# Corporate Responsibility Report A Culture of Sustainable Excellence





### Report scope and profile

This is a report of how responsibly we have performed as a company in the calendar year 2006. It covers all STMicroelectronics NV's activities, sites, unless otherwise stated. You can find details about ST's size, structure, ownership and countries of operation plus reports from previous years at <a href="https://www.st.com">www.st.com</a>.

This year we took very concrete examples from sites, regions, product groups and central organizations to illustrate our performance in each section of the report and the growing company-wide awareness of corporate responsibility this reflects.

This report is in accordance with the 2006 Global Reporting Initiative (GRI) G3 Guidelines. Where relevant, 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  $\bigcirc$ .

Performance indicators (Social, H&S, Environment) found in this report are verified and validated by Bureau Veritas Certification, France. ST's environmental and Health & Safety Decalogue targets are also included throughout the report and denoted with  $\square$ . I 4.8 I

You can find an index of all indicators used on the flap at the back and you can find details of our verification processes on page 64. We explain methodologies used for measuring specific aspects of performance in the relevant sections. We also provide a glossary explaining acronyms and abbreviations on outside flap.

This report is printed, an html version with additional information is available on STs website and it can be downloaded in PDF format. Each time you can find more information on the web, additional information on html version in indicated by the symbol  $\square$ .

The report is published in English only.

#### For feedback

We are committed to improving both our Corporate Responsibility Performance and the ways we communicate to our stakeholders. We encourage contributions and debate from all stakeholders and welcome feedback on the content and presentation of this report – as well as suggestions for next year. Before getting started on the preparation of this report, we organized around 30 phone interviews with our stakeholders in order to get feedback on last year's report and collect expectations for this new edition. We also launched an internal survey and around 50 managers gave us their feedback. We paid attention to all the requests and tried to respond as well as possible. For any feedback, please contact us at corporate.responsibility@st.com.

Although reasonable efforts have been made to ensure the consistency of the summary financial information for the year 2006 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, 2006, as filed with the SEC on March 14, 2007, 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, 2006. 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.

#### **Supporting Sustainable Excellence in ST**

Georges Auguste, Corporate Vice President, Total Quality and Corporate Responsibility Kate Rigge, Corporate Responsibility Director and her team, Karen Duhart, Wendy Hudry and Mélanie Salagnat.



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#### Website

This printed Corporate Responsibility Report details STMicroelectronics' Corporate Responsibility (CR) performance across all its activities and sites in the calendar year 2006.

The report can be read online or downloaded in PDF format at http://www.st.com/stonline/company/cr/reports/index.htm.

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# Foreword by Carlo Bozotti

CHIEF EXECUTIVE OFFICER

This Corporate Responsibility report is published at a very special time for our company: exactly 20 years ago, SGS Microelettronica and Thomson Semiconductors merged to form SGS-Thomson Microelectronics, which became STMicroelectronics in 1998. In these 20 years, we grew our sales by more than ten times, we improved our ranking in the semiconductor industry from position #15 to position #5, and of course from all points of view, ST today is immensely more solid.

This success is based on many factors: leading technologies, diverse product portfolio, world class customer base, strong financial position. But I believe that our culture of Corporate Responsibility is a most fundamental factor: demonstrating our sense of responsibility and creating long term value for all our stakeholders is the key enabler of sustainable performance.

When our company was created we defined our values and our primary objectives as customer satisfaction, creating value for shareholders, contributing to the well-being of employees and communities, and striving for sustainable development. These priorities never changed, and they have materialized in the many programs we have launched and deployed over the years.

In 2006, I highlighted our focus on energy savings, health, quality, and financial results, in order to respond to stakeholders' expectations. We have made very significant progress: energy consumption per unit produced continues to decrease 5% per year, and our products contribute to significant energy savings in their applications; the health program launched last year now covers more than 50% of our employees, our quality improvements are recognized by our customers, and we also improved our key financial parameters.

Integrity is the other priority that I highlighted last year, and we have recently published our Principles for Sustainable Excellence - our renewed code of conduct. This shows our commitment to stand for what is right, and demonstrates that our values are there, strong and solid as ever. Our Principles and the training programs that we have designed to deploy them throughout the company, represent a clear and determined means of ensuring greater responsibility, accountability and transparency in all aspects of our business activities.

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

Carlo Bozotti

President and CEO of STMicroelectronics





## Message from Alain Dutheil

CHIEF OPERATING OFFICER AND VICE CHAIRMAN OF THE CORPORATE EXECUTIVE COMMITTEE

For many years, semiconductor manufacturers have been pushed to transfer a significant part of their production lines to low cost areas in order to cope with the ever decreasing prices of our industry. Globalization has been a reality for us long before other industry segments. Today, with the reduced growth rate forecasted over the next few years in the semiconductor market, the continuing pressure on prices, and the evolution of the euro/USdollar exchange rate, this trend is accelerating. On top of that, more and more customers are based in the wider Asia Pacific region, giving strong additional reasons for extending our presence in these countries.

This increasing presence in emerging countries highlights some problems that were not so visible before, probably because globalization was not at such a high awareness level in the media and the political world. Pollution, Human Rights and social issues – to name a few – are now challenges we face everywhere. Consumers (and we are

all consumers) take for granted the fact that the product they buy provides the expected functionality, with the highest quality level. But they will now ask new questions about the way the product is manufactured, the pollution generated throughout the process, the way employees are treated, etc. And their questions will not be limited to what we do in our plants; they will also want to know what happens at our suppliers', and we will be held accountable for pollution, human rights and related issues in our whole supply chain.

Our approach to Corporate Responsibility has always been exactly the same in each and every country in which we operate. We apply the same standards on environmental parameters; we deploy the same programs for employees' health; we manage our employees the same way wherever they are located; and we contribute to local development in all countries. We signed the Global Compact in 2000, and we report regularly on our achievements. But this is not enough;

the evolution of expectations, including those relating to our supply chain, has led us to participate in the Electronics Industry Code of Conduct Initiative (EICC) since 2005, in order to be more effective and share good practices and results with other companies involved in the electronics industry supply chain.

We know that the recent trends put additional constraints and accountabilities on our shoulders, but we accept them as our responsibility, in line with our Principles for Sustainable Excellence, and as our contribution to sustainable globalization. It is our duty to contribute to the social evolution of the emerging countries where we operate.

# Value creation across the Supply chain &

We define our Corporate Responsibility (CR) issues as those specific topics that have the potential to affect us, or our stakeholders, in our ability to create value. These are areas that require a special effort that exceeds any 'business-as-usual' approach.

#### Society

- Local communities: ST operates in both industrialized and emerging economies, creating employment and value for the local communities through relationships with stakeholders and community involvement programs
- **Lobbying:** at the corporate level, we interact with governments on key issues, e.g. environment and R&D, and our sites work with local authorities to support public policy.

#### Management

- Corporate Governance and business ethics: principles for Sustainable Excellence and Business Conduct and Ethics Policy are part of the governance structure in place to ensure that the activities of all ST sites are in line with the company's values
- **Research & Development:** our R&D activities often involve partnerships with national public laboratories, universities, customers, suppliers and even competitors
- **Product and process quality:** ST is fully certified to the ISO TS 16949 standard & Total Quality is an integral aspect of our company mind-set and culture for Sustainable Excellence.

#### **Environment**

- Water use: manufacturing semiconductors involves the use of ultra clean water. We are reducing usage through process optimization and recycling, to achieve our Decalogue target
- Energy use and climate change: we have an ambitious carbon strategy: becoming carbon neutral by 2010 by reducing energy consumption, increasing the use of renewable and alternative sources of energy and offsetting remaining emissions through carbon sequestration (reforestation)
- **Production waste:** our activity generates waste in the form of sludge, chemical substances, rejected wafers and plastics, most of which is reused, recycled, or burned with energy valorization
- **Chemical management:** our rigorous EHS management systems are certified to international standards and set more stringent targets for reducing risks relating to chemicals than any local legislation
- Air/water pollution: our measurement and management of
  emissions to air and water using the environmental burden method and
  our eco-footprints ensure that we keep tight control of pollution. These
  efforts are reinforced by a constant investment in abatement systems
  and internal waste water treatment plants.

#### **Customers**

- Market segments and applications: ST's sales are well balanced between the industry's five major high-growth sectors: Communications, Consumer, Computer, Automotive and Industrial
- **Products in use:** most of a product's environmental impact is a result of its use, mainly energy consumption, which is much greater over the course of a product's life than the energy required to produce it. Design for low-energy consumption has been part of our approach to environmental management for many years.



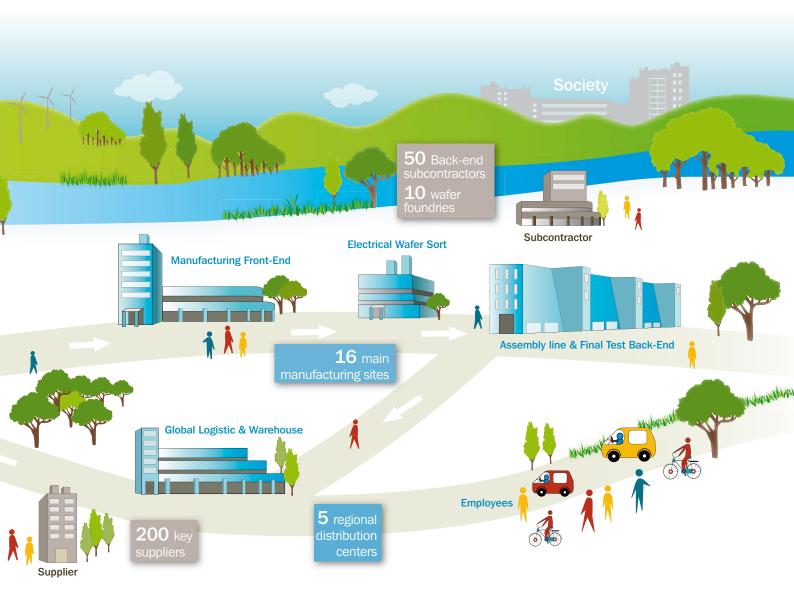
#### **Employees**

- **Human Rights and labor issues:** we are committed to respecting Human Rights. We want our presence in all countries in which we operate to make a positive contribution to their social and economic development
- Equal opportunities and diversity: our aim is that our workforce should reflect the diversity of the society in which we work and in the case of gender, the relevant local student population
- Responsible restructuring: in response to market dynamics and challenging economic circumstances we may resort to workforce redeployment or reduction, but we do so responsibly, always striving to provide security for our employees
- Employability and employee satisfaction: we have always been committed to the satisfaction and well-being of our employees. We have many processes and tools in place to measure and improve continuously in this area.

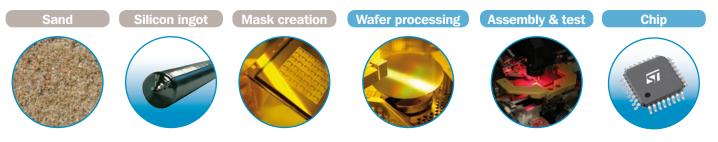
#### **Suppliers**

• **Supply chain management:** managing our supply chain responsibly is a complex challenge. We work within our sphere of influence in collaboration with the ICT industry to progressively make improvements and spread the culture of sustainability.

# management of related issues



### How do we create a chip?



### Where can you find our chips?



## Framework for Sustainable Excellence

Sustainable Excellence is the evolution of our TQM approach. It is our culture for achieving excellence across the board. By responding to our stakeholders' needs in the short and long term, we will make our company 'sustainable' - successful now and in the future - enabling us to contribute to sustainable development at a global level.

Essentially, ST's governance and management systems are designed to help the company create value for all its stakeholders. Our culture of Sustainable Excellence (SE)— the evolution of our Total Quality Management (TQM) approach—takes into account the need for robust, formal governance mechanisms and management systems, as well as more subtle, cultural aspects, to ensure cohesion and innovation, based on a shared vision and common objectives.

ST's various boards, councils and committees form the backbone of the company's overall governance framework. This structure, reinforced by internal control mechanisms, including policies, procedures and processes, supports responsible business practice.

Bodies such as the Corporate Responsibility Advisory Council, the corporate Sustainable Excellence Steering Committee, and the corporate Environment Health & Safety and Quality Steering Committees, provide additional focus on performance and programs relating to specific aspects of Corporate Responsibility.

The Corporate Responsibility Advisory Council is composed of senior managers representing key corporate functions and regional and local organizations. Its role is to contribute to the evolution of ST's strategy for CR, and to oversee and support our key CR programs and initiatives.

The corporate level Sustainable Excellence Steering Committee is made up of operational managers representing all major organizations and regions. They are nominated by their respective Corporate Vice Presidents and have a formal responsibility for deploying objectives and programs relating to CR. The corporate SE Steering Committee is complemented at the local level by site SE steering committees. These are designed to have an overview of some domains already managed by existing structures, processes and committees (for example Environment, Health & Safety and Quality – which are managed operationally by specific steering committees), and of some new or previously informal domains, such as human rights, business ethics, stakeholder engagement, management of CR in the supply chain, and company culture.

In response to the widening scope of stakeholder expectations, the local Sustainable Excellence committees play a key role in supporting the integration of the newer domains into more formal management systems. Given the complexity of today's business environment, these committees provide a common strategic direction in line with ST's culture, and help to integrate key stakeholder perspectives and expectations. Our new code of conduct, the Principles for Sustainable Excellence, serves as the reference framework for this common approach.

### **Local Sustainable Excellence Steering Committee Charter**

#### Vision

Sustainable Excellence in ST is about creating financial and non-financial value for all our stakeholders.

#### Mission

To support ST's vision by understanding and responding to the expectations of all local stakeholders, from customers and employees, to suppliers and local communities, and securing their engagement and commitment.

#### Responsibilities

- Ensure local alignment to the Principles for Sustainable Excellence, including effective risk management and communication
- Integrate stakeholder perspectives and expectations into local site strategy for SE
- Promote Sustainable Excellence culture through deployment of corporate and local SE programs and initiatives
- Set objectives for continuous improvement and breakthroughs
- Report on progress to regional and/or worldwide SE Steering Committee

## Sustainable Excellence Committees and Risk Management

A risk management approach to business is an integral part of the governance structure for Sustainable Excellence. The committees themselves identify and manage risks and opportunities, using a variety of management tools, including risk workshops, internal and external audit results, an internal self assessment questionnaire, the Employee Opinion Survey, quarterly reporting of key performance indicators, and quarterly management review of performance versus objectives. The committees form a key link between the corporate and local levels of the company and are, in essence, a strategic two-way communication channel that enables ST to recognize and respond to our evolving social and business environment.

Organizational framework for Corporate Responsibility



# We talk to our Sustainable Excellence Champions

Interview with Sara Tedeschi and Marco Santangelo, Sustainable Excellence Champions, Catania, Italy



Throughout the company, Sustainable Excellence Champions play a formal role in disseminating ST's culture, helping to integrate Sustainable Excellence into our key functions and operational activities.

Marco Santangelo and Sara Tedeschi are Sustainable Excellence Champions at ST's manufacturing site in Catania, Italy. Marco is the training manager in our APM product group, in the Linear & Interface division, and Sara works in APM's Quality & Reliability department. They were both TOM Champions before the move to Sustainable Excellence. and they have a front line role in disseminating ST's culture and helping deploy our programs, like the Corporate Responsibility Awareness and Quality Excellence in Mind (QEM) trainings, launched in 2006.

What role did you play exactly in deploying the Sustainable Excellence programs, and how successful were they in your opinion? Marco: I supported the launch of Sustainable Excellence and helped launch the CR Awareness program in my division. In the spirit of communication and knowledge-sharing, our approach was to really help people through the process, by organizing briefing sessions using the presentation and video, and taking the time to discuss and answer any questions or concerns people had. We also asked for informal feedback by email, to check that everyone understood the messages. The feedback was very positive. Every year, we do a mini survey to make sure that our internal division activities are in line with group strategies, and we use the results to help develop our action plans. In this year's survey, we added a question asking whether people could see a link between TQM/Sustainable Excellence theory and practice. This will be our baseline for the future. But in the meantime, we have seen a 25% increase in overall satisfaction in the 2006 survey and for me, this shows there is now better awareness of our company values and principles, and greater attention to the practical implications of these values.

Sara: The Quality & Reliability function I work for covers the whole of the APM product group, but in reality our activity to support Sustainable Excellence is more on the site than in the group. Our role is to support the division so that everyone can work more effectively. By working at the site level, you're much more connected to the cultural reality people work in on a day-to-day basis and therefore well placed to understand people's needs and concerns. My experience of the CR Awareness training program was that people found the directness of the messages beneficial, and they appreciated that we were able to explain the evolution from TQM to Sustainable Excellence, and how they could contribute. The focus on the individual is very important here. We're aware that the world is evolving and that expectations have changed. There is a greater need for communication. This also came out in our Employee Opinion Survey in 2005. So to get people more involved, we decided to put out a local version of the quarterly Sustainable Excellence Newsletter that we receive from the corporate level. In it we give an update on the various programs and the launch of the Principles for Sustainable Excellence, on teams and objectives, etc.

Marco: I agree. In the past people wanted to know what to do and just execute. Today it's different - people want to think for themselves and know how to act; they want to be empowered. So there needs to be a different management approach that brings real transparency to management decisions. This is why we are using communication meetings to explain, for example, why and how the career plan strategy has changed. There's a different mentality now; the world is changing and we have to adapt. That's why the symbolic transition from TQM to Sustainable

Excellence is so beneficial. We needed a philosophy that reflected that the context is bigger today: there are more stakeholders, more expectations, more pressure. We've been able to show we have a wider strategy now for how ST needs to respond to this. We're not in the dark, and this will help us with the changes we need to make in such a competitive business environment. Rolling out two major Sustainable Excellence programs together - Corporate Responsibility and Quality Excellence in Mind - has also helped reinforce this point. In our division, we've really understood the value of this and have structured our organization to implement these ideas in practice. People recognize this and see the benefits, and they feel good about that.

#### What are the challenges in all of this?

Sara: The challenge is to make sure these programs aren't just words. They need to be about actions, and communication of those actions. We are good at doing things, but sometimes not so good at following through. Action is absolutely key. That's where our local Sustainable Excellence steering committee comes in, for example in working out who our stakeholders are, and engaging with them in a really structured way.

Marco: We can have a great idea, but if we don't communicate effectively, we're not putting it into practice. Effective communication is critical. The biggest challenge for ST as a company is innovation. This covers everything we do. It doesn't just apply to products, but to the whole business process, including investing in the culture of the company. It's all about innovation, and we just have to understand how to do this practically. Sustainable Excellence is the foundation on which this activity is based.

# Independence and good governance for Sustainable Excellence

At ST, we are keenly aware that the quality of our corporate governance is critically important to the value of our company and the fulfillment of our missions, including our commitment to Sustainable Excellence.

We are organized in the Netherlands and our executive management is led by a Managing Board, consisting of our CEO, who performs his duties, with the support and oversight of a Supervisory Board ("Board"), acting in accordance with Dutch law.

We derive real benefits from our compliance with the various corporate governance rules that apply to us in The Netherlands, and elsewhere as a result of our listings of shares on the NYSE, Eurolist, and Borsa Italiana.

Good corporate governance generates efficiency and helps secure the financial rewards that come from investors having confidence in our disclosures, management oversight, and strategies. That efficiency and financial success also helps us maintain a culture of Sustainable Excellence, and create diverse forms of value for all our stakeholders, including employee well-being, environmental management, and promotion of Human Rights.

We have carefully tailored our model of corporate governance to result in competent, objective, and independent judgments, and to address our high expectations in a wide range of activities. These include strong management accountability, overseeing of disclosure practices, representation of shareholder interests, and responsible decision-making.

The independence of ST's Supervisory Board is promoted by its diverse membership. The Board includes members with an immediate understanding of the concerns of long term investors, as well as professionals without shareholder affiliations. There are also an equal number of French and Italian representatives, which strikes a balance between the interests of our historical French and Italian shareholders.

Our Supervisory Board has the confidence, support, resources, access, and knowledge to discharge its duties entirely independently from our management. Our CEO has never been a member of our Supervisory Board, and there are, in fact, no current or former members of the management of our company on our Supervisory Board.

Thus, with its high level of functional independence, our Board is well positioned to be detached from management to best design, implement and monitor the achievement of management objectives, and candidly support and critique management performance.

At the shareholder level, over 70% of our shares are currently floating and are owned publicly. The balance of the shares are held among a number of French and Italian public and privately- owned companies. Our shareholders, as a whole, include a broad and diverse base of investors, combined with larger, long-term shareholders that know our business well.

Our Supervisory Board and Managing Board, and our balanced shareholding structure, ultimately help us to advance our long-term vision of contributing to sustainable development, and thereby creating more value for our shareholders and other stakeholders.

# Internal control over financial reporting

Interview with Leila Benabderrazik, Internal control Manager



We perform around 2,500 tests a year on our major locations

#### A key process to guarantee the integrity of our financial reporting and disclosures

Internal control is key to showing our investors that we have responsible control processes. Therefore, we have an internal control system in place, covering all business processes that can have a financial impact. Our objective is to guarantee the integrity of our financial reporting, disclosures and footnotes to ensure they are valid, accurate and complete.

We have identified 15 critical cycles. For each of these, we have selected a champion who is responsible for outlining the process, describing the activities, and defining the measures we have in place to prevent financial misstatement or fraud.

For the last three years, we have been checking the effectiveness of those measures, by performing around 2,500 tests a year on our major locations. We do this by taking random samples, to check that each measure is well designed and working properly.

In 2005, we identified several aspects to improve, primarily relating to documentation and standardization across ST locations. In 2006, we made a number of enhancements to our controls, thanks to the sharing of best practices among our locations and further maturity in the definition of our processes.

In our filings with the U.S. Securities and Exchange Commission and as required by SECT404 of Sarbanes Oxley act, we have not reported any material weaknesses in our internal controls over financial reporting which allows us to get the SOX certification for 2006.

We also have a corporate policy for the appropriate handling of any complaints concerning accounting, internal accounting controls or auditing matters. This includes our appointment of a special ombudsman to collect any such complaints, whatever their source, and protect the identity of those who wish to remain anonymous. Contact details for our special ombudsman are made available to employees on our intranet site. | 4.4 | 4.6 |

#### Press release and message sent to all our employees in November 2006 to disclose information about the prosecution launched by STMicroelectronics against the company's former Treasurer.

In 2006, STMicroelectronics informed its employees that, following a criminal complaint filed by the company in September with the authorities in Lugano (Switzerland) after findings of an internal audit, the Prosecutor of Lugano is presently conducting a criminal investigation pursuant to alleged fraudulent activities in certain currency transactions entered into between 1998 and 2005 by ST's former Treasurer, who retired from the company at the end of 2005. ST is fully cooperating with the Prosecutor in connection with the investigation.

ST confirms that the transactions under investigation were discontinued at the end of 2005. Furthermore, ST has concluded that such transactions do not have a material impact on the company or on its previously published financial statements. With the implementation of organizational changes in its treasury department, and of measures designed to enhance its internal controls in the treasury activity, ST believes it has taken the necessary measures to prevent similar actions from arising in the future.

