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# STMicroelectronics' environmental and social milestones

**This section marks significant dates and events in our company's environmental and social history, with particular emphasis on the last decade as we celebrate the tenth anniversary of the Environmental Decalogue which was first released in 1995. We announced our Environmental Protection Policy as depicted on the cover of this report and launched our initiative toward the ideal objective of total environmental neutrality.**

This report follows the structure and indicators suggested by the Global Reporting Initiative (GRI) Guidelines. To make things easy, abbreviations show the GRI indicators (EN refers to environment, EC to economic impact, LA to employment, HR to human rights and SO to society) – and ST's own company indicators (all begin with ST) – relevant to each section. Please see the Annex for the standards and verification processes underpinning the report, together with an index of the GRI and ST indicators used.

## Foreword

In 1993, we took the decision to move from simple compliance with international and local regulations to adopting a proactive approach, with senior management outlining the fundamentals of the company's environmental vision, mission, and policy. We created the Corporate Environment Strategies Management organization, and launched a company-wide initiative with the goal of establishing ST as a world leader in environmental protection and social responsibility. 1993 also saw the complete elimination of ODS Class 1 from our processes.

In 1994, there was an initial environmental review of all manufacturing sites and the decision was made to apply for EMAS validation. At the same time, we adopted the principles of the 'Business Charter for Sustainable Development' published by the International Chamber of Commerce (ICC).

### 1995

**September:** First Corporate Environmental Day held. (Worldwide)

First issue by senior management of the Environmental Decalogue with its ten environmental commandments for reaching 'Environmental Responsibility and Sustainable Development'. (Worldwide)

### 1996

ST launches its first environmental training program for top management and 'train the trainers' sessions. It also begins its endeavors to reduce greenhouse gas emissions, focusing on defining company-wide emissions reduction goals, and developing a technical roadmap to be applied to all its operations. (Worldwide)

### 1997

**April:** ST receives Certificate of Environmental Management from French Minister of Environment for its environmental policy. (France)

**September:** ST wins European Quality Award (EQA), from the European Foundation of Quality Management (EFQM), for its commitment to the principles of TQM in its business practices. (All sites worldwide)

**November:** ST sites worldwide fully validated to the requirements of European Eco-Management and Audit Scheme (EMAS). (All sites worldwide)

### 1998

**May:** Trophy: Trophée Enterprise Environnemental Catégorie Grandes Entreprises by Enjeux-Les Echos and PricewaterhouseCoopers. (All ST sites, France)

**June:** ST receives 'Jury Special Commendation' in European Better Environment Award for Industry for its 'Management for Sustainable Development'. The award is an initiative of the European Commission and the UN Environment Programme. (Europe)

### 1999

**July:** ST Asia-Pacific wins 1999 Singapore Quality Award for Business Excellence from the Singapore Productivity and Standards Board for its concerted TQEM efforts focusing on the principles of Customer Focus, Employee Empowerment, Continuous Improvement, Fact-Based Decision Making, and Management Commitment. (Singapore)

**September:** ST wins US Environmental Protection Agency (EPA) Climate Award for its outstanding accomplishments in protecting the Earth's climate and for its ability to serve as a model to inspire other individuals and organizations. (USA)

ST ranked as the world's leading semiconductor company for sustainability by Dow Jones Sustainability Global Index (DJSGI) for integrating the philosophy of sustainable business practices into a comprehensive TQM system. (Worldwide)

**October:** ST awarded Assam II Award for contributing to the development of environmental sustainable activities by applying its Decalogue principles and ISO 14001/EMAS certification. (Morocco)

**November:** ST wins the Malcolm Baldrige National Quality Award, becoming the first non-American company to win the prestigious recognition, created by the US government. (USA)

### 2000

**October:** ST ranked First in Environmental Management by Innovest Strategic Value Advisors as 'AAA' eco-efficient for its performance on environmental, social, and strategic governance issues, with a particular focus on its impact on competitiveness, profitability, and share-price performance. (Worldwide)

**December:** P. Pistorio, President and CEO of ST, receives Akira Inoue Award for Outstanding Achievement in Environmental, Health and Safety. (Japan)

## 2001

**December:** ST receives Award for Best European Practices in India by the European bi-lateral (Indo-Italian) Chambers of Commerce and Industry, as part of the first IMPRESA Europe Awards, created to foster business relationships among participating countries. (India)

P. Pistorio, President and CEO of ST, wins Tomorrow Magazine's 2001 Environmental leadership award for his consistent leadership in showing that social and environmental responsibility can be valuable corporate assets. (Worldwide)

## 2002

**January:** Fortune Magazine names ST among the 10 great companies in Europe to work for, thanks to its challenging and stimulating workplace. (Europe)

**March:** ST acknowledged among 25 best employers in India by Hewitt Associates, in a study conducted in conjunction with Business Today of India. (India)

**October:** ST Malta plant receives the Management Award for Sustainable Development as part of the European awards for the environment 2002, organized by the European Commission Directorate-General Environment. (Malta)

## 2003

ST is first global semiconductor company to gain OHSAS 18001 certification to meet challenging occupational health and safety standards and systems for all its manufacturing sites. (Worldwide)

ST wins the Swiss Solar Energy 'Solar Price' award for the Photovoltaic category. (Geneva)

ST exceptional contribution to environmental protection is highlighted in a book on inventions and people protecting the climate and fragile ozone layer, Industry Genius, published by Greenleaf Publishing. Among the 10 'Genius' global companies, ST is praised by the authors for using the power of semiconductors to eliminate energy waste in battery chargers and other consumer products. (Corporate)

## 2004

**January:** ST receives award for the best Industrial Renewable Energy Partnership from the European Commission for its program to achieve an objective of 15% use of renewable energy sources by 2010. (Europe)

**February:** ST awarded ISO TS16949 certification for all manufacturing and non-manufacturing sites, worldwide. This certification demonstrates ST's ability to meet the more demanding automotive-quality requirements at all of its sites. (Worldwide)

In addition to the manufacturing sites certified in 2003, four non-manufacturing sites also gain OHSAS 18001 certification. (Worldwide)

ST India is included again in the 'Best Employer' category by Hewitt Consultants and Business Today of India. (India)

**June:** P. Pistorio, President and CEO of ST, earns the 2004 IEEE Ernst Weber Engineering Leadership recognition as "an inspirational leader" and "strong supporter of environmental protection and sustainable development". (USA)

**September:** ST Malta adopts biodiesel fuel for 100% of its vehicle and heating needs, cutting harmful emissions in half. (Malta)

**October:** ST receives Corporate Governance Award from Roland Berger Strategy Consultants, in conjunction with the HEC School of Management and the well-respected French publication *Enjeux Les Echos*. The award is based on its achievements in growth performance, value generation, and corporate governance, and the outstanding cultural diversity existing in ST and its management team. (France)

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**Corporate Responsibility** ST has always recognized its ethical obligation to act responsibly towards society and the environment. But in 1993, ST did something remarkable. We decided to work proactively to meet our ideals of Corporate Responsibility in full.

As a result, we not only exercise our power on behalf of our immediate stakeholders but also for the benefit of society and the world at large. And we have maintained this for over ten years while improving our ability to enhance performance and profitability.

## Message from Pasquale Pistorio

This is the last full year for which I have responsibility as STMicroelectronics' CEO. I am proud that in my time at ST, our company's passion for Corporate Responsibility has won it worldwide respect, and that we have helped to spread the message that being a good corporate citizen is also good for the bottom line.

As long ago as 1993, ST made a far-reaching move: we went from just doing what was asked of us to taking a proactive approach to our own obligations. This set the pattern for everything that we have done since. We went beyond mere compliance: for instance we took the strictest environmental regulations that applied in any of the sites that we operated in around the world and applied them to all of our sites worldwide. We didn't just wait until we were forced to meet standards of corporate behavior, we set the pace ourselves.

Why did we do this? Because we know that we can't ignore any part of our 'triple bottom line' – covering our economic, social and environmental performance – if we are to succeed. Because we know we have an ethical obligation to act responsibly. And because we believe that doing the right thing also helps our competitiveness.

2005 sees the tenth anniversary of our pioneering Environmental Decalogue, which set out targets for ST's contribution to sustainable development. We were one of the first companies to set ourselves measurable, time-limited goals in environmental performance and to commit ourselves to them in public. Over the years, other companies have come to share our view of the importance of Corporate Responsibility. But we will continue to be among the pioneers, still setting ourselves more ambitious goals than are required by legislation, and still working to develop ideas about how companies can make a positive contribution to the communities they inhabit.

For instance, in 1999 we updated our Environmental Decalogue and set for ourselves the very ambitious goal of reducing our CO<sub>2</sub> emissions to zero by 2010, so that we are neutral in terms of global warming. We will reach this goal by continuing to reduce by 5% per year our energy consumption per production unit, by increasing the proportion of our energy that is generated from renewable sources, and by CO<sub>2</sub> sequestration through reforestation.

ST was one of the very first signatories of the United Nations (UN) Global Compact, which sets out guidelines for Corporate Responsibility. The principles we follow from the Compact were already part of our normal business practice – and they remain so. Then in 2001, thanks to our reputation for social engagement, I had the honor of being asked to become a member of the UN ICT Task Force, launched by Secretary General Kofi Annan, to help bridge the digital divide between those who are able to make use of information technology, and those who are not.

Finally, among other major milestones in the field of Corporate Responsibility, in August 2001 we established the STMicroelectronics Foundation, financed by donations from the company and managed autonomously by a Board of independent members. The mission of the Foundation is to spread the social culture of ST, and to implement Corporate Responsibility programs, the most important of which is the Digital Unify program...



With the anniversary of the Environmental Decalogue, and with the handover to a new CEO, this is a time to look back over our achievements at ST – at the many awards, for example, that we have won for our environmental work and our contribution to sustainability. But it is also a time to look ahead. I am sure that my successor, Carlo Bozotti, will continue to take the company forward in Corporate Responsibility, and that ST's core values of integrity and transparency will continue to serve us well.



**Pasquale Pistorio**

Honorary Chairman, STMicroelectronics  
President and CEO, STMicroelectronics to March 2005



### **Message from Carlo Bozotti**

Our commitment to sustainable development is not new; when we first published our Shared Values in the early 1990s, we made it clear that our company would “contribute to the well-being of our people and of every community in which we operate”.

Throughout this time, we have taken advantage of our Total Quality Management culture of “permanent dissatisfaction” to continuously improve our performance, with a very strong focus on environment since 1994.

And we made significant progress indeed, reducing our energy consumption by 42% (per unit produced), our water consumption by 64% and our CO<sub>2</sub> emissions by 50%. This has provided us with an extraordinary saving of over US\$100m per year, clearly demonstrating once again that “ecology is free”.

Simultaneously, we have improved our approach, moving with the world around us from an environmental focus to the broader vision of Corporate Responsibility. This evolution is visible in our reports, in which we have included a social section for the last three years. In 2004, taking into consideration the feedback received from various stakeholders, we have integrated in this document several indicators that were not reported on before, especially concerning our economic impact and about human rights. We signed the UN Global Compact in 2000, and since then we have progressively integrated the Principles into our activities and reporting, using the Global Reporting Initiative Guidelines and indicators as a supporting tool. We also support the new ‘European Roadmap for Businesses Towards a Sustainable and Competitive Enterprise’.

I have had the honor of leading ST since March 2005, and I would like to thank my predecessor, Pasquale Pistorio, for his extraordinary achievement in shaping the culture of the company; without his constant drive and enthusiasm over the last 18 years, the concepts of sustainable development would not be integrated into our organization...

Today, and just as in the past, we will do business with integrity, and we will be aware of our responsibilities towards our stakeholders. Big corporations are powerful, so they must be accountable: this is what we believe. Market conditions may change, and they may have an impact on the speed of implementation of our programs. But we will not question the direction and the ultimate goal. Our vision is to create financial and non-financial value for all our stakeholders.



**Carlo Bozotti**  
President and CEO, STMicroelectronics





**Our values** At ST, our values come first. We not only give them priority but also adapt and expand them to reflect the changing world we operate in.

By placing employees at the center of our business, we encourage their creativity and stimulate an innovation process to the benefit of us all.

We have always stayed faithful to our values. And that is a vital part of our unending commitment to the principles of ethical behavior.

## ST's Guiding Principles for Corporate Responsibility

At ST, our values come first. We are passionate about environmental protection and have won many awards for sustainable development. But we never rest on our achievements. Times change, and like all the best companies we seek new ways of achieving harmony with the world.

Our understanding of Corporate Responsibility (CR) extends far beyond the environment. In this report, you will find extensive information on our performance – covering human rights issues and the supply chain – and our economic impact. We remain at the forefront of Corporate Responsibility and ethical business, helping to develop ideas about how to be a positive influence and live up to corporate obligations.

ST is in transition following the hand-over to a new CEO. But our commitment to Corporate Responsibility remains unchanged. We continue to do all we can to benefit society and the environment as part of our unending commitment to the principles of ethical business behavior.

This report demonstrates that ST works to do what is right – not just what it takes to satisfy the rating agencies. This means that we often far exceed established standards and set ourselves more challenging targets than we have to. This is essential to us.

Communicating openly with our stakeholders – employees, customers, investors and others in the Corporate Responsibility community – is vital. This report is part of that process and we are committed to continual improvement, always welcoming new ideas and innovation.

The Guiding Principles have been part of our Shared Values since the early 1990s, and they represent the core values underlying our business intentions and set the tone for how we pursue our mission and objectives.

### Customer satisfaction

We believe that the key to success is Total Customer Satisfaction. That is why we listen to our customers, and strive to anticipate and meet their needs and expectations. Our future also requires strong partnerships, which depend on our ability to provide world-class quality, service and value within appropriate timescales.

### Business integrity

We conduct our business with each set of stakeholders to the highest ethical standards. This means that we honour our commitments, deliver on our promises and work to maintain a sense of loyalty, fairness and justice.

### People

Every one of us will be loyal, hardworking, committed and personally involved in the continuous improvement and learning process. This means that we will behave with openness, trust, simplicity and respect. We are ready to share what we know, to encourage everyone's contribution and to recognize achievements. And we emphasize job enrichment and personal realization through empowerment, teamwork and training.

### Excellence

We accept that permanent change and continuous challenge drive improvements. Consequently, we always strive for excellence, quality, competency and efficiency. We prize flexibility and agility and also encourage innovation and creativity throughout our activities.

### Profitability

The profit we generate enables us to prosper and grow. It provides security and reveals future opportunities while allowing the company to meet its other social and business responsibilities.

While this report focuses on our Corporate Responsibility activities in 2004, we do not keep Corporate Responsibility separate from our other activities. Instead, we believe that acting correctly and responsibly is an integral part of business excellence.

This report follows the structure and indicators suggested by the Global Reporting Initiative (GRI) Guidelines. To make things easy, abbreviations show the GRI indicators (EN refers to environment, EC to economic impact, LA to employment, HR to human rights and SO to society) – and ST’s own company indicators (all begin with ST) – relevant to each section. Please see the Annex for the standards and verification processes underpinning the report, together with an index of the GRI and ST indicators used.

#### **Our company objectives**

- *Growth: to grow faster than our competitors, with a target of 5% market share*
- *Financial: to generate shareholder value and return on equity better than the average of the top ten semiconductor suppliers*
- *Social: to contribute to the well-being of our people and of every community in which we operate, with a particular emphasis on environmental care and social responsibility.*

#### **Meeting our Corporate Responsibility objectives through Total Quality Management**

Total Quality Management (TQM) provides firm guidelines for our activities and is key to our meeting our social, environmental and economic objectives. With its strong ethical basis, TQM helps us to translate our ethical intentions into action. As our employees’ guide to TQM explains, “everyone in the organization is involved in the final product or service to the customer; each of our work processes and activities contributes to the success of the whole. In a broader sense, ‘Total’ also includes the organization’s responsibility to the community at large”.

We have developed TQM to provide specific guidance on managing interactions between colleagues. It also indicates how to practice ‘enlightened’ leadership that can bring out the best in people through cooperation and trust. This ethical form of behavior is based on our TQM ‘Five Principles’:

1. *Management commitment: Our managers should lead cultural change and create the environment in which TQM can develop*
2. *Continuous improvement: We never rest on past successes but always work to better our best*
3. *Fact-based decision making: We can only be sure of our conclusions by gathering and analyzing factual data*
4. *Employee empowerment: Everyone, without exception, has a contribution to make according to their skills, creativity and place within the organization*
5. *Customer focus: Everyone is someone’s customer; the customer is the starting point for our strategies and actions – and the vital measurement of our success.*

These TQM principles help employees decide the best way to conduct their daily business life. They provide the link between ST’s Guiding Principles and the reality of everyday work.

One of the TQM’s key concepts is responsibility: giving responsibility (empowerment); accepting responsibility (ownership and accountability); and understanding that the company has a responsibility towards all of its partners and stakeholders, as well as to society as a whole.





**Our business** As a successful, innovative, global enterprise and because of the sector in which we operate, it is important to us to engage closely with our different groups of stakeholders.

We constantly strive to be a good corporate citizen. And to make sure that our values are played out on the ground, we have embedded Corporate Responsibility into the very structure of our company.

