
TAM	Total Available Market
USAs	Unvested Stock Awards
US GAAP	US Generally Accepted Accounting Principles
VOCs	Volatile Organic Compounds
WBCSC	World Business Council for Sustainable Development
WEEE	Waste of Electrical and Electronic Equipment
WSC	World Semiconductor Council
20-F	Annual report filed with the Securities and Exchange Commission
3G	Third generation of mobile phone standards and technology

#### **GRI** indicator prefixes

EC	Economic Impact
EN	Environment
HR	Human Rights
LA	Employment
PR	Product Responsibility
S0	Society

#### ST indicator prefixes

	-
ST	Company
STE	Economics
STEV	Environment
STHR	Human Rights
STHS	Health & Safety
STS	Social
STSC	Supply Chain
STS0	Company
STPR	Product Responsibility

 $<sup>\</sup>hfill \square$  You can find a more complete glossary in the html version of this report

The ST Corporate Responsibility Report 2009 is printed on paper produced by factories whose environmental management system is ISO 14001 certified.

The paper used is entirely chlorine free, and the high recyclability and renewability of the raw material, together with production processes, are optimized for maximum reduction of impact on the environment.

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