#### Non-compliance reporting channels

In addition to the non-compliance channel managed by a special ombudsman described above, an e-mail channel has also been put in place to give employees the option of communicating suspected instances of non-compliance with ST's Principles for Sustainable Excellence to ST's top management. These two high-level reporting channels are in addition to existing local channels, starting with an employee's manager, Human Resources manager and site director. A new corporate level procedure now defines how local and regional organizations should manage non-compliance reporting at their level, to ensure this is happening in a consistent way worldwide (See more on page 26).

#### Business Conduct and Ethics policy | S03 | ♥ STS01 |

This year we have decided not to publish information on this indicator because we are currently changing to a new procedure for tracking the signature of Business Conduct and Ethics policy which will be performed through a new compliance e-learning course 'Compliance with ST's Principles for Sustainable Excellence'.

For more details on anti-competitive behavior and compliance, read our 20-F report (pages 116, 145, 146). | S07 | S08 |

#### **Company performance**

2006 performance

# Performance versus objectives in 2006





Company	Create awareness of Corporate Responsibility throughout the company	
	Redesign the framework for implementing company values and Principles	0
	Ensure compliance of management population with rules for Integrity	0
	Ensure a robust link between corporate and local governance structures	0
		<b>/=</b> 5
Economic	Satisfy shareholder expectations through financial and non-financial performance	
	Create economic value for stakeholders	
	Create the conditions for sustainable innovation	
Social	Support the company in adapting to its surrounding dynamic context	()
	• Ensure dynamic career progression, life long learning and employability to meet employee and company needs	Ö
	• Ensure employee empowerment and engagement	Ö
	Ensure diversity and equal opportunities	(7)
	Proceed to deeper integration of Human Rights issues in and beyond ST	(7)
		0
	Engage proactively with local community and society to create mutual value	
Health & Safety	Ensure a safe and healthy workplace	0
	Contribute to employee health beyond the workplace	()
Environment	Maintain top class management systems for environment	0
Livirolinion	Continuously improve our eco-footprint according to our Decalogue targets	0
	Contribute to company efficiency and financial performance	0
	Progressively achieve carbon neutrality	$\circ$
	Anticipate and respond to customer and legislative requirements for the environment	0
	Antisipate and respond to customor and regulative requirements for the similarity	
Product	Comply with our Principles and values to develop responsible products that contribute to Society	0
Responsibility	<ul> <li>Proactively comply with environmental regulations and customer requests when managing chemical products and material declaration</li> </ul>	0
	Continuously reinforce our product and process quality	(*)
	• Focus on designing eco-efficiency products	(*)
		147
Supply chain	Continuously aim to satisfy and exceed our customers' Corporate Responsibility requirements	()
	Actively contribute to the EICC initiative by complying with industry standards in our own operations and connecting our compliance and connecting our compliance.	()
	supporting our suppliers and subcontractors in reaching compliance  • Achieve efficient and beneficial partnerships with our suppliers and subcontractors	(7)
	Achieve emoient and beneficial partitionings with our suppliers and subcontractors	Sal

## Significant events 2006

ST recognized as the world's number one supplier of camera modules for mobile phones







tion of our

Inauguration of memory manufacturing facility in Wuxi

Inauguration of our new Design Center in Rabat with His Majesty King Mohammed VI

### January

- · ST and Veredus Laboratories announce the development of a fast, point-of-need diagnostic capability built on ST's Lab-on-Chip platform
- ST listed in the top ten green companies of the decade by Innovest Strategic Value Advisors in cooperation with The Climate Group

### February

- Inauguration of ST's new design campus in Greater Noida, India
- ST recognized as the world's number one supplier of camera modules for mobile phones by the independent industry analyst Prismark Partners LLC

### March

• ST announces a voluntary pledge to reduce its US greenhouse gas emissions by 50% from 2000 to 2010

### April

• 'Power IC of the year' award won by ST's leading edge STw4141 converter during the 'Innovation of the Year' ceremony held in San Jose, USA

### May

• Introduction of the new Nintendo home console 'Wii', which includes ST's high performance acceleration sensors (MEMS)

### June

- Inauguration of Minatec in Grenoble, France, one of the biggest poles of innovation and expertise with common resources and tools dedicated to micro and nanotechnology Research & Development
- Inauguration of our new Design Center in Rabat, Morocco
- Launch of the Corporate Responsibility Awareness Program for pilot sites, in France and Singapore

### September

- ST establishes cooperation agreements with two Beijing universities
- ST files a criminal complaint pursuant to alleged fraudulent activities performed by ST's former Treasurer, who retired at the end of 2005
- Launch of the Corporate Responsibility Awareness Program at worldwide level

### October

• Inauguration of memory manufacturing facility in Wuxi, China (joint venture agreement with Hynix)

### November

- Inauguration of the new 8" production line for MEMS in Agrate, Italy
- ST announces the Flash memories deconsolidation

### December

• Inauguration of a new building in Grenoble for the Innovation and System Integration Center

# Our culture is changing and we want to shout about it

Interview with Karen Duhart, Corporate Responsibility Project Manager, Total Quality & Corporate Responsibility



In 2006, we launched an ambitious program to tell all our employees about how our company culture is evolving from Total Quality Management to Sustainable Excellence.

In 2006 we launched an ambitious program to tell all our employees about how our company culture is evolving from Total Quality Management (TQM) to Sustainable Excellence, in order to embrace and respond to the wider expectations of our stakeholders. Here Karen Duhart, Corporate Responsibility Project Manager, brings us up to date with progress.

This program, the Corporate Responsibility Awareness training, was our first global e-learning course, and seeks to explain:

- what Corporate Responsibility is
- · why it is important
- · how employees can contribute, and
- how our leadership in this area is evolving.

It also introduces our new code of conduct, the Principles for Sustainable Excellence, which serves as our company's reference framework for responsible business practice.

#### Designing and deploying the Corporate Responsibility Awareness program

Being so large in scope (our objective is to reach all 50,000 employees by the end of

2007), and also a new experience for ST in e-learning, the Awareness program took a whole year to put together, and months to plan the launch.

We set up a dedicated project management team at corporate level, which included members of different departments and functions, such as the CR Department, ST University, Information Technology and Human Resources.

We carried out the whole project, from content to delivery, using internal resources. In addition to this, we set up a company-wide network of regional and local people, including Sustainable Excellence champions and committees, to make things happen on the ground.

#### Key success factors and challenges

The program has been a real success so far, and we can attribute that to several factors, namely:

 Top management commitment: the year before the e-learning program, the Total Quality & Corporate Responsibility Vice President and the Corporate Responsibility Director conducted a world-wide site tour, to introduce the subject, and get commitment from local management

- ST University: our internal university played a key role by helping prepare the final content of the course, and in introducing our new e-learning platform in record time
- Communication campaign: this included a range of different media such as posters, video, presentations, a world-wide kick off meeting and constant coaching to local champions
- Deployment scheme: we used certain locations as pilot sites, to build and transfer knowledge between sites quickly and efficiently. Each site was also fully responsible for deploying their own program, and therefore able to adapt to local needs easily.

Of course, no program is without its challenges. And the Corporate Responsibility Awareness program was no exception. The main challenges included having to:

- find an effective way of communicating the same message to all 50,000 employees (from top managers to clean room operators)
- find solutions to the many technical and logistical challenges
- find practical ways to engage with managers, encourage them to take ownership and drive the 'appropriation' process







 address real dilemmas and perceptions of discrepancies between our values and our actions, and encourage people to take an innovative, problem-solving approach.

#### A closer look at how things worked locally

Of course, we could only do so much centrally to make this program happen - we also needed involvement at a site level, which is where the Sustainable Excellence steering committees came in.

Each site set up a dedicated core team, made up of their training manager, communication manager, IT department, Human Resources department, and Sustainable Excellence site coordinator. They each designed a strong action plan, building on other sites' experiences, and integrating a specific approach to local needs. Common elements of these action plans included strong communication, manager involvement and collective introduction and feedback sessions.

#### So what did employees think of it?

It was important for us to find out employees' perceptions of the program. So we included anonymous open and closed questions in the course. Preliminary results show that employees appreciated the new interactive media and the content of the training. In particular they valued the concrete commitment of the company to CR, and the focus on how they as individuals can contribute.

# 10,000 employees trained in 9 months 20% of ST employees

# A personal experience of the Sustainable Excellence program

Interview with Anna Catella, Quality Management Systems Manager, Catania, Italy



To keep our company evolving, we have to change our mindset, expand our way of thinking, and adapt ourselves to the moving environment we are working in.

"For me, with 30 years' experience within ST, in Catania, this kind of program isn't new. It is the concrete evolution of our way of working that started with Quality, Environment and TQM – Total Quality Management.

The guidelines that drove our working life over 15 years have built common values, approaches and processes to deal with the fast moving environment in which we operate.

With a continuous improvement approach in our daily activity, the path to Excellence is a never ending trip, with a constant stream of new perspectives and new challenges.

Today we are aware that Quality is not just about supplying high quality products and

services. It is about acting responsibly, and in line with our Principles, to guarantee the respect of our stakeholders and the environment.

The social and ethical focus is the real novelty of the Sustainable Excellence program. We are embarking on a very ambitious program to make a positive contribution to the world. To keep our company evolving, we have to change our mindset, expand our way of thinking, and adapt ourselves to the moving environment we are working in.

Corporate Responsibility Awareness is the first step in the right direction, involving each employee in the evolution process. To do

that effectively, we had to show how it would impact our working life and how we could each contribute in our daily activities.

More concretely, deploying such an awareness program required strong efforts to reach every single person on the Catania site. So, how did we approach the challenge of training everyone? We used all the communication channels available, to explain, involve and convince people of the importance of the program and its expected results.

In 2006, after just two months, involving operators too, we reached 40% of the site's population and we plan to reach 100% by June 2007.

We now need to give 'continuity' to this program. With the Corporate Responsibility Awareness campaign, we have raised expectations. By deploying the Principles for Sustainable Excellence, and making sure there is coherence between management behavior and these principles, we will raise motivation".

# Looking forward to 2007

2007 is a very special year for STMicroelectronics

20 years since the merger of SGS Microelettronica and Thomson Semiconductors to form SGS-Thomson

Throughout these years, we have demonstrated our ability to face difficult challenges and to grow faster than the market. We are well positioned to outperform our competitors:

- · we are a pioneer and a leader in 'System-On-Chip' solutions
- · our portfolio is very diverse and focuses on high growth applications
- · we enjoy a world class customer base and we have developed strategic alliances
- we have leading technologies, powerful IPs (Intellectual Property) and a broad range patent portfolio
- we have developed a global, state-of-the-art manufacturing infrastructure
- we have a strong financial position
- · our management team is experienced, cohesive and stable
- · we have deployed a winning corporate culture committed to Corporate Responsibility.

#### However, the semiconductor industry is undergoing several structural changes characterized by the:

- · changing long-term growth which has moved from double-digit growth to singledigit growth over the last several years
- strong development of new emerging applications in areas such as wireless communications, solid-state storage, digital TV and video products and games
- increasing importance of the Asia Pacific region and emerging countries, particularly China which represents the fastest growing regional market

- importance of convergence between wireless, consumer and computer applications
- · evolution of the customer base to a mix of OEM (Original Equipment Manufacturers), EMS (Electronic Manufacturing Services providers) and ODM (Original Design Manufacturers)
- increased participation in the semiconductor industry of private equity firms, exemplified by the takeovers in 2006 of two of the top ten semiconductor companies.

#### Our strategy within this challenging environment is designed to focus on the following complementary key elements:

- · have a broad and balanced market exposure, with a diversified product portfolio focusing on customized, system-level solutions for high-growth digital and mixedsignal applications
- · separate our Flash business with the objective to achieve - with a partner - the dimension of scale which, in this business, is absolutely crucial
- be the undisputed leaders in multimedia convergence (cellular phone, digital consumer, etc) and power applications (motor control, lighting, factory automation, etc), dedicating significant resources to product innovation and increasingly becoming a solution provider
- reinforce our historical strategic alliances while developing new major key accounts as well as the mass market
- · remain an integrated device manufacturing company, but develop our relationships with outside contractors (both foundries and back end services) in order to reduce our capital intensity

- · remain committed to our strategy of alliances to reinforce cooperation in the area of technology development
- · have an integrated presence in each of the world's economic zones that we target
- · develop the quality excellence of our products in the various applications we serve, through robust processes, robust products, and robust management systems
- provide our shareholders with value creation
- · maintain and develop our culture of Corporate Responsibility, focusing in 2007 on energy savings, on the health program and on integrity compliance.

(For more details, also read our 20-F report, pages 24, 25, as well as the Social and Environmental sections of this report)

Our aim is to be the leading 'one-stop-shop' for OEM customers, and to become one of the top three semiconductor manufacturers in the world, with a clear and undisputed leadership in power application solutions (automotive, industrial, power supply, motor control, etc.) and in solutions for multimedia convergence (wireless, consumer platforms and computer peripherals applications).





# New directions in the ST way

Interview with Jean-Philippe Dauvin, Vice President of Education & Knowledge



**Corporate Responsibility** will appear side by side with the traditional price and performance of the chips, as key differentiators between the vendors.

In 2006, for the third year in a row, the mobile phone market has grown above 20% - an unexpected performance which has propelled the yearly sales into over a billion pieces and the worldwide subscriber base into the three billion range.

Obviously the dynamism of emerging countries' demand is a key factor here, but renewing the installed base in the mature world has also contributed to the growth. In the near future, new markets and old ones will be equal in terms of numbers of phones, but in value terms, mature regions will account for two thirds of the total demand.

Looking at the buoyant communications market, the PC makers should feel a bit nostalgic, remembering the 80s when demand was growing at a steady 16% a year. Today, this rate has fallen by half, despite the raging price war, and the large potential of emerging countries. Demand saturation, a lack of innovation and high prices despite their recent fall has limited PC market growth to just 6 to 8% a year. As a result, the relative share of PCs will shrink to 40% of the market, compared to 30% for communication.

Let's think about some of the different consumer markets for a second. It includes home PC, mobile phone, digital audio and video, gadgets and automotive applications. Ten years ago, these 'consumer applications' represented just one third of the total chip market; we expect them to account for at least two thirds by the end of this decade (150 US\$B to 180 US\$B). To capture these market opportunities, semiconductor makers have to adapt themselves to today's consumer value chain rules: low cost, but highly differentiated products, rapidly changing applications, and a very fragmented market. For semiconductor companies, this is all but a revolution. It affects everything: the product cycle time, our design methodology, our manufacturing strategy and our geographical localization.

Since 2001, our industry has never regained the attention of the financial markets, despite the fair near-term perspective, the excellent financial situation of semiconductor companies, and their low market capitalization. Private equity firms in mid2006 have invested in our industry in buying through Leverage Buy Out (LBO) for 25 US\$B or so, Freescale, Philips Semiconductors, and ASE, the Back-end leader. But for private equity, these stakes are marginal: less than 5% of the 800 US\$B total private equity operation in 2006. Having said that, these new partners will play a strategic role in the industry consolidation process.

Then there's the consumerization of the semiconductor market, and the new market opportunities, such as medical and healthcare. These new trends will change the relationship between the players of the food chain. Many of these consumer products and, in the near future, those addressing health care and medical applications, will have a very high semiconductor content (See page 52).

In other words, the performances of these products will be totally dependent on semiconductors. Customers are going to want portable products with low consumption, low emission and high recyclability, and semiconductor vendors will be responsible for meeting those requests.

By the end of this decade, when health care applications will be a much larger market, semiconductor companies will also have a far more global responsibility. As a result, even more stringent than it is today, Corporate Responsibility (CR) will appear side by side with the traditional price and performance of the chips, as key differentiators between the vendors. And companies such as ST, which have invested early in CR, will definitely be candidates for growth and profitability in terms of satisfying their stakeholders.

### Separation of our Flash business

In December 2006, we announced our decision to establish a stand-alone Flash Memories Group in 2007. This group will consolidate all the Flash Memory operations including NAND and NOR Flash memories technology R&D, all product-related activities, Front-end manufacturing, marketing and sales worldwide.

This strategic repositioning in the Flash memory business was decided in order to limit our exposure to the capital intensity of the industry as well as to achieve the appropriate economies of scale which are demanded in this competitive segment.

Effective January 1st, 2007, to meet the evolving requirements of the market together with the pursuit of a strategic repositioning in Flash memory, we have reorganized our product segment groups into the Application Specific Product Groups, the Industrial and Multisegment Sector and the Flash Memory Group.

We will begin reporting sales and segment financial information using this alignment beginning in the first quarter of 2007.

Note: at the end of May, 2007, STMicroelectronics, Intel and Francisco Partners announced their agreement to create a new independent semiconductor company supplying Flash memory solutions. Under the terms of the agreement, STMicroelectronics will sell its Flash memory assets to the new company, while Intel will sell its NOR assets and resources. For more details, please refer to the press release issued on May 22<sup>nd</sup>, 2007.

# Creating **know-how** through partnerships

Semiconductor design and process technologies are subject to constant technological improvements and require large expenditures for capital investments, advanced research and technology development.

Our research and development efforts are increasingly expensive and dependent on alliances to develop new process technologies in line with market requirements. Here is an update on some of our alliances with competitors and suppliers, with a special focus on the Crolles2 Alliance, the joint venture agreement with Hynix and partnerships with leading suppliers.

#### **Crolles2 Alliance**

We have been cooperating with NXP Semiconductors (formerly known as Philips Semiconductors) for the joint development of advanced CMOS process technologies in Crolles, France, since 1992. In 2003, we signed a new joint research technology cooperation agreement with Freescale Semiconductor, and NXP Semiconductors for the joint research and development of advanced CMOS process technology on 300mm wafers, as well as for the operations of a 12" wafer pilot line fab which was built in Crolles2 with the stated goal of accelerating the development of future technologies and their proliferation throughout the semiconductor industry. In January 2007, NXP Semiconductors announced that it will withdraw from the alliance at the end of 2007. Freescale Semiconductor has also notified us that the Crolles2 alliance wil terminate as of such date. We remain convinced that the shared R&D business model contributes to the fast acceleration of semiconductor process technology development and we will continue to actively pursue an expansion of our portfolio of alliances to reinforce cooperation in the area of technology development in Crolles2. For more details on Crolles2 Alliance, also read our 20-F report (pages 8, 25, 31, 35).

Our success depends on our ability to obtain patents, licenses and other intellectual property rights covering our products and their design and manufacturing processes. To that end, we continue to seek patents on our circuit designs, manufacturing processes, packaging technology, and other inventions. We maintain our strong IP portfolio (over 19,000 patents) with a consistent flow of new patents.

#### Joint venture agreement with Hynix

In 2004, we signed a joint venture agreement with Hynix Semiconductor to build a front-end memory manufacturing facility in Wuxi City,



Memory manufacturing facility in Wuxi City, China



Crolles2 Alliance cleanroom, France

China. The facility was inaugurated in October 2006. This unit employs approximately 2,700 people and features a 8" wafer production line that began production of DRAM in June 2006 and a 12" wafer production line, which began NAND production in October 2006. The total investment in the project is approximately 2 US\$B, and we contributed 33% of the equity financing, equivalent to 250 US\$m, while Hynix contributed 67%. The financing of the joint venture also includes funding from local Chinese institutions.

For more details on the joint venture agreement with Hynix, also read our 20-F report (pages 10, 31).

#### Partnerships with suppliers

We have also established joint development programs with leading suppliers such as Air Liquide, Applied Materials, ASM Lithography, Canon, Gemalto, Hewlett-Packard, KLA-Tencor, LAM Research, MEMC, Teradyne and Wacker and with electronic design automation tool producers, including Cadence, Co-Ware and Synopsys.

For more details, also read our 20-F report (pages 30, 31, 32).

#### **Economic impact**

Performance overview

## Economic performance overview

Satisfy shareholders expectations through financial and non-financial performance

ST key figures 2006   EC1	
ST1 Net revenues	\$US 9,854m
ST3 Net earnings	\$US 782m
ST2 Gross profit	\$US 3,523m
ST4 Earnings per share	\$US 0.83
ST5 Gross profit as a percentage of sales	35,8%
ST6 Market share (sales divided by Total Available Market)	4%

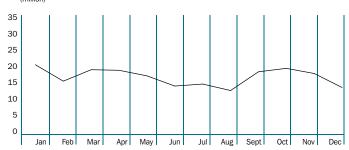
Dividend paid   EC1			US\$m
	2004	2005	2006
Dividends	107	107	107

Operating income and cash flow   EC1			US\$m
	2004	2005	2006
Operating income	683	244	677
Net operating cash flow	208	270	666

#### Average daily trading volumes | STE8 |

Euronext Paris/Borsa Italiana Milan/NYSE

No. of shares



Share price 2006, NYSE   STE8	US\$



ST sales   EC1			US\$m
	2004	2005	2006
ST sales	8,760	8,882	9,854

ST sales by region*   EC1   2.7   STE7			%
	2004	2005	2006
Europe	32.3	31.4	31.2
North America	15.5	14.4	12.5
Asia Pacific**	21.2	20.9	21.1
Greater China	21.2	24.8	25.9
Japan	4.6	3.5	4.1
Emerging Markets	5.2	5.0	5.2

(\*) The sales are split by region of shipment of our products; in many cases the sales process originated in another country (Europe and the USA in

particular), at design level with our customers.

(\*\*) Net revenues for Asia Pacific in prior periods were restated according to the new perimeter taking into account the creation of the 'Greater China' region.

ST sales by market segment   EC1   2.7   STE9			%
	2004	2005	2006
Automotive	15	16	15
Computer	16	17	17
Consumer	21	18	16
Industrial	16	14	14
Telecom	32	35	38

### In 2006, our net revenues increased 11%, driven by strong growth in Communication (wireless) and Industrial segments:

- · our sales grew by almost one billion dollars
- · our net income tripled
- our gross profit increased 16%

### Our financial results for 2006 compared to the results of 2005 were favorably impacted by:

- higher sales volumes and a more favorable mix in our revenues
- continuous strong improvement of our manufacturing performance, including the completion of our 6" restructuring and the redeployment of Electrical Wafer Sort (EWS) resources to Asia
- · a more favorable effective exchange rate for the US dollar
- · net interest income
- lower impairment, restructuring charges and other related closure costs
- income tax benefit

#### But they were also negatively affected by:

- negative pricing trends (-8%) due to persisting overcapacity in the industry
- stock-based compensation charges related to 2005 and 2006 grants
- · increase of other expenses

We seek to use our available cash in order to develop and enhance our position in the very capital-intensive semiconductor market while at the same time managing our cash resources to reward our shareholders for their investment and trust in us.

Based on our annual results, projected capital requirements as well as business conditions and prospects, the Managing Board proposes each year to the Supervisory Board the allocation of our earnings involving, whenever deemed possible and desirable in line with our objectives and financial situation, the distribution of a cash dividend. Read our 20-F report (pages 4, 5, 56).

The semiconductor industry is highly cyclical and has been subject to significant downturns at various times. This means performance can vary significantly from one year to the next.

Last year, our Serviceable Available Market increased by 8% while STMicroelectronics grew by 11%, gaining market share in 2006 compared to 2005. Over the last 10 years, our compounded annual growth rate was approximately 9% in a market which grew only 6%. We are a solid member of the top five semiconductor companies.