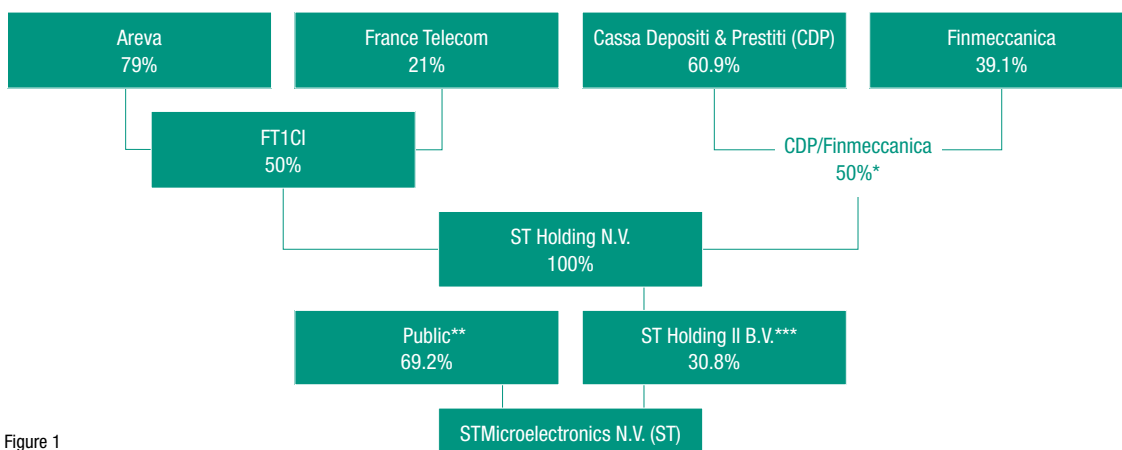
## The nature of our business

ST is a global, independent semiconductor company that designs, develops, manufactures and markets a broad range of semiconductor products used in a wide variety of electronic applications. These include automotive products, computer peripherals, telecommunications systems and consumer products as well as industrial automation and control systems.

In 2004, we were the leader in sales of analog products, application specific integrated circuits (ASICs) and application specific standard products (ASSPs). Semiconductor microelectronic circuits and components are integral to recent and impending advances in commerce, industry, science, medicine and entertainment.

Registered in the Netherlands, ST is quoted on the New York Stock Exchange, the Paris Euronext exchange and Milan's Borsa Italiana. The company now has just over 900 million outstanding shares, with approximately 70% publicly traded on the various stock exchanges. The balance of shares is held by STMicroelectronics Holding II B.V., a company whose shares are owned by Finmeccanica (Italy), CDP (Italy) and by a French consortium including Areva and France Telecom. Shareholder voting procedures are public and can be found on our website at [www.st.com](http://www.st.com).

### Shareholding structure (as of December 31, 2004)



STE9 Figure 1

In 2004, the company's revenues were US\$8.7bn: 42.4% in Asia-Pacific, 27% in Europe, 13.8% in North America, 12.2% in emerging markets (Latin America, Africa, Eastern Europe, the Middle East and India), and 4.6% in Japan.

\* Not a legal entity, purely for illustrative purposes. \*\* New York Stock Exchange, Euronext and Borsa Italiana, Milan. \*\*\* ST Holding II B.V. is a company whose shares are owned directly or indirectly by Areva France Telecom, Finmeccanica and Cassa Depositi & Prestiti which have signed between themselves a shareholders' agreement.

## Key figures

ST in general	2003	2004
Net revenues US\$m	7,238	8,760
Net earnings US\$m	253	601
Total assets US\$m	13,477	13,800
Equity US\$m	8,100	9,110
Total cash and equivalent securities US\$m	2,998	1,950
Total debt US\$m	3,095	1,958
Total headcount	45,654	49,529

EC7 Figure 2

Research & Development (R&D) expenditure US\$m	1998	1999	2000	2001	2002	2003	2004
	690	836	1,026	978	1,022	1,238	1,532 (17.5% of net revenues)

STE4 Figure 3

Capital expenditure US\$m	1998	1999	2000	2001	2002	2003	2004
	947	1,348	3,317	1,700	996	1,221	2,050

Figure 4

ST total headcount growth	2003	2004
France	9,909	9,989
Italy	10,379	10,939
Rest of Europe	1,590	1,665
Malta	2,281	2,323
Morocco	4,571	4,661
Americas	2,985	3,180
Asia-Pacific (including Japan)	13,759	16,532
Other Middle East/Africa	180	240
Total	45,654	49,529

Figure 5

ST has two kinds of manufacturing site: front-end and back-end. The front-end sites produce silicon 'wafers' through a series of complex processes that enable the silicon to control and transmit electronic signals. The thin slices of silicon range from 5 to 12 inches in diameter, with more advanced technology being required to produce the larger diameters.

Back-end sites assemble and package the individual silicon 'die' or squares by cutting them from the wafers. The squares are then sealed with wired connections into the 'package' or box that connects the chips to an electronic device.

ST has nine front-end and seven back-end sites (see Figure 6).

Manufacturing sites	Front-end	Back-end
	Agrate, Italy	Ain Sebaa, Morocco
	Ang Mo Kio, Singapore	Bouskoura, Morocco
	Carrollton, Texas USA	Bouskoura 2000, Morocco
	Castelletto, Italy	Kirkop, Malta
	Catania, Italy	Muar, Malaysia
	Crolles, France	Shenzhen, China
	Phoenix, Arizona USA	Toa Payoh, Singapore
	Rousset, France	
	Tours, France	

Figure 6

## 2004: significant events

In January, ST received the Best Industrial Renewable Energy Partnership award, as part of the European Commission's Campaign for Take-Off for Renewable Energy. The award came in recognition of our program to ensure that by 2010, 15% of the energy we use will come from renewable sources.

In February 2004, ST received ISO/TS16949:2002 certification for all of its sites, including non-manufacturing sites. The certification covers both the ISO 9001:2000 standard and the TS16949:2002 standard, which applies the much more demanding quality criteria of the automotive industry. Also in February 2004, ST opened its third state-of-the-art design and development facility in Noida, near New Delhi, India. ST India specializes in developing high value intellectual property (IP), System-on-Chip (SoC) embedded software for end applications and IT infrastructure.

As a pioneer in making the electronics industry more environmentally friendly, ST, together with Philips Semiconductors and Infineon Technologies, welcomed Freescale Semiconductor into the Environmental 4 (E4) group, which is focusing on accelerating the use of lead-free packages while stimulating further development of environmentally-friendly package technologies.

In November, we signed a joint-venture agreement with Hynix Semiconductor, one of the world's largest semiconductor manufacturers. This is to establish a front-end memory-manufacturing facility in China, which will help ST not only to build up its NAND Flash capacity, but also to increase its presence in China as an integrated silicon chip supplier, capable of bringing advantages at the social level in the local communities where it operates.

In December, we officially opened the ST Technopark in Ang Mo Kio, Singapore, which brings together ST's various facilities, including its newest wafer fabrication plants. The site, which ST first occupied 20 years ago as one of the first semiconductor companies to set up assembly and test operations in Singapore, includes one 8-inch and two 6-inch wafer fabrication plants, as well as our Asia-Pacific

headquarters buildings. These buildings house R&D, IC design, sales, marketing, training, and support functions, in addition to ST's Asia-Pacific executive offices.

The restructuring of our 6-inch manufacturing facilities is continuing, following the closure of our Rennes sites in France early in 2004 (see p.39). ST also took the decision to close our back-end facility in Tuas, Singapore, in 2004. The closure affects 600 employees, all of whom have been transferred to our Singapore Toa Payoh facility, with no job losses.

## Stakeholder engagement

We have many different groups of stakeholders and we engage with them in a variety of ways. As a highly decentralized company, much of our stakeholder engagement takes place at local or regional level. This means that an integral part of our daily operations involves communicating with employees, customers, suppliers/subcontractors, unions, local communities, local authorities, national and transnational government, the business community, shareholders, academics, non-governmental organizations (NGOs) and the media.

Corporate policies, as well as corporate and local procedures, underpin these contacts – and in every case we apply the high standards of business integrity set out in our values. We are building a common framework to ensure that all company organizations and sites understand stakeholder expectations and respond to them uniformly, effectively and harmoniously.

At the corporate level, we coordinate our contact with different stakeholder groups through the relevant departments. This is supervised by the Corporate Responsibility Steering Committee, chaired by the Corporate Vice President (VP) for Total Quality Corporate Responsibility (TQCR).

## Stakeholder consultation and expectations

Stakeholder group	Corporate Division Site	Consultation channels	Expectations
Shareholders and the financial community		<ul style="list-style-type: none"> <li>• Annual reports</li> <li>• Annual General Meeting</li> <li>• Questionnaires</li> <li>• Meetings with analysts</li> <li>• Communication via the media and directly with the financial community</li> </ul>	<ul style="list-style-type: none"> <li>• Regular and consistent, proactive communication</li> <li>• Transparency and material disclosure</li> <li>• Good governance and business ethics</li> <li>• Continuous improvement in CR</li> <li>• Financial profitability</li> <li>• Good management of social, economic and environmental risks</li> <li>• Link between CR and financial profitability</li> </ul>
Customers		<ul style="list-style-type: none"> <li>• Satisfaction surveys</li> <li>• Commercial relations</li> <li>• Questionnaires and codes of conduct</li> </ul>	<ul style="list-style-type: none"> <li>• Good service and quality</li> <li>• Technological innovation</li> <li>• Low price</li> <li>• Transparency and material disclosure</li> <li>• Compliance with and anticipation of laws</li> <li>• Good management of social, ethical and environmental risks</li> <li>• Continuous improvement in CR</li> <li>• Management of CR issues in supply chain</li> </ul>
Suppliers and subcontractors		<ul style="list-style-type: none"> <li>• Commercial relations</li> <li>• Joint research and development (R&amp;D)</li> <li>• Joint ventures</li> </ul>	<ul style="list-style-type: none"> <li>• Timely payment</li> <li>• Business forecasts</li> <li>• Technology roadmap</li> <li>• Confidentiality and IP protection</li> <li>• Clearly expressed standards and requirements (logistics, support, quality, CR etc.)</li> <li>• Consistency and transparency</li> <li>• Safety of employees working at our facilities</li> </ul>
Employees and unions		<ul style="list-style-type: none"> <li>• Employee opinion survey</li> <li>• Annual performance appraisal/ employee-manager relations</li> <li>• Site communication channels</li> <li>• Ad hoc interviews and focus groups</li> <li>• Meetings with union representatives</li> <li>• European Works Council</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of human rights</li> <li>• Good two-way communication</li> <li>• Consistency between values and actions</li> <li>• Continuous improvement in CR</li> <li>• Training and development</li> <li>• Close, human relationships with managers</li> <li>• Recognition for achievements</li> <li>• Flexibility and support to achieve work-life balance</li> <li>• Transparency and disclosure</li> <li>• Job security and good working conditions</li> <li>• Adequate salaries</li> </ul>

Figure 7

Figure 7 shows ST's key stakeholder groups, their expectations of us and some of the communications channels we use with them. Further details of our engagement with stakeholders – through our employee satisfaction survey or our work with Amnesty International, for example – can be found in this report.

Corporate  
Division  
Site

Stakeholder group	Consultation channels	Expectations
Local communities	<ul style="list-style-type: none"> <li>• Local consultation</li> <li>• Site environmental reports</li> <li>• Joint projects</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of human rights</li> <li>• Good management of environmental, health and safety (EHS) risks</li> <li>• Protection of environment</li> <li>• Transparency and material disclosure</li> <li>• Engagement in the community</li> <li>• Sharing benefits of expertise and resources</li> <li>• Continuous improvement in CR</li> <li>• Respect and integration of local culture</li> </ul>
Government: – Local – National – Transnational	<ul style="list-style-type: none"> <li>• Local/national consultation</li> <li>• Annual reports</li> <li>• Industry working groups/committees</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with law</li> <li>• Protection of human rights, health and safety</li> <li>• Payment of taxes</li> <li>• Protection of environment</li> <li>• Continuous improvement in CR</li> <li>• Contribution to policy making in CR/sustainable development</li> <li>• Transparency and material disclosure</li> <li>• Sharing benefits of expertise and resources</li> </ul>
NGOs, associations, academic community, business community	<ul style="list-style-type: none"> <li>• Direct consultation</li> <li>• Annual reports</li> <li>• Partnerships/joint projects/working groups/meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of human rights, health and safety</li> <li>• Protection of environment</li> <li>• Good management of social, ethical and environmental (SEE) risks</li> <li>• Transparency and material disclosure</li> <li>• Sharing benefits of expertise and resources</li> <li>• Continuous improvement in CR</li> <li>• Contribution to policy making in CR/sustainable development</li> <li>• Financial support (with some exceptions)</li> </ul>
Media/Press	<ul style="list-style-type: none"> <li>• Routine working relationship and direct consultation with the media community</li> </ul>	<ul style="list-style-type: none"> <li>• Proactive and reactive communication, material disclosure, transparency, service-oriented attitude and consistent flow of information</li> <li>• Timely response to queries with transparent and honest information aimed at communicating the company's position</li> </ul>

Figure 7 (continued)

## Lobbying

At corporate level, we interact with government authorities on a number of key issues specifically related to our sector and where we have significant influence. These largely involve environmental subjects – such as CO<sub>2</sub> emissions from the use of Perfluorinated Compounds (PFCs) and the use of hazardous substances in our operations – and topics relating to the strategic direction of our research and development, mainly in Europe.

We often advocate more stringent regulations and occasionally lobby to prevent a ban on chemicals for which there are no current alternatives. We lobby via industry associations and this generally involves voluntarily committing to the maximum possible reduction in the relevant chemicals or emissions until a viable alternative is found.

## Lobbying activities

Issue	Description of activity	Period	Country
Lobbying to avoid a ban on PFCs	Lobbying of the European government through industry associations to avoid legislation banning PFCs. ST and the semiconductor industry took this position because there are no viable alternatives to the use of these chemical compounds in the manufacture of electronic components. ST and other member companies of the European Semiconductor Industry Association signed an agreement to voluntarily reduce PFC emissions to reach a level 10% below the 1995 level by 2010, before opposing the European government's proposed total ban on PFCs.	1998-99	Europe
Lobbying to increase the funding available in the Seventh EU Framework Program (FP7) for Information Technology	The previous Commission launched the concept of 'Technology Platforms' for FP7, with the intention to stimulate public/private partnerships in the framework of Joint Technology Initiatives, which will combine private sector investment, and national and European public funding. ST is very active in the main ICT technology platforms at management level, together with the main large European industry players. The new Commission has requested a doubling of the yearly budget for FP7, versus FP6.	Since 2004	Europe
Proactive stance to the proposed European REACH legislation	ST fully supports the objective of REACH (Registration, Evaluation and Authorization of Chemicals), which is to protect human health and the environment through the control and phasing out of hazardous substances. As an example, ST includes all CMR, PBT and POP* substances on our banned substances list. Internal exemption can be given but this is reserved for exceptional cases only. We plan to adopt the proposed system and 'export' positive aspects of it to our non-European sites. We will work with other semiconductor companies and our material suppliers to increase the visibility of chemicals that could be entering our operations from upstream without our knowledge.	Ongoing	Europe
Proactive stance to the phase out of Perfluorooctane Sulfonate (PFOS)	Despite the difficulty of detecting the presence of PFOS in our chemical products (due to the small quantities concerned, and confidentiality/IP issues), we surveyed all material suppliers to understand the situation. The results led us to distinguish between 'critical' and 'non-critical' uses. For critical uses, alternatives are needed. We will work at industry level with our peers and suppliers to find solutions together. For 'non-critical' uses we have already developed replacement programs and are sharing the results internally for worldwide deployment.	Ongoing	Europe
Proactive stance to draft UN Norms for Transnational Companies on Human Rights	We have signaled our support of the draft UN Norms and are committed to working internally and with relevant human rights NGOs and other companies to implement the Norms within our sphere of influence.	Ongoing	Worldwide

Figure 8

**S02** **S03** In influencing local public policy, our sites work with local authorities according to the company's shared values and principles of business integrity. These are set out in our policies on Business Conduct and Ethics, and Conflict of Interests and prohibit the use of any kind of bribes or illicit payments. ST also refuses financial support to political parties or groups.

\* CMR: Carcinogenic, Mutagenic, Toxic for Reproduction.  
PBT: Persistent, Bioaccumulative and Toxic.  
POP: Persistent Organic Pollutant.

## Our Corporate Responsibility issues

We value the views of our stakeholders in understanding the importance of the Corporate Responsibility issues that are most relevant to our company, and take their input into account when deciding where our obligations lie.

We also value our work with others in the Corporate Responsibility community. By participating in forums and debates, we contribute to an understanding of the role of Corporate Responsibility and its dissemination. We are one of the leading companies supporting the UN Global Compact, the draft UN Norms on company behavior regarding human rights, and the 'European Roadmap for Businesses Towards a Sustainable and Competitive Enterprise'.

Working with the Corporate Responsibility community has been invaluable in highlighting and helping us better understand particular issues. In 2004, for example, we began to focus on human rights and approached Amnesty International and The Rights Practice for their input on the ST Code of Conduct in relation to human rights.

### Defining our Corporate Responsibility challenges

We define our Corporate Responsibility challenges as those specific topics that have the potential to impact us – or one or more of our stakeholders – in our ability to create financial or non-financial value. These are areas requiring a special effort that exceeds any 'business as usual' approach.

Through continuing dialogue with our stakeholders, we have identified a number of important Corporate Responsibility challenges that we believe we should focus our attention on particularly. These may be longstanding, recent, specific to our industry, particular to our company, or simply reflect a general concern relating to the impact of business on society.

### The impact of chemicals on health and safety and the environment

We recognize that manufacturing semiconductors requires hazardous chemicals, which pose a potential risk to the health and safety of our employees and to the environment. We also acknowledge that there are wider – although minimal – implications for health and safety and the environment from the use of hazardous chemicals beyond our own operational activities – both up- and down-stream. The way we manage these risks is detailed in the health and safety section of this report (p.53).

### Employability and employee satisfaction

We have been committed to the satisfaction and well-being of our employees since ST's foundation in 1987. This is a key issue because it contributes to the long-term success of the company. However, it is subject to severe internal and external pressures.

For example, as a result of market conditions our investments in Asia-Pacific now exceed our investments in Europe and the USA. The shift in the regional weighting of the company's asset base requires significant management communications to keep our historical employee base informed, as well as educate the new employees during this transition. We have an important role to play in helping them feel more secure, and we are maximizing our efforts to provide security for our employees.



**Human rights**

At ST, we are committed to respecting human rights, and want our presence in developing countries to make a positive contribution to their social and economic development. Because of the expansion of global business and the increased economic activity in developing countries, human rights have an increased importance for most multinational companies. This is reinforced by the concerns expressed by civil organizations and the socially responsible investment community.

Human rights issues are relevant to ST because both our sector and our company have expanded into a number of developing countries. We are in favor of “globalization with a human face”, and believe human rights are an important and complex element within the wider debate on the impact of globalization. We also acknowledge that some human rights issues relating to business in general are complex, and require the collaboration and commitment of a number of different stakeholders whose interests may at times diverge.

**Ethical supply chain management**

Because of the sheer scale of impact that global business can have on people and the environment throughout the value chain, we have begun to focus on ethical supply chain management. We believe that discussion and action on this subject can contribute to limiting potential negative impacts of poorly managed globalization, and to setting and implementing shared standards that increase financial and non-financial value for everyone concerned. Managing the supply chain responsibly is a complex and highly challenging undertaking, but we believe that globalization can have a human face. We are determined to progressively make improvements and spread the culture of Corporate Responsibility within our sphere of influence.

**Gender equality and diversity**

Non-discrimination, equal opportunities and the value of diversity are key issues for multinational companies. Our employees and stakeholders have indicated that they are particularly concerned about gender equality and we are addressing this, as it has the potential to significantly influence the long-term success of the company.

## Business risk and opportunities

With regard to Corporate Responsibility, we believe that there is no conflict of interest between our shareholders and other stakeholders. Corporations that are good corporate citizens in their communities not only fulfill their ethical obligations but also maximize the return to their shareholders.

When our various stakeholders tell us different things, we balance the varying opinions and then take a carefully considered view. For ST, Corporate Responsibility means ‘creating financial and non-financial value for all of our stakeholders’. We consider all the effects of our actions, the business risks and opportunities – and the implications for our stakeholders – before taking a decision based on our values.

With others in the Corporate Responsibility community, we strive to ensure that there is a level playing field in which acting responsibly promotes a company’s financial interests.

We are pleased to see that, increasingly, financial value is being attached to ethical action, as companies begin to realize that socially responsible organizations generate more value for their shareholders as well as for other stakeholders. This is something that ST has understood for a long time.

We have long believed that to make a genuine, lasting contribution to sustainable development, companies practicing Corporate Responsibility must articulate the ‘business case’ for the values they hold. This has now become the consensus. We also know that some elements of Corporate Responsibility lack a compelling business case – some may even involve higher costs – but we believe they must still be defended and upheld on ethical grounds.

That is why we voluntarily decided to invest in the reduction of CO<sub>2</sub> emissions, especially those arising from PFC chemicals, even when there was no apparent short term ‘payback’ (see p.90 of our 2003 Sustainable Development Report). And it is why we defend human rights standards in the workplace, even when there are costs in setting up and maintaining adequate management systems and practices. We have never doubted that in the long term, ethical behavior pays off, through the increased attractiveness of our company, higher motivation of our employees, and greater profitability resulting from the reduced consumption of natural resources. We are deeply convinced that ST will deserve its long-term ‘license to operate’ through a strongly embedded sense of Corporate Responsibility.

Because of the importance of economic success in a competitive world, we recognize that there are everyday business situations that necessitate a balance between financial and wider social, economic, ethical and environmental interests. Our response is to ensure that everyone in our company is aware of the potential impact of our activities on all our stakeholder groups, including those activities which cannot be easily quantified in terms of money – but which still matter to people.

We let our employees know that they may have to make challenging decisions, giving precedence to a specific stakeholder group at a particular time. But that decision should never be automatic and should always be taken in the full knowledge of the wider implications for all concerned.

We are developing a formalized risk register covering non-financial risks and opportunities. This will ensure the systematic management of issues of concern to stakeholders. The register is designed to demonstrate the business risks and opportunities of Corporate Responsibility issues, and to identify the relevant direct and indirect financial impacts.

Reducing or managing risk helps to control the cost of insurance and to minimize the chances of incurring the costs of litigation. It also protects our reputation and creates a bond of trust between the company and our stakeholders, which is vital to our long-term success.

## Translating our values into action

### Business conduct

How do we make sure that ST's values are played out on the ground?

ST is a large, complex organization. Our management is driving Corporate Responsibility through corporate policies on business conduct and ethics, conflicts of interest, trading in ST shares and so on, deployed throughout the ST organization worldwide, as well as by training delivered through ST University. We have also adopted a Corporate Governance Charter, which is periodically reviewed and posted on our website at [www.st.com](http://www.st.com).

### ***Compliance with laws, norms, conventions and principles***

*Each ST organization and each Director, officer and employee, is required – without exception – in their personal behavior, and in the manner they conduct business, to:*

- *Behave honestly and ethically by ensuring that business policies and practices are aligned with ethical principles in dealing with customers, suppliers, employees and officials of domestic or foreign governments or administrations*
- *Act in accordance with all national and international laws, rules and regulations directly applicable to their business ethics and professional activities*
- *Respect and promote human rights, based on accepted international laws and practices such as those of the United Nations Universal Declaration of Human Rights, International Labor Organization (ILO) and UN Global Compact Principles*
- *Ensure proper use, protection and conservation of ST assets and resources (which include business, technical, financial and trade data, and personal information), for ST's sole best interests and not for personal benefit.*

- *Respect the rights of ST's customers, suppliers and competitors in the same way that ST expects its own rights to be respected*
- *Maintain the confidentiality of protected or sensitive information acquired in the course of their work, except when such disclosure is either duly authorized in compliance with ST policies, or legally required, and not use such information for unethical or illegal advantage, either personally or through third parties, including for trading in the shares of ST, or in those of ST's customers, suppliers or partners*
- *Provide all information enabling complete and reliable financial reporting and disclosures*
- *Avoid any impropriety in personal and professional relationships, when dealing with suppliers, customers, and all organizations or individuals doing or seeking to do business with ST*
- *Report any breach of this Policy Statement or the other principles or practices covered by this Standard Operation Procedure (SOP).*

Extract from our Business Conduct and Ethics Policy

### Compliance with corporate governance standards

As a Dutch company listed on the New York Stock Exchange, Euronext Paris and the Borsa Italiana in Milan, ST is subject to various rules and recommendations. Our compliance with these standards is discussed in detail on p.86 of our 20-F report ([www.st.com](http://www.st.com)). Furthermore, we present an overview of the activities of the different committees comprising our Supervisory Board in Figure 9.

### Business ethics

**S02** **S03** Our guiding principles provide the foundations on which our commitment to the highest standards of business integrity are based. All of our employees are expected to comply with the highest standards of business ethics in their work, and with customers, suppliers and government officials. This is set out in our Business Conduct and Ethics Policy, which is supplemented by local policies and procedures. We inform all our suppliers about our ethical standards and expect them to conform.

Activities of committees comprising the Supervisory Board	Supervisory Board members	Audit Committee	Compensation Committee	Strategic Committee	Nominating & Corporate Governance Committee
Number of independent members (based on the definition suggested by New York Stock Exchange)	9/9	3/5*	3/3	5/5	3/3
Number of meetings in 2004	10	12	4	5	1

Figure 9

\* Note: Only the three independent members are voting members.

## Implementation of the Business Conduct and Ethics Policy

- All local entities shall adopt Business Conduct and Ethics standards and policies (including Conflict of Interest and Insider Trading rules) consistent with this SOP. Stricter guidelines or more detailed instructions may in certain cases be necessary to comply with local requirements, but these may not contradict this SOP.
- All ethical, legal, environmental, employment and human rights issues must be addressed and resolved in a manner consistent with the principles and provisions of this SOP.
- All ST Directors, officers and employees must be informed thoroughly about this SOP. All new employees are to be required to sign and agree to comply with this SOP when signing their employment agreement. Local management is responsible for the enforcement and compliance with this SOP.
- All first and second line managers and employees extensively dealing with third parties (i.e. front-end manufacturing, back-end manufacturing, R&D, purchasing and site management) shall be regularly reminded of the contents of this SOP and requested to complete and sign a yearly compliance statement.
- All ST Directors, officers and employees are responsible for promoting the principles and provisions of this SOP. Questions about the application or meaning of any provisions of this SOP, or potential violations of this SOP are to be reported to superiors. Where allegations are concerned, fair and comprehensive investigations will be conducted by ST Internal Audit organization in coordination with management closest to the issue.
- ST shall ensure that there will be no adverse work-related consequences to an ST Director, officer or employee bringing complaints of violation of this SOP.
- Acts inconsistent with this SOP must be promptly corrected. They are subject to disciplinary action up to and including termination of employment, under the responsibility of the relevant management superior and Corporate Vice President (VP), and information of the Corporate Human Resources VP. Reportable violations of this SOP must be referred immediately to the Chief Financial Officer (CFO), General Counsel as well as to the Chief Executive Officer (CEO). The CEO has ultimate authority for disciplinary action if not duly taken by the hierarchical management.
- In case a waiver or interpretation of a specific situation is required, the CEO shall be the sole person authorized to grant such a waiver or make such an interpretation upon endorsement by the CFO for situations pertaining to paragraphs 5.1 to 5.5 inclusive of this SOP and information to the General Counsel.
- The Audit Committee must be informed of any event which constitutes reportable breach of this SOP and about any case of waiver or interpretation at the next quarterly meeting of the Audit Committee.

### **Financial reporting procedures and internal controls**

ST is committed to:

- Providing true, complete, accurate and timely financial information, and understandable disclosures in public communications and reports
- Refraining from directly or indirectly taking any action to fraudulently influence, coerce, manipulate or mislead investors, creditors or persons that make decisions and take actions based upon ST's financial statements or public disclosures
- Ensuring that such statements and disclosures are not materially incorrect or misleading.

ST's practice is to file full quarterly financial statements, complete with Management's Operating and Financial Review and Prospects on form 6-K with the SEC. Audited annual financial statements, complete with Management's Operating and Financial Review and Prospects, are filed with the SEC on form 20-F. All filings are made with the certification contemplated by 302 and 906 of the Sarbanes-Oxley Act. ST also makes filings with the French AMF (Autorité des Marchés Financiers) and the Italian CONSOB (Commissione Nazionale per le Società e la Borsa).

ST seeks to ensure reliable internal controls, and will:

- Periodically assess the quality of internal controls, including internal controls over financial reporting
- Implement control improvements as and when necessary
- Take immediate action to resolve any control weakness that could materially affect the reliability of financial reporting and disclosures.

### **Internal Audit**

Corporate Internal Audit is an independent, objective assurance and consulting activity designed to add value and improve ST's operations at all levels, and to control the compliance with company standard operating procedures and policies. It helps the company reach its objectives by bringing a systematic, disciplined approach to evaluating and improving the effectiveness of risk management, control, and governance processes. Internal Audit assists the Audit Committee of the Supervisory Board in its duties, and helps to ensure that all information regarding corporate governance and business ethics is brought to the Committee's attention. This includes any instances of non-compliance with the company Code of Conduct, policies and procedures and applicable laws and regulations.

### **Corporate Responsibility Steering Committee**

With the creation of the Corporate Responsibility Steering Committee in 2003, ST now has a dedicated organizational framework to oversee the implementation of Corporate Responsibility initiatives throughout the company (see Figure 10).

### Organizational framework for Corporate Responsibility

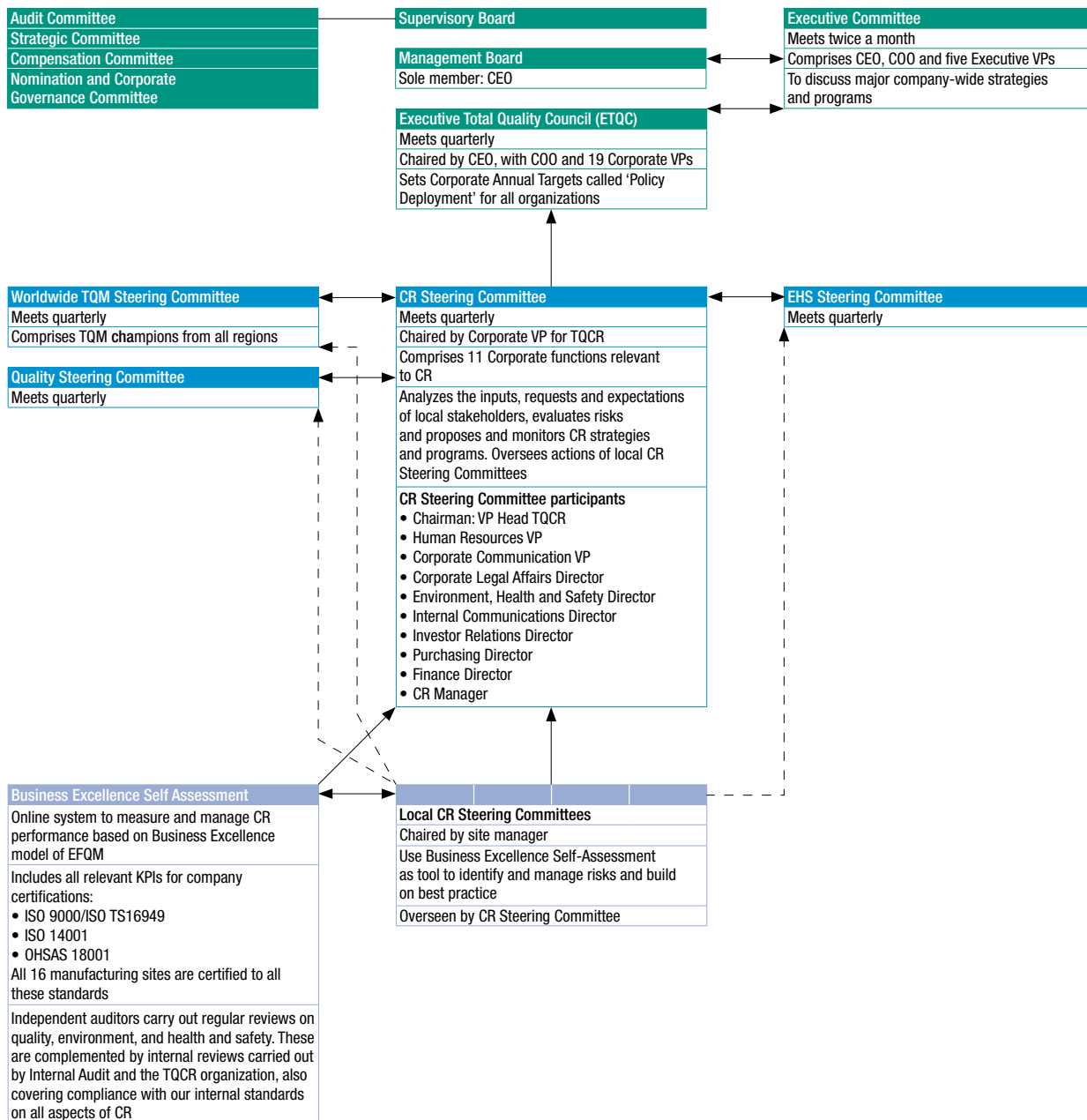


Figure 10

The Corporate Responsibility Steering Committee members, who meet on a quarterly basis, cover the key functions involved in issues relating to Corporate Responsibility. They include the Corporate VP for TQCR, Corporate Legal Affairs Director, Investor Relations Director, Corporate Communication VP, Human Resources VP, and the Environment, Health and Safety Director. A full time Corporate Responsibility Manager joined the team in March 2004 and acts as the primary coordinator for all Corporate Responsibility-related issues in the company.

The Committee's mission is to analyze the inputs and requests from stakeholders, evaluate the risks the company faces, and propose strategies and programs for the effective management of Corporate Responsibility. The Chairman of the Corporate Responsibility Steering Committee reports the activities and findings of the committee to the Executive Total Quality Council, chaired and driven by the CEO, on a quarterly basis.

In 2004, the Corporate Responsibility Steering Committee oversaw the launch and development of a number of programs, including:

- Transformation of our existing manual TQM Self Assessment into an online tool
- Preliminary revision of our Code of Conduct and Supplier Code of Conduct
- Discussions on sector initiative for ethical supply chain management
- A corporate working group on gender equality; engagement with the Corporate Responsibility business network on gender equality
- Work on human rights standards and their implementation, in collaboration with NGOs specializing in human rights
- The launch and development of an awareness campaign on Corporate Responsibility in five major sites, and corporate purchasing and supplier quality departments
- The creation of a training program in Corporate Responsibility designed to complement the revised Code of Conduct, focusing in particular on human rights and business ethics with the support of specialized NGOs (Amnesty International, The Rights Practice and Transparency International)
- An ongoing discussion with the socially responsible investment community and adoption of a new method of communicating our performance results to the socially responsible investment community and other stakeholders (One Report)
- Engagement with The Reassurance Network to prepare for quality assurance of our Corporate Responsibility management systems and an overall improvement process
- Engagement with Corporate Responsibility business networks (such as EFQM, CSR Europe, Philiias, Sodalitas and WBCSD) to share best practice.

The Corporate Responsibility performance of local sites will be monitored at the corporate level using our newly expanded and improved Business Excellence Self Assessment tool, and formal and informal communication networks. These results will be reported regularly to the Corporate Responsibility Steering Committee with the objective of monitoring and managing risk, identifying opportunities for improvement and communicating results to the senior management.

The responsibility of managing Corporate Responsibility at the local level is that of site managers, who act as chairmen of the local Corporate Responsibility steering committees. A number of these committees are already in place. All major sites will have their own Corporate Responsibility committee.



### **Policies, management systems and objectives**

Corporate Responsibility is built into the setting of Corporate Annual Targets, and these are then cascaded through the ST management structure. Our employees' actions are also guided by the Environmental Decalogue (a pioneering set of ten principles for sustainable development, with measurable targets within a set time frame).

In 2005 the Environmental Decalogue will be revised to cover health and safety, in order to reflect the merging of the Environment, and Health and Safety departments. We will also be working towards developing a Social Decalogue. Corporate Responsibility concerns feature heavily in the ongoing draft revisions to our internal Code of Conduct, our new Supplier Code of Conduct, the evaluation of management systems for CR, and in the training that ST employees receive.