- Since January 1<sup>st</sup>, 2005, the region 'Europe' includes the former
  East European countries that joined the EU in 2004. These countries
  were part of the Emerging Markets region in the previous periods.
  Net revenues for Europe and Emerging Markets for prior periods were
  restated to include such countries in the Europe region.
- As of July 2<sup>nd</sup>, 2006, the region 'North America' includes Mexico which was part of the Emerging Markets in prior periods. Net revenues have been reclassified to reflect this change.
- As of January 1<sup>st</sup>, 2006, we created a new region 'Greater China' to focus exclusively on our operations in China, Hong Kong and Taiwan. Net revenues for Asia Pacific in prior periods were restated according to the new perimeter.
- 'Emerging Markets' includes markets such as India, Latin America (excluding Mexico), the Middle East and Africa, Europe (non-EU and non-EFTA) and Russia.

Our results of operations and financial condition can be significantly affected by material changes in the exchange rates between the US dollar and other currencies where we maintain our operations. As a market rule for the semiconductor industry, product prices are mainly denominated in US dollars, while a significant portion of our operating costs are incurred in non-US dollar currency areas. If the US dollar weakens, we receive a limited part of our revenues, and more importantly, we increase a significant part of our costs, in currencies other than the US dollar.

Read also our 20-F report (pages 10 and 74, 75)

The evolution of revenues in the various regions illustrates the fact that sales initiated in countries such as Europe and North America (where applications are developed) will frequently generate shipments in other regions such as Asia Pacific and Greater China (where manufacturing operations are located).

Our customers' profile is relatively stable compared to previous years; we serve five main market segments: automotive, computer peripherals, consumer, industrial and telecom.

#### Our sales by market segment

Telecom remains our primary market, with Nokia as our largest customer. We have formed alliances with customers including Alcatel-Lucent, Bosch, Hewlett-Packard, Marelli, Nokia, Nortel, Pioneer, Seagate, Siemens VDO, Thomson and Western Digital. Our strategic alliances have been historically a major growth driver for us.

In 2004, 2005 and 2006, revenues from strategic customers accounted for approximately 39%, 44% and 41% respectively of our net revenues.

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 penetration has been historically quite low.

In 2006, our sales growth to these new key accounts was an impressive 48%.

Also, 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. Results in 2006 were remarkable, since our sales to the mass market grew 17%.

Finally, we have focused on two regions as key ingredients in future sales growth, Greater China and Japan, where we have reorganized regional management. We are now number 3 in China, where our sales grew 16% last year. In Japan, we grew over 30% in 2006 while the Japanese market grew only 5%.

For more details on the results by segment, also read our 20-F report (pages 59, 62).

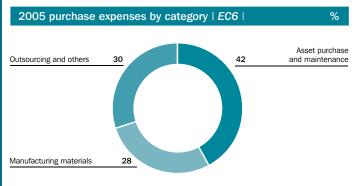
#### **Economic impact**

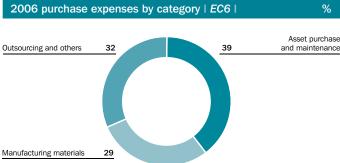
Performance overview

### Create economic value for stakeholders

Payments for purchases of tangible a	assets   EC6   C	STE1	US\$m
	2004	2005	2006
Purchases of tangible assets	2,050	1,441	1,553

All taxes paid   EC1			US\$m
	2004	2005	2006
Taxes paid	168	122	98





### Economic impact on 4 key stakeholders | EC9 | STE10 |

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

Communication: ST won a contract with Ericsson Mobile Platforms to supply 3G digital baseband processors to OEM's that are licenses of EMP 3G mobile phone technology

Digital consumer: we introduced the first 65 nanometer single chip dual HD decoder in the industry

**Data storage:** we developed a new proprietary system-on-chip (SOC) for disk drives in 90 nm technology

Automotive: we designed (design-in) a range of new products for the powertrain, safety and body applications

MEMS: ST introduced a new family for new applications: accelerometers, for game consoles (Nintendo Wii), HDD's (Toshiba laptops) and the cellular handset market

Flash memories: we grew 8% with a wave of new products in a market which grew 7%

Industrial: we achieved a remarkable growth of 20% by expanding our customer base and introducing 4 new products per day.

#### Creating value for our suppliers

While the amount paid to suppliers of tangible assets is an official and audited figure also published in our 20-F report (page F6), the split of purchases between tangible assets, materials and others is based on different data sources and time frames; it aims to give a realistic visibility on the most important economic flows between ST and its main suppliers categories, but it should not be considered as official and audited accounting information.

We do not publish the split of our purchases by region, because in many cases what we buy in a given country may in fact be imported from another country, and the resulting data are very difficult, if not impossible, to analyze.

#### Our economic contribution to society

Taxes are part of our normal economic contribution to society, but 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, as well as changes in estimated tax provisions due to new events. We currently enjoy certain tax benefits in some countries, but these benefits may not be available in the future due to changes in the local jurisdictions.

#### **Creating value for our employees**

As we have a complete section on social issues, we decided from now on to concentrate all social data in that section. (See more on pages 24-37).

### Create the conditions for Sustainable Innovation

Partnerships with the academic community   STE3   ♥ STS44			
	2005	2006	
Partnerships with universities, colleges, schools	217	236	

R&D Engineers and technicians by region   ○ STE5						
		Europe	Americas	Asia-Pacific	Others	Total
	Employees	4,857	352	1,730	256	7,195

R&D expenditures   ◆ STE4			US\$m
	2004	2005	2006
Expenditures	1,532	1,630	1,668

R&D headcount evolution   ♥ STE5			
	2004	2005	2006
Overall R&D headcount	9,800	9,700	10,300
R&D engineers and technicians	6,003	6,570	7,195

ST patent applications filed by region   STE6			
	2004	2005	2006
Italy	239	253	212
France	245	310	233
Rest of Europe	75	69	59
Americas	69	39	41
Asia-Pacific	86	49	62
Total	714	720	607

#### R&D, critical to our success

We believe that Research and Development (R&D) is critical to our success, and we are committed to continue investing in R&D in the future. 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.

Our policy in the field of R&D is market driven and is focused on leading-edge products and technologies in close collaboration with strategic alliances partners, leading universities and research institutes, key customers and global equipment manufacturers working at the cutting edge of their own markets.

We also participate in joint European research programs, such as the MEDEA + and ITEA programs, and cooperate on a global basis with major research institutions and universities.

For details on publicly-funded research programs, also read our 20-F report (pages 44, 45).

Our two major technology centers are Crolles2 Alliance, France, and Agrate, Italy. Other advanced R&D centers include Catania and Castelletto in Italy; Grenoble (1), Tours and Rousset in France; Phoenix, Carrollton and San Diego in the USA; Ottawa in Canada; Bristol and Edinburgh in the UK; Bangalore and Noida (2) in India; Beijing (3), Shenzhen and Shanghai in China; Rabat in Morocco (4); and Geneva in Switzerland.

- 1) The Grenoble-based Innovation and Systems Integration Center has been expanded with new facilities inaugurated in December 2006, covering a total area of 13,000 square meters, designed to accommodate 600 employees. This extension confirms ST's ongoing commitment to the Grenoble community ever since it first established a presence there in the early 1970s.
- 2) Our Noida activities have been transferred to a new facility located in Greater Noida. The new building, inaugurated in February 2006 on a 100,000 square meter area, is ST's largest design center outside Europe. The current capacity is 1,800 people, including a 750-seat cafeteria, health center, bank, etc. When completely finished, it will have a capacity for 5,000 employees.
- 3) In September 2006, ST announced the signing of cooperation agreements with Beijing University of Posts and Telecommunications (BUPT) and Beijing Jiaotong University (BJTU) to establish a microcontroller laboratory on each university campus, to train electronic engineering students to develop embedded application technologies. Approximately 1,000 students are expected to be trained in each university each year.
- **4)** The new building for our Design Center in Rabat was inaugurated in June 2006 by His Majesty the King of Morocco Mohammed VI; the Center today is home to around 170 people; the 16,000 square meter building contains 7,000sqm of office space, 300sqm of laboratory, a 250sqm computer room, an amphitheater and a restaurant.

# Finalizing our 2006 restructuring in France...

Interview with Thierry Denjean, Human Resources Director, France Region

After the complex situation we experienced in Rennes, and the issues brought about by a lack of understanding, it was really key for us, facing this new restructuring plan, to split the economic and the social debate, giving time and opportunities to our employees to anticipate social consequences of the restructuring, with the aim to avoid implementing a dismissal procedure.

On one side, we had to talk economics with the unions, while on the other side, we needed to help people start thinking about possibly changing careers and re-training.

We had a worldwide restructuring plan to deploy. At that time, we only knew which fields were going to be affected, not the specific jobs. So we decided, with our social representatives, to give all the employees in those fields the tools to start thinking about internal or external re-training.

Meanwhile, we were putting the more detailed restructuring plan together. For this, we signed an agreement (called a GER), and set up confidential centers (called CRSP – Centre de Ressources Services Partagés) in Grenoble and Rousset. These included business experts who were able to work with our employees on their individual career plans.

The average age in ST is quite young, and therefore many employees were interested in setting up their own, new companies.

Those that were interested in doing this had to present their case to a joint committee made up of ST management, union representatives and external experts.

We arranged for experts to support employees' new companies for two years, and negotiated financial aid, tax exemptions and training with our institutional partners. We also negotiated a special status with the administrative departments (assedic and DDTE) so that, if people did leave their jobs, they wouldn't lose out on their social benefits.

## The restructuring project has been very successful:

- People have moved jobs, either internally or externally
- We have not made any dismissals
- We now have more open discussions about job changes and career opportunities.

#### **Restructuring plan results – France Region** End of temporary contracts (fixed-term or interim contracts, subcontracting, etc.) 588 2005 departures (turnover) 111 71 Internal transfers to other activities Individual validated projects within the GER\* Plan\*\* 228 - Internal mobility inside France 19 - Mobility to Asia 2 51 - Outplacement (employees who left ST voluntarily to pursue work opportunities outside ST) - Company creation 82 - Training (employees who took the opportunity to return to school or university with a view to 18 moving to new activities) - Personal project (Private life choice, e.g.: family choice, moving abroad) 9 - Early-retirement GER\* 29 - RITT – temporary worktime reduction 18 Total number of people involved 998

(\*) Gestion de l'Emploi dans le cadre des orientations de Restructuration, Restructuring manpower planning agreement (\*\*) Excluding internal mobility within same organization (manufacturing people from test activity)

# ...and helping our employees become more employable

fast moving business



Since 2006, we have been involved in a unique initiative in France, that aims to improve the employability of ST employees. What is particularly original about it is that different partners from the same regional economic area (bassins d'emploi) have been working together on this shared issue.

The project began with lots of discussions with ST union representatives. An agreement was then drawn up, called the GPEC (Gestion Prévisionnelle de l'Emploi et des Compétences), to formalize everyone's commitment to the initiative and agree what we wanted to achieve.

#### The main aims of the initiative are to:

- · Publicize local jobs through a 'job observatory'
- · Help employees prepare for moving jobs, either internally or externally
- · Enable all sizes of companies and laboratories to work together and share skills
- · Regenerate regional economic areas (by creating new companies, and regenerating existing ones)
- Give employees time to think about their long-term career options - and help them move forward with their plans.

#### Why did we launch the project?

We learnt from the past

- In 2003, despite having a clear social plan in place, our restructuring plan, which we started in Rennes, proved very traumatic. There was a lot of misunderstanding, both within ST and locally - and we realized we needed a long-term plan for managing similar situations.
- In 2005, we needed to cut a further 1,000 jobs in France. We did this using a GER plan (Gestion de l'Emploi dans le cadre des orientations de Restructuration), signed with union representatives, based on voluntary redundancies (see page 22). This fitted in with our aim of helping all ST employees become more employable.

#### We know our jobs are changing

With this initiative, we are also acknowledging the fact that our business environment is changing fast – both in terms of technology (such as the complexity of our products, and the move into new technical domains), and in terms of business factors (such as where our final customers are located, and the need for us to offer different services).

With this in mind, our objective is to secure the professional path of our employees, by helping them become more employable, both internally and externally. We want to enable them to take control of their own career paths, and equip them to move more easily between different jobs.

We'll be letting our employees in France know about jobs that are likely to be changing through a 'job research institute' involving ST experts and managers. We'll also be presenting a report to union representatives, which will be available to all employees.

#### What else is happening?

There will also be some new tools for employees who are going to be affected by restructuring.

#### This includes:

- An external center, shared with other private companies, offering specific help to research and plan job moves or new ventures, with the guarantee of confidentiality if required
- · Help with specific projects such as identifying training or putting together business plans.

Local authorities, employment administrations and unions, who signed the collective agreement, are also involved. All parties sit on a committee to agree on which projects are suitable for support.

#### The benefits

By taking part in this initiative, companies in France, including ST, are working together to:

- · Improve local employability
- · Build new links between smaller and bigger companies
- · Regenerate local areas
- · Develop new skills at a regional level
- Enable employees to move into different jobs and set up new business ventures.

# Responsible restructuring in Morocco

Interview with Mohamed Lasry, President of STMicroelectronics in Morocco and three local employee representatives



What are the lessons learnt from this experience on all sides? Honesty and dedication.

Mohamed Lasry and Joseph de Fombelle, General Manager Bouskoura Site

When market conditions obliged ST to plan for restructuring activities in 2006, one of the options that was considered and put forward was the closure of a unit called Subsystems Product Group (SPG) dedicated to the design and production of chips for electronic cards, telepass for motorways, flash memories and similar products. SPG was located in Casablanca, Morocco, close to ST's larger production site at Bouskoura, and one of the reasons why it had been identified for closure was that its activity was quite different from ST's core business.

ST's first action was to look for a buyer for SPG. When a buyer for the activity could not be found, the focus was on finding a different solution. At the start those involved didn't realize quite how hard it was going to be and that the process would take them over a year to manage. The strong commitment of all parties involved – local management, employee representatives and employees – to trust each other and work together to find a responsible solution was what made it possible to come through the trauma of restructuring with the least possible impact.

Atika Salaheddine, Saadia Bamadoud and Abdellah Akrim, local employee representatives, Bouskoura site at Morocco

Mohamed Lasry, President of STMicroelectronics, Morocco explains, 'It was a very difficult time. When the news came, people suffered a lot and were in shock, but they said nothing. For them, the emotional attachment to ST as a family was very strong. It goes beyond work. But the commitment from ST was to save jobs and do things properly. The first prospect we faced when a buyer could not be found was the closure of SPG. But then, the solution proposed was to integrate SPG into our Bouskoura site and to reduce the number of employees by offering the possibility to leave ST with financial compensation.

There were periods over the course of the year where the discussion sessions with employee representatives went on into the night in very difficult conditions; the talks could have broken down at any moment. Both employee representatives and local management worked hard during the negotiations, to hold everything together and find a solution. Not the best solution, but the least bad. Despite all the difficulties and the enormous tension and uncertainty that everyone was living with during that period there was never any violence or strikes. It could have been different. But there was the trust, the belief and the desire to fight to save our people's jobs.

The employee representatives, who were freely elected by SPG employees before the restructuring began, share their perspective: local management kept everyone going. People were asking, "What will become of us, will we be sold or transferred? We want to stay with ST". They made it possible to communicate the message, to stay with us until the end, every employee. At the local level there was transparency and perseverance.

There was a responsible behavior on the part of everyone, to think of the interests of everyone, to find a consensus with the top management. There were problems in communication, it's true. The hardest part was the announcement and then the rumours without knowing, and the constant change of decision. But the idea was to put things in context and find a solution.

At times our credibility as delegates was in doubt. But our strength was to always come back to the employees, all of them, in small groups. That required lots of energy, and throughout that time no delivery was delayed, no lines were down and everyone carried on with their jobs even in peak times. Employees showed great loyalty.

One of the challenges we faced was to save the reputation of ST in Morocco. This was difficult because the company was surrounded by stakeholders, for example suppliers and subcontractors. People knew that SPG was going to close and that also had to be managed.

What are the lessons learned from this experience on all sides? "Honesty and dedication. It is most important to communicate and collaborate – not to be in a hard position but to be flexible and embrace dialogue."

By the end of the restructuring period, of the 835 original employees of SPG, 376 were integrated into Bouskoura, 169 were transferred to different ST activities, 214 left voluntarily with compensation and 76 employees resigned or had their temporary contracts terminated.

# Re-training our employees in Toa Payoh a strong demonstration of social responsibility



As part of our global strategic reorganization to improve our competitiveness, our Toa Payoh plant in Singapore has undergone several changes over recent years. It has changed from a pure assembly and test plant, into a site with varied high-end activities and operations. And the plant now houses the Central Packaging and Test Manufacturing (PTM) activities (previously managed in Rousset), EWS (Electrical Wafer Sort) Manufacturing, and Divisional and Global Outsourcing activities.

With the transfer-out of mature products from Toa Payoh to make way for advanced activities, coupled with improvements in equipment efficiency, the plant faced the challenge of finding jobs for employees

affected by the restructuring. These employees were mostly over 40 years old, with little or no elementary education, and low English-language proficiency.

As a socially responsible organization, we are committed to providing employment for our employees, who we consider to be a key stakeholder in our business. So in 2006, we launched a series of re-skilling programs to enable our people to get new jobs in the wafer fabrication plant in ST's Ang Mo Kio, Singapore. We have arranged this in partnership with the Union and the Ministry of Manpower - Workforce Development Agency.

#### Many of our employees have now gone through an extensive and comprehensive re-skilling programme, which covers:

- 1) English language literacy to equip them with the simple English required to function effectively as Wafer Fab Specialists in the Ang Mo Kio plant
- 2) Change Management and Personal Effectiveness - to instil a positive mindset so they can better adapt to the changes and maximize their hidden potential
- 3) Foundation skill / Wafer fab familiarization courses - to give them basic knowledge of Front-end manufacturing,

The initial transition was difficult, as we faced strong resistance from employees who didn't want to leave their familiar working environment or their colleagues who were also friends. However, we worked hard to make the re-skilling programme a success, and many of the employees are now adjusting and adapting well to their new working environment.

ST even gained national recognition and publicity in Singapore as a socially responsible company for not resorting to the easy option of just laying employees off during a restructuring exercise. The Prime Minister of Singapore, Mr Lee Hsien Loong, has also complimented us for our efforts to re-train older workers to enhance their employability.

- At the end of September 2005, the total headcount for Toa Payoh PTM was 1,364. With the transfer-out of the Eprom line, 63 operators were transferred in October-December 2005.
- To date, we have successfully transferred 214 employees to Ang Mo Kio and our business headquarters (BHQ).
- By the end of 2007, we expect to re-skill and transfer another 200 direct and 50 indirect employees to Ang Mo Kio.

# A new work contract that was both flexible and met business needs

Interview with François Suquet, Human Resources Director, Rousset, France



Anticipating that we were converting our site at Rousset from 6" to 8" and eventually closing our 6" unit, our Human Resources department decided to create a new kind of work contract in 2003: the CDIC, Contrat à Durée Indéterminée Chantier (open-ended work contract), which originated in the construction industry.

#### The main objectives of the contract were to:

- ensure we had the workforce in place, who could adapt to our decreasing activity at the 6" unit between 2003 and 2006. We had agreed to close the unit when activity dropped to 3,000 wafers a week
- establish an alternative to the temporary work contract and respond to the Rousset industrial project.

The new contract was specifically for our temporary workers who were getting to the end of their 18-month contracts. We offered them a four-year contract with stronger social and financial rights.

The new contract was very innovative in its social approach; we discussed it with our four union representatives, and they signed up to it.

Introducing this kind of contract was fairly complex from a legal and social point of view, but the fact we decided to go ahead with it illustrates our social commitment. In the end it was a very good opportunity for people to get longer work experience, and eventually, in most cases, a stable job.

Three years later, of the 330 employees we offered the contract to, 300 are now on CDI: Contrat à Durée Indéterminée (open-ended contracts). This is thanks to 8" investments, industrial decisions and favorable market conditions.

We have helped all these employees either find new career opportunities or change their scope of activity.

# Introducing a New Policy for Sustainable Excellence in HR Management

INTERVIEW WITH BILL BOYCE, CORPORATE HUMAN RESOURCES DEVELOPMENT GROUP VICE PRESIDENT



This is the first concrete step to ensure that a consistent formal approach is adopted by all ST locations to address non-compliance reporting. The new framework for implementing Corporate Responsibility in ST, defined by our new code of conduct, the Principles for Sustainable Excellence, is designed to help the company align its policies, processes and ultimately its action with evolving stakeholder and societal expectations. This is a gradual process that requires a systematic review of the policies and procedures that form our document hierarchy.

In 2006, as a result of the first phase of the review process, we identified a gap in our policies in the area of social responsibility and human rights. We realized that while the majority of our HR procedures and practices generally reflected the content of our Shared Values and Guiding Principles (our TQM heritage before Sustainable Excellence), there was no overarching policy explicitly defining the rules and guidelines necessary to ensure the full integration of human rights and employee well-being.

The objective we published in 2005 was to draft and publish a policy to fill this gap and this was done in 2006. The new policy, 'Sustainable Excellence in Human Resources Management' provides specific rules and guidelines in the following areas:

#### Human rights in the workplace

- No forced labour
- No child labour
- Freedom of Association and collective bargaining
- Equal opportunities
- · Fair treatment

#### **Workplace Environment**

- Employee empowerment, engagement and continuous learning
- Working time
- Health & Safety
- · Fair wages
- Security
- Responsible restructuring
- Protection of employee information

In addition to this, it requires all ST organizations worldwide to ensure that all relevant Local Operating Procedures are in place to support the new policy, including a formal procedure to manage and communicate to employees the channels available to report potential breaches of our code of conduct. This is the first concrete step to ensure that a consistent formal approach is adopted by all ST locations to address noncompliance reporting (to date this aspect has been largely decentralized).

Based on the reporting data that we collect and our detailed knowledge of the management of these areas, we were already confident in our overall management of social aspects, including human rights. However, this new document and the actions that it will give rise to will support us in going even further in communicating and integrating our Principles (first step Awareness; second step Integration). The next challenge for 2007 will be supporting all ST organizations in implementing the policy effectively and measuring and monitoring that effectiveness.

The Principles for Sustainable Excellence and the policies represent the intent of Top Management

The Management Manuals and Addenda provide consistent information, both internally and externally related to Management Systems (e.g. the ST Quality Manual describes the common aspects of the quality Management System whilst the Addenda describe specificities).

The key-process descriptions describe activities managed inside each key-process.

The Procedures define how activities are carried out.

The 2 hierarchical levels of procedures are:

- Corporate procedures (SOPs)
- Local procedures (LOPs)

This level includes detailed working documents such as work instructions, specifications, drawings or quality plans.

Records are registrations of performed activities or results achieved.

# Creating a WOrldwide referential project: Contribution Matrix

Interview with Olivia Zappala, Corporate Human Resources Development Specialist



We have put together descriptions of them.

We are moving towards a global job reference system, with common job titles and descriptions, and a harmonized job evaluation process.

Initiated by the France Human Resources (HR) department, and then rapidly adopted by Italy HR, the Contribution Matrix Project is now being rolled out worldwide. The project consists of developing generic job descriptions by job family. The main contributions of a job function are listed and described by level of responsibility, making a matrix. The various roles are then evaluated, following the Hay methodology, which we already use across all our sites.