In 2004, we continued the process begun in 2003 of reviewing our key Corporate Responsibility policies. Our internal objective is to build on and expand our existing TQM approach to Corporate Responsibility. This will create a single shared framework that will ensure clarity and consistency of values, objectives and action throughout the company. This internal development will support the company in fast-moving market conditions.

In 2004, we focused on laying the foundations for a revised Code of Conduct, based on our existing Business Conduct and Ethics Policy. This will integrate new elements such as human rights and principles relating to HR management. Our aim is to use the revised Code of Conduct as the single reference document for Corporate Responsibility, covering the responsibilities of the company to all stakeholder groups through the decisions and actions of all employees. The review of this document will also lead to the full review of our management systems for Corporate Responsibility in a selection of sites worldwide in 2005 by The Reassurance Network, a UK-based assurance company. A task force will be set up in 2005 to integrate the findings of the evaluation process within our existing company systems and culture. We see this process as a deep and gradual improvement and development of the pioneering work and achievements of ST in Corporate Responsibility over the last decade.

In 2004, we also focused on laying the foundations for a new Supplier Code of Conduct that will expand the requirements that we make on our suppliers, based on our own principles and objectives relating to Corporate Responsibility. This document will be finalized in 2005.

The work being carried out on our Code of Conduct consists of harmonizing existing policies and their implementation within the new expanded context of Corporate Responsibility in ST, and identifying areas in which policies or procedures must be improved or created if found to be lacking.



## **ST's economic impact and performance**

Because of our global presence, we are making an important contribution to global wealth creation – especially in the emerging countries where we are long established. We support these economies by employing local people, working with local suppliers, and supporting local services.

And we also contribute to wealth creation through the very nature of our business – microelectronics, which is principally based on research and innovation. Our products help raise the bar of productivity and competitiveness, by making processes quicker and more efficient.

ST has a global presence. This means we make a valuable contribution to global wealth creation, particularly in those emerging countries where we have long operated – China, Malaysia, Malta, Brazil, Russia, India and countries in North Africa. In all these locations, ST boosts the local economy by employing local people (including managers), working with local suppliers and supporting local services. ST’s microelectronics business also creates wealth as its products help to raise productivity and competitiveness.

This section shows the wider economic impact on our stakeholder communities.

**Breakdown of sales by region**

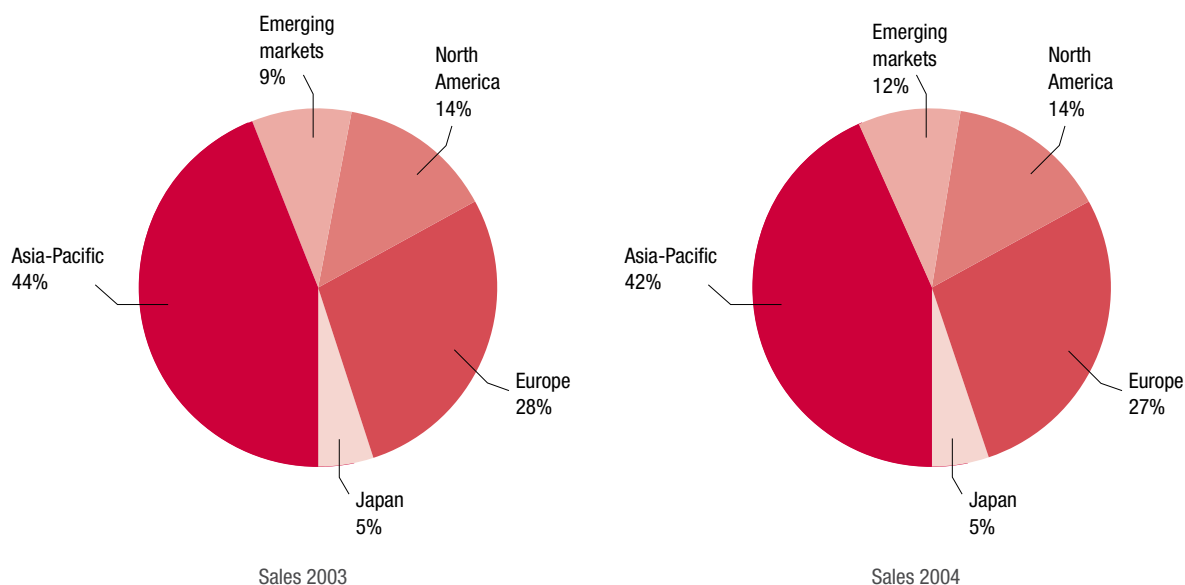


Figure 11

**Customers**

In 2004, the semiconductor market expanded in a more favorable economic environment, and global sales of the industry increased by 28%.

**EC1** ST grew by 21% in 2004, driven by wireless, digital consumer and automotive applications, with sales reaching US\$8,760m.

**EC2** The percentage of sales by region shows some decrease in Asia-Pacific and Europe, and a slight increase in emerging markets (see Figure 11). Please note that these data are based on the region to which our products are shipped; the sales themselves are generally made in Europe and the USA.

The breakdown of our sales by market segment is stable. The profile of our products is also relatively stable, with 66% of our sales being of ‘dedicated products’ (developed for a specific customer), compared to approximately 69% in 2003 and 2002.

## Suppliers

**EC3** In 2004, ST purchased plant fittings, materials for semiconductor fabrication and associated services worth around US\$3.4bn from its suppliers. This is an increase of around 50% compared with 2003.

The company spreads its purchasing across the world, in line with countries' technical specialties: 30% of purchases were made in the USA, 32% in Europe, 18% in Japan and 20% in the rest of the world (particularly in Asia).

Purchases from ST suppliers	2001	2002	2003	2004
US\$m	2,415	1,949	2,310	3,422

Figure 12

**STE1** The split between plant, property, equipment (PPE) and materials (in US\$m), is shown here in Figure 13.

Split between PPE and materials (US\$m)	2002	2003	2004	As a % of sales
PPE	991	1,320	2,050	23.4%
Materials	958	990	1,199	13.6%
Total	1,949	2,310	3,249	37.1%

Figure 13

In 2004, some 60% of ST's purchases were made from major multinational groups, with 40% from relatively small, specialist companies. In the same year, just under 30% of investment expenditure – US\$700m – went towards the construction and upkeep of buildings and various types of equipment.

A considerable share of this expenditure has helped to support local economies in the regions of the world where ST has industrial sites, via small and medium subcontracting companies.

**EC4** We are currently developing the management and reporting systems to ensure that the percentage of contracts paid in accordance with agreed terms is monitored at company level.

### Providers of capital

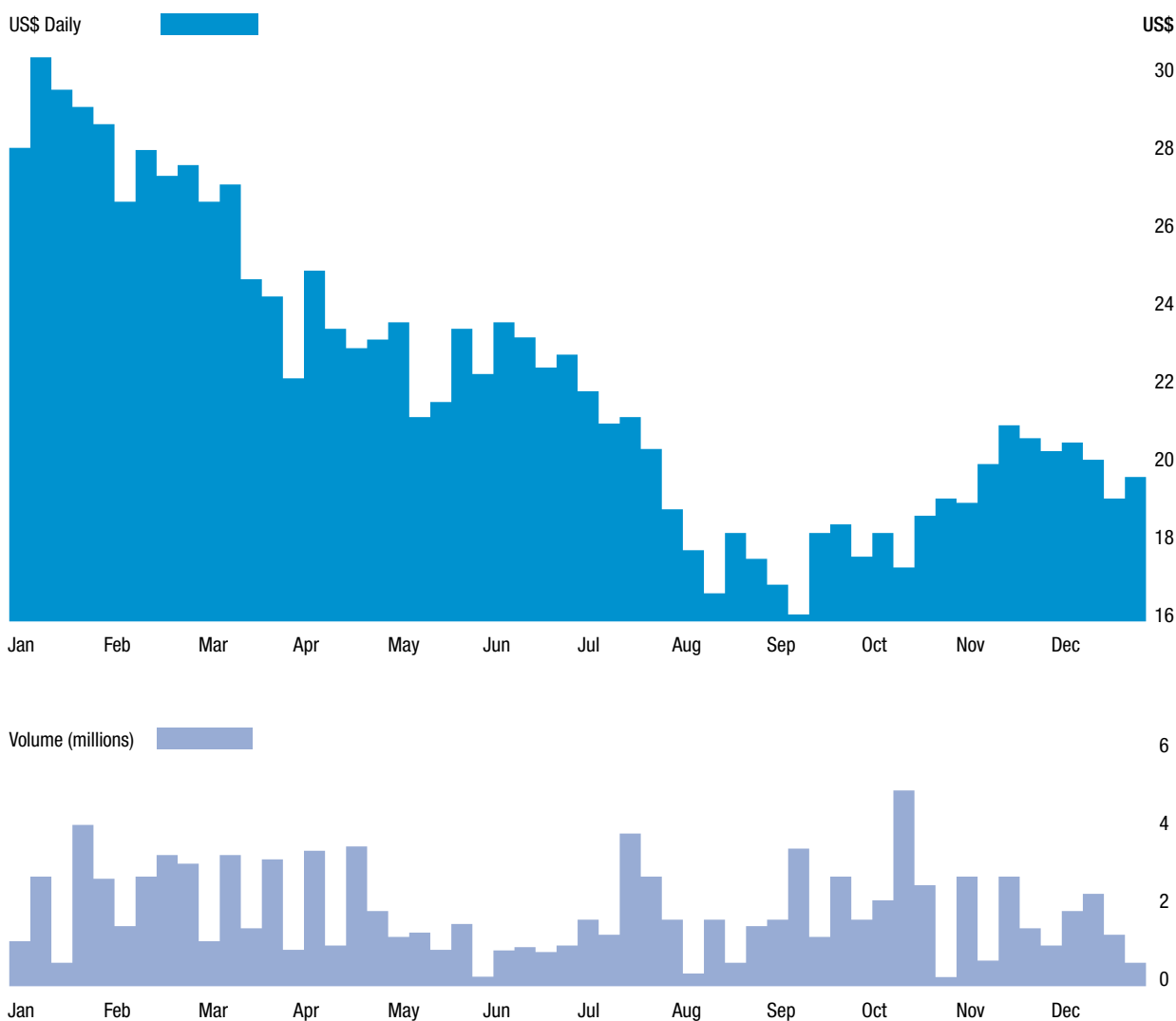
**EC6** In 2004, ST paid dividends to its shareholders, and repurchased all the outstanding 2009 convertible bonds, repaying a portion of its debts:

Capital activities	US\$m
Dividends distributed	107
Interests paid	44
New loans subscribed	91
Repayment of debt	1,288

**STE8** ST's share price performance over the last year has been strongly affected by the overall worldwide economic situation, and particularly by specific market conditions in the high technology sector (see Figure 16).

Figure 15

### ST share evolution 2004 (NYSE:STM)



**STE8** Figure 16

## Public society

### Research and development

Research and development (R&D) is critical to our success, as well as to the development of the countries in which we operate. That is why we are committed to increasing R&D expenditure in the future, especially in the area of nanotechnology.

In our 18 years of existence, ST has grown significantly faster than the global semiconductor industry, and much of this success has been fuelled by our dedication to R&D. Even during downturns, ST has consistently maintained a high level of R&D investment.

But even this high level of R&D investment underestimates the value we have received from our efforts. ST has always used an array of important strategic customer alliances to ensure that our R&D activities closely track the changing needs of the industry, and our network of partnerships with prestigious universities and research institutes around the world ensures that ST has access to and federates leading-edge knowledge from wherever it may be. ST is committed to this effort because developing the new semiconductor generations that have typically arrived every 18 months involves much more than simply shrinking the size of the basic transistors. These technology advances usually require the development of new specialized materials, equipment and design tools. For this reason, each new technology node is the result of a concerted effort by the global semiconductor industry, following a cooperative effort among global semiconductor manufacturers and suppliers and industry, government, and academic researchers to ensure advancements in the performance of integrated circuits. This is known as the ITRS (International Technology Roadmap for Semiconductors).

**STE3** Over the years, we have developed a wide and deep network of cooperation with many leading universities, including in China (Shenzhen Graduate School of Tsinghua University), the UK (Bristol), Italy (Bologna, Catania, Genoa, Lecce, Milan, Naples, Palermo, Pavia, Pisa, Rome and Turin), France (Grenoble, Marseille, Montpellier, Toulouse and Tours), the United States (Carnegie Mellon, Stanford, Princeton, Berkeley, UCSD and UCLA), and Singapore for basic research projects on design and process development.

ST also leads numerous projects running under the European Union's Information Society Technologies (IST) programs. ST has actively participated in these programs and is continuing its collaborative R&D efforts within the MEDEA+ research program. Meanwhile, the R&D organization within ST's front-end Technology and Manufacturing (FTM) Division that comprises some 1,100 researchers, works at all levels, from fundamental research with academic partners into solid-state physics to piloting the production of actual devices built in newly developed technologies. ST, Freescale (formerly part of Motorola) and Philips have combined some of their non-competitive R&D forces in the 'Crolles2 Alliance' to jointly develop these future generations of semiconductor technology. In 2004, we announced an agreement with Commissariat à l'Energie Atomique (CEA) to run a four-year project, 'Nanotech 300', with our partners in the Crolles2 Alliance.

ST's Advanced System Technology (AST) organization is working to support our development of System-on-Chip (SoC) technology that will drive key strategic applications, including digital consumer, wireless communications, computer peripherals and smart cards – as well as the broad range of emerging automotive applications such as car multimedia. All of these worldwide activities

create new ideas and innovations that enrich our portfolio of intellectual property, and enhance our ability to provide our customers with winning solutions.

**STE5** The number of our employees dedicated to R&D activities has increased from 5,000 to 10,000 in the last six years (see Figure 17). This has not only doubled the number of people contributing to the innovation at the heart of our company's success, but has also contributed to providing important career and society-enhancing jobs to young people from countries that are interested in developing their own economic, technological and social infrastructures, including India and China.

**STE4** R&D expenditure in 2004 is shown in Figure 17.

**STE6** Intellectual property rights that apply to our various products include patents, copyrights, trade secrets, trademarks and maskwork rights. We have more than 19,000 patents or pending patent applications registered in countries around the world. In 2004, we filed 714 new patent applications worldwide (see Figure 18).

#### Taxes

**EC8** Taxes are part of our economic contribution to society; we pay taxes in all the countries in which we operate (income taxes and other local taxes). See Figure 19.

#### Charitable donations

**EC10** For charitable donation, please see the section on 'Our communities', on p.60.

## Employees

ST has created 8,884 jobs since 2001, despite the fall in employment in our industry during this period.

This job creation has largely occurred in Asia, while in the regions of Europe and the USA, employment has remained stable. This is largely because of the significant growth of our activities in Singapore and in China, and the fact that the region's turnover is traditionally higher.

**EC5** Our labor costs for the last four years are shown in Figure 20.

**LA1** Headcount by region is shown in Figure 21.

**LA2** New hires for 2004 are shown in Figure 22.

In 2004, the most significant personnel movements took place in Asia-Pacific due to strong development in the semiconductor market in this region and ST's own development there.

The growth in hires reflects the strong expansion in production (54% of the new hires were operators), but it also shows the development of local technical competence since the remaining 46% were engineers and technicians spread throughout the world.

**STE7** The change in headcount in 2004 shows a significant increase at company level – of 3,875 people. There were 8,206 new hires and 4,303 work contract terminations for the reasons shown in Figure 24.



Research and development	Europe	Americas	Asia-Pacific	Total
Number of people involved	7,555	443	1,823	9,822

STE4 STE5 Figure 17

ST patent applications filed in 2004	Number of patents
Italy	239
France	245
Rest of Europe	75
Americas	69
Asia-Pacific (including China, India, Israel, Japan, Singapore and South Korea)	86

STE6 Figure 18

Total taxes	2001	2002	2003	2004
US\$m	97	146	41	168

EC8 Figure 19

Labor costs	2001	2002	2003	2004
US\$m	1,493	1,593	1,925	2,308

EC5 Figure 20

Headcount by region	2002	2003	2004
Europe (including Malta)	23,200	24,159	24,916
Americas	3,154	2,947	3,071
Asia-Pacific (including Japan)	11,881	13,759	16,532
Africa	4,877	4,571	4,661
Others	29	218	349
Total	43,141	45,654	49,529

LA1 Figure 21

Hires by region	2003	2004
France	426	695
Italy	772	853
Rest of Europe (including Malta)	530	320
Other Mediterranean countries	630	688
Americas	154	474
Asia-Pacific (including Japan)	3,532	5,176
Total	6,044	8,206

LA2 Figure 22

Hires by job type	Increase 2003-2004	2003	2004
Engineers and managers	327	2,266	2,593
Technicians and administrators	135	1,032	1,167
Operators	1,700	2,746	4,446
Total	2,162	6,044	8,206

Figure 23

New jobs	2003	2004
Jobs attributed to new entrants	5,706	7,855
(including from takeovers)	500	4
Contract terminations		
Resignations	2,303	3,198
Retirements	183	240
Early retirements	59	10
Deaths	19	15
Lay-offs (including disciplinary reasons)	743	840
Evolution of headcount	45,654	49,529
New hires	6,044	8,206

STE7 Figure 24

### Economic impact on stakeholders

Figure 25 shows how the cash generated by our sales is split among our various stakeholders. It should be noted that:

- The amounts mentioned do not add up to the sales figure (\$8,760m) because not all amounts are disclosed by the company
- The amount given to “charities” includes the donation to ST Foundation, which is a different legal entity.

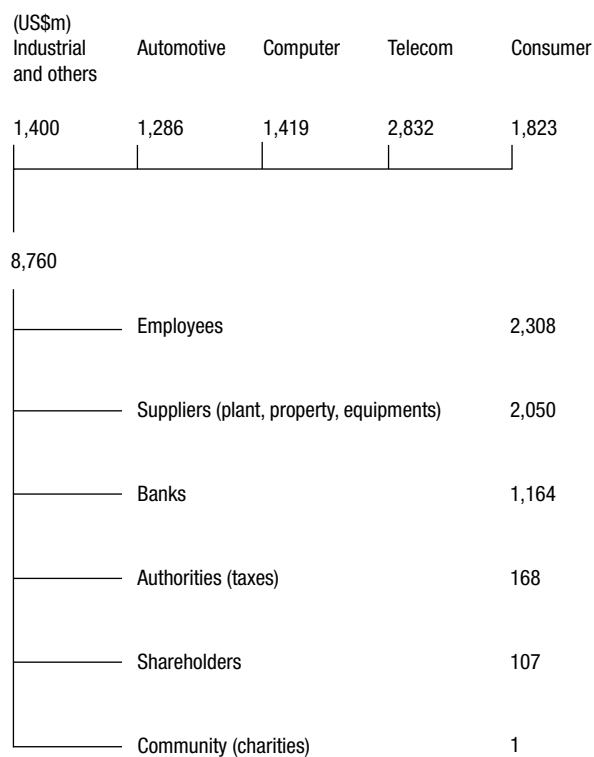


Figure 25

### **Update on the closure of our manufacturing plant in Rennes, France**

At ST, we know that we make a big impact on local economies and communities. That is why, if job losses are necessary, we will do whatever we can to find alternative employment for those employees affected. Last year we reported on the closure of our manufacturing plant in Rennes. The progress we have made in implementing our social plan for our Rennes plant demonstrates our commitment to upholding our principles, even in the most difficult circumstances.

As of December 31, 2004, the total workforce in Rennes consisted of 62 employees still working, and 402 employees who had received formal notification of the termination of their employment with ST. At the end of 2004, a total of 313 out of 402 employees at Rennes were in new employment or were no longer looking for work. This represents 78% of the workforce affected by the plant shutdown.

The breakdown of this figure is as follows: 6 employees created their own business, 53 were in training and 156 have found another job outside the company, all with the help of ST (61 of these 156 were placed through a collective agreement with two local companies). 48 employees have been relocated internally within ST and 50 have taken retirement.

62 people still within ST have not received notification of termination of their contracts. Of these 62, 43 are a group of people who wish to form a separate company based on their former back-end activity. A Memorandum of Understanding has been signed with the government and the unions to make this possible.



## **ST's social impact and performance**

We are constantly looking for ways to improve the lives of our stakeholders. That's why we are investigating how to provide greater opportunities for our employees, and to help them achieve a more satisfactory work-life balance.

Then there are the many local communities that we contribute to – through our community projects, our work with local suppliers and government, and the economic boost that we provide for an area.

And finally there is the wider society, which we engage with through our work to promote and protect human rights around the world, and also through the charitable activities of the STMicroelectronics Foundation.

Society is constantly changing. And we aim to keep pace with it.

As a company with global reach, ST affects the lives of many different people. Firstly, there are our employees. Then there are the different local communities we engage with and contribute to: through the economic boost that we provide for an area, through the service we offer our customers, through our work with local government and suppliers, and through our community projects. And there is the wider society, which we encounter through the charitable work of the ST Foundation.

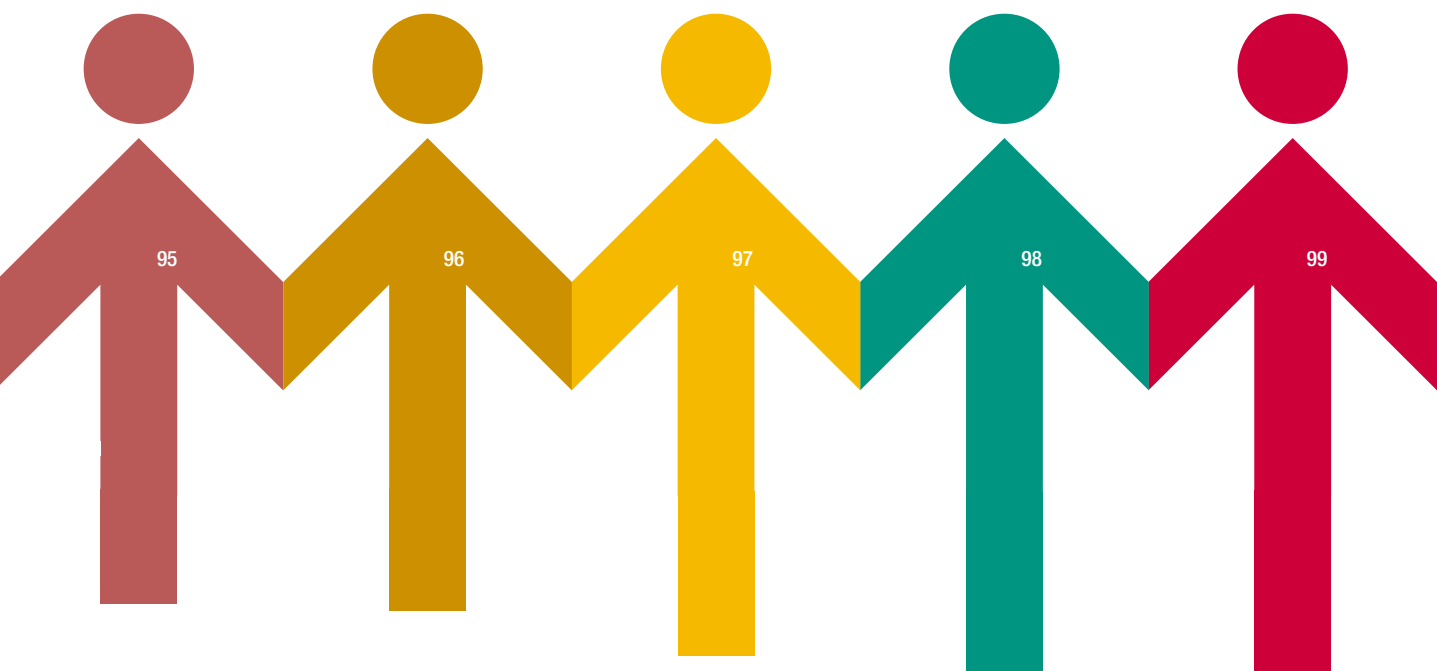
Our policy is to provide our employees with an environment in which diversity is valued. In 2004, we launched the first of a series of

opportunities. And we still engage closely with our employees through our employee opinion survey and *World Class* magazine.

In 2004, there were decreases in both the number and severity of work-related injuries and illness. And in terms of health and safety, all of our manufacturing sites and a number of our non-manufacturing sites continue to be OHSAS 18001 certified.

2004 has also seen us push forward on human rights issues in ST, in keeping with our history of leadership in CR. As signatories of the UN Global Compact, we are looking closely at the

**LA1** Figure 26. Evolution of headcount



initiatives looking at diversity issues. The first of these, the Grenoble PluriElles initiative, explores how to ensure a level playing field for men and women, and how to support employees in achieving work-life balance in the high pressure, fast-moving market in which we operate (see p.45).

The average number of hours our employees spent in training and development, including on courses run by our own ST University, rose again in 2004. We launched a number of new initiatives, such as the Career Paths project, to help our employees maximize their career

human rights implications of our business. We are working with the relevant NGOs, including Amnesty International, on the human rights aspects of our revised Code of Conduct and Supplier Code of Conduct.

In 2004 we have continued to work with our local and wider communities. ST staff have volunteered a greater amount of their time to work on community projects, and the ST Foundation has maintained its contributions to many different charitable causes, including the relief work following the Asian tsunami.

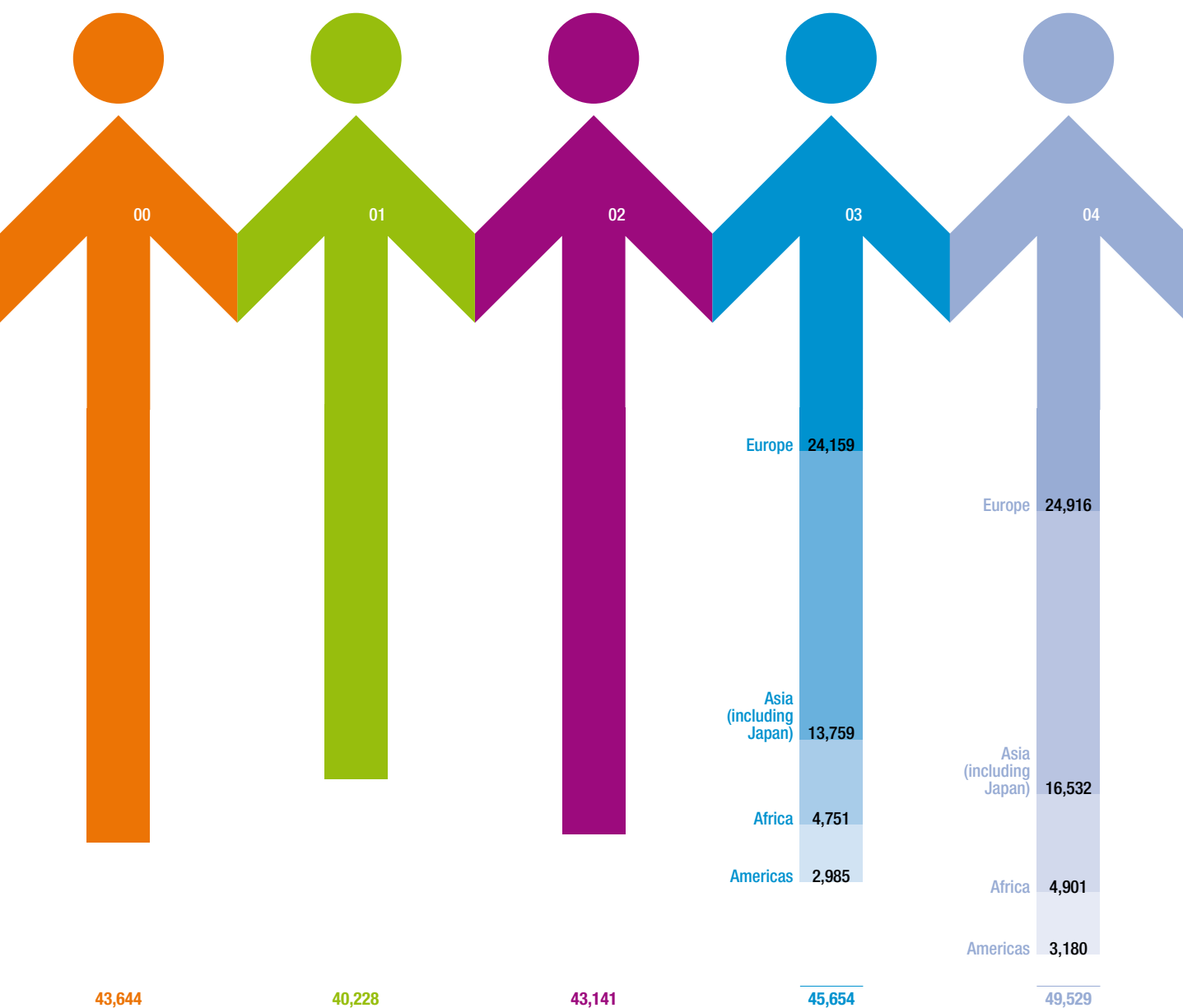
## Our people

At ST, we know that our employees are at the heart of our ambition to create value. That is why we pay such close attention to their hiring and integration, and to developing a long-term relationship with them. In 10 years the number of people working for ST has risen nearly 100%. There were 3,875 more people working for us in 2004 compared with 2003, despite the fluctuations and overall slowdown in our sector. As Figure 26 shows, ST has continued to invest in Europe and employee numbers have risen here, while Asia saw the fastest growth in 2004. ST is a Europe-based multinational company, and will remain Europe-based, committed to manufacturing and R&D.

### Attracting and retaining talent

For ST, operating in a high-tech industry, it is crucial to attract the best engineers and researchers. Consequently we strive to provide talented people with interesting projects and career opportunities. We also offer a vast range of jobs, in each part of the world, in both management and technical areas. We believe that talented people are attracted to a company where they are valued, and where ethical, social and environmental principles are fundamental.

In 2004, the fresh-out recruitment rate is very close to our corporate standard (59.1% vs. 60% minimum).



Hiring		2003	2004
STS1	Ratio job accepted/offered	95.7%	91.4%
STS2	Fresh-out recruitment rate	61.8%	59.1%
STS3	Recruitment cycle time (average cycle time to recruit engineers and managers, from job opening to acceptance)	59 days	55 days

Hires by job type		2003	2004
Engineers and managers		2,266	2,593
Technicians and administration		1,032	1,167
Operators		2,746	4,446
Total		6,044	8,206

LA2 Figure 27

**STS4** As of December 31, 2004, the average age of our employees was 33.65 years, compared to an average age of 33.8 years on December 31, 2003.

**STS5** In 2004, nearly half (48.5%) of our employees had worked for ST for over 5 years (see Figure 29).

Career length and turnover rate		2003	2004
STS6	Career length	10 years	12 years
LA2	Turnover rate	5.04%	6.61%

Figure 28

Newcomer seminars are organized for our new hires in order to help with the integration process. Life-long learning is then promoted in the areas of technical skills, management and quality. Training helps to empower our employees, increase their motivation and contribute to our retention rate. Retention is also helped by our global, consistent and integrated compensation and benefits policy.

**Diversity**

**LA10** We value diversity as part of our corporate culture. Global in outlook, we know that our strength and competitiveness are built on the wealth of our diversity: we consider it an asset. We want our people to reflect the diversity of the society in which they work, and we want to attract the most talented individuals to work for us, regardless of their gender, ethnic group or age.

We are already culturally diverse. In fact, 83 different nationalities are represented throughout the 36 countries in which we operate. We combine the cultures of France and Italy, Asia, North Africa and the USA. One third of our workforce is located in Asia, and in Morocco we are the main foreign employer.

**LA11 STS8** Although our company's roots are French and Italian, 40% of our top managers are from other countries.

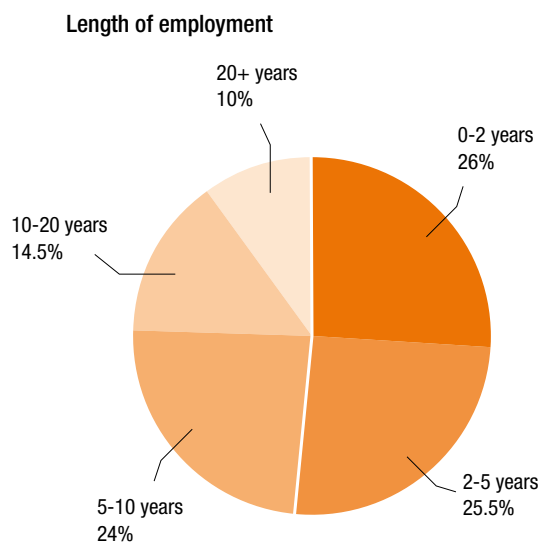
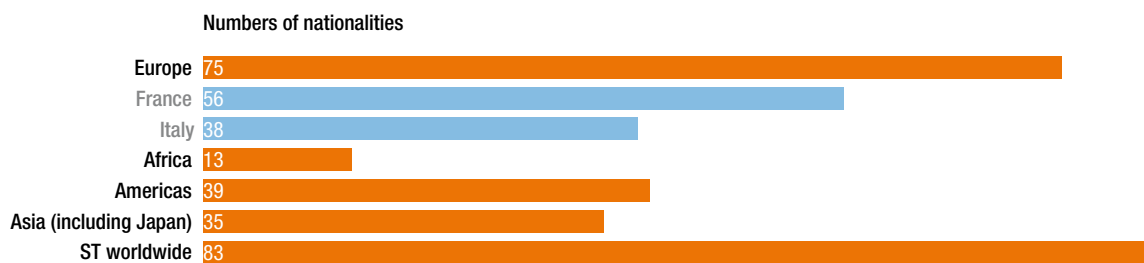


Figure 29





**STS7** Figure 30

**HR4** We believe in fair employment procedures. We screen, recruit and select candidates solely on the basis of their qualifications and abilities for a particular job, and we promote on merit. We do not tolerate discrimination, whether it involves race, color, age, political opinion, gender, national origin, disability, religion, marital status, veteran status or sexual orientation. This is specified in our Corporate Recruitment Procedure.

At the corporate level, we are investigating what more we can do to ensure that there is a level playing field for both current employees and potential applicants. We are currently examining gender equality in particular and will move on to other issues in the near future.

At the end of 2004, under the auspices of the Corporate Responsibility Steering Committee, we set up a working group on equal opportunities with a special focus on gender equality. In Europe in particular, there are far more men than women studying relevant subjects at university, and this is reflected in the relatively low percentage of women among new hires and in management positions. The objective of the working group is to formulate a strategy on how to ensure equal opportunities for men and women in ST, and to increase the representation of women at all levels of management.

Themes on work-life balance are also being explored. Because improving diversity concerns attitude, behavior and culture, we will focus on raising awareness of equal opportunities issues. The findings and recommendations will be submitted in the second half of 2005 to the Corporate Responsibility Steering Committee. Our aim is to validate and implement a strategy that integrates the best practices already demonstrated in some of our sites. We will also extend this initiative to our key operating regions.

#### **The Grenoble PluriElles initiative**

Grenoble PluriElles is a local initiative, established in July 2004. In partnership with a number of employee unions, the working group's objectives are to examine the current situation of women at ST's Grenoble site, and to see how things can be made fairer. Four mini-groups are investigating whether women are being held back unfairly in terms of recruitment, practices and processes, career development, and work-life balance. The group is collaborating with an external social psychology laboratory to organize personal interviews and gather real life testimonials. The PluriElles group meets every month, and will be presenting its findings and recommendations in 2005.