#### The project aims to:

- Simplify and harmonize our job description / evaluation process by replacing individual job descriptions with generic, pre-evaluated ones which will become the HR reference. This will help local evaluation committees become more efficient
- · Guarantee homogeneous job grading and job evaluation between sites and countries. For managers of multicultural teams, this is crucial to ensure a fair job grading system
- · Avoid confusion between job evaluation and recognition. Job grade is too often perceived as a means of recognition

- Develop a more accurate job function database that will give us a benchmark, both within ST and with the external market
- Obtain a thorough knowledge and analysis of all the jobs and an overview of how they are spread within the organization, to highlight potential discrepancies and use this information for managerial decision making.

#### The current status

We have put together a list of all job families and descriptions of them, and we have evaluated the associated levels. We are now integrating this information into our HR Information Systems to reflect the changes.

We are involving all our HR offices and giving them training so they can relay the tool effectively to managers and employees, who are, of course, the real beneficiaries of the new system.

#### What we will end up with:

- · A worldwide job reference system (by family and level)
- · A career ladder with three paths: technical, project management and managerial, highlighting the career steps
- · A structured and harmonized worldwide headcount reporting system.

#### And the next steps for 2007?

We will be linking the technical and functional competency information to the updated job reference system.

# ST University Training for better performance

Interview with Gerard Mangin, Director of Education



At ST, we take training very seriously - which is why we have our own ST University, known as STU.

Operating on a worldwide basis, with a core team of 30 professionals in France, Italy, China, Singapore, and the USA, and an active network of more than 1,000 in-house trainers, STU develops and deploys strategic and company-wide training programs and learning services. The University also supports business, regional and functional areas, to improve overall performance.

One of the University's key objectives is to help us build a strong managerial community, anchored in our Sustainable Excellence culture to enable us to face the turbulence of our business environment, and the realities and challenges of the new century.

STU offers three management curricula to give managers a coherent development path, so they can move efficiently into their function, grow and build their multicultural network, and then develop as high impact leaders. These programs foster and disseminate our Sustainable Excellence culture, through dedicated workshops.

Another critical role of STU is to deploy strategic programs quickly and effectively. By investing in a powerful, new e-learning platform, STU has rolled out the Corporate Responsibility Awareness training to more than 10,000 employees in just nine months. That's 20% of ST employees since the project was launched in 2006. This training is helping us develop a new Sustainable Excellence mindset.

STU has also developed, with the help of the major players in our supply chain, new Supply Chain training, taking into account the Principles for Sustainable Excellence.

With tutors in instructional design and performance development, STU also provides business workshops in different domains. A new training program, Quality Excellence in Mind, is being deployed in all organizations to help us reach the highest quality in everything we do.

Another course, From Creativity to Innovation, is helping ST organizations develop original solutions that satisfy our environmental and Health & Safety requirements, to name just a few.



#### STU offers more than 100 courses, covering five major categories

- Management (representing 41.6% of total STU training hours)
- Job-specific 25.2%
- Personal development 20.8%
- Masters in microelectronics 7.2%
- Tools and methodologies 5.2%

#### **Training standard**

Minimum training hours per employee per year (ST standard) 35

#### 2006 indicators

STU activity versus ST training activity 5.47%

STU training hours 118,385

ST training hours **2,161,867** 

(See more on training on page 33).

# **NeaPolis Innovation** working on academic research

MASSIMO IACULO, FIRMWARE ENGINEER IN MPG NAND & STORAGE MEDIA DIVISION, NAPLES, ITALY



**Working on academic** research is crucial for increasing our tech sector and helping us prepare for the future.

For four years, Massimo Iaculo, Firmware Engineer in MPG Nand & Storage Media Division, has been working closely with universities in and around Naples to build know-how, and share it internally.

This initiative has since become a huge program, developed with all the departments on the Naples site. Called NeaPolis Innovation, it has formalized ST's collaboration with local universities.

#### "We have found a win-win way of working together:

- For students and professors, this initiative is a great opportunity to work on concrete projects proposed by us each year. They get competencies and the chance to test them in the working world.
- · Working on academic research is also great for us strategically, as it promotes innovation, which is crucial for increasing our creativity in a high tech sector and helping us prepare for the future. By working on these projects, we can experiment and explore solutions.

Also, the results are reviewed on a yearly basis, and because we are choosing the projects, we can focus on key issues for us. It's a very useful and rich experience".

NeaPolis Innovation is a core team of five universities: Università degli Studi di Napoli Federico II, Università degli Studi di Salerno, Seconda Università degli Studi di Napoli, Università degli Studi del Sannio, and Università degli Studi di Napoli Parthenope - all working closely with STMicroelectronics.

At the moment, about 20 students are working with the Naples site on various projects. These are all within five focus areas defined within NeaPolis Innovation:

- packaging and modeling
- mechatronics
- system level and reconfigurable system
- · telecoms for automotive
- post-silicon technology.

In 2006, ST Naples sent thirty new patent proposals, with nine patents pending and six already issued.

# ST partners with two more universities in China

In 2006, ST announced the signing of cooperation agreements with Beijing University of Posts and Telecommunications (BUPT) and Beijing Jiaotong University (BJTU) to establish a microcontroller laboratory on each university campus, to train electronic engineering students to develop embedded application technologies.

On top of all the necessary training and technical support, ST is providing its advanced 32-bit STR7 ARM-based MCUs and development tools for hands-on embedded systems training, in which the engineering students will work on real-life embedded design projects.

On the other side, the universities are setting up an ST-sponsored MCU laboratory for teaching and scientific research, and will

develop student training courses based on ST MCUs and tools.

These initiatives will benefit ST, the Chinese universities and of course, the students who will gain valuable experience on the very latest development tools used in commercial environments.

Student training had already begun in early September 2006, when the new university term started. Approximately 1,000 students are expected to be trained in each university every year.

These two universities, together with Shanghai Jiaotong University and the Harbin Institute of Technology, add to the list of the most prestigious educational and research laboratories and universities, in many of the countries where we operate, with which



ST has established very strong links and partnered on a long-term basis.

ST is contributing through cooperation with these Chinese universities to the country's future in the high tech industry.

# Involved in the local community, STMicroelectronics Foundation

As a non-profit organization, the STMicroelectronics Foundation is a separate legal entity from STMicroelectronics NV. But of course as it is our company Foundation, and as its sponsor, we closely follow the projects within its scope, to which many ST sites and employees contribute.

The key mission of the ST Foundation is to spread computer literacy in disadvantaged areas, and in addition to this we support sustainable development projects in developing countries.

### Its main activities, pursued throughout 2006 are:

- 1) Digital Unify program
- Participation in United Nations Global Alliance and Networking
- 3) Development projects
- Support of projects and/or NGOs that use Information and Communication Techonology (ICT) to overcome social, economic, educational, developmental barriers
- 5) Charitable donations

#### 2006 results

2006 was a very good year for the ST Foundation, with a strong increase in both the number of new trainers and trainees of the 'Informatics and Computer Basics' training course, as part of the highly successful 'Digital Unify' program to bridge the 'Digital Divide'.

## A closer focus on some projects Digital Unify

Throughout 2006, the Digital Unify has been again the program of highest priority for the ST Foundation to which most of our financial and human resources have been dedicated. Overall, the program counts to date 25,531 trainees and 596 trainers and is deployed in many countries such as Italy, Malta, India, Malaysia, Tunisia and the Democratic Republic of Congo. Also, in 2006, this program has been expanded to new countries: Ethiopia, Thailand, Sierra Leone and Uganda.

#### **Development Projects**

#### 'Children of Gujarat' Gift Matching Campaign and Water Project, India

In 2006, the ST Foundation matched funds of 31,000 euros that were donated by ST employees. A Health Care center had been built in front of the house of the Congregation. The construction is finished, but it is not equipped. In order to integrate and strengthen the sanitary service for the villages, ST Foundation has agreed to sponsor the equipment of the Health Care center with a delivery room and create a primary health care centre. The services provided will be the following: gynecology assistance; postnatal and prenatal care; reproductive health care (RCH); periodical immunization; general health check up, periodical treatment; eye and dental care; awareness and treatment of communicable diseases like malaria, typhoid, cholera; nutritional program; HIV/AIDS awareness program.

The 2006 donation has to be considered as the evolution of the first two matching donations made in 2004 and 2005 of the same amount and that were spent on the water project in the Gujarat villages.

The gift matching for this campaign allowed the construction of an adequate water supply system for four villages.

#### **Donations**

Through financial donations to local associations in many different countries, the ST Foundation supports ICT development, completing computer centers, setting up solar panels, delivering computer literacy, sponsoring activities to create and expand educational tools and resources.

**Digital Unify program in action** in Rabat, Morocco (left) and in Naples, Italy (right).





## Social performance overview

Support the company in adapting to its surrounding dynamic context

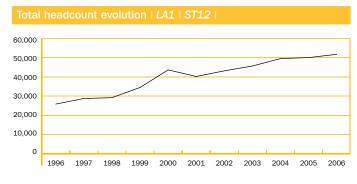
- Participate in Company 5 year plan (done in 2005)
- Complete implementation of restructuring plan
- Formalize Social policy
- Review and align social procedures with Principles for Sustainable Excellence

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Headcount evolution by region   LA1   ST12					
Region	2004	2005	2006		
Europe	22,593	22,405	22,527		
Americas	3,180	3,120	3,277		
Mediterranean	7,224	6,906	7,336		
Asia-Pacific	16,532	17,602	18,596		
Total	49.529	50.033	51.736		

Hires by job type I ♥ LA1 I			
	2004	2005	2006
Engineers and managers	2,593	1,605	2,312
Technicians and administrators	1,167	749	1,154
Operators	4,446	3,189	4,088
Total	8,206	5,543	7,554

	career length and turnover rate	I <b>○</b> LA2 I	STS6 I	
		2004	2005	2006
STS6	Average career length (years)*	12	15	13
C LA2	Average turnover rate (%)	6.6	7.8	8.79

(\*) Career length is the average length of employment of people leaving ST. Thus the calculation of the career length is based on the average turnover of the last 3-5 years.

#### **Accompanying company strategy**

The HR community has been involved in the development of the Company Five Year Plan from the earliest stages. The objective: to provide support for the organizations and anticipate strategies for HR and business in parallel. On the basis of this strategic planning HR will be able to act proactively and therefore more effectively in providing all the organizations concerned with appropriately timed solutions related to internal and external competences.

Starting from the business plans, HR has put together a synthesis of the challenges described by the organizations and consolidated the major development trends by organization and by region as well as at overall company level.

The major focus areas and priorities for action are evident from the challenges – technology transition, the necessary development of management competences, remuneration, competitiveness, etc.

The current and future HR infrastructures will guarantee deployment effectiveness as far as systems processes and centers of expertise are concerned.

There are four keynote programs aimed at offering close support for the strategic business programs and to ensure efficiency and flexibility of our organizations:

• The necessary transformation of organizations and the management of transitions, notably those brought about by technology discontinuities and the complexity of our market

- Developing expertise and leadership, focusing on an improved ability to identify and develop skills through greater competence and stronger involvement of managers
- A competitive remuneration strategy, focused on recognizing the value of individual performance
- Planning for and making available the key competences necessary to achieve our business objectives. This will be done through internal mobility, functional or geographic, by recruitment programs taking advantage of new channels like Campus Management, a more exact means of targeting expert profiles, and overall by bringing new blood into our teams, including management positions.

#### **Employees by region and turnover**

The overall company headcount has increased in 2006, especially in Asia which now represents 36% of the total ST population. The other regions are globally flat, with a slight increase in Europe and Middle-East / Africa.

More than 60% of our recruitments are centered in Asia (especially China) to support the ever-growing business needs and the aggressive business expansion plan. We maintain the recruitment activity in Europe, in particular for our skilled workforce which represents 31% of our professional hires.

Turnover remains rather high in developing countries, especially in China. Our objective, in most of the countries we operate in, is to maintain our overall turnover at the same level, while in India and China we aim to reduce it.

Restructuring plan results – France region	
Total number of people involved	998
End of temporary contracts (fixed-term or interim contracts, subcontracting, etc.)	588
2005 departures (turnover)	111
Internal transfers to other activities	71
Individual validated projects within the GER* Plan**	228
- Internal mobility inside France	19
- Mobility to Asia	2
<ul> <li>Outplacement (employees who left ST voluntarily to pursue work opportunities outside ST)</li> </ul>	51
- Company creation	82
<ul> <li>Training         <ul> <li>(employees who took the opportunity to return to school or university with a view to move to new activities)</li> </ul> </li> </ul>	18
- Personal project	9
(private life choice, e.g.: family choice, moving abroad)	
- Early-retirement GER*	29
- RITT-temporary worktime reduction	18
Restructuring plan results – Italy region	
Total number of people involved	1271
Temporary contract expired	234
Departure with incentive	
<ul> <li>Bridge to retirement (employees leaving will receive a pension within 3 years after their resignation)</li> </ul>	200
- Early-retirement (while the employee could remain until the age of 65, he/she leaves the Company having attained the right for a seniority pension (35 years of contribution and + 57 years old))	290
<ul> <li>Other         <ul> <li>(employees who accepted an incentive to leave the company instead of being transferred from Castelletto site to Agrate site)</li> </ul> </li> </ul>	25
Voluntary resignations (figure in line with the 2 years cumulate turnover of 2% that is the average each year)	422
Other initiatives	100
(employees involved in the sale of ACCENT)	
Restructuring plan results – Morocco	
Total number of people involved	835
Transfer to another ST site (Bouskoura, Morocco)	376
Transfer to another activity within ST	169
Voluntary departure with compensation	214
Resignations or end of contract	76
Restructuring plan results – Toa Payoh – Singapore	
Total number of people involved (still on going)	527
Operators transferred	63
Transfer to Ang Mo Kio site and Business headquarters	214
Re-skill and transfer 'on going'	250
Total number of people involved all regions	3,631
(+) Costian de l'Emplei dans le codre des exientations de Postructuration	

- Restructuring manpower planning agreement
- (\*\*) Excluding internal mobility within same organization (manufacturing people from test activity)

#### Disclosure on management approach

You will find the disclosure on management approach in the html version of this report.

96% of our employees are covered by the performance indicators disclosed in this report. We took into account all our locations manufacturing and non-manufacturing - at worldwide level to collect the 2006 results.

#### **Social Policy**

In 2006, we introduced a new Social Policy covering Human Rights, employee empowerment, engagement and continuous learning, responsible restructuring and other related subjects. For more details on this policy, see page 26.

The creation of a new Social Policy has opened the way for a deeper review of social procedures and the alignment of them with our new code of conduct, the Principles for Sustainable Excellence. This review will be carried out in detail by our regions and sites in 2007, with the support of our corporate Human Resources and Corporate Responsibility departments.

#### Implementation of restructuring plan

In 2005 we reported that, due to our challenging economic context, we were obliged to carry out a restructuring plan involving redeployment and recruitment of engineers and a worforce reduction by about 3,000 positions: approximately 2,300 in Europe (1,200 in Italy and 1,000 in France), about 700 in the Mediterranean region and the remainder in other European countries and our Americas region.

Following on from the figures reported last year, we are now in a position to show the final status of the restructuring effort concerning workforce reduction. This table shows that we stayed within/below the projected figures of the plan, thanks notably to the extensive efforts of the affected sites and regions to ensure a responsible approach to restructuring. For more details on these initiatives, see pages 22-25.

## Social objectives for 2007

- · Review and align social procedures with our **Principles for Sustainable Excellence**
- Continue to ensure that local Sustainable Excellence steering committees take their Employee Opinion Survey results into consideration during their annual self-assessment and the setting of local objectives
- Share gender equality best practices among our regions
- Take into account in the evaluation criteria for corporate recognition the benefits for all our stakeholders (economic, social, Health & Safety, environmental, product responsibility and supply chain positive impact)
- Contribution matrix: follow deployment process towards a harmonization of job evaluations
- Propose alternative employee opinion survey which focuses on measuring the level of employee
- · Successfully integrate our Flash Memory Group with Intel's Memory team to form a new independent Flash Memory company.

• Improve internal mobility - medium-term target: 90% of jobs to be posted internally	0
Continue to increase professional assessment through people reviews	0
Worldwide competency referential to be completed	0
Increase training hours	8
• E-performance appraisal, complete roll-out of system worldwide	0
<ul> <li>Improve newcomer and new manager training programs and make mandatory</li> </ul>	0

Internal mobility - jobs filled internally			
	2004	2005	2006
STS14 Jobs requiring experience filled internally	61	85	61

Average training hours   LA10			
	2004	2005	2006
STS15 Professionals*	38	37	30
STS16 Operators	67	80	91**
STS17 Others (non professionals)	36	30	30
Total***	49	53	43

- (\*) It refers to employees who hold managerial roles and are exempt from overtime compensation.
- $(\sp{**})$  This higher figure is linked to the regular certification/re-certification of operators at least every 18 months.
- (\*\*\*) Including training on equipment and outside training.

Employee access to training STS18	%
	2006
Employees having received > 35 hours training/year*	37

(\*) This indicator is particularly important as it shows how training is distributed among employees.

Promotion r	ate and people reviews   LA12   STS21	L	%
		2005	2006
STS21a	Percentage of exempt* employees having changed job grade in last 12 months	21	34
STS21b	Percentage of exempts assessed during a collective people review (in the last 2 years)	43	59

(\*) It refers to employees who hold positions normally requiring graduate or post-graduate education and who are not eligible for overtime compensation.

#### Internal mobility

It is our policy to post all our jobs requiring experience internally to advertise internal career opportunities available to our employees and enable them to apply.

We target to fill 70% of our jobs internally. In 2006, 61% of jobs requiring experience were filled internally compared to 85% in 2005. Restructuring activities in 2005 resulted in a higher use of internal mobility to fill jobs since external recruitment that year was extremely controlled ( $\pm$ 500). We have now returned to a more normal level for internal mobility fill rate.

Our internal mobility also includes a significant flow of resources in China and Asia Pacific: relocation of business, China's economic expansion, the development of our industrial hub in Singapore, as well as the installation of R&D activities and the rapid growth of manufacturing in certain regions. It is also the basis for a fundamental development in the company's concept of mobility.

Today, globalization and its consequences (flexibility, responsiveness, efficiency, etc.) have made the company's viewpoint change and now our mobility policy increasingly supports the development of international careers – professional paths marked by varied experience in several countries. Furthermore, there is another important change, resulting from globalization and the consequent development of certain countries, like China, for example: mobility has developed in line with this and has become also regional. Today, there is fast and significant growth in this type of mobility, notably in Asia.

#### **Training hours**

In 2006, our Operator headcount increased, particularly in Asia, resulting in an increase of operator training hours. However, in 2006, management was faced with strict fiscal controls including travel restrictions, which limited the training for Professionals. As a result, we failed to meet our target to increase overall training hours.

#### Promotion and people reviews

This indicator shows the percentage of professional / exempt employees promoted each year and replaces the previous one 'percentage of job descriptions that are written', since we believe this gives more accurate visibility on the career growth opportunities available to our employees.

The promotion rate has increased from 21% in 2005 to 34% in 2006, which shows considerable progress. This has become a key indicator we wish to track and keep at a high level over the coming years.

Nearly 60% of our professionals were assessed in a collective people review in 2006 against 43% in 2005: this shows that the worldwide implementation announced and launched in 2005 has been successful and has responded to an organizational need to better map the workforce and identify key talents.

In 2006, we worked on the creation of a worldwide job referential with common job titles and descriptions and a harmonized job evaluation process (See page 27).

#### Employability | LA11 |

(See page 23).

#### **Social performance**

Performance overview

#### Ensure employee empowerment and engagement

- Link Employee Opinion Survey more closely to beStick self-assessment action plans
- Analyse new open questions from Employee Opinion Survey (EOS)
- Take specific corporate actions on worldwide issues identified in EOS
- · Reactivate corporate recognition programs

Unvested Stock Awards   STS47		
	2005	2006
Number of employees rewarded	7,189	6,000
Percentage of eligible population	41	34

Employee opinion survey ◆ STS28a			%
	2003	2005	2006
Overall participation rate	87	80	NA
Overall satisfaction rate	65	61	NA

(\*) This indicator is not applicable this year as our Employee Opinion Survey is carried out approximately every 18 months.

Recognition   STS26   STS28   STS34			
	2004	2005	2006
STS26 People recognized	49,553	41,676	77,390*
STS28 Overall company recognition budget (US\$k)	1,000	1,613	1,031
STS34 Accepted suggestions which were implemented (%)	54	57	39

(\*) Can include multiple recognition for one employee over the year.

Unplanned absenteeism   STS28b		
	2005	2006
Percentage of unplanned absenteeism*	3	3.05

(\*) As opposed to vacations and holidays which are typically planned months in advance, unplanned absenteism is the result of absence due to last minute emergencies or illness and therefore cannot be planned and managed.

#### **Unvested Stock Awards**

Since 2005, we have offered restricted Stock Award Plans, 'Unvested Stock Awards' which are designed to incentivize, attract and retain our executives and key employees who contribute to our success, by aligning compensation with the evolution of our share price.

In 2006 the program was redesigned to provide larger awards but to a more selective panel of employees (34%).

#### Recognition

Embedded in our Sustainable Excellence culture, corporate recognition programs are designed to recognize team as well as individual excellence and outstanding contributions. Awards encourage and motivate employees to reach a high level of performance and consequently increase the company's competitiveness.

#### Recognition takes place in ST through 2 different ways:

 Corporate level - yearly event: corporate recognition acknowledges individual employees or teams who have made outstanding contributions and accomplishments which best reflect ST Principles for Sustainable Excellence (Integrity, People, Excellence).

Team recognition awards are CEO, Gold, Silver and Bronze awards and individual performance is recognized by the 'ABCD' (Above and Beyond the Course of Duty) award. In 2006, 805 people were recognized at corporate level.

• Local level - frequency defined by local organizations: recognition takes place at site and organization level through various different processes. In 2006, the number of awarded recognitions increased again (note that employees can be recognized several times).

#### **Employee suggestion scheme**

0

We encourage our employees to think in terms of continuous improvement, and it has been our culture for many years to enable them to contribute to real improvements through our long-standing suggestion scheme.

In 2006, nearly 27,000 suggestions were implemented.

The knowledge that their suggestions can result in improvements in any aspects of the company's performance results in greater involvement and engagement of employees.

#### **Employee Opinion Survey**

We consider our employees as the foundation of our business success and the most valuable of our resources. Therefore we promote and encourage communication between employees and management and every 18 months our employees worldwide are invited to participate in the survey, which is now an integral part of our Sustainable Excellence management practices. It provides an opportunity for dialogue to share thoughts, opinions and ideas about the company and for the subsequent implementation of appropriate action plans to improve employee satisfaction among the men and women who make ST a success.

An analysis of the results of the open questions from the 2005 survey was made available to local organizations to support them in the implementation of their local action plan. Most actions relating to the Employee Opinion Survey are taken locally and in some cases at the Regional or Top Management level in the case of common issues.

Each site and organization management team defines a post-survey action plan to improve weak areas, monitor implementation and progress and communicate results of action plans to employees.

In 2006, we worked with local Sustainable Excellence steering committees to ensure that they take their Employee Opinion Survey results into consideration during their annual self-assessment and the setting of local objectives. This will continue to be a focal point for activity in 2007.

- · Gender equality: decide on company strategy
- · Sign France-level agreements with unions
- Define disability consistently to improve reliability of indicator tracking percentage of disabled employees





Nationalities in corporate staff   LA13   STS8	
	2006
Different nationalities represented in the corporate staff	8

Disabled employees   LA13   STS12b		
	2005	2006
Percentage of disabled employees	0.41	0.62

Gender split for professionals   LA13   ○ STS10			
	2004	2005	2006
Men-professional	81	80	80
Women-professional	19	20	20

Gender breakdown   LA13   STS9			
	2004	2005	2006
Men	60	60	61
Women	40	40	39

Women	in management   LA13			
		2004	2005	2006
STS11	In senior management (Job grade 17 and above)	6.3	6.6	7.04
STS12	In executive management (Job grade 19 and above)	3.8	4.1	5.65
STS12a	In staff management reporting to site/senior organization management		10	12

#### **Ensure diversity and equal opportunities**

Diversity at ST is a key strength, and multicultural diversity has always been a strong point for ST, reflected by the dominant presence of employees and managers of local origin in ST's many sites around the world. This cultural diversity is also reflected by the 8 nationalities that are represented at the Corporate Vice Presidents' level. These cover England, Finland, France, Germany, Greece, Iran, Italy and Singapore.

We are now focusing in ST on increasing the representation of women at all levels of the company. As the figures above show, our results are improving consistently over time, notably for the representation of women in senior management and executive management.

Since last year, we have also been tracking the percentage of women who directly report to the site or senior organization manager at local level, and this year we have seen an improvement in this indicator. The split between men and women at professional level (below senior and executive levels but above operator level) is stable at 20%. Our overall gender split reflects the fact that many of our Operators are women.

Many of our sites and regions have specific programs and initiatives relating to gender equality and equal opportunities.

Following on from the focus on Equal Oppportunities in France in last year's report (see pages 30-31), in 2006, a key agreement was signed with France-level unions defining the specific objectives ST France has committed to meet for gender equality.

#### Company strategy for gender equality

In 2006, following the work of the corporate-level working group on gender equality, it was decided that a soft, cultural approach should be taken to developing a company-wide strategy for gender equality. Since gender equality is subject to many cultural and social differences depending on location, each region should have its own approach within the clear framework of the Principles for Sustainable Excellence and the new Social Policy.

It was also decided that the work to share best practices and a common approach to some aspects of gender equality can be continued through the new internal working group on Human Rights (see page 36). In particular in 2007, the objective is to transfer successful practices from France to Italy and to progressively bring other regions into the best practice sharing process.

Integrating disabled employees in 2006: we have seen a slight increase in the number of disabled employees across ST. This is due to an increasing focus on this area and to the specific initiatives of some countries and regions.

ST supports Equal Employment Opportunities for candidates and employees. ST commits to recruit, screen and select candidates solely on the basis of qualifications and abilities needed for the work to be performed.

Race, color, age, political opinion, religion, gender, sexual orientation or national origin cannot be used as selection criteria.

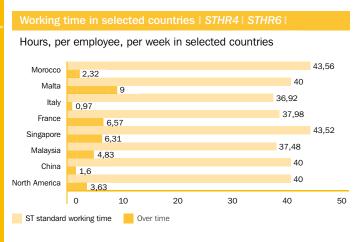
#### **Social performance**

Performance overview

#### Proceed to deeper integration of Human Rights issues in and beyond ST

Support local sites to implement new management systems





Working time lost to strikes   STS38			%
	2004	2005	2006
Ratio time lost to strikes/time worked	0.04	0.15	0.04

Working time and overtime hours   ♦ STS36   STHR7				
		2004	2005	2006
STS36	Employees with regular work time less than 48 hours per week (%)	100	100	100
STHR7	Average overtime per week (hours per employees)	1.79	1.24	4.17

Communication meetings   STS34a		
	2005	2006
Average number of meetings per year in each organization or site during which management presents company/organization/site results to all employees allowing time for open discussion	10	9

#### Working time and overtime

As shown in the tables above, all of our regions continue to work within the standard of 48 hours per week as regular work time. Overtime varies according to local legislation and culture, but always remains within the limit of a 60-hour week. Overtime leading to this 60-hour limit is an exceptional, not a regular occurence and it is always freely chosen. The increase in average overtime per week may reflect the hiring freeze in many regions, which can lead to an increase in working time for operators if production levels remain constant or increase.

#### Freedom of association and employee-management dialogue

2005 was unusually high in terms of working time lost to strikes, due to country-wide strikes in Italy in the context of the renewal of the National Labor Contract. 2006 results have returned to a more normal figure.

Considering that all of our European sites are covered by the European Works Council and a number of sites outside Europe (e.g. Morocco and Singapore) also have formal systems for collective labor negotiations, we calculate that in 2006, as in previous years, over 75% of our employees were represented by independent trade unions and other officially recognized representatives, or covered by collective bargaining agreements. I LA4 | STHR5 |

ST continues to ensure healthy dialogue and interactions between management and employees, notably by the existence in every site of regular communication meetings. During these meetings, as well as receiving information about ST's strategy and results, there is the opportunity for employees to raise any questions with management and have an open discussion. A high average number of meetings per year was maintained in 2006 to reflect this long-standing cultural practice.

**Entreprises pour les Droits de l'Homme (EDH)** is a working group that ST and 7 other French or Francophone multinational companies have created together in 2006 to work proactively on the implementation of Human Rights in a business context. The group has been inspired by the Business Leaders Initiative on Human Rights (BLIHR).

#### What is the objective of EDH?

The high-level objective of the group is to contribute to the concrete implementation of the United Nations Universal Declaration on Human Rights through a number of different actions:

- exchange best practices and challenges in the implementation of Human Rights with other stakeholders
- find solutions together and with other stakeholders to challenges that our companies may face in implementing Human Rights
- contribute to reflections on human rights at the international level and to the emerging international framework for the implementation of human rights in a business context
- contribute to the promotion of Human Rights through our activities, including direct action with stakeholders within our sphere of influence.

The group is newly formed and so will in due course translate these high-level objectives into more concrete and measurable objectives. Each company will make a formal commitment within the group regarding what they intend to achieve.

ST has set up an internal working group on human rights to drive this initiative within the company. The group will work in 2007 to define its formal objectives and areas for activity during the year.

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

Partnerships with the academic community   SO	1   EC1   🔾	STS44
	2005	2006
Partnerships with universities, colleges, schools	217	236

STMicroel	ectronics donations   S01   EC1			USk\$
		2004	2005	2006
OSTS39	Total cash donated to charitable associations	291	1,645	271
STS39a	Estimated value of in-kind donations to community and society		655	772

We are still not confident in the reliability of the data relating to employee hours dedicated to non-business related activities | STS42 |.

We have decided, therefore, not to publish this data.

Corporate Responsibility awards   2.1   STS43		%
	2005	2006
Number of recognitions or awards received for	85	68
excellence in CR		

STMicroelectronics Foundation   S01   EC1		
	2005	2006
Total new trainers	112	200
Total trainers from beginning of program	396	596
Total trainees	8,035	13,390
Total trainees from beginning of program	12,168	25,531

#### Partnerships with the academic community

Our stakeholder engagement in the local community invariably includes strong, strategic partnerships with academic institutions, including for joint research and hiring purposes. In 2006, the number of partnerships in this area increased, reflecting the continuing importance of this kind of activity for ST's success.

#### **Charitable donations**

2005 was an usually high year, notably due to the Tsunami fund-raising efforts of ST and our employees. 2006 has returned to more normal levels and the slight decrease reflects the pressure to reduce costs that was felt by the company as a whole this year.

At the same time, in-kind charitable donations (e.g. personal computers) increased slightly, reflecting the continuing efforts of ST sites to contribute to the local community even in tough economic times.

#### **Corporate Responsibility awards**

As in 2005, ST received numerous awards for excellence in different aspects of Corporate Responsibility including environmental performance.

### Some examples of local initiatives implemented in 2006 In Longmont, Colorado, USA

We donate old company cellphones to the local safe shelter for abused women for making SOS and other emergency calls free of charge. We donate old laptops to the shelter and the local Community College.

#### In Muar, Malaysia

A charity dinner was held by the site, with 900 participants. As a result of the funds raised, 12 charitable organizations and schools received school equipment, wheelchairs, braille machines, medical equipment, dialysis machines and donations made to the National Cancer Council and the Salvation Army Melaka.

#### In Phoenix, Arizona, USA

A science fair was held to promote education in science and math with our customer Avnet. This event educating children in science and math involved hundreds of students in the school grades 5-8. ST also runs a competition with a special environmental challenge which in addition to promoting science resulted in some amazing inventions.

#### In Rousset - France

Several events were organized on site to increase the awareness of all employees on the issue of disabled employees' employability. The activity has been multiplied by five between 2005 and 2006, subcontracting specific projects such as landscaping, reprography and storage to external 'protected' workshops employing disabled people and contributing to their integration.

#### In Rabat, Morocco and Naples, Italy

The Digital Unify program has been going strong in Morocco and Italy to reduce the technology gap. ST is involved in the program by sponsoring the creation of computer classrooms. Employees and volunteers, have been trained to conduct computer training for people in their local community.

#### **STMicroelectronics Foundation**

(See more on page 31)

## Prevention and awareness are key in safety

Perspectives and best practices shared by Alain Denielle, Health & Safety and Environment Director, ROUSSET, FRANCE



Manufacturing electronic components requires the use of chemical products: acids, bases, solvents and ammoniac products and more than 10 different gases.

Of course, following the company's procedures, and in line with regulations and certifications, all those products are well known, identified and tracked by Health & Safety departments, Medical departments and the users themselves.

Even with a complete and controlled manufacturing process, awareness and prevention are key for safety on a site like Rousset with a 8" manufacturing unit and a test workshop, representing a clean room area of around 11,000 square meters and more than 800 kinds of equipment.

We go much further than what is recommended by regulations, and work on

More than 900 measuring points are checked on a continuous basis in manufacturing but also in technical areas.

In addition, 5 spectrophotometers monitor the ambiance periodically with 155 sensors in those clean rooms, providing more than 5,000 data per day about 40 potential chemicals.

And to make sure that all users are aware of our systems and processes, we invest in training for all our employees. More than 15,000 hours of training on Health & Safety matters are now done every year in Rousset.

Over the last two years, on Rousset Site, all employees working in the clean room have been involved in a huge training program called 'Objectif Prévention'. Organized within a day, the objective of this course is to inform, present and demonstrate the safety equipment, processes and projects through very interactive training involving games and role play.

the domain of the

safety engineer, but

it is their role to help

prevent accidents, with

audits, training and by

establishing systems.

accident, even a near-

miss, the safety engineer

will help the manager in

charge with a thorough

In the case of any

Being more aware of all safety procedures, people understand better what is done to protect them but also know better what role they can also play to increase safety.

This program had very good results. More than 1,000 people have been involved in the last 2 years and the feedback from participants was very positive.

The program was possible because of management commitment: 300 managers participated in a 2 day safety training prior to this program, understanding their Health & Safety responsibilities and therefore preparing for and promoting the awareness program.

The next step - Behavioral Approach - is currently being prepared and will involve information for employees and additional training on behavior. This program, allowing and encouraging employees to observe the behavior of their colleagues on the job, with a specific 'observation process', should allow the identification of unsafe or inappropriate behavior, therefore facilitating corrective and preventive actions.

## Safety first in Shenzhen

Perspective from JI KIM, General Manager, Shenzhen, China

As of May 2007, with around 3,500 employees working in our 24-hour operations, we have recorded zero accidents since January 11, 2004.



analysis. Prevention is one of the best ways to ensure a safe operation. Every accident has its causes, and each is a gold mine for learning and prevention.

#### New employees: safety from day one

One of the most frequent causes of accidents in Back-end sites is putting a hand or finger into a running machine. For example, when our operators see a dropping unit, their sense of responsibility means they may instinctively

try to pick it out themselves, without thinking of the hazard. Thus we need to train them in safety issues.

On their first day, the hazard and consequences of dealing with working machines are well explained to new employees. After the training session they sign to acknowledge their training and that they understand their responsibilities in the case of violation. In the meantime, and when missing, access points to the working machinery are covered to prevent fingers being inserted into the machines. We protect people with safety systems and devices such as alarms, automatic safety switches and energy cut-off devices. When a new machine arrives, we check it for this in addition to the general safety check. Above all we are always alert to safety through continuous training and reminders, often using cases from other sites.

In our 24-hour operations it is the manager who must take first responsibility for managing safety. In the event of an accident, the manager in charge should be the leader for accident investigation and analysis. He or she should visit the scene of the accident immediately, along with the safety engineer and medical staff. The accident scene tells us everything - offering a clear example of the importance of safety, as well as learning to assist prevention. Safety is not solely

#### Contribute to employee Health beyond the workplace

• Deploying our Health Plan



Carlo Bozotti stated during the Satellite Broadcast "we would like to go beyond the traditional concept of safety, working at protecting the health of our employees inside and outside their workplace"

**Health Plan** validated by Carlo Bozotti

**Health Plan** communicated to sites worldwide. Action plan set up at each site to meet Health Plan requirements

### february 06

april 06

loctober 06 I january 07

**Health Practices** analysis completed by sites

Health Plan developed by Corporate EHS department with support from medical experts and HR representatives **Health Plan** deployed in pilot sites Ang Mo Kio, Greater Noida, Muar, Shenzhen, Toa Payoh

## Health plan, from a site perspective in Catania

Interview with Filippo Prati, Human Resources Director, Catania, Italy



The specific
Health Plan
launched by our
CEO will allow
us to address a
wider range of
health issues
and increase
prevention.

In Catania, we have frequent medical visits required by local law 626/94, focusing on people working with chemical products. These include eye and hearing checks, blood tests, spirometric exams, etc.

The specific Health Plan launched by our CEO will allow us to address a wider range of health issues and increase prevention.

After a first assessment step to evaluate the gap between local reality and ST's objective, we proposed a personalized Health Plan for our site.

We are planning on doing complete check-ups, blood analyses, mammography, chest x-rays, audiometric tests, electrocardiogram, blood pressure checks and cancer screening not only for the population considered more at risk, but for a wider audience.

The whole program has been prepared in 2006: the budget has been accepted at corporate level and all local medical experts and doctors have been contacted to organize the planning of the program that will be launched during the second quarter of 2007.

We will work within our local Sustainable Excellence Steering Committee to define the communication campaign to launch the program and involve all employees on site. Health Plan launched in 2006 on 5 pilot sites: Ang Mo Kio and Toa Payoh (Singapore), Muar (Malaysia), Shenzhen (China) and Greater Noida (India) covering up to 17,000 employees.

For example, Ang Mo Kio has already done:

- 1,011 check-ups
- 597 chest x-rays
- 122 pap smear tests
- 10 prostate cancer screening tests
- 1,011 blood analyses
- 457 electrocardiograms
- 46 mamographies

In next year's report, we will be able to publish the details of this plan at a worldwide level.

# Singapore taking care of the health of their employees

A healthy workforce is an important asset to any company. Believing in this and heeding the government's call to take care of employees' health, we collaborated with the Singapore Health Promotion Board to put in place a successful Workplace Health Programme, endorsed by the management and run by employees themselves, to provide the environment and empower employees to take charge of their health.

The comprehensive programme has received national recognition through the receiving of the 2<sup>nd</sup> Gold HEALTH (Helping Employees Achieve LifeTime Health) Award in 2006 (the first being in 2005).

At the same time, FTM Region Asia Pacific also won the very much coveted Corporate Nutrition Award and the Healthy Canteen Award.



## Health & Safety performance management

#### Disclosure on management approach:

We manage our Health & Safety performance using OHSAS 18001, which is widely seen as the most rigorous international standard for occupational Health & Safety. All of our 16 manufacturing sites and 4 non-manufacturing sites have been certified to OHSAS 18001 since 2003. For a full account of our management approach, see the html version of this report  $\square$ .

We have a corporate EHS Steering Committee and each manufacturing site has a Health & Safety Steering Committee responsible for implementing the Corporate Health & Safety Policy. Each local committee covers 100% of ST employees in that manufacturing site. 86% of our employees are covered by these committees – the remaining 14% of employees are in functions and locations unrelated to manufacturing. ILA6 I

Our performance data presented in this section covers 89% of our employees. The remaining 11% work in functions and locations unrelated to manufacturing.

#### 2006 Health & Safety results

We are pleased to report that since we began keeping company-wide records in 2004, there were no work-related fatalities within ST, and there were also no Health & Safety fines or penalties. I LA7 I

In comparison with our excellent results in 2005 and the steep decrease of the Recordable cases rate in the previous years, 2006 showed some deterioration of our performance; however, the overall improvement trend since 2002 is close to 40%, or 10% per year. Our Severity rate decreased by 2% in 2006, below our 10% target, but the overall improvement since 2002 is an impressive 45%. The impact of these results can be seen in the increase of the estimated cost to the company by 15% in 2006 compared with 2005, while the improvement since 2002 has resulted in a \$2.5 million saving. This estimate includes the following costs: wage, medical, indirect wage, administrative, material losses/damage, production and other hidden costs

This performance should also be considered in the context of the US semiconductor and overall industry. Our Recordable cases rate was 0.59 in 2006, versus 1.5 for the US semiconductor industry average in 2005, and 6.3 for the US industry in general. In addition to this, the red dotted line on the graphs showing our results represents the performance we would have achieved without any action, taking 2002 as a baseline.

LA7 | STHS6 |

#### So what explains the increase in our Recordable cases rate in 2006?

Our reporting results show that there has in fact been a 10% decrease in the rate of 'industrial' Recordable cases, that is cases involving chemicals, mechanical apparatus, machines or machine parts, electrical current etc. The overall increase of the Recordable cases rate is due to a 57% increase in 'domestic' cases, that is cases involving a fall or slip or being struck by or against a door, chair, building, tree etc (see breakdown of cases by type). A number of actions and programs have been launched in 2006 to address this issue, in particular in the area of communication and training to help raise employee awareness and prevent such cases. We are continuing to develop the 'proactive' approach we adopted a few years ago, which involves anticipating and predicting risks and recording near-misses with the objective of

preventing accidents and injuries. We have also launched a Behavioral Risk Improvement program in a pilot site in this context, in which both managers and unions are involved.

In 2006 our Singapore site at Ang Mo Kio received the Singapore Silver Award for its safety performance from the Ministry of Manpower and our Toa Payoh site won the Singapore Health Gold Award.

#### Chemical workstation risk | STEV67 | STEV68 |

In 2006 we have made considerable progress in our goal to reach zero cases of 'significant' risk related to chemicals in our workstations (our internal standard is more stringent than any local legislation). In 2005 over 20,000 workstations were assessed and 1,400 (7%) were identified as falling into the 'significant risk' category. At the end of 2005 just 658 cases remained. Although we did not reach our goal of zero cases by the end of 2006, only 120 cases remain to be eliminated by mid 2007. These last cases have taken us longer to solve because they involve work on site infrastructure.

#### Health plan | LA8 |

In 2005 our CEO Carlo Bozotti announced a new focus on employee health stating that ST should go "beyond the traditional concept of safety, working to protect the health of our employees inside and outside their workplace". In 2006 we reached our objective to define and initiate this health plan, based on a global strategy that allows for a customization of programs to address local needs and cultures. Programs include early diagnosis and disease prevention efforts, such as clinical screenings, immunizations, nutrition and weight counseling. In 2006 the Plan has been deployed in the Asia Pacific region and the 2007 target is to implement the Plan in all sites, covering all employees.

#### Health & Safety topics covered in formal agreements with trade unions | $L\!A\!9$ |

At present, we do not follow this indicator at worldwide level.

## Health & Safety objectives for 2007

- Reduce Recordable cases and Severity rates by 10%
- Eliminate 120 remaining cases of 'significant' chemical workstation risk
- Deploy our Health Plan to cover all employees
- Certify our Greater Noida design site to OHSAS 18001

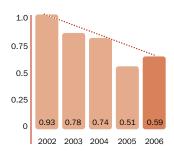
### Performance overview

#### Ensure a safe and healthy workplace

- Reduce Recordable cases rate by 10%
- Reduce Severity rate by 10%
- Reach zero cases of 'significant' workstation chemical risk by end of 2006
- · Define and initiate new health program for employees

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#### Recordable cases rate | LA7 | ◆ STHS1 | ☐ 9.1 |

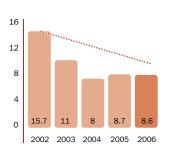


ST's Recordable cases rate for work-related injuries and illnesses increased by 14% in 2006 compared with 2005.

2006 Recordable cases rate = 0.59 Recordable case per 100 employees.

···· -10% per year using 2002 as baseline

#### Severity rate | LA7 | STHS2 | 1 9.3 |



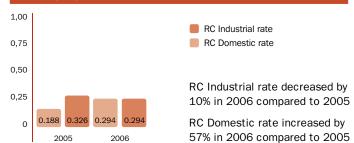
ST's Severity rate for work-related injuries and illnesses decreased by 2% in 2006 compared with 2005.

2006 Severity rate = 8.6 days lost\* per 100 employees.

···· -10% per year using 2002 as baseline

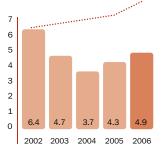
(\*) In 2002, OSHA rules changed so that the days-away category now includes both work and non-work days lost due to injury or illness.

#### Recordable cases rate (breakdown: industrial/domestic) | LA7 | STHS11 |



#### Injuries/illnesses cost | LA7 | STHS6 |

US\$m

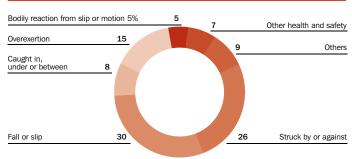


ST's work-related injuries and illnesses estimated cost increased by 15% in 2006 compared with 2005.

···· Without Action (See page 42)

Savings over 4 years = 14.5 US\$m

#### Breakdown of Recordable cases by type of Event, Accident or Exposure | LA7 | STHS12 |



#### Approximate man hours worked (millions) since last Recordable case of work-related injury or illness\* | LA7 | STHS4 |

	2006
Shenzhen (China)	18
Bouskoura SPG (Morocco)	3
Greater Noida (India)	3

(\*) For sites without any Recordable case in 2006

#### Benchmarking our results





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 Semiconductor Industry Association (SIA).

\*Latest data available

For more information and more details on the indicators | LA7 | STHS7 | STHS8 | STHS9 | STHS10 see the html version of this report

## Rousset's energy saving program

Franck Maugein, Facilities Engineer, In charge of Electricity Operation & Maintenance, Rousset, France



Did you know?
The 20 GWh of energy we are saving in a year corresponds to an average 2,200 kW of power... that's enough to run 1,100 ovens like yours for 1 year 24 hours a day!

#### How can our energy saving program help save the planet?

The link between electricity and global warming, in France and elsewhere, is  ${\rm CO}_2$ . In France, thanks to the large proportion of nuclear energy, the average  ${\rm CO}_2$  emission per kWh is only 60g.

The more we consume, the more global warming increases. So, simply put, to reduce this effect, we need to reduce our energy consumption.

### Can we do business profitably and still reduce energy?

In a word, yes. Environmental and business issues don't have to be mutually exclusive. Although the initial investment to implement energy-saving solutions can be high, energy is so expensive that we can often see a Return On Investment in less than 24 months.

Since 2001, we have implemented around 15 projects on our Rousset site, which have enabled us to save 20 GWh (20,000,000 kWh) annually i.e. 1,200 tons of  $CO_2$  every year.