Gender breakdown by region and professional status			
Regions		Men	Women
Africa	Manufacturing	1,202	3,228
	Non-manufacturing	328	143
	<b>4,901</b>	<b>1,530 (31%)</b>	<b>3,371 (69%)</b>
Americas	Manufacturing	1,295	563
	Non-manufacturing	1,038	284
	<b>3,180</b>	<b>2,333 (73%)</b>	<b>847 (27%)</b>
Asia (including Japan)	Manufacturing	5,336	7334
	Non-manufacturing	2,916	946
	<b>16,532</b>	<b>8,252 (50%)</b>	<b>8,280 (50%)</b>
Europe	Manufacturing	9,132	4,477
	Non-manufacturing	8,738	2,569
	<b>24,916</b>	<b>17,870 (72%)</b>	<b>7,046 (28%)</b>
France	Manufacturing	3,561	2,083
	Non-manufacturing	3,278	1,067
	<b>9,989</b>	<b>6,839 (68%)</b>	<b>3,150 (32%)</b>
Italy	Manufacturing	4,348	1,349
	Non-manufacturing	4,050	1,192
	<b>10,939</b>	<b>8,398 (77%)</b>	<b>2,541 (23%)</b>
All	Manufacturing (32,567)	16,965 (52%)	15,602 (48%)
	Non-manufacturing (16,962)	13,020 (77%)	3,942 (23%)
<b>Total ST</b>		<b>29,985 (60%)</b>	<b>19,544 (40%)</b>

ST59 Figure 31

Percentage of professionals by gender	Men	Women
2003	82%	18%
2004	81%	19%

ST510 Figure 32

Percentage of management women	2003	2004
ST511 Senior management	5.85%	6.25%
ST512 Executive management	3.66%	3.78%

ST510 LA11 Figure 33

**LA11** There are currently no women on ST's Management Board, which is comprised solely of the Company's CEO, nor on Corporate Staff, which comprises Corporate VPs reporting to the CEO.

### Training and development

Due to the dramatic pace of change in our semiconductor industry, in both technology and market growth, continuous education is essential.

We believe that staff development and continuous performance improvement is the key to our success. As a result, we promote life-long learning and support our employees' personal and professional projects to realize their ambitions and broaden their competencies. This applies within or across different job functions and countries.

Continuing education and development is available through local training departments as well as the ST University. A catalog listing all the training courses is available to all employees, and managers can enrol their staff on courses directly using ST's new e-training HR services.

We provide a minimum of 35 hours of training – and an average of 55 hours – to each employee annually, as a corporate standard. In 2004, the average number of training hours per employee was 49 hours (46 in 2003 – see Figure 35).

All operators of manufacturing equipment are certified and reassessed every 18 months.

**ST518** Overall, 43% of our employees received more than 35 hours of training in 2004. This reflects the fact that the vast majority of training is in technical areas within manufacturing.

### ST University

ST University (STU) was founded in July 1994 to deliver ST strategic programs and to help us make ST a permanent learning organization. It operates on a worldwide basis, with a central organization located in Fuveau, France, close to our Rousset manufacturing site. There are four branches: in Phoenix (USA), Catania (Sicily), Singapore and Shenzhen (China).

A core team of 30 professionals and about 1,000 associate trainers and speakers provide courses to employees across the company. Associate trainers are certified after receiving extensive training from STU ('Train the Trainer') and contribute to teaching the courses that are developed by our core training team. Over the past five years, STU has delivered 460,000 hours of training to almost 20,000 students. Our associate trainers' contribution has developed quickly and we estimate that they deliver approximately double the amount of training hours taught by our core team.

STU offers more than 100 courses covering five major categories: Management (representing 46% of total hours); Job-Specific (18%); Personal Development (26%); Masters in Microelectronics (8%); and Tools and Methodologies (2%). Demand for e-learning courses, delivered through our intranet network is growing steadily, and represents 32% of course participation in 2004. This approach allows STU to train a large number of our employees at a lower cost in all countries. In 2004, STU's training effort covered all of the regions in which ST operates. Out of the total hours delivered by STU's core team, 20% were delivered to Asia-Pacific employees, 26% to France, 23% to Italy, 13% to USA and 18% to our Mediterranean and emerging markets areas. STU is also involved in the activities of the ST Foundation's Digital Unify initiative, supporting the deployment of the Informatics and Computer Basics program using the cascading process.

STU core team activity									
	1996	1997	1998	1999	2000	2001	2002	2003	2004
Number of training hours per year	36,500	62,900	41,700	95,800	134,800	65,300	58,800	104,000	117,000

ST515A Figure 34

Average training hours by category		
	2003	2004
ST515 Engineers and managers	35	38
ST516 Operators	62	67
ST517 Technicians, administrators etc.	35	36
Total	46	49

LA9 Figure 35

Percentage of trainees who received evaluation		
	2003	2004
ST519 Kirkpatrick Level 1	96.1%	94%
ST520 Kirkpatrick Level 2	89%	83%

Figure 36

We are working to increase the training of ST's sales and administrative staff, and middle management, which is a critical population within ST in disseminating management practices and behaviors.

We monitor the effectiveness of our training using the training industry standard Kirkpatrick model.

Our internal standard is to reach 100% implementation of Levels 1 and 2 of the Kirkpatrick model. Level 1 evaluates trainee satisfaction regarding content facilitation and logistics; Level 2 evaluates improvements in knowledge, attitudes or skills that occur as a result of the training (see Figure 36).

### Internal mobility

Our policy is to make all job vacancies available to internal applicants, and our HR standard is to fill 70% of openings internally for jobs requiring specific experience. In 2004, 69% of these job openings were posted internally and 61% filled internally, compared with 64% and 51% respectively in 2003 (see Figure 37).

### Progress in 2004 versus plan

In 2004, one of our goals was to increase internal job mobility and we have achieved that (see Figure 37). We are maintaining our efforts to reach our medium-term target of 90% of vacancies to be posted internally, only excluding specific cases of planned moves or successions already clearly identified.

### Plans for 2005

We aim to continue to improve our internal mobility by making job opportunities more visible to our employees and by identifying likely people through collective reviews inside and across ST organizations.

### Performance appraisal

We use a formal process to help our people improve their job performance and develop their careers. Annual performance reviews with managers assess employee results against agreed objectives, highlight employee strengths and weaknesses, provide a comparison of existing skills with those required and allow planning of training or recruitment to fill any gaps. Discussions on personal development and employees' aspirations are an important part of these reviews.

**STS21 STS22** In 2004, 94% (95% in 2003) of all technicians, engineers and managers had their performance reviewed and 86% (82% in 2003) of our employees discussed their individual development plans in their annual performance appraisal.

### The Career Paths project

To help ST employees maximize their career opportunities, and to ensure that there is transparency across the various parts of the company, ST has launched 'Career Paths'. Covering all job families, Career Paths allows each employee to better understand the various career opportunities available in ST – and the competencies required to travel along or cross between the three main career paths: technical expertise, program-project and management.

As well as supporting people development, the Career Paths project helps to increase mobility and flexibility across our organization. It puts special emphasis on the technical ladder. For example, a formal program, validated by top management, now lets people who decline line management positions choose an alternative career within their area of technical specialty. This enables them to progress as far as they can within their field of expertise, possibly up to the highest level. The position of 'ST fellow', which recognizes employees as experts in their non-managerial specialty, is the ultimate technical accolade.

Internal job mobility	2003	2004
<b>STS13</b> Percentage of jobs requiring experience posted internally	64%	69%
<b>STS14</b> Percentage of jobs requiring experience filled internally	51%	61%

Figure 37

### The competency referential project

Today, each job in the company is given a reference, depending on the competencies and level of expertise it requires. This means that employees can assess themselves against the requirements of a particular job, and it helps them to decide – with their managers – what development or training they might need. Competencies are grouped by type: personal, technical and behavioral. At a collective level, HR managers will then use the new competency references to assess global training needs for the coming year.

In 2004, the competency taskforce defined the competency levels of all the major job families, especially engineers, based on worldwide best practice. We now intend to embed this mapping into our HR information systems.

We have a number of challenging goals for 2005. These include designing and deploying a mandatory training course for newly-hired managers. They will take this within six months of being appointed, and it will focus on people and performance management, the staffing process and internal communication.

Other goals include identifying employees who are ready to take new positions, better supporting HR development plans with a structured follow-up process, and encouraging cross-fertilization through exchanges of personnel between different parts of ST – based on competency requirements as formalized in the HR Five Year Plan.

### Reward and recognition

To guarantee fairness and transparency, all ST jobs are described and evaluated consistently. They are also benchmarked against industry and market standards.

**STS23 STS24** In 2004, 88% of our employees had an up-to-date job description and 97% of ST jobs were benchmarked for compensation levels.

**LA12** Our policy is to offer a competitive total compensation and benefits package in order to attract, motivate and retain the best talents in our industry. And we regularly monitor the competitiveness of our remuneration. This involves each country carrying out an in-depth competitiveness analysis of compensation and benefits at ST, benchmarking them against the market and industry leaders. The yearly salary policies for countries with more than 50 employees are approved by the corporate HR VP and the executive committee.

Fairness is assured at corporate as well as local levels. For example, salary surveys based on the corporate job grading structure are conducted in each country, and national salary policies are established accordingly. ST salary range mid-points always correspond to the 55th percentile of the market and each year a budget is assigned to ensure all employees are at least at the minimum of their job grades.

Salaries are based on corporate guidelines, the job's specific parameters, market value, employee performance and personal skills.

**STS47** We offer a wide range of substantial benefits, including variable incentive pay, health insurance, savings and retirement plans. Senior employees are offered stock option plans as part of their remuneration package (see Figure 38).

Stock options: number of beneficiaries	2000	2001	2002	2003	2004
<b>STS47</b>	7,510	8,731	9,809	10,504	11,381

Figure 38

**STS25** All of our employees have a benefit package covering health insurance, including those in countries where such insurance is not compulsory.

We believe that recognition is an important contributor to our success, because it is a strong motivator. We aim to recognize and reward outstanding performance, innovation, responsible behavior and teamwork. Recognition ceremonies are organized throughout the year (see Figure 39).

**Employee engagement and empowerment**

At ST, we promote a culture of maximizing our employees’ ability to do their jobs and develop their careers. We also strive to engage with them through transparent communication.

We aim to empower and motivate employees by:

- Assigning clear roles with concrete and measurable targets
- Providing easy access to the information they require to do their jobs
- Ensuring access to continuous learning and skill improvement
- Creating a company culture based on trust and TQM principles, leading to delegation and empowerment
- Encouraging self-motivation and discipline
- Promoting team-based working methods.

To support employees in their work, we run awareness-raising and training programs on:

- Company policies and objectives, including those related to quality
- The requirements of the Quality Management System
- Customer-specific requirements, suggestions and feedback
- Specific job competences including non-conformities to quality requirements
- Programs set up locally in the areas of quality, health and safety, productivity and the environment
- Basic concepts in Statistical Process Control (SPC) and Total Preventive Maintenance (TPM)
- Personal responsibility in terms of quality of products and services, adherence to company regulations, and safety of other employees
- Attitudes in keeping with TQM principles.

**Employee Suggestion Scheme**

Our employee suggestions can create improvements in productivity, safety, work environment, service and quality. Launched more than 10 years ago, the electronic Employee Suggestion Scheme (ESS) allows suggestions to be evaluated quickly (at present the average response time is already 21.9 days with an ambitious medium-term target of one week) and tracked in a reporting system that reduces cycle-time.

Employee recognition		2003	2004
STS26	Number of people recognized*	23,767	49,553
STS27	Number of overall recognition ceremonies	195	171
STS28	Overall recognition budget (US\$)	54,092	1,000,023**

Figure 39

Employee knowledge sharing and teamwork		2001	2002	2003	2004
STS29	Number of employees participating in online learning communities (OLCs)	1,975	4,191	5,778	6,623
STS30	Percentage of professionals, technicians and administrative staff with team goals included in their annual objectives				78%
STS31	Percentage of professionals, technicians and administrative staff with incentive/recognition based on team results				64%

Figure 40

\* Employees may be recognized several times.

\*\*The substantial increase in number from 2003 to 2004 is due to an improved reporting system and a more comprehensive coverage of all sites.

The scheme is designed to maximize the visibility and recognition of the most effective and creative employee contributions.

Specific programs, tools and initiatives are set up to promote continual improvement and innovation, and motivate personnel towards achieving quality objectives. Besides the ESS, other activities include training and recognition ceremonies. Employee participation in ESS is in itself a measure of employees' awareness of the importance of their work and their responsibility for continuous improvement in all areas. In 2004, ST employees made an average of 1.87 suggestions, through the scheme (see Figure 41).

#### **The employee opinion survey**

Since 1993, we have conducted worldwide employee opinion surveys every 18 months in order to assess the level of employee satisfaction and engagement. Details are available on Dolphin, the Corporate HR portal. All employees are invited to participate anonymously and to answer questions covering performance management and reward, development opportunities, working conditions, training effectiveness and the application of TQM. The results are then communicated to all employees and analyzed by each organization. The results lead to action plans for improvement, managed at site, region and organization levels.

The last opinion survey was in 2003 (see p.48 of the 2003 report for details of the results).

#### **Back-end manufacturing employee suggestion scheme**

ST's Worldwide back-end manufacturing launched its own ESS in 1992 as part of the initial deployment of TQM. The number of suggestions made by employees has regularly increased, from 12,478 in 1992 to 95,517 in 2003. In 2004, ST focused on quality-related suggestions, which naturally resulted in a sharp decrease (64,597), with an average number of suggestions per employee of 4.9.

Recognition, a tangible demonstration of our appreciation, is an important element of the scheme and is a source of pride and motivation for employees. In addition to the spontaneous recognition of direct management, there are formal recognition processes at different local and corporate levels. The ESS is run locally, but monitored and reviewed at the highest level (see Figure 42).

Employee participation in ESS	2003	2004
STS32 Average number of suggestions per employee	2.62	1.87
STS33 Acceptance rate for suggestions***	74.4%	47%
STS34 Percentage of accepted suggestions which were implemented	43.7%	54%

Figure 41

Suggestions in back-end plants	2004
Suggestions received	64,597
Suggestions reviewed %	90%
Suggestions implemented/accepted %	62%
Participation %	50%
Average time to response (days)	21.9
Average time to implement (days)	42.6

Figure 42

\*\*\* All employees can make suggestions, but not all are appropriate, and so may or may not be accepted or implemented.

In 2004, we determined to introduce improvements based on the results of the 2003 opinion survey.

We are holding our next opinion survey in September and October 2005. This will include open questions relating to employee motivation and engagement. Afterwards, we will create action plans based on a qualitative analysis of the answers.

### **Exploring employee concerns following the 2003 opinion survey**

We always actively investigate employee expressions of concern or dissatisfaction. At the end of 2004, two internal surveys of randomly selected employees were carried out simultaneously by specialist consultants at our French and Italian sites. These undertook a detailed exploration of some signs of dissatisfaction in France and Italy that had been picked up by the 2003 employee opinion survey.

Our aim was to identify the areas of dissatisfaction most commonly expressed and to understand the concerns raised and their impact on daily working life in order to respond appropriately.

**Communication:** It became apparent that the company's strategy – financial and technological – was not fully understood and that employees wished to have more explanation and discussion with managers on the subject.

**TQM:** TQM was unanimously seen as the company's ethical touchstone since ST's foundation. It was also appreciated as an incomparable tool for achieving excellence. In addition, there was a unanimous call for TQM to be updated and strongly redeployed in the sites in order to create a new momentum and greater solidarity between sites and employees within Europe.

**Training:** Employees had noticed a change of direction in internal training activities, although they willingly acknowledged the unfavorable economic environment. Those interviewed were convinced of training's role in maintaining excellence and consequently called on the company to offer employees more training opportunities.

**Management:** Confronted with a more complex economic reality than in previous years, employees sought closer contact with their managers rather than institutionalized relationships, which rely on internal e-mails and the Internet. They wanted company strategy to be embodied by the people who worked closely with them, even though those people might be located some distance away.

**Recognition:** Employees were concerned that the company's long-established methods of rewarding outstanding performance might be declining because of cost-containment programs related to unfavorable market conditions. Employees were involved in, and willing to invest in their work, but they also wanted clear recognition for merit. Indeed, for them, recognition did not come solely through salary but also through tangible signs in the way they were treated and from evidence of increased confidence in them.

We are carrying out an evaluation of ST's management systems for Corporate Responsibility in 2005 to see how these concerns can be addressed. The findings will be integrated into the continuous improvement program for Corporate Responsibility. *ST takes the views of its employees seriously, listens carefully to their survey opinions, and acts on them wherever possible.*

### **World Class**

Our quarterly internal magazine, *World Class*, is one of the most important ways in which we engage with our employees. It is sent to all our employees worldwide and is printed in English, Italian, French and also Chinese, to help integrate the newly hired employees from that country. The editorial has four main strands:

- Information on all the global players in our business: including details of our major markets, and our own sites and operations
- Strategic and managerial information: keeping employees informed about where ST is going, including data on our financial performance each quarter
- ST culture and values: ideas about the kind of company that ST wants to be
- ST's involvement in social and environmental responsibility.

As well as *World Class*, several other tools are used. They may be electronic such as e-mail and intranet, face-to-face meetings or paper communications. They are all aimed at deploying key strategic messages at a worldwide level, so ensuring that a common message is conveyed and understood in the same manner – regardless of location and language.



## Security

To guard our profitability and social responsibility, we have to protect our human, physical, intellectual and logical assets, as well as provide a proper response to emergencies and incidents. In 2004, we gave increased support to our Corporate Security Department and conducted an in-depth audit at each site level.

Specific instructions were sent out to ensure that each of our sites adopts the best security practices in order to protect our employees, contractors and property without endangering local communities. Overall, we always consider the security of our tangible and intangible assets from the perspective of all our stakeholders.

## Consumer and employee privacy

**PR3** ST has a strict privacy policy. We do not request personal information from visitors wishing to access any section of the company's public websites. Identifying information (name, address and so on) is required only when website visitors interact with ST or ask for a specific service or information. All employees are informed about the ST data privacy policy and expected to respect the confidentiality of any personal information they may acquire during their work.

## Health and safety

The health and safety of our employees is one of our primary responsibilities. As such, we work particularly hard to make continuous improvements.

**STHS5** We manage our health and safety performance using OHSAS 18001, which is widely seen as the most rigorous international standard for occupational health and safety. OHSAS 18001 defines the specifications for an occupational health and safety (OHAS) management system, to enable an organization to control its OHAS risks and improve its performance.

We extended the OHSAS 18001 certification program to all our manufacturing sites following an objective set in 2001, and this was reached in 2003.

All of our manufacturing sites and four non-manufacturing sites are now certified to OHSAS 18001. This demonstrates how we apply the most stringent international standards to all our sites worldwide, so supporting the health, safety and well-being of our employees.

Having applied the OHSAS 18001 certification program, we have now established a formal internal management system, which helps to harmonize our systems, encourage cross-fertilization and share best practice. In addition, the application of the OHSAS 18001 standard assists us in adopting a common language, homogeneous methods and shared systems throughout the company in order to assess health and safety standards in the workplace.

**LA5** Effective performance monitoring necessitates the recording of work-related injuries and illnesses and the calculation of related indices. We have adopted the OSHA (Occupational Safety and Health Administration in the United States) model. Indices are appropriate for benchmarking within the microelectronic industry. The OSHA model meets the requirements of the International Labor Organization (ILO) Code of Practice.

### Main milestones in the implementation of OHSAS 18001

- July 2001: Corporate Safety OHSAS 18001 program officially launched.
- Publication of our Corporate Health and Safety Policy, setting out the main principles underpinning our health and safety system.
- Consolidation of Company Health and Safety Standards and Guidelines in the Corporate Occupational Health and Safety Manual.
- Harmonization of site health and safety management systems.
- Gap assessment of all manufacturing sites in 2002/2003 against the Corporate OHAS Manual and OHSAS 18001.
- December 2002: three manufacturing sites (Agrate, Kirkop and Tours) obtained an 'earlier' OHSAS 18001 certification.
- December 2003: all our manufacturing sites OHSAS 18001 certified.
- 2004: four non-manufacturing sites OHSAS 18001 certified.
- June/July 2004: first worldwide EHS meeting hosted at the Rousset site.
- 2004: All our sites already certified to OHSAS 18001 come through their surveillance visits successfully. The certifications are all maintained.

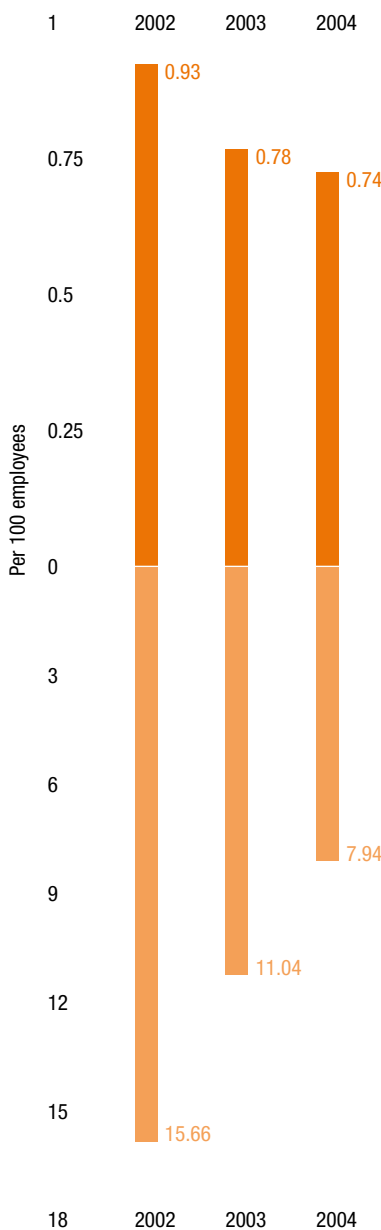
**LA6** We have a Corporate Health and Safety Steering Committee and each manufacturing site has a Health and Safety Steering Committee. The permanent members of the latter include the Site Manager, Site Safety Officer, Operation Manager(s), HR Manager, Materials/Purchasing Manager and Facilities Manager. This Committee is responsible for implementing the Corporate Health and Safety Policy. Each local Health and Safety Steering Committee covers all 100% of ST employees in that manufacturing site. 85% of our employees are covered by these committees – the remaining 15% of employees are in functions and locations unrelated to manufacturing.

**LA7 Health and safety performance data for 2004**

**STHS3** **STHS4** In 2004 there were no work-related fatalities within ST, and there were no health and safety fines in that year within any of our manufacturing sites or our major non-manufacturing sites. This maintains our excellent health and safety record established in previous years.

Bouskoura SPG (Morocco) had no work-related injuries or illnesses (recordable cases) in 2004. Carrollton (USA) exceeded 2 million man hours without a lost time accident (days away from work case). Muar (Malaysia) and Ain Sebaa (Morocco) had reached around 3 million man hours without a lost time accident at the end of 2004. Kirkop (Malta) and Shenzhen (China) exceeded 3.8 million man hours without a lost time accident at the end of 2004. Bouskoura back-end (Morocco) exceeded 3 million man hours without a lost time accident by mid-2004.

**Recordable cases rate**



**STHS1**

ST's recordable cases rate for work-related injuries and illnesses decreased by 5% in 2004 compared with 2003.

2004 recordable cases rate = 0.74 recordable injury/ illness case per 100 employees.

**STHS2**

ST's severity rate for work-related injuries and illnesses decreased by 28% in 2004 compared with 2003.

2004 severity rate = 7.94 days lost due to injury/ illness per 100 employees.

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.

These rates apply to all manufacturing sites and the Grenoble site, again covering 85% of our employees. The remaining 15% work in functions and locations unrelated to manufacturing.

**Severity rate**

Figure 43

Recordable cases rate benchmarks

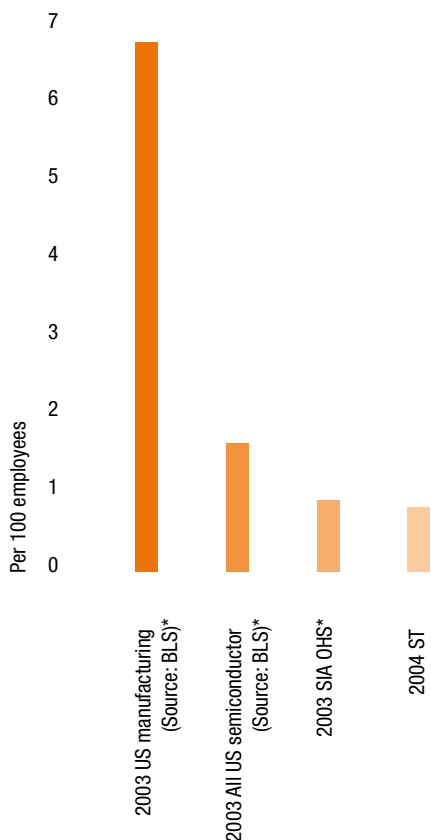


Figure 44

Figure 44 shows the recordable cases rate for ST compared to BLS and SIA OHS benchmarks.

US manufacturing and US semiconductor industry performances are tracked by the US Bureau of Labor Statistics (BLS) and the Semiconductor Industry Association (SIA).

**STHS6** We finalized the ST Financial Indicator, in 2004, to evaluate the direct and indirect cost of injuries and illnesses. This includes direct wage costs, medical costs, indirect wage costs, administrative costs, material losses/damages costs, production costs and other hidden costs. Figure 45 shows the results of this evaluation.

ST's work-related injuries and illnesses cost decreased by 21% in 2004 compared with 2003.

2002-2004 injuries/illnesses cost (US\$m)

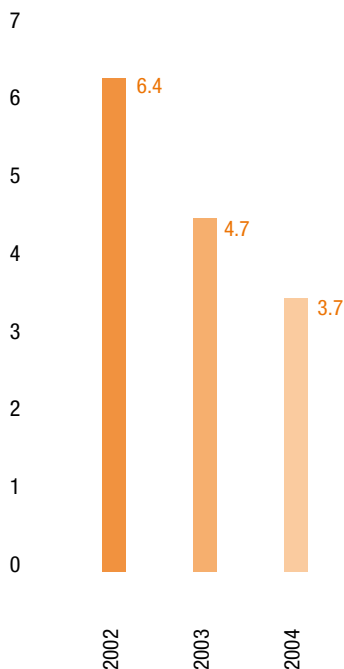
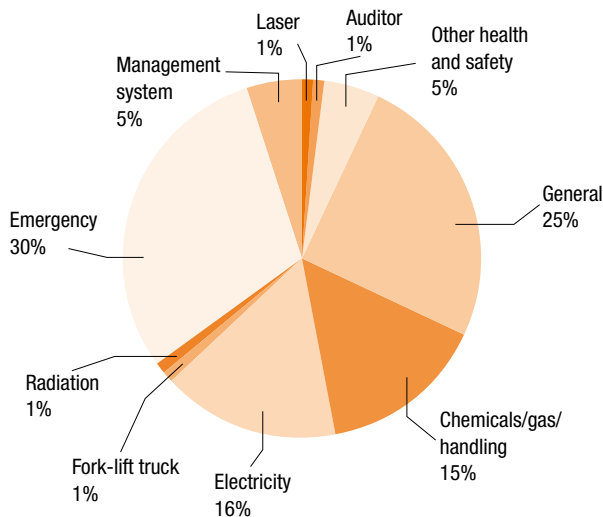


Figure 45

Distribution of 2004 health and safety training hours



**STHS7** Figure 46

**STHS8** We also trained 27 additional internal health and safety management system auditors, which brings the total to around 100.

\* Latest data available.

### ST's overall safety performance 2002-2004

We have achieved:

- A reduction of more than 20% in our incidence rate in two years (2004 recordable cases rate was 0.74 compared to 0.93 in 2002)
- A cut of nearly 50% in our severity rate in two years (2004 severity rate was 7.94 compared to 15.66 in 2002)
- A decrease of 43% in injuries and illnesses cost in two years (2004 cost was US\$3.7m, compared to US\$6.4m in 2002).

### Loss prevention

In 2004, we consolidated our Property Conservation strategy and policy in our Corporate Property Conservation Manual. This includes Property Conservation Guidelines that follow the National Fire Protection Association's Fire Codes, and a description of our Site Field Fire Engineering Inspection Program. ST continues to deliver Specialist Fire Engineering Services for new projects.

### Chemicals management and workstation risk assessment

**STEV67** **STEV68** We aim to deploy the most stringently regulated health and safety programs of any country in which we operate, at all of our locations. The following are examples of concrete measures initiated in chemicals management:

- Coordination of hazardous material strategy management across the company (corporate standards have been produced for EHS Chemical Risk Management and Assessment, and the EHS Banned Chemicals List)
- Creation of a Company Hazardous Material Steering Committee with a Corporate Chemicals Management working group.
- Creation of a site chemical committee for each manufacturing site
- Assessment of all workstations and chemicals in use following strict EHS guidelines. Of the nearly 15,000 workstations assessed, only a few need improvements and they now have dedicated action-plans and investment allocated to them.

### Health and safety goals for 2005

We are determined to continuously improve our health and safety performance. Our goal for 2005 is to have a reduction of 10% in recordable cases and severity rates. To concentrate our efforts, we will merge the three steercoms for Environment, Health and Safety, and Hazardous Materials into one joint Steering Committee in 2005.

### Human rights in the workplace

#### HR1

We are committed to providing a safe, healthy and stimulating workplace where human rights are protected and promoted.

#### Our human rights commitments

As one of the first companies to sign the UN Global Compact, we are committed to advancing the principles of human rights within our sphere of influence, as reported last year. Correspondingly, we support the UN's Universal Declaration of Human Rights and the core standards of the ILO. In 2004, we declared our official support for the draft 'UN Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights'.

In 2004, we consulted with two human rights NGOs – Amnesty International Business Group (France) and The Rights Practice (UK) – on the content of our draft internal Code of Conduct and Supplier Code of Conduct. We also sought their feedback on a set of internal indicators and guidelines on human rights issues for use in our sites worldwide.

#### HR8

In addition, we commissioned The Rights Practice to provide the content for internal ST human rights awareness and training programs for all employees, especially for those key management staff that need to be informed. And we have drawn up a formal partnership with Amnesty International, to be signed in 2005.

In 2004, we also expressed our willingness to participate in a working group with other companies and Amnesty International in order to explore ways of implementing the draft UN Norms. This will be in the context of the work already being carried out by the Business Leaders in Human Rights (BLIHR) working group in the UK.

### Stakeholder feedback from Amnesty International

"In June 2004 STMicroelectronics (ST) called on the French section of Amnesty International (AISF), to request guidance and support in voluntarily undertaking the commitment to promote and respect human rights as an integral part of its Corporate Responsibility program.

A first series of constructive exchanges took place in 2004 and ST agreed to integrate the proposals made by AISF into a number of documents relating to Corporate Responsibility. These include the revised Code of Conduct, Supplier Code of Conduct, Guidelines and indicators for ST organizations and sites. Today, Amnesty International welcomes:

- The fact that ST fully supports the Universal Declaration of Human Rights and most of the international instruments protecting fundamental human rights
- The commitment to support the draft United Nations Norms of Responsibilities for Transnational Enterprises Regarding Human Rights, made verbally in December 2004 and subsequently formally signed on March 10, 2005.

AISF sees these commitments as a very encouraging prospect for human rights. Throughout the past year of collaboration with AISF, ST has clearly demonstrated its determination to make progress in this area. In order to support the development of this collaboration, 2005 could see the formalization of the partnership between ST and AISF, which would exclude any auditing activity or validation of performance results.

The adoption and fulfillment of ST's commitment to Corporate Responsibility by all employees remains a significant challenge for the company. AISF will remain vigilant during this phase of implementation, which is essential to integrated and sustainable development, and will provide assistance to the best of its ability and availability."

AISF, April 4, 2005

### Disclosure

In this context, this year we report for the first time on an analysis of our current status and performance on human rights. This section of the report deals with human rights in the workplace, with the exception of discrimination and health and safety, which are considered above.

The analysis of sector and country risk highlights the need for clear internal policies on human rights in the workplace, especially regarding:

- The right to worker representation where independent unions are not allowed or may be hindered
- Working hours, as ST is present in some countries where the legal requirements are not very strict
- Dismissal and restructuring, which are not regulated in some countries
- Minimum wages and benefits
- Protection against harassment and discrimination, especially in countries where labor rights are minimal.

We have integrated this need in our corporate policies shown on the following pages.

### Forced labor and child labor

Forced labor and child labor are not especially relevant issues for us, particularly in view of the very technical and high-level nature of the work performed in our factories. Nevertheless, we have raised awareness of the management teams in our factories – especially in developing countries – and we are proactively monitoring the situation.

## Corporate policies

ST's set of corporate policies and operating procedures in 2004 cover a limited number of topics listed in the UN Norms thoroughly, though a number of human rights policy statements have the status of corporate policies internally. These include:

- **HR7** *Forced labor*: "ST does not accept the use of bonded workers, forced labor, illegal workers or of prisoners against their will. No employee or any worker employed on a contract basis should ever be required to remain in employment against their will."
- **HR6** *Child labor*: "ST does not employ people under the age of 16 years, anywhere. ST supports the abolition of child labor and seeks to promote the health, safety and education of children."
- **HR4** **LA10** *Non-discrimination*: "ST seeks to provide equal opportunities for employees at all levels. Discrimination against employees based on gender, race, disability, origin, religion, marital status, age or sexual orientation is not in compliance with the company shared values and will not be tolerated. Sexual harassment of employees is not tolerated and such behavior is ground for corrective action up to and including immediate termination for cause. ST is committed to attract, develop and retain its workforce respecting its diversity and providing equal opportunities to all its employees according to their skills and capacity."
- **HR5** *Freedom of association and collective bargaining*: "Employees are free to choose whether or not to lawfully organize and join associations, including trade unions. ST does not threaten, penalize, restrict or interfere with employees' lawful efforts to join an association of their choice."
- *Working time*: "ST sets working hours in compliance with applicable laws. Regular working time does not exceed 48 hours a week. ST employees have at least one day off in seven. ST provides paid annual leave and holidays required by law or by applicable collective bargaining agreement."
- *Security*: "We consider the overall security of our tangible and intangible assets from the perspective of all of our stakeholders. ST's profitability and social responsibility require us to protect human, physical, intellectual and logical assets, as well as providing a proper response to emergencies and incidents. We do what is necessary, through the application of the best security practices in all of our sites, to protect our employees, contractors and property without endangering local communities."
- *Data privacy*: "ST respects the privacy and integrity of its stakeholders. Personal information is collected by lawful and fair means. The company does not sell, rent or lease personal stakeholder or employee information. ST is committed to protect personal information against unauthorized use or disclosure. Individuals are provided with reasonable access to their personal information, and the ability to review and correct it, as applicable. The company also complies with relevant privacy and data protection laws in the locations in which it operates. Each ST employee is informed about the ST data privacy policy and in turn, commits to respect the confidentiality of protected personal information, as well as protected personal information, he or she may acquire in the course on their work."

- *Operations in sensitive countries:* “Our policy is to ensure, through our management processes, systems and culture, that all of our sites worldwide, regardless of their geographical location and local culture, maintain the highest standards in all aspects of Corporate Responsibility, including human rights and labor standards. We require our organizations to ensure that workers have a means to raise grievances, and the possibility to express their opinion.”

In 2005, as part of the revision and evaluation of our Code of Conduct, we will be reviewing the policies, procedures and management systems that serve to implement it.

**Enforcement**

The implementation of policies and procedures for human rights is the responsibility of local HR departments, under the supervision of the Corporate HR department and the Corporate VP for HR. The Total Quality Corporate Responsibility (TQCR) organization, under the supervision of the Corporate VP for TQCR, provides support to the HR department in this process.