### An example of one of our energy-saving projects

Just like a car, our Rousset facility has a cooling circuit for its manufacturing tools. The water consumed by the tools has to be controlled at  $18^{\circ}$ C, but the water cooling distribution systems can cause the temperature to rise by  $4^{\circ}$ C. To bring the temperature back to  $18^{\circ}$ C, we use a system of heat exchange, with a chilled water plan (PCW), to reduce the temperature by  $4.5^{\circ}$ C.

To reduce the energy required to supply this chilled water, we added a second heat exchanger to increase the exchange capacity with a third network. The water warmed in the third network, is supplied by a river with a temperature of 16°C, and consumed in the manufacturing process.

Investment: 102,000 euros. Energy saved: 1,095 MWh/year. Return on investment: 21 months.

## Reducing water consumption in Malta

ANTHONY SCICLUNA, FACILITIES MANAGER, KIRKOP, MALTA

STMicroelectronics Back-end sites use water during production, mainly to clean parts, but also as part of the infrastructure we need to run our processes, such as air conditioning systems. Conserving water needs a commitment not only to reduce its use, but also to find ways to recycle the water from one operation to another. ST Malta has been able to drastically reduce its water consumption (per unit produced).

### Over the years it has done this in a number of ways:

- by using air-cooled heat-exchangers to reduce the need for water in the cooling towers
- by implementing systems which recycle waste water from wafer-saws, electroplating and wet-blast deflashing

 by investing in state of the art technology to convert waste steam back into high quality water for re-use.

As well as its people's efforts, ST Malta has committed almost two million dollars towards water conservation, the result being a reduction of water consumption to almost a quarter of what it would otherwise have been.

ST Malta has committed close to two million dollars to reduce water consumption by almost 75%.



Facilities team, ST Kirkop, Malta

## Reducing energy needs in our Ang Mo Kio site in Singapore

Our AMK Site has implemented more than 100 energy conservation projects (1994 to 2006) | ENT |

#### **Upgrade chilled water pumps** AMK5"

ROI\*: 1.6 years Savings: 919,800 kWh/year or 145,000 S\$/year Completion: June 2006

#### Use scrubber water to pre-cool cooling tower water in AMK5"

ROI\*: 2.5 years Savings: 595,680 kWh/year or 95,000 S\$/year Completion: End Q4 2006

#### Replace air handling unit with double coil in AMK5"

ROI\*: 2.3 years Savings: 1,040,338 kWh/year or 165,000 S\$/year Completion: End Q4 2006



ST Singapore uses electricity generated from natural gas which pollutes less than oil. It also generates lower emissions of greenhouse gases, SOx and NOx to the environment. CO<sub>2</sub> emission factor = 0.43 kg/kWh.

#### **Upgrade condenser water** pumps in AMK5"

ROI\*: 1.9 years

Savings: 788,400 kWh/year or

125,000 S\$/year Completion: June 2006

#### "Power Planner" device on condenser water pumps in

ROI\*: 0.9 year Savings: 421,575 kWh/year or 67,000 S\$/year Completion: Q1 2007

#### Solar Hot water system in AMK6"

ROI\*: 2.5 years

Savings: 136,000 kWh/year or

21,000 S\$/year Completion: Q1 2007

(\*) ROI: Return On Investment kWh: kilowatt-hour

## Renewable energies in a new building at our Grenoble site

Benoît Mollaret, Facilities Director, Grenoble, France

Always aware and concerned about the environmental impact of our installations, we decided to convert the roof of our new restaurant building into a huge photovoltaic and solar thermic panel.

This setting allows us to save up to 300,000 kWh per year corresponding to a financial saving of 15,000 US\$ per year:



We decided to convert the roof of our new restaurant building and solar

- photovoltaic panels (36 kWp\*, 300sqm): these panels will produce 50,000 kWh per year, approximately 15% of the building's electricity consumption
- solar thermic panels (70 kWp\*, 60sqm): these panels will save 250,000 kWh per year.
- \* kWp: kilowatt peak



## Transport initiatives making a contribution to the environment

Interview with Sergio D'Arrigo, Mobility & Facilities Manager FMCS, Catania, Italy



On a site like Catania, which has more than 5,000 employees, managing everyone's travel to and from work is a key issue. We are committed to finding ways to reduce our environmental impact, as well as looking at how we can address issues such as increased traffic and shortage of parking spaces.

We wanted to better understand what we can do to improve the situation. So we carried out a detailed survey, with the help of the local university's Engineering Faculty, to define the transport profile of our employees, including where they live, their daily schedule, the type of transport they use, when they travel, and so on. 43% of employees took part, so we were able to get some really useful data on which to base our proposals.

#### Car-pooling as a first initiative

After analyzing the data, we decided to promote car pooling. There are several well-known advantages to this: it is cheaper than traveling in separate cars, you have the chance to mix with other employees, and it's safer than traveling alone. But we also offered our staff another incentive: a specific parking area for car-poolers. This was particularly appealing as there isn't enough parking for everyone who wants to travel by car, and parking outside the premises isn't as convenient. Two years after launching the initiative, 400 people are now car-pooling.

#### A special focus on public transport

In partnership with the City of Catania and the Italian Environment Ministry, we also helped start a shuttle program, including 'bus plus train' transport.

Public transport didn't serve the north of the city that well, but thanks to our lobbying, a new bus route is now being created - with financial help from the Italian Environment Ministry. A local transport company, AMT (Azienda Municipale Trasporti) agreed to enlarge an urban transportation bus line, starting from strategic points located inside the town and reaching our plant, according to the schedule (frequency and timing) of ST shifts.

The result is a reduction of cars circulating in rush hours and an improved level of service for ST users.

Globally speaking, our Catania site promoted several integrated initiatives to limit the impact of ST-related traffic on the environment (such as car-pooling, controlling exhaust fumes, and making it easier to use the bus).

We are also working on a partnership with the local train company to obtain discounted train tickets for employees.

Of course, in such matters, involving stakeholders is key to getting the project to work. We need the buy-in of national authorities and local partners, as well as our employees, to guarantee the success of any initiative.

Finally, we are also piloting a new initiative, launched by the City, where on some days of the year we have a special parking lot where we can inspect employees' vehicles to make sure they conform with the local regulation called 'bollino blu'. This check guarantees cars meet  $\rm CO_2$  emission specifications. This service is free for employees.

Following in the footsteps of other sites that have launched such initiatives, our Catania site is now really moving forward in this area.

## How to keep improving a Mature alternative transport program?

Interview with Pascale Poblet, Travel Plan Project Leader, Grenoble, France

In 2000, we created the ST Grenoble Travel Plan. Starting from 15% of employees using alternative transport we have increased that to 50% within 5 years, implementing incentives such as company subsidization of subscriptions to public transport and offering bicycle accessories (helmet, pump, safety shirt, etc).

After 5 years, this program is very mature and recognized and we have achieved great results.

#### We are now facing new challenges...

The second phase of our plan is aimed at reaching 60% of employees using alternative

transport in 2010. It is now a question of convincing everyone that keeps on using his or her car from home to the site.

In 2006, our first action was to reserve 22 parking spaces close to the site entrance dedicated to the car-sharing program. 40 more people joined this initiative, saving 20 journeys and more than 500 kilometers per day.

The Travel Plan Correspondent puts people wanting to car-share in touch with each other. We started other initiatives in 2006 too, including training cyclists and protecting bikes against theft.



## Local actions

We are committed to contributing to environmental programs around the world. Here are some achievements resulting from site and employee efforts.

Reforestation programs in the USA and in Morocco.



#### Renewable energies

Solar thermic and photovoltaic panels have been installed on the rooves of some of our buildings around the world for example in Grenoble, France and Phoenix, USA as illustrated here. ST has built a wind farm with 6 wind turbines in Opoul, south of France.

Our Rousset site has taken on the responsibility of managing it since 2006. The energy generated by this private farm is sold to EDF, the national electricity company, which reintegrates it into its own network. The main interest for ST is to demonstrate its support for the development of renewable energies.

#### Cleaning our environment

In 2006, the external local authority (Conseil General) held an environmental day dedicated to the cleaning of the Loire river banks. (The Loire river is classified UNESCO heritage). Many Tours inhabitants participated in this project together with around 40 ST employees and their families.

## Environmental performance overview

Maintain top class management systems for environment

Maintain ISO 14001 / EMAS validation in all ST manufacturing sites

• ISO 14001

EMAS (1 site in Italy under renewal)

0	
0	

Environmental burden: net values	EN16   EN17   EN1	9   EN20   EN	21   STEV2	
Emissions to air				
Indicators	Units	2004	2005	2006
Global warming*	MTCE	522,877	626,420	563,363
Ozone depletion	Kg R11 Eq	122	78	135
VOCs	Tons	294.0	311.0	290
Atmospheric acidification**	$Kg SO_2 Eq$	48,025	81,509	72,951
Photochemical ozone creation	Kg ethylene Eq	59,401	46,767	65,974
Air emission toxicity***	Kg PH <sub>3</sub> Eq	3,543	7,532	3,737
Emissions to water				
Eutrophication	Kg[P + N]	252,119	387,051	385,031
Aquatic oxygen demand	Kg COD****	518,935	443,870	354,965
Heavy metals to water	Kg heavy metals	19,520	17,522	13,279
Aquatic ecotoxicity	Kg Cu Eq	10,772	11,490	13,964

- (\*) Includes direct greenhouse gas emissions from our manufacturing plants and indirect emissions from energy consumption and transport, reported in Metric Tons of Carbon Equivalence (MTCE)
- (\*\*) Starting in 2006, we have included in our indicator the emissions linked to ammonia and we have recalculated the 2004 and 2006 data accordingly
- (\*\*\*) Emissions of substances are considered with threshold limit values below 3ppm, expressed in phosphine equivalent
- (\*\*\*\*) Total Chemical Oxygen Demand (COD).

#### Environmental awards 2006 | STEV19

## In 2006, our company, individual sites and staff have won some environmental awards:

- Pengcheng waste reduction:
   150 companies took part in this competition
- based on waste reduction activities 40 companies, including ST Shenzhen site, China, won an award
- Environmental distinction awards: the site of Carrollton, USA, won this award for considerable progress, strong environmental leadership and working partnership with the city and other organizations in supporting

#### Disclosure on management approach

You will find the disclosure on management approach in the html version of this report  $\square$ .

We have a corporate Environment Health & Safety Steering Committee and each manufacturing site has an EHS Steering Committee responsible for implementing the Corporate EHS Policy. Performance indicators for Environment cover 100% of manufacturing sites.

#### Air and water emissions

Since 2001 ST reports net emissions through the Environmental burden methodology. These net figures represent the air and water emissions of all ST sites in absolute terms, independently from the growth in production capacity. The last 3 years are reported in the above table.

In 2006 most of our eco-indicators improved. In particular the global warming impact decreased by more than 10% due to significant progress in the reduction of PFC emissions in 2006 (7 US\$m was invested in the installation of additional abatement systems) and in energy saving (for more details see page 50). Thanks to the installation of new abatement systems in Tours (France) and Agrate (Italy), VOC emissions decreased by 6.8%. Air emission toxicity has been reduced by 50% due to additional point-of-use treatment systems.

Up to the year 2005, we integrated, in the eutrophication data we reported on, the downstream water treatment carried out outside ST by local utilities and municipalities. We felt this could lead to errors in our estimation of our water wastage.

For this reason, we have decided from 2006 onwards, to publish the environmental data measured 'at our gate', without taking into consideration the downstream treatments. Obviously, our real environmental impact is much lower since our water effluents are processed by waste water treatment plants outside ST. But we feel it is the most appropriate way to measure our impact on local communities, even though we are contributing financially (through the payment of taxes) to the overall waste water processing.

community sustainability.

The ozone depletion impact is almost negligible and relates to one ODS substance used in one location. The aquatic eco-toxicity indicator has slightly increased during the last 3 years but ST is operating at 61% of our 2001 performance.

#### **Environmental certifications**

All our manufacturing sites are operating under certified Environmental Management Systems (ISO 14001 and EMAS). Our overall management system for environment is mature and robust and all of our sites have been fully certified for at least 10 years.

#### Compliance with environmental laws and regulations | EN28 |

In 2006, for all our locations / sites at worldwide level we had no fines or penalties.

#### Contribute to company efficiency and financial performance

• 202 US\$m saved in 2006



Environmental costs versus savings									
EN5   STEV8   STEV		US\$m							
	2001	2002	2003	2004	2005	2006			
Total costs	30	32	35	35	34	35			
Energy savings	26	48	69	91	107	129			
Water savings	7	11	15	19	22	26			
Chemical savings	21	35	48	64	74	82			
Total	54	94	132	174	203	237			
Balance (cost savings	24	62	97	139	179	202			

We found a discrepancy in our table last year; we have modified it this year to disclose the relevant data.

#### The method used to create this table

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

#### Concrete examples of programs for environmental savings

These 3 key programs -savings in energy, water and chemical- have allowed ST to save a total of 700 US\$m in 6 years and over 1 US\$B since we launched our environmental initiative. Once identified and recognized by qualified experts, the best environmental practices are deployed in the manufacturing plants.

Eco-efficiency programs have a return on investment within less than 3 years.

During ST's annual worldwide EHS meeting, each site is requested to present to the whole EHS community its best programs. Some of the environmental programs that were awarded in 2006 are listed below:

#### Rousset (France) - Rousset 8" Fab ecological design

The 8" manufacturing site has been designed to reach the lowest ecological eco-footprint (today at 0.87). All emissions are treated with state of the art abatement systems (VOC, PFC, dedicated acid and ammonia scrubbers, Point of Use abatement systems for toxics). The industrial waste water treatment plant is designed to abate all potential contaminants at the lowest achievable level (copper, fluoride, phosphorus, ammonium, nitrates, etc.). Energy saving techniques have been systematically selected (mini-environment concept, heat recovery systems on chillers, variable speed drive devices on all motors, etc.).

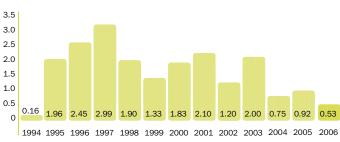
Ang Mo Kio (Singapore) – Epitaxy scrubbers' water reclaim system A new membrane HERO (severse osmosis) system has been developed for saving water and reduces the wastewater discharge flow of AMK5 Epitaxy scrubbers. The system has allowed the site to save 298,000m³ of water, equivalent to a cost saving of 400 US\$k.

#### Catania (Italy) - Fluoride abatement

The site has improved its Fluoride abatement system in order to reach a 6 ppm threshold limit. The new system consists of auto-cleaning filters, fluoride abatement by activated alumina and regeneration by sodium hydroxide.

#### Environmental investments | EN30 | ◆ STEV6

% of total company investments



Environmental investments: In 2006, our overall capital expenditures have been kept under very strict control, in order to improve our Return On Capital Employed. The projects related to Environment have been reduced or delayed accordingly.

#### Kirkop (Malta) - Radiator installation

A radiator (air cooling heat exchanger) was installed to reduce water consumption, chemical and other operating costs on cooling towers. The project's key benefits are:

- Water recycling ratio reached 80%
- Main water savings: 12,500 US\$ per year
- · Reduction in electrical power consumption
- · Higher efficiency with increase of heat load
- Saving in the use of anti-corrosion chemicals and biocides for cooling towers
- · Radiator has very low need for maintenance and repairs

#### Toa Payoh (Singapore) – Solar powered hydrophonics

'Hydrophonics' is the cultivation of plants on clean water supplied with balanced plant nutrients otherwise normally extracted from soil. Basically, the system eliminates soil polluting pesticide chemicals, eliminates polluting farm machineries, conserves naturally occurring soil fertilizers and nutrients and saves 95% of water used to produce equal weight of crops in soil-planted crops. The Toa Payoh 'hydrophonics' system produces 500 kg of spinach a year, all donated to charity (e.g. Singapore Red Cross).

#### Muar (Malaysia) - Use of electrical vacuum

In line with our energy reduction program, Muar set up 4 units of vacuum pumps to replace the compressed air operated vacuums. The project cost of 110 US\$k had a payback of 16 months.

#### Shenzhen (China) - Power use reduction

A project was developed in Shenzhen to reduce power consumption in compressed air. New heat-of-compression type desiccant dryers have replaced former mechanical dryers with a saving equivalent to 2,400 MWh/year.

#### Ain Sebaa (Morocco) – Compressed air production and use reduction

A complete survey was performed to rationalize the use of compressed air on the site. Different measures were implemented and have generated a 7.5% energy saving and an associate cost reduction of 130 US\$k per year.

#### **Environmental performance**

Performance overview

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

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- Reduce energy consumption by 5%\*
- Reduce water consumption by 5%\*
- Reduce chemical consumption by 5%\*
- 80% of waste to be reused or recycled
- <5% landfill waste versus total waste</p>
- (\*) per unit produced / year

- Reduce pollution from VOCs by 10% in Front-End\*
- Reduce pollution from acidification by 5% in Front-End\*
  - Reduce pollution from eutrophication by 5%\*
  - Reduce pollution from heavy metals by 10% in Back-End\*

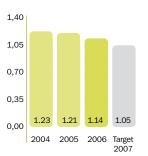
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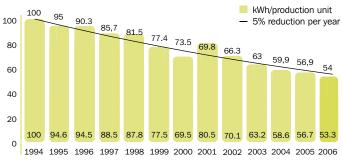
Consumption: absolute values   EN5   STEV31   ☐ 3.1   STEV64			
	2004	2005	2006
Electricity (GWh)	2,148	2,341	2,469
Water (1,000m <sup>3</sup> )	20,550	21,834	22,215
Chemicals (tons)	16,938	18,669	21,378

#### ST eco-footprint 2006

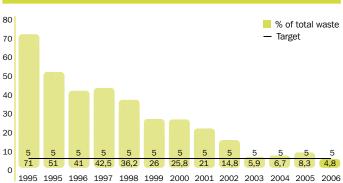


The eco-footprint is a composite index based on 10 individual indicators (For more details see page 49)



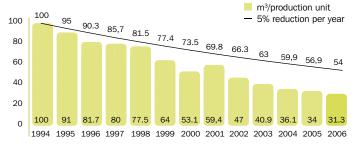




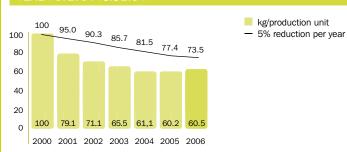


Recycled waste	EN22   S	STEV71 I	STEV72	I [[] 6.1		%
	1994	2002	2003	2004	2005	2006
Waste recycled	25	65	73	80	78	80

#### Consumption of water: normalized values | EN8 | STEV56 [] 2.2



#### Consumption of chemicals: normalized values | EN1 | STEV64 | ☐ 2.3 |



## Environmental objectives for 2007

- Decrease PFC emissions to the level of our original roadmap
- Keep reducing the energy consumption at least 5% per year
- Reduce our eco-footprint below 1,05.

#### Overall reduction in consumption

In 2006, the absolute consumption of all ST sites has increased by 5.4% (electricity), 1.6% (water) and 14.5% (chemicals). These trends should be compared to a production growth equivalent to 10.4 % in 2006.

#### Consumption of electricity

ST operated in 2006 at 54% of the 1994 value. The challenging goal to reduce our normalized electricity consumption by 5% per year has been met. As an example of good practice implementation one can highlight the installation in Catania (Italy), Rousset (France) and Ang Mo Kio (Singapore) of a system that continually cleans the tubes of the heat exchangers used in producing cooling water. By preventing performance degradation, this saves 6 to 15 GWh/year, i.e. 500 USk to 1 US\$m/year.

Other examples of projects implemented in 2006 include the replacement of old compressors in Ang Mo Kio, the upgrading of cooling towers in Agrate (Italy) and the installation of new free-cooling systems in Catania.

#### Consumption of water

The chart on page 48 plots our performance against the Decalogue target and shows that the reduction of water consumption per unit produced has been much faster than planned. ST is consuming about 30% of the quantity of water used in 1994 for the same equivalent production unit. Many successful programs are addressing water saving especially in the field of water recycling activities (the company's average rate of water recycling is around 30%). Among the sites that have implemented the most beneficial water saving projects are Ang Mo Kio (water reclaim), Agrate (water recovery from cooling towers), Shenzhen (China, ultra filtration systems) and Toa Payoh (Singapore, recovery of deflash water using new UF membrane).

#### Consumption of chemicals

Despite an overall performance that is much better than ST's Decalogue target, we have slightly increased our chemical consumption due to new technologies that are highly demanding in terms of new chemicals. Specific programs on new recipes and process optimization are in progress in close cooperation with the Semiconductor Equipments Industry and with our chemical suppliers.

#### ST eco-footprint 2006

The 'eco-footprint' is an environmental composite indicator that allows ST to monitor a number of key aspects of the environmental performance of our manufacturing plants. The following 10 parameters compose this indicator:

- Global warming
- · Air acidification
- VOC emissions
- · Material intensity
- Electricity consumption
- · Water consumption
- · Chemical consumption
- Waste
- Heavy metals to water (Back-end sites) Fluoride to water (Front-end sites)
- · Eutrophication.

For each parameter, the value of  ${\bf 1}$  is our target, generally based on the best performance achieved by an ST site at some point in time.

The positive trend of the last 3 years is supported by projects focusing mainly on energy saving, PFC and VOC emission reduction.

#### Landfill waste

In 2006 only 4.8% of the total waste produced by ST went to landfill. This has been achieved by promoting the correct separation and destination of different wastes produced in ST sites. In particular we guarantee a responsible re-use of waste chemicals (that represent a significant percentage of our manufacturing waste) by sending them to companies that are authorized to reclaim (whenever possible) or to burn them with energy valorization.

#### Hazardous waste

Hazardous waste, in very general terms, is the waste resulting from the production process, which can include chemical substances, plastics, lightbulbs, etc. The formal definition of hazardous waste varies from country to country. Since 2004, we have been tracking data on hazardous waste, but this data is not yet ready for publication. All hazardous waste is disposed of safely by specially authorized companies to avoid environmental contamination (e.g. solvents are burned with energy recovery; inorganic substances can be reused inside or outside ST).

#### Recycled waste

Despite an increasing production, ST is maintaining a level of 80% of recycled waste. Based on local regulation and initiatives, each site identifies specific projects to reach the challenging target reported in ST's EHS Decalogue (re-use or recycle at least 95% of our waste).

#### **Biodiversity**

This is not applicable to ST's industrial activity.

#### **Environmental performance**

Performance overview

#### Progressively achieve carbon neutrality

- Increase use of renewable energy to 15% of total energy use by 2010 (10.5% in 2006)
- Reduce net PFC emissions to 10% versus 1995 by 2008 (net reduction in 2006 versus 2005: 2.6%) 🤾

Summary of net CO <sub>2</sub> emissions   EN16   EN17   EN29			kTons
	2004	2005	2006
STEV27 CO <sub>2</sub> due to energy (direct and indirect emissions)	1,046	1,157	1,039
STEV46 Direct emissions due to PFCs	718	747	728
STEV48 Transportation emissions*	231	242	242
STEV47 Total emissions	1,995	2,146	2,009
Sequestration due to the implementation of reforestation projects**	3	40	81
STEV52 Total net CO <sub>2</sub> emissions	1,992	2,105	1,927

The table is slightly different than the one presented in 2005 (transportation emissions are integrated in the total emissions)

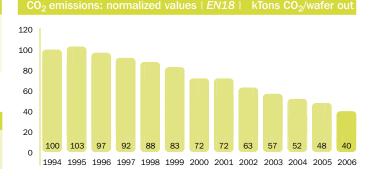
- (\*) The transportation emissions value is a global estimate of employees' transportation and transport of goods.
- (\*\*) We found a discrepancy in our table last year; we have modified it this year to disclose the relevant data.

#### Alternative and renewable energy | EN18 | STEV37 | 🛄 3.3

In 2006 the percentage of  $\rm CO_2$ -free energy used in ST was 17%, compared to 2% in 2005. This includes hydroelectricity, nuclear energy, wind energy and photovoltaic. The increase versus 2005 is mainly due to a change of energy provider in Italy.

Note: The parameter of this indicator has changed in 2006 and now includes nuclear energy.

Electricity produced by ST wind farm   EN18   STEV40							
	2003	2004	2005	2006			
Electricity	18.6	30.5	33.1	23.7			



#### Summary of greenhouse gas emissions

ST considers global warming as one of the most critical issues to be treated and works on it by decreasing the level of greenhouse gases (GHGs) released into the atmosphere during manufacturing activities.

### The table above gives a summary of our greenhouse gas emissions. In 2006:

- ST had an 11% decrease of CO<sub>2</sub> emissions related to energy
- The green energy provided by our suppliers was particularly high in comparison to 2005
- For the first time in our history, ST also decreased net direct PFCs. This was possible thanks to considerable investments on abatement systems implemented in Singapore during the year, and to the fact that we reached 80% of our worldwide CVD tools equipped with point-of-use abatement systems.

The sequestration of  $CO_2$  due to the implementation of reforestation projects is increasing over the years, thanks to the growth of trees planted in Australia (2,600 ha), Morocco (4,800 ha), Texas (1,400 ha) and in other regions (100 ha).

All of the above actions contribute to a decrease of more than 8% in the total net  $CO_2$  emissions.

#### Energy produced by ST wind farm

ST's wind farm located in the South of France has produced 29% less electricity in 2006 than in 2005, due to technical problems that occurred in a turbine.

#### CO<sub>2</sub> emissions

The normalized  ${\rm CO}_2$  emissions trend chart summarizes the effectiveness of our overall program detailed above.

#### Regulation tracking | STEV4 | 11 |

For more information on ST's compliance with existing and future environmental legislation, see the section on Product Responsibility.

#### Environmental incidents | EN23 |

In 2006, we identified a problem of soil contamination in our manufacturing site in Tours (France); the site management has immediately reacted by preparing a remediation plan in coordination with the competent authority. The problem is under control and has not generated any fines or penalties.

Our site in Rennes (France) has identified a potential groundwater organic contamination. A detailed investigation is ongoing, and measures will be taken to remediate the problem in collaboration with local authorities. This potential problem has not generated any fines or penalties.



## Microelectronics and healthcare provision

Interview with Anton Hofmeister, General Manager of ST's Microfluidic Division, Agrate, Italy



Slowly but surely, the benefits of using ST's products and technology for applications in healthcare are becoming more apparent to all concerned.

Slowly but surely, the benefits of using ST's products and technology for applications in healthcare are becoming more apparent to all concerned. With the help of Anton Hofmeister, General Manager of ST's Microfluidic Division, we look at the opportunities and challenges that lie ahead.

Semiconductor chips lie at the heart of all advanced technology, whether aviation, automotive, telecoms, IT or other technological enterprises. They are taken for granted in everyday consumer applications and because they are so small, and getting smaller, it's easy for the public to be unaware of their existence. Yet it is this size which is helping open the door for microelectronics in the healthcare sector.

It's certainly a sector where new ideas are needed. Advances in medicine, and consumer needs and expectations, compounded (in the nicest possible way) by people living longer, have put dramatic financial pressure on healthcare systems. And the scope for new applications is enormous given the increasing

power and precision of our technology. Consider perhaps imaging sensors we use today to take pictures with our cell phones. The same technology will be applied one day for diagnostic purposes by taking pictures inside a patient's body in a less invasive and more affordable way.

In Anton Hofmeister's microfluidic work, we see a perfect contemporary illustration of this theory in practice: "In ST we have a long history of MEMS based microfluidics products for inkjet printers. In fact we are a world leader in how to work with small amounts of fluid, and how to apply this to print technology. About five years ago we realized we could apply this fundamental know-how to medical devices".

The microfluidic work in healthcare falls into two main areas, which could very informally be described as In and Out - either injecting or extracting fluid from the human body. A prime example of injection would be the tiny pump on a patch (see article page 53) which allows a precise, continuous flow of insulin into the body - and of course, many other medications could be used following the same principle. ST's In-Check™ Lab-on-Chip platform is the reverse example, where blood, or any other body fluid, can be extracted in tiny amounts for diagnosis in miniaturized form, actually on the chip.

Clearly applications like these have huge implications for world medicine and for the individual, as Anton describes: "While the insulin pump will initially help those with a continuous need for insulin, once it becomes mass produced, it will be used by many diabetes patients in what unfortunately is a growing market, due to the sedentary lifestyle and poor nutrition habits in industrialized society. In case of Lab-on-Chip, our applications can help accelerate the trend toward early diagnosis of infectious disease and a more focused treatment". And while this thinking currently applies to industrialized countries, in the developing world microelectronics offers the opportunity to bypass a whole generation of medical techniques. In the long term our technology will allow developing countries to jump directly to the situation where rural doctors perform diagnostics 'in the field' - much like a country avoiding the need for a wired telecommunications network since a wireless one can now be installed.

So, even leaving aside the more obvious applications in health information systems, clearly there is a market for microelectronics in the treatment and prevention side of healthcare. But what are the challenges? Firstly there are those related to the multidisciplinary approach required. As Anton points out: "For the development of our Lab-on-Chip In-Check™ platform, on top of the electronics system we need to understand biochemistry, biology, diagnostics, etc.... There is an organizational challenge as part of the very specific know-how belongs to our customers. We need to be able to speak their language in order to develop a platform which fits their needs".

Then there are challenges in the market itself: "Yes, as it's dealing with human lives, healthcare is fairly conservative as a sector and adoption cycles for new technology are rather long. Fortunately we are not talking about 10-15 years as in the case of a new drug, but still quite a bit longer than in consumer electronics". It is also difficult to predict when a disruptive technology such as Lab-on-Chip will take off, but when it does, growth is often explosive. Says Anton: "You can make all the forecasts you like, but imagine there is a serious outbreak of avian flu and our partner has a reliable, low cost rapid test available with our Lab-on-Chip. It could generate major growth within months as governments need to prepare for massive monitoring of entry ports into their countries".

There are also high barriers to entry - the healthcare market is dominated by a small number of very large players who have long-standing business relationships with medical professionals and the regulatory bodies such as the Food and Drug Administration in the USA. "So really our task is about forming strategic partnerships with the big players, which is part of ST's traditional approach and something we have done successfully in many other industries".

However, working with the big companies is not enough as it is often small start-ups which push the new technologies more aggressively into the market. "This is why we partner with companies such as Veredus in Singapore, or Mobidiag in Finland". Certainly the strategic partnership route is the most suitable for ST. One other thing is for certain, in the future of healthcare, small is big.

## Nanopump, a small device with huge potential

INTERVIEW WITH ROBERT HODGES, LAB-ON-CHIP BUSINESS UNIT DIRECTOR, CARROLLTON, USA



We're pleased to announce a strategic cooperation with Debiotech which is a Swiss company located in Lausanne. The objective of the

cooperation is to manufacture and deliver to the market a miniaturized insulin-delivery pump. The 'Nanopump' is about a quarter of the size of existing pumps and can be worn as an invisible patch on the skin. Using microfluidic MEMS technology, it draws insulin from a storage reservoir and infuses it into the tissue under the skin - offering an attractive

alternative to insulin injections that need to be administered several times a day. And because the Nanopump is much smaller than other devices, patients don't have to worry about holding the pump in place or concealing it under clothing.

The highly miniaturized disposable insulin pump combines Debiotech's expertise in insulin delivery with ST's strength in manufacturing high-volume silicon-based microfluidic devices. The insulin Nanopump was developed by Debiotech which won them the Swiss Technology Award in 2006. The industrialization efforts led by ST will leverage our growing experience in the biomedical

market and we hope this can make a big difference in the lives of diabetic patients around the world. Other bio-tech programs within ST's Microfluidics Division include the In-Check Lab-on-Chip platform currently being applied to the detection of sepsis and Avian flu.

Anton Hofmeister, Group VP and General Manager of ST's Microfluidic Division. said: "ST's increasing focus on applying its semiconductor manufacturing processes and growing experience in microfluidic biotech applications gives us the potential to improve the lives of millions of people around the world". We expect the Nanopump to be available in select markets in 2008.

### Zero failures for our customers that's what Quality Excellence is all about

Sustainable Excellence is a term we use a lot across the business. But what do we really mean by it? We're talking essentially here about our ability to fulfill people's expectations. Or in this case, to give our customers what they want. Without customers, we don't have a business. So to be successful, we need to recognize that customers' expectations for product quality are increasing. Zero failures is becoming a basic requirement, and therefore quality excellence is essential to our success.

So what do we mean by 'zero failures', exactly? Simply put, our customers expect the devices they buy to work in their applications without any problems - just like we, as consumers, are becoming less tolerant about failures in the products we buy, whether an MP3 player or a car. The move towards zero failures is already taking place in demanding market segments such as the automotive industry. This is quickly extending to other segments, such as the computer and

consumer markets, with convergence bridging markets and spreading this expectation to new areas.

We understand our responsibility in this field, and we are committed to meeting the challenge. In other words, we feel strongly that ST products should never be the cause of a malfunction in our customers' applications. Today, most of our products are consistently at zero ppm (part per million); but we need to go further to maintain this quality level for all our products over time, with no drift or accidents.

#### We believe that strong quality performance is based on four areas:

· High quality processes in both manufacturing and non-manufacturing areas: this includes having well-controlled process parameters; controlling deviations and non-conformities; managing changes carefully with appropriate risk assessment; and using IT-based tools to execute processes flawlessly.

- Excellent product design: by that we mean products based on a deep understanding of our customers' needs; which have been assessed for potential failure modes: with appropriate solutions integrated from the early design phases.
- · A strong infrastructure: with a Quality Management System based on processes; tools and methods for continuous improvements; and a Quality Operating System to manage customers' complaints, non-conforming lots, traceability, audit followup, and so on.
- Mutually beneficial partnerships with customers and suppliers: encompassing joint improvement programs; effective and immediate management of customers' issues; and collaborative solutions such as Supply Visibility Information, the STPartner dedicated customer portal, Rosettanet, and others.

These systems, tools and methods are already going a long way to helping us achieve the highest quality standards. But they are not enough on their own. To get to where we want, and need, to be with this, we need the backing of our entire workforce.

Every one of us has to recognize our responsibility to meet our customers' needs. And that means every one of us adopting a 'quality excellence' mindset which is what we call 'Quality Excellence in Mind'.

So we are now launching a companywide training and motivational campaign - to develop and grow this awareness, and encourage our people to think and act with 'Quality Excellence in Mind'. Our goal, quite simply, is to integrate quality excellence into our daily business lives and decisions. If we can do this, and encourage all ST employees worldwide, at all levels, to get behind this concept - and bring it to life - we know we can achieve a quality breakthrough.

#### Customer satisfaction



Robust products



Tools & systems



Customer relationship management



Attitudes & Mindset: Quality Excellence in Mind!

## Small scale, big picture

Interview with Laurent Gouzenes, ST's Planning and R&D Programs Director



is one
billionth of a
meter,
so a human
hair is about
30,000
nanometers
wide.

Every sector of industry will probably be affected by nanotechnology. Properties of all materials, such as color, strength and conductivity depend on the structure of their atoms, and when we can design and build on that scale, we can develop new materials and devices with entirely new properties. If you're not a scientist, it's still hard to come to terms with the size we're talking about. During our discussions with Laurent Gouzenes. ST's Planning and R&D Programs Director, he came up with a fascinating description of size - if a grain of sand was the equivalent of a city like London or Paris, a transistor would be the size of a household fridge in that city. That small, yet there are millions of transistors in a microchip within an electronic appliance, and the transistor itself is made of many parts, with as many as 30 different materials.

Nanotechnology plays a part in your PC, mobile phone, car keys, MP3 player, set-top box and any other electronic device you use. So the importance to ST is clear. We asked Laurent:

#### How is our work likely to evolve in the future?

Things will get smaller and smaller yet more complex. By 2010, we want to build a chip with one billion parts. A car is made of about 5,000 parts, and a plane about 50 million parts, so our chips will be much more complex than a plane or a car. Managing complexity at this tiny scale is a huge challenge. We will need more technology to make it work. There will also be a greater effort to build in 'redundancy' – so that if one of the billion parts fails it does not make the chip as a whole fail. This in itself will require a considerable change of mindset, as today we work with a 'zero defect' mindset.

#### Will the application of the chips change?

Yes, it will. The memory capacity and communication skills will be vastly increased. Instead of mobile phones that hold some images, it will be perfectly normal to carry your life around in your pocket – all your photos, music, mail, favorite movies, etc.

Also, you will be able to connect everything everywhere. There will also be applications for improving the energy management of the appliances we use. Plus, there will be entirely new products. Today, we use chips for information and communication processing. In the future, electronic devices will be able to 'sense' the environment, temperature and the presence of chemicals, so they will be able to do things to dramatically improve our lives, such as help diagnose and cure diseases. We will have more sophisticated x-rays and body scans, with greater diagnostic precision, able to follow what happens to the body while you are actually carrying out different actions. It will also be possible to use these kinds of devices to help regulate your body in old age or sickness. There is also the potential for robots in health care, helping people in an ageing society. One of our products already has the capacity to diagnose disease - our Lab-on-Chip.

#### Tell us more about the Lab-on-Chip.

The idea for the future is that while you are waiting to see a doctor, a Lab-on-Chip will analyze your problem. In effect, it holds some strands of DNA which match the characteristics of given viruses. The chip compares DNA extracted from your body fluids and if anything is recognized as similar, it indicates that you have a certain disease or virus.

#### What application does Lab-on-Chip have today?

It is used today for screening plants and animals, but it is very expensive and only used for pure research. One approach we have already taken is to develop very simple areas on the chip to detect one specific disease, for example bird flu.

#### What about the fears concerning nanotechnology and artificial intelligence?

These are totally unfounded, just science fiction fantasy like Star Trek and time travel. We - human beings – define the applications of nanotechnology. The technology does not decide for itself.

## What about real risks for Health & Safety and the environment in our operations and from our products?

There is a risk about the spread of nanoparticles in nature, but this is the same situation we already have with chemicals used in any industry. What is new is that this is the first time in history that people are considering the risks before, and not after, developing a new technology. This is how things should be done.

#### What is the role of the French National Research Network for Nanoscience and Nanotechnologies?

It brings together the various fields of research, and private and public research laboratories, to provide a forum for all professionals to meet and talk about current issues and applications of research, to understand how technologies can be applied for the benefit of society and to help disseminate information and knowledge in this field. In order to accelerate the phase from research to application for the public good, we orient the selection of projects to be funded and create synergies between the different fields of research and application concerned.

#### Why were you chosen to lead the Network?

ST is clearly recognized as a leader in the field, firstly because the largest industrial field in nanotechnology is the semiconductor industry, but also because we have developed very good relationships with many public laboratories and this is a good example for other companies in France. By bringing in a worldwide view on science and technology combined with fierce international competition on business, we promote efficiency in R&D and public/private partnerships, and this fits closely with the aim to support the competitiveness of Europe in advanced technology.

## Designing eco-efficiency electronics for internal combustion engines



the fuel injection strategy

Interview with Mario Lavorgna, APG Power Train & Safety Division ADVANCED SYSTEM APPLICATION DIRECTOR, Naples, Italy

Reducing environmental impact is now a big focus in the automotive market - and as a semiconductor supplier, we are committed to playing our part by providing products and solutions that can lead to eco-efficiency products.

One of our main aims is to reduce CO<sub>2</sub> emissions, while still improving the performance of car engines.

Institutions and private companies are currently working on guidelines and regulations (such as Zero-Emission Vehicles - ZEV, European Emission Regulations -Euro 6), to find the best balance between fuel consumption, lower pollution and high performance.

To get ready for this, a team in our Automotive Product Group, based in Naples, is now working on advanced research to prepare new solutions for the market. Based on ST's patents, they are working on optimizing the new generation of diesel and gasoline engines.

#### Among other things, they are developing:

- Optimized EGR (exhaust gas recirculation) for diesel engines
- Soft-computing control of the air/fuel ratio in gasoline engines
- Control of knocking and misfiring in gasoline engines.

## Focusing on Safety, too

Interview with Nicola Cesario, APG Power Train & Safety Division ADVANCED SYSTEM APPLICATION ENGINEER, Naples, Italy

While we are busy fosusing on reducing the environmental impact of car engines, in APG's activities, we are also focusing on improving

The idea is to strictly monitor the functioning of the vehicle system by using only the signals coming from the sensors traditionally used. Processing the data coming from these sensors in a smart way, allows us to develop virtual sensors that can detect and also diagnose system faults. The result of this work is a fault-free system architecture.

A concrete example: we have developed and implemented algorithms that are able to track accurately the rotor position of a brushless motor without the need of rotor position data measured by means of an ad-hoc sensor. This algorithm allows customers to use our approach as a rotor position virtual sensor which can identify some malfunctions of the

Increasing the



traditional rotor position sensor mounted on the motor.

So, it increases the functional safety of the system without adding any cost.

## Quality

For us, product responsibility also includes product and process quality, which is one of the most fundamental responsibilities we have to our customers. ST as a company, including all of its sites and organizations, is fully certified to the ISO TS 16949 standard, which was originally introduced in response to the automotive industry's need to ensure superior quality systems beyond the traditional ISO 9001 standard.

Certification to this standard at company level means that all of our company processes and management systems are formally certified throughout the organization, not just at local level. The chart below shows 2005 and 2006 data for three of our key performance indicators for quality: the number of customer complaints, the time it takes us to process failure analysis and the number of customer returns of products. These results show consistent improvement throughout 2005 and 2006.

Quality   PR5   STPR2   STPR3   STPR	R4 I					
	Q4'04	Q4'05	Q1'06	Q2'06	Q3'06	Q4'06
Customer complaints	100	86.2	84.4	76.1	72.4	71.6
Cycle time to process failure analysis	100	72.7	70.3	65.0	65.8	62.6
Customer returns	100	41.1	30.3	21.7	45.1	38.3

## Products in use

We are focusing our attention on three aspects of product stewardship: energy saving products, chemical content of our products, and military use of our products.

#### Energy saving products | EN26 | STPR1 |

Shipments in 2006 were over 250 million products designed and used for energy saving applications. This represents about 4% of our sales. Estimated savings are approximately 1,200GWh, which is equivalent to a 140MW power plant operating 24hours a day and 7 days a week. Assuming that our products have a life time of at least 2 years, this means that the energy consumption of our manufacturing plants is totally compensated by the energy savings achieved thanks to our products in their application.

#### Some concrete examples

Using electronic techniques instead of electromechanical methods results in reduced operating power. Examples include almost anything that contains an electrical motor, as well as domestic and industrial lighting, water and electricity metering, etc.

We develop products specifically optimized to reduce power consumption in the end application:

#### TV amplifiers

Changing from Class B to Class D amplifiers improves energy consumption by 1.2W per device. With some 60 million products sold up to 2006 and assuming an average use of 2.5 hours per day, this is equivalent to an 8MW saving.

#### Mobile phone charger

With a stand-by feature, the same kind of calculation on 300 million units sold per year leads to 49,000GWh saved per year. Assuming the same result over the years, the saving would be 17MW.

#### LED drivers

ST recently introduced the first high-brightness LED drivers to include auto-power-saving features. This product was specifically designed to support all worldwide energy-saving programs which encourage power efficiency in lighting applications.

In lighting, signage and transport applications, it allows a savings of 80% compared to existing solutions.

#### **Material declaration**

| PR1 | STEV78 | STEV79 |

As a consequence of the RoHS Directive, more and more customers are now requesting us to provide the detailed material content of our products. While we understand and support the need for a precautionary approach to avoid health or environmental problems due to uncontrolled use of chemical products, the implementation of a robust system to communicate reliable information to our customers is not trivial. One of the main issues (faced by all semiconductor companies) is to get the appropriate information on the detailed chemical content of the materials we buy from our suppliers (such as molding compound, glues, etc.) because in many cases this information is part of their intellectual property, and as such is protected by patents. We plan to solve this problem within the next few months, which will allow us to provide the requested information to our customers.

## ST's actions on material declaration

Interview with Philippe Levavasseur, Corporate Environment Health & Safety Deputy Director



We have created our own list of banned substances, to which we regularly add the requests of our customers.

Due to environmental problems at worldwide level, regulations for companies are becoming more and more stringent. As a pioneer in environmental protection, and staying true to its strategy, ST has been able to anticipate all the recently published laws and regulations and ensure compliance.

#### **Chemical products and ROHS directive**

In 1997 we started a voluntary program to remove polluting and hazardous substances from all our devices. In 2000, we launched  ${\tt ECOPACK^{\tiny TM}}$ , a strategic program to develop environmentally friendly packaging and to gradually ban lead (Pb) and other heavy metals from our manufacturing lines.

This strategy was fully in line with the European ROHS (Restriction of the use of certain Hazardous Substances) directive published later in 2002. Therefore, once lead-free (Pb-free), ST devices were RoHS compliant as well. Similarly we selected three other technologies (NiPdAu, Pure Sn and SnAgCu Ball) based on their maturity, manufacturing feasibility and capacity and

market acceptance, and we were able to eliminate the chemical substances in question in a timely and transparent manner. Again, ST was ready before the ROHS regulation entered into force, in July 2006.

We also make sure our suppliers are in line with our own rules concerning the use of chemicals and hazardous substances. We

created our own list of banned substances, to which we regularly add the requests of our customers. When buying materials, we require compliance with our chemical lists and, for critical materials such as molding compounds, glues, lead frame and substrates, we require lab analyses from our raw materials suppliers.

## To follow such requirements, we set up a chemical committee for each site. It aims to:

- make sure we don't buy product substances that are on our list of banned substances
- analyze precisely the risks at each workstation, with a chemical-specific risk assessment at all locations where the chemical can be used (storage, distribution systems, work stations, etc.)
- evaluate the potential for Environmental and Health & Safety (EHS) exposure
- eliminate or reduce the risks to the best achievable level with the use of proper EHS devices (protective equipments, double containment, closed systems, air emissions abatement systems).

Today, our list of banned chemicals covers around 1,000 substances. Our internal criteria for adding a substance to these lists are based on the most stringent worldwide regulations and on the evidence of a particular danger (CMR\* substances for example).

#### Another more stringent step with REACH

The new requirement with the REACH regulation in Europe is that all used substances must be registered. Authorization is needed for high concern substances such as CMRs\*, PBTs\*\* or vPvB\*\*\*.

This regulation is directed mainly at the chemical industry (our suppliers) but as a downstream user company, we will have to describe our uses and demonstrate that they are all controlled according to the specific conditions established for their exposure scenarios. As only registered substances can be used, we will have to reinforce the control of any substance in our supply chain.

Thanks to our site chemical committees, we have already prepared the sites for this new step in managing chemical substances.

- (\*) Carcinogenic, Mutagenic, toxic for Reproduction
- (\*\*) Persistent, Bioaccumulative and Toxic substances
- (\*\*\*) Very Persistents Very Bioaccumulative

### WEEE

As a supplier of components to the electronics industry (not manufacturers of electronic equipment), we are not directly affected by the European Directive 2002/96/EC Waste of Electrical and Electronic Equipment (WEEE).

| EN26 |

## Military use of our products

In our Principles for Sustainable Excellence, distributed to all our employees and available on our website, we have made it very clear that "we will not sell products that we know are to be included in weapons".

At the end of 2006 we have conducted an internal survey and we have checked that we have no direct sales of this kind. We have direct sales to the civilian aerospace sector, and we sell our products also through

distributors, with no control over subsequent sales. These products are standard, employed in hundreds of different applications and sectors, such as voltage regulators, diodes and transistors that can be purchased from any distributor and employed in thousands of products. It is unlikely any of our standard products are used by military clients for use in weapons, as these usually require very specific, customized applications.

## The part we're playing in the EICC initiative

Interview with Kate Rigge, Corporate Responsibility Director, Total Quality & Corporate Responsibility

As the Information and Communication Technology (ICT) sector supply chain initiative gathers momentum, around 40 companies - of which we are one - are learning about what it means to work together to improve Corporate Responsibility (CR) performance in our shared supply chain.

It is good to see the common approach beginning to gain recognition, and it is encouraging to witness the collective determination that the companies share in the way the inevitable challenges we face are addressed, to find win-win solutions.



Working together to improve Corporate Responsibility standards in our shared supply chain.

#### **Progress of the EICC**

In 2006, the Electronics Industry Code of Conduct (EICC) - of which STMicroelectronics has been a member since November 2005 - and GeSl's (Global e-Sustainability Initiative) Supply Chain Working Group started applying the shared tools which have been developed to help implement common standards in the electronics Information and Communication Technology (ICT) sectors.

#### The tools, which were developed in 2005, include:

- a first level of risk assessment to enable companies to identify high risk suppliers
- a second level of risk assessment consisting of a self-assessment questionnaire with an embedded scoring system
- an audit checklist and a guidance manual.

These tools cover phases 2 and 3 of the official Supplier Engagement Model (see the chart below), which is designed to help companies support their suppliers in improving their CR performance. A common database tool, E-TASC, was also being developed in 2006, to act as the 'portal' through which customers and suppliers will access all the initiative's tools. We expect this to be ready in 2007.

#### ST's active participation

By attending the quarterly meetings, EICC member companies follow the progress of the various working groups, which underpin the activity of the wider group. Companies are expected to actively participate in these groups (which meet on a weekly basis by conference call), according to their expertise, priorities and interests.

#### Supplier Engagement Model



**Introduction** of CR requirements to suppliers and formalizing commitments



**Assessment** of suppliers to evaluate potential risk and current performance



**Validation** of supplier performance through audit and corrective action activities



Continuous improvement: of supplier performance through monitoring, support and learning and capability building In October 2006, ST volunteered to take a co-lead role with other companies in the newly-created Learning and Capability Building work group, which is shared with GeSI's Supply Chain working Group. We felt we would be able to contribute our experience of company-wide training on CR (for example, our CR Awareness e-Learning program for all our employees), and bring both a customer and supplier perspective to the strategy and training courses the group is responsible for. In addition to this, one of the working group's first priorities - training for Supply Chain Managers - was one of our own objectives for 2006. By committing resources to a collective goal that will serve many companies rather than just our own, we feel we are participating in a very tangible way in the collective spirit of the ICT initiative. The first course is due to be ready in 2007.

Creating a Learning and Capability Building work group is a significant step forward in the overall ICT supply chain initiative. It responds to the fourth phase of the engagement model and reflects the desire of EICC and GeSI members, and their stakeholders, to go beyond the 'tick-box audit' approach, to one that focuses on helping supplier companies develop their competences and take real ownership of their performance.

#### Integrating the common standards in ST's operations

As a supplier of several of the EICC and GeSI companies and a customer in our own right, we are beginning to feel the full effect of the industry approach, which aims to streamline customer requirements throughout the supply chain, making life easier for everyone.

We feel we have a responsibility to ensure we comply with the common standards in our company facilities – and this fits in very well with our culture of Sustainable Excellence.

So, having integrated the common standards into our internal self-assessment tool in 2005, in 2006 we helped our facilities to understand the implications of the ICT initiative and prepare to respond accordingly, starting with the completion of the common self-assessment questionnaire. During the year, we have seen an increase in the number of customer requirements that integrate the common approach. By the end of 2006 we

were preparing to participate in our first EICC audit, as part of the EICC's joint audit pilot. Five of our customers requested a common third-party audit on our Shenzhen site in China, which was successfully completed in January 2007.

Our objective in 2007 is to continue formalizing the compliance process by helping more of our facilities complete the questionnaire. We see this as part of the process of ensuring our management systems cover all aspects of the EICC. We already have well-established and certified environment and Health & Safety management systems, and some aspects of our labor and ethics management systems are also being reinforced through this process. We are also capitalizing on what we see as the 'integrated' nature of the common industry approach, to ensure we have integrated management systems that generate greater synergies and efficiency in our operations.

#### Integrating the common standards in how we manage our suppliers

In 2006, our CR team and Purchasing organizations worked together to begin to align our requirements of suppliers and subcontractors with the common ICT standards. This involved reviewing our overall supplier engagement process and identifying the specific activities, processes and tools we need to evolve to support our commitment to implementing the EICC in our supply chain.

#### This includes:

- adopting the EICC as our official supplier code of conduct; communicating our commitment to the initiative and our expectation of suppliers and subcontractors to make the same commitment
- rewording relevant contractual clauses
- integrating EICC criteria into our Supplier Performance Evaluation tool, and
- asking some suppliers and subcontractors to complete the self-assessment questionnaire (this selection is based on an evaluation of the level of risk, using the common first level risk assessment tool).

Full integration of EICC requirements in our supplier auditing process will take more time, and we will be addressing this in 2007-2008.

#### Where there's a collective will there's a way

The experience of getting more deeply involved in the ICT initiative has been extremely positive, not least because of the outstanding commitment and determination of the companies and individuals involved.

Not only are we learning a great deal from other member companies, including our customers, who have a more mature approach to this challenging domain, we are developing our internal competences to, hopefully, help our suppliers make the same beneficial and dynamic steps forward.





## Reducing delays of payment for Subcontractors

INTERVIEW WITH CLAUDE PREDAL, SOURCING AND DEVELOPMENT DIRECTOR, GLOBAL OUTSOURCING BUSINESS MANAGEMENT



To be able to 'walk our talk' and show to our stakeholders, the subcontractors, that ST is fair in business.

ST had a bad image in the subcontracting world because payments were not always made on time.

This situation was not something we intended to happen, but was the result of a system issue. We were raising Purchase Orders (POs) at a level which was too aggregated and the invoices issued by our subcontractors did not always match our POs as they were more detailed, reflecting the reality of the work carried out in their factories.

In the case of a mismatch with the PO, the invoice was rejected and sent back to another internal department for analysis. This was generating a very tedious (and manual) job and was introducing delays in the payment process.

These overdue payments represented, in some cases, significant amounts; enough to be of serious concern for our subcontractors and to pollute our business relationship with them

We were giving our subcontractors an image of ST as a bad payer which was not in line with our perception of what business ethics should be.

Taking into account that a job done has to be paid in time (and that we, ST, would not appreciate to face the same issue with one of our customers!), we have initiated a program named 'PO Automation'.

Through a complete re-codification of our data base and development of new programs, we are now able to issue POs including detailed items in line with subcontractors' invoices.

Now ST's system is robust enough so we have also been able to initiate a 'self-billing' program, allowing ST to issue the invoices on behalf of the subcontractors who just have to validate them.

Completion of this program is targeted for the end of 2007.

The first results are promising: we have already divided by 3 the amount of overdue payments.

The obvious benefit for us is that we are increasingly able to 'walk the talk' and show to our stakeholders, the subcontractors, that ST is fair in business. This can only have a positive impact on our business relationship with them.

An additional positive side effect is that teams from subcontractors and from ST, who were perhaps not used to working together, have had to understand the other side's constraints and find ways together to solve issues and achieve a common goal.

## Supply chain objectives for 2007

#### **Suppliers**

- EICC self-assessment questionnaire to be performed on the fifteen top risk key critical suppliers
- Start the audit process with the two highest risk suppliers
- Start integrating Corporate Responsibility in all existing management tools
- Check all key suppliers against EICC
- Deploy new banned substances specification including new requirements

#### **Subcontractors**

- Complete the EICC selfassessment for the 30 highest risk key subcontractors
- Audit the 3 highest risk subcontractors
- Sign subcontracting agreements with key and strategic subcontractors, including EICC compliance obligation
- Implement of subcontracting performance evaluation system, including criteria covering measurement of EICC Code of Conduct, Labor & Ethics policy and banned substances

#### **Customers**

- On-time delivery excellence by end of 2007
- Launch of supply chain education program (4,000 participants by mid-2009)
- Demand management process re-engineering (from commercial demand to production plan)

## 2006 engagement with suppliers introduction and first assessment

INTERVIEW WITH OLIVIER TRANCART, GLOBAL SOURCING & PURCHASING, SUPPLIER QUALITY MANAGER



to around 120 selected

As part of the EICC initiative. we took some concrete steps in the management of our suppliers, sending a complete EICC introduction package to around 120 selected suppliers in August 2006.

#### The pack contained:

- a letter of introduction explaining our membership of, and commitment to, the FICC
- the EICC code of conduct
- the EICC first level risk assessment tool for each supplier to complete: this was a 'mock' questionnaire evaluating their likelihood of non-conformance and the significance of the risk to them of non-conformance.

#### We monitored the feedback in two sequences:

- 40% response rate by October 2006
- 80% adherence to our EICC-aligned supplier evaluation process, for which we compiled the responses in February 2007.

Overall, the responses from the suppliers were very positive, taking into account their different levels of understanding and maturity in Corporate Responsibility.

From this first phase of risk evaluation, we ranked suppliers to prepare the ground for the second phase, planned for 2007, which is the integration of this subject within management systems, such as in the supplier approval process.

#### Planned for 2007

#### A focused assessment phase:

- · EICC self-assessment questionnaire to be performed on the fifteen top risk key critical suppliers
- start the audit process with the two highest risk suppliers
- start integrating Corporate Responsibility in all existing management tools
- check all key suppliers against EICC.

#### Other programs with suppliers in line with the EICC include:

- promoting ISO 14001 and OHSAS 18001 certifications
- annual adherence to ST banned substances policies.

Supplier environmental performa	nce   O STSC	4b										
Suppliers of	Numb	Number of suppliers			1001 cer Svalidate			tification ogress (%		With no	certificat	tion (%)
	2004	2005	2006	2004	2005	2006	2004	2005	2006	2004	2005	2006
Materials	99	97	108	70	64	73	8	6	6	22	30	21
Equipment/facilities	61	61	61	69	76	76	28	21	21	3	3	3
Total	160	158	169	69.6	68.6	74.1	15.6	11.8	11.4	14.8	19.6	14.5

Customer CR requirements   STSC9		
	2005	2006
Number of customer requirements for CR (including environment) received at company level*	165	144

(\*) This data includes all Customer Environmental and Corporate Responsibility requirements from our customers, received by our corporate-level departments for support and validation. Many more are dealt with directly at local and regional level.

#### Disclosure on management approach

You will find the disclosure on management approach in the html version of this report  $\square$ .

## Aiming to satisfy our customers continuously

Interview with Bernard Boulet, Global Supply Chain & Data Quality Director



With solid foundations established in 2006, our supply chain network has been able to confront many challenges.

As we said last year, we now have extensive management systems in place to meet our customers' expectations, related to quality, environmental, Health & Safety and wider Corporate Responsibility issues.

With solid foundations established in 2006, our supply chain network has been able to confront many challenges. We set up the supply chain program last year with the principal aim of ensuring we deliver products to our customers on time.

#### We are pleased to announce the following results:

In 2006, we halved the percentage of products delivered to our customers late (not on time), when at the same time we increased by 5% orders with an ST-committed delivery date equal to our customers' requested date.

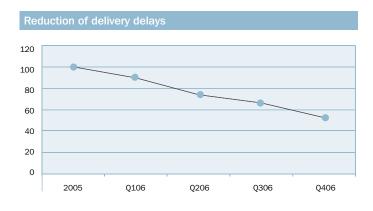
From now on, we will use the following two indicators to track how we are doing in terms of getting our products to our customers on time.

- Reduction of delivery delays (evolution per quarter; percentage reduction in volume)
- ST-committed delivery date equal to customer request (in volume);
   (5% improvement achieved in 2006)

#### So how did we achieve these results?

- First, we involved every function in our supply chain: purchasing, manufacturing, logistics, product groups and sales - and created new indicators and measurements for the contribution of each function in reaching our target. Each function is now monitoring those indicators regularly.
- Second, we improved our 'Just in time' scores, we also introduced more effective ways of prioritizing, by showing our delivery commitments to our customers in our production plans.
- Finally, we assessed and amended any rules, planning systems and processes that could cause delays.

In 2007, we intend to keep working on this key issue, to continuously improve our commitment to our customers, which is one of the cornerstones of our Sustainable Excellence approach.





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## Bureau Veritas verification statement to the management of STMicroelectronics NV

Bureau Veritas Certification, France has been engaged to provide assurance services to STMicroelectronics.

#### Introduction

This Attestation Statement applies to the STMicroelectronics 2006 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:

- 1) Review of the environmental and social performance data for the period 1st January 2006 to 31st December 2006
- 2) Information reported, including that against the GRI indicators
- Review of systems and procedures for the collection, compilation and consolidation of Health & Safety, environmental and social data
- 4) Review of internal quality and consistency controls against such data
- 5) An overview of the complete 'Report' to ensure its consistency with the findings of our work.

#### Exclusions from the scope of our work

The following exclusions apply to the scope of our work:

- Data falling outside the 2006 reporting period, as defined above
- · Greenhouse gas item moved to considerations/limitations
- The information hyperlinked from the 2006 Corporate Responsibility 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 Catania sites of STMicroelectronics.

#### **Assurance conclusions**

It is our opinion that:

- The management of Health & 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.

#### Areas for ongoing improvement

- The creation of new indicators should be anticipated such as indicators for benchmarking in safety
- The company should provide adequate comments to explain every significant trend even if the trend is negative and even if the company does not publish the indicator.

#### **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 and 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 of independence, impartiality and competence

Bureau Veritas 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 maintain 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 over environmental, social, ethical and health and safety information, systems and processes and has over 10 years' combined experience in this field.



Romain Petit

Chief Executive Officer, Bureau Veritas Certification, France

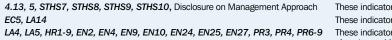


## 2006 Key Performance Indicators

	ST's indicators	2005	2006
Company			
Percentage of eligible employees who signed the Business Conduct and Ethics Policy (%)	STS01	83	NA
Economic			
Net revenues (\$USm)	ST1	8,882	9,854
Net earnings (\$USm)	ST2	266	782
Gross profit (\$USm)	ST3	3,037	3,523
Earnings per share (\$US)	ST4	0.29	0.83
Gross profit as a percentage of sales (%)	ST5	34.2	35.8
Market share (%)	ST6	3.9	4
R&D expenditures	STE4	1,630	1,668
R&D overall headcount evolution	STE5	9,700	10,300
R&D engineers and technicians	STE5	6,570	7,195
ST patent applications field by region	STE6	720	607
Social			
Total number and rate of employee turnover by age group, gender and region	ST12	7.8	8.79
Job creation / hires by job type	ST12	5,543	7,554
People recognized	STS26	41,676	77,390
Accepted suggestions which were implemented	STS34	57	39
Average number of meetings in each organization or site during which management presents company/orga/site results to all employees allowing time for open discussion	CTC 2.4 a	10	0
(number/year)	STS34a	10	9
Average training hours for professionals	STS15	37	30
Employee having received > 35 hrs training/year	STS18	40	37
Professionals by gender (Men/Women)	STS10	80/20	80/20
Number of partnerships with universities, colleges, schools	STS44	217	236
Total cash donated to charitable associations US\$k	STS39	1,645	271
Health & Safety	CTUC4	0.54	0.50
Recordable cases rate	STHS1	0.51	0.59
Severity rate	STHS2	8.7	8.6
Environment	CTEV/70	0.0	4.0
Landfill waste (% of total waste)	STEV73	8.3	4.8
CO <sup>2</sup> emissions (PFC+energy+transportation) (kTons)	STEV49	2,146	2,009
Product Responsibility	CTDDO	96.0	71.0
Customer complaints	STPR2	86.2	71.6
Cycle time to process failure analysis	STPR3	72.7	62.6
Customer returns	STPR4	41.1	38.3
Supply Chain	OTO 2 41	00.0	74.4
Suppliers environmental performance (% of suppliers certified)	STSC4b	68.6	74.1

This index shows where to find full or partial information relating to the Global Reporting Initiative (GRI) core elements and indicators in this report and in the html version of this report. GRI indicators are shown in the color of the section in which they belong. This index also shows where to find information relating to ST's own performance indicators. These are all prefixed 'ST' and shown in *black italics*. 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.

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EN11-EN15

These indicators are reported on in ST's Annual Report on Form 20-F These indicators are reported on in ST's website

These indicators are not reported because the information is commercially sensitive These indicators are not reported because we do not yet have reliable enough systems in place to provide the data

These indicators are not reported because they are not applicable to our operations

## Glossary

APG	Automotive Products Group	
BE	Back-end	
beSTick	Internal self-assessment tool	
BLIHR	Business Leaders in Human Rights	
BLS	US Bureau of Labor Statistics	
BVQI	Bureau Veritas Quality International,	
	France	
CCX	Chicago Climate Exchange	
CEO	Chief Executive Officer	
CFO	Chief Financial Officer	
CMOS	Complementary MOS (Metal Oxide Semiconductor)	
CMR	Carcinogenic, Mutagenic, toxic for Reproduction	
COD	Chemical Oxygen Demand	
C00	Chief Operating Officer	
CPG	Computer Peripherals Group	
CR	Corporate Responsibility	
	<u> </u>	
DART	Days Away from work, job Restriction, job Transfer	
dB	Decibel	
DFE	Design For Environment	
DRAM	Dynamic Random Access Memory	
DVFS	Dynamic Voltage Frequency Scaling	
Ecopack®	Lead-free labelling for RoHS-	
	compliance (the EU Directive on	
	Restriction on Use of Hazardous	
	Substances)	
EFQM	European Foundation of Quality Management	
EFTA	European Free Trade Association	
EICC	Electronics Industry Code of Conduct	
EHS	Environmental, Health & Safety	
EMAS	Community Eco-Management and	
	Audit Scheme	
EOC	Employer of Choice	
EMS	Electronic Manufacturing Services providers	
ePA	Online performance appraisal tool.	
EXCO	Executive Committee	
FE	Front-end	
GeSI	Global e-Sustainability Initiative	
GHG	Greenhouse Gases	
GRI	Global Reporting Initiative	
HPC	Home, Personal and Communication	
0	(ST Product Group)	
HR	Human Resources	
H&S	Health & Safety	
ICB	Informatics & Computer Basics	
ICT	Information and Communication	
	Technologies	
	International Labor Organization	
ILO		
	ST Lab-on-Chip platform	
In-Check™	ST Lab-on-Chip platform	
In-Check™ IP	ST Lab-on-Chip platform Intellectual Property	
In-Check™ IP	ST Lab-on-Chip platform Intellectual Property International Organization for	
In-Check™ IP ISO	ST Lab-on-Chip platform Intellectual Property International Organization for Standardization	
In-Check™ IP ISO KPI	ST Lab-on-Chip platform Intellectual Property International Organization for Standardization Key Performance Indicator	

MEMS	Micro-Electro-Mechanical Systems
MIPI	Mobile Industry Processor Interface
MPA	Micro, Power, Analog Group
MPG	Memory Products Group
MRSA	Methicillin-resistant
	Staphylococcus aureus
MTCE	Metric Tons of Carbon Equivalent
NAND	Not And
NGO	Non-Governmental Organization
NOX	Nitrogen Oxides
ODM	Original Design Manufacturers
ODS	Ozone depleting Subspances
OEM	Original Equipment Manufacturers
OHS	Occupational Health & Safety
OHSAS	Occupational Health & Safety
	Assessment Series (OHSAS 18001)
OSHA	Occupational Safety & Health
	Administration in the United States
PFCs	Perfluorinated Compounds
PFOS	Perfluoro-octane Sulfonate
POC	Products of Combustion
PSM	Programmable Systems Memories
R&D	Research & Development
R11	ChloroFluoroCarbon (CFC) and is
	also called CFC 11. It is an Ozone
	Depleting Substance. Its chemical
	name is Trichlorofluoromethane.
RC	Recordable case rate
REACH	Registration, Evaluation and
	Authorization of Chemicals
RoHS	Restriction of Hazardous Substances
SAM	Serviceable Available Market
SCS	Secured Communication Solutions
SE	Sustainable Excellence
SIA	Semiconductor Industry Association
SOP	Standard Operating Procedures
SOX	Sulfur Oxides
SPG	Subsystems Product Group
SRI	Socially Responsible Investment
STU	ST University
TCE	Tons of Carbon Equivalent
TQCR	Total Quality & Corporate
	Responsibility organization
TQM	Total Quality Management
UNEP	United Nations Environment Program
USAs	Unvested Stock Awards
US GAAP	US Generally Accepted Accounting
US GAAI	Principles
VIP	Variable Incentive Plan
VOCs	Volatile Organic Compounds
WBCSD	World Business Council for
******	Sustainable Development
WEEE	Waste of Electrical and Electronic
<b>-</b> _	Equipment
WSC	World Semiconductor Council
20-F	Annual report filed with the Securities
	and Exchange Commission

GRI indicator prefixes			
EC	Economic Impact		
EN	Environment		
HR	Human Rights		
LA	Employment		
PR	Product Responsibility		
SO	Society		
ST indicator prefixes			
ST	Company		
STE	Economic		
STEV	Environment		
STHR	Human Rights		
STHS	Health & Safety		

Supply Chain

**Product Responsibility** 

Company

The ST Corporate Responsibility Report 2006 is printed on paper produced by factories whose environmental management system is ISO 14001 certified.

The papers used are totally 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.

Furthermore the papers used are certified with the Program of Endorsement for Forest Certification (PEFC), meaning that the wood used to produce them (minimum 30%) has come from forest that is well managed according to strict environmental, social and economic standards. The forests of origin have been independently inspected and evaluated according to the principles and criteria that have been agreed and approved by PEFC.

#### Cover pages

STSC

STSO

STPR



This book is printed on Creator Silk 350g/m-IQnet and AEONOR certify that the organisation Torraspapel, S.A. (Motril) as implemented and maintains an ISO 14001 Environmental Management System.

#### Insides pages



This book is printed on Creator Silk 135g/m² IQnet and AEONOR certify that the organisation Torraspapel, S.A. (Motril) as implemented and maintains an ISO 14001 Environmental Management System.