We gave structure to some of our ongoing activities to promote and protect human rights in 2004. We began working on expanding the indicators and guidelines for use in all of our sites, in an existing implementation tool – our Business Excellence Self Assessment. This tool is currently being upgraded to an online IT system that will enable ST organizations and sites to report their performance on human rights and many other areas of Corporate Responsibility more easily and effectively.

In 2005, we will enter approximately 40 new indicators relating to human rights and business ethics into this upgraded system that will progressively be used by all of our organizations and sites worldwide. We intend to use these indicators as the starting point for work with our stakeholders on the appropriate implementation of the draft UN Norms.

**Working time**

We set working hours to comply with all applicable laws. Our operations are carried out in a way that ensures that working conditions are both humane and productive. We are careful to ensure that our employees may refuse to work overtime, without threat of discrimination, penalty, punishment or dismissal.

Working time		2003	2004
STS35	Employees having at least 1 day off every 7 days	100%	100%
STS36	Employees with regular work time less than 48 hours per week	100%	100%
STS37	Average overtime per week	2.20 hours	1.79 hours

Figure 47

## Freedom of association

Employees are free to choose whether or not to lawfully organize and join associations including trade unions. ST does not threaten, penalize, restrict or interfere with employees' lawful efforts to join an association of their choice.

**LA3** Considering that all of our European sites (now including Malta) are covered by the European Works Council, and a number of our sites outside Europe (e.g. Morocco and Singapore) also have formal systems for collective labor negotiations, we calculate that over 75% of our employees are represented by independent trade unions and other bona fide employee representatives, or covered by collective bargaining agreements.

In addition to this, ST has formal participative management systems in all of its sites worldwide. All ST sites hold regular communication meetings with employees and/or their representatives, during which everyone present has the opportunity to raise and discuss any matters of their choice with the local site management. ST's long-standing TQM approach provides tools that give employees the opportunity to voice their opinions and make suggestions about any aspect of the company's activities, processes and procedures (see p.50 on employee empowerment).

**LA4** ST has a European Works Council, a requirement under European Union Law. The aim of the Council is to promote the participation of every worker in dialogue with the company. The Council has 21 representatives and meets annually. Should exceptional circumstances occur that affect

the interests of the workers and employment, extraordinary meetings can be called. The Council is kept informed on transnational issues that affect the interest of workers.

## Sexual harassment

Sexual harassment of employees is not tolerated and such behavior can lead to dismissal.

## Our communities

**S01** We are committed to being good corporate citizens, contributing to the well-being of the communities in which we operate and to society in general. We believe that we have a responsibility to fulfill our ethical obligation to society as well as to maximize returns to shareholders.

Dealing with local issues is the responsibility of local management, who are encouraged to engage with local communities, and we are working to put in place a shared framework for this engagement across the company. Besides our basic economic impact on communities and society through the employment we provide, we also contribute through donations and a range of employee volunteering activities. These are an important source of support to communities, help improve our relationship with stakeholders, and motivate our employees.

Figures 49 and 50 show some of the contributions that ST has made in 2004. There has been a significant increase in the amount of their own time that ST employees have contributed to work on community projects, although cash donations are down on 2003.

**STS43** In 2004, ST has received 21 company citizenship awards.

Ratio of total time lost to strikes to time worked	2003	2004
	0.04%	0.05%

**STS38** Figure 48

Contributions of cash and employee hours	2003	2004
<b>STS39</b> Total cash donated to charitable causes	US\$402,000	US\$1,190,590*
<b>STS40</b> Staff hours spent on environment projects	62,880	73,732
<b>STS41</b> Staff hours spent on education projects	287,219	167,020
<b>STS42</b> Staff hours spent on other non-business related activities projects	34,145	39,231

**EC12** **EC10** Figure 49

Contributions to education	2004
<b>STS44</b> Number of partnerships with universities, colleges, schools	286
<b>STS45</b> Number of students from schools, colleges, universities on placements with ST	4,757
<b>STS46</b> Number of universities, colleges, schools provided with funding or equipment	60

Figure 50

\* Furthermore, ST has contributed with additional capital installment to ST Foundation.



## The ST Foundation

The ST Foundation is a not-for-profit organization, based in Geneva. It exists to raise awareness of the importance of microelectronics and how it can contribute to sustainable development. Throughout 2004, the Foundation was actively involved in a wide variety of programs and activities.

### Digital Unify

The ST Foundation's Digital Unify program, launched in 2003, aims to bridge the gap between those who have access to digital technology and those who do not. It aims to train the latter in how to use it.

This program is a high priority for the ST Foundation. Important advances in 2004 include the launch of Digital Unify in India and Malaysia, with preparations being made for launch in Tunisia. 2004 saw the numbers of trainers involved with the program more than double, growing to over 250.

A kit has been prepared for local Digital Unify teams to use, including course material and evaluation forms. We have started to develop a data tracking tool to enter data on course participants worldwide, and to make the Digital Unify 'Train the Trainers' course available on an e-learning platform. This will allow us to reduce costs, reach remote locations and train more trainers over the same time period.

### Collaboration with UN ICT Task Force

In 2004, representatives of the ST Foundation participated in meetings of the UN ICT Task Force, which continues to look at the sustainable and effective use of ICT technology for development.

### Gujarat sponsorship scheme

An e-mail campaign organized by the ST Foundation among staff in Italy and Geneva resulted in 55 sponsors coming forward. They agreed to pay for children in villages in Gujarat, India, to receive schooling and health care, and for the childrens' mothers to attend vocational training classes and benefit from micro credit schemes to improve family income.

The ST Foundation has also made donations for the construction of wells in order to supply the villages with drinkable water. The ST Foundation's total contribution for this development project is over US\$39,000.

### Donations made to associations and NGOs that use ICT to overcome social, economic, educational, developmental barriers

In 2004, the ST Foundation donated computers, together with over US\$58,000, to various bodies that aim to use ICT to overcome social, economic, educational and developmental barriers. These include schools in Kenya and Senegal, and the UN Volunteers organization, which encourages university students to volunteer for projects aimed at helping bridge the digital divide worldwide.

### Charitable donations

In 2004, the ST Foundation's charitable donations included:

- US\$10,000 for a school for 'barefoot children' in Ndola, Zambia
- US\$10,000 for the Organisation Mondiale contre la Torture
- US\$40,000 to the International Red Cross following the Asian tsunami.\*\*

### Research activities

Research funded and available at the ST Foundation includes a benchmarking report on other Foundations, and a report on other corporations' programs aimed at helping bridge the digital divide.

\*\* This is in addition to the donation made by STMicroelectronics.



## **ST's environmental impact and performance**

It all started with our concern for the environment – and that is still vital to us. But is there room for improvement after more than 10 years? Of course.

Our efforts and achievements have been consistently rewarded. We continue to exceed compliance with local regulations. And while increasing production, we continue to reduce energy consumption per unit produced. In every area – including energy efficiency, recycling, water conservation, alternative and renewable sources of energy, and the use of hazardous chemicals – we are constantly finding ways to improve.

For many years, ST has been prominent in acknowledging the importance of environmental protection and in keeping our impact to a minimum. Recently, we have extended our concerns to include many more areas where we can exert a positive influence – from human rights to community programs and employee engagement. But we remain absolutely passionate about the environment and sustainable development.

The excellent environmental performance of all of our sites continued to be recognized in 2004 through EMAS validation and ISO 14001 certification. We also continued to win awards in 2004 for our record on the environment – from bodies including the European Commission and the Singapore Environment Ministry. We still go well beyond compliance with local regulations on environmental matters in many different areas. And we are leading the way in introducing new measures to promote sustainable development.

Although ST's overall greenhouse gas emissions rose slightly in 2004 – due to the company's vastly increased unit production – emissions per item produced improved by 8.2% compared with 2003. So because we have been taking action to reduce emissions, we have been able to minimize the impact of our increased production.

In 2004 we also made steady improvements in energy efficiency, in the development of alternative and renewable energy sources, and in the reuse and recycling of our waste. We have cut water consumption per unit of production and have continued to reduce our use of potentially hazardous chemicals.

### ST and the environment – history

At ST, we have had a corporate environmental policy since 1993, and we have been constantly improving on it. It reflects a proactive attitude toward environmental protection, which goes beyond mere compliance with international and local regulations. In fact, every time we make a decision, we consider the likely environmental impact of our actions.

## STEV1 ST's environmental policy

### 1. Purpose/scope

The purpose of this policy is to establish the major principles for improving environmental performance, allowing ST to become one of the best industrial companies for environment protection, and to obtain recognition from stakeholders and society in general for environmentally-friendly operations.

### 2. Organizational units affected

This policy, based on TQM principles, applies throughout the company and subsidiaries worldwide and to all activities: design, R&D, manufacturing, facilities, purchasing, logistics, sales and marketing, and generic administrative activities (legal, HR, accounting etc.).

### 3. Policy statement

#### 3.1 Mission

Our Total Quality Environmental Management (TQEM) mission is to develop strategies and programs supporting the company's journey to Business Excellence, with a specific focus on customer satisfaction, sustainable development and the deployment of our guiding principles in work practices.

#### 3.2 Environmental policy

Environmental care is an integral part of ST, and we aim to make sure that it is always present in all company activities through the following commitments:

- We will strive to improve the global environment and aim to achieve sustainable development through all of our business activities
- We will strive for pollution prevention, reduced consumption of natural resources, reduction of waste, and minimized impact (social and environmental) of chemical substances
- We will apply the 16 principles of the 'Business Charter for Sustainable Development' of the International Chamber of Commerce (ICC)
- We will operate beyond the level of compliance with all relevant laws and regulations of all countries where we operate and be at least one year ahead of official deadlines with all international protocols
- We will follow the 10 commandments of our Environmental Decalogue (see p.67)
- We will maintain both the ISO 14001 certification and EMAS validation of all our sites worldwide, and certify new sites within 18 months of their operational start-up, including regional warehouses
- We will incorporate environmental criteria in all stages of our production cycle, from the design phase to procurement, sales and end of life
- We will establish, publicize and deliver against challenging performance targets and report on our progress worldwide and by site on an annual and quarterly basis
- We will implement a Management System based on best current practices all over the company
- We will develop a Risk Assessment Program to manage risk identification, analysis, reduction and avoidance
- We will benchmark our environmental performance in comparison with other companies within the semiconductor industry as well as other industrial sectors, so as to equal or exceed the best performing companies
- We will put in place strong internal and external controls and auditing to ensure that environmental procedures are carried out and to identify and prioritize areas for improvement

- We will provide appropriate training to all our employees and all necessary information to our stakeholders
- We require everyone who works for ST to comply with all the principles and guidelines of this policy
- We will develop a long-term relationship with our suppliers and contractors, choosing those with the highest environmental standards and practices
- We will promote an open dialogue with workers and the communities in which ST operates, and cooperate in a positive spirit with industrial and scientific communities, governments and non-governmental organizations to develop laws, regulations and guidelines for continuous improvement within these communities, promoting a healthy global competitiveness
- The Executive Total Quality Council chaired by the CEO is responsible for developing and implementing the environmental strategy
- Every employee has a personal responsibility to understand and to live up to this policy and commitments.

### 4. General principles

ST's Environmental Policy is based on the belief that it is our responsibility to society to protect the natural world from our industrial processes. Our commitment to the environment is a strong characteristic of our identity and a genuine source of pride and motivation within the company. We also believe that environmental care makes good business sense and contributes to the overall efficiency of the company.

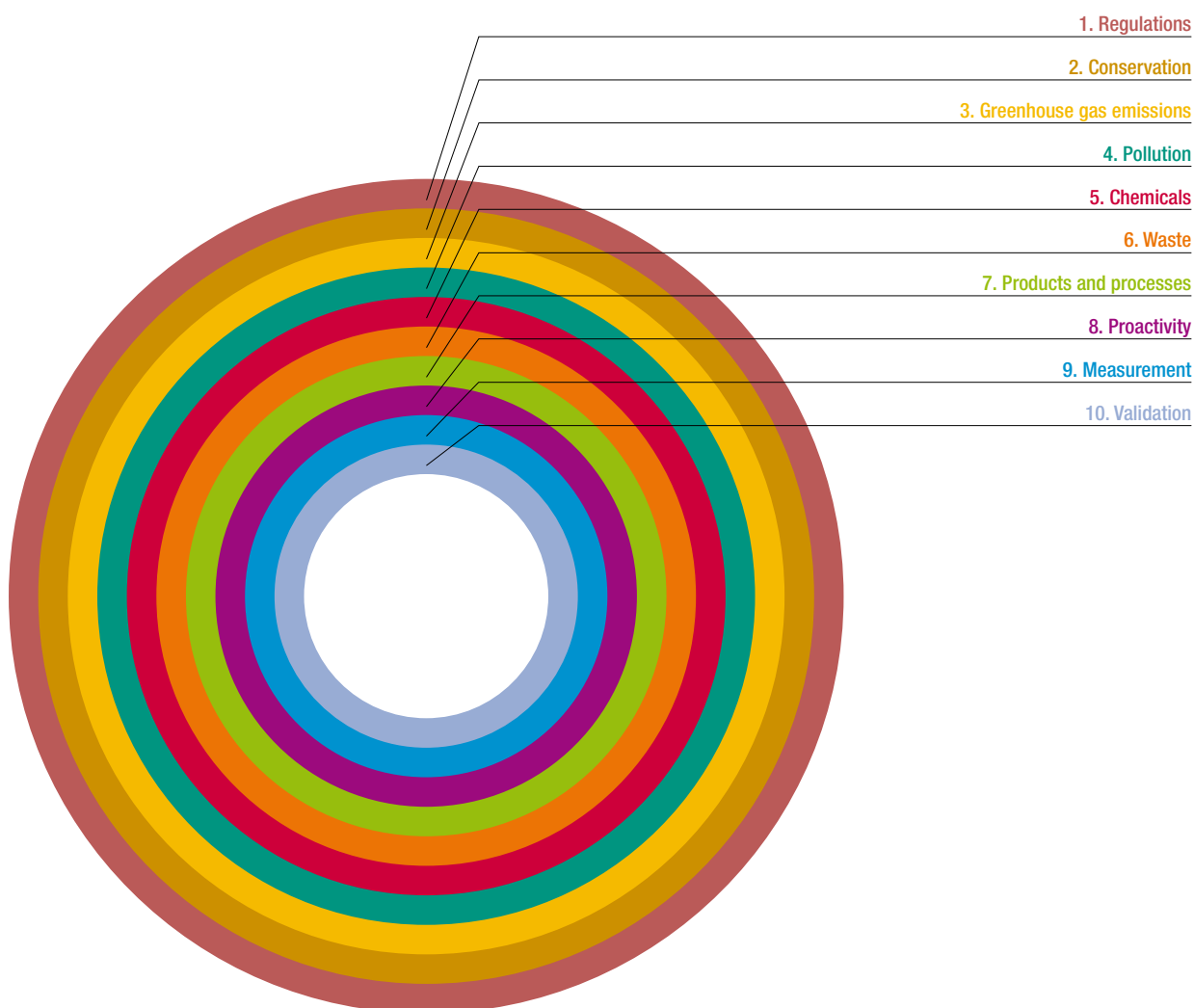
Our aim is to demonstrate our commitment to the environment by understanding and meeting the expectations of our stakeholders and of society in general, through initiatives and programs based on our Environmental Decalogue: a set of 10 quantified, timed and measurable targets created to help the company reduce its impact on the environment. Far from being a passive statement of principles, the Decalogue is part of the company's basic operating principles and helps create a culture in which employees at all levels are encouraged and rewarded for being environmentally aware.

To deliver this policy and formalize our dedication to environmental awareness, ST has endorsed the following internationally well-known principles:

- ST has adopted the 16 principles of the 'Business Charter for Sustainable Development' published by the ICC
- ST participates in the voluntary Community Eco-Management and Audit Scheme (EMAS) as well as the International Standard ISO 14001, both of which provide excellent guidelines to help us manage environmental issues at our sites
- ST follows the TQM approach which is a practical way of working and managing all the aspects of a business to achieve the best results
- ST has committed itself to reporting on its environmental performance, following the GRI format
- ST has adopted the concept of eco-efficiency indicators introduced by the World Business Council for Sustainable Development.

In 1994, ST applied for EMAS validation for all our sites and began to adhere to the ICC Business Charter for Sustainable Development.

In 1995, we issued our first Environmental Decalogue, a set of 10 targets created to help the company reduce its impact on the environment. This has been published as a booklet and distributed widely among ST's employees, suppliers, customers and partners. The latest version of the Decalogue was published in 1999.



**STEV1 ST's Environmental Decalogue**

- 1. Regulations**
  - 1.1 Meet the most stringent environmental regulations of any country in which we operate, at all of our locations.
  - 1.2 Comply with all international protocols at least one year ahead of official deadlines at all our locations.
- 2. Conservation**
  - 2.1 Energy: reduce total energy consumption (kWh per production unit) by at least 5% per year, through process and facilities optimization, conservation and building design.
  - 2.2 Water consumption: continue to reduce water draw-down (cubic meters per production unit) by at least 5% per year, through conservation, process optimization and recycling.
  - 2.3 Water recycling: reach a minimum of 90% recycling ratio in two pilot sites by end 2005.
  - 2.4 Trees: reduce office and manufacturing paper consumption (kg per employee) by at least 10% per year, and use at least 95% recycled paper, or paper produced from environmentally certified forests.
- 3. Greenhouse gas emissions**
  - 3.1 CO<sub>2</sub>: reduce total emissions due to our energy consumption (tons of carbon equivalent per production unit) by at least a factor of 10 in 2010 compared to 1990 levels. This is five times greater than the goal set by the Kyoto Protocol.
  - 3.2 Renewable energies: increase their use (wind, photo-voltaics and thermal solar) so that they represent at least 5% of our total energy supplies by the end of 2010.
  - 3.3 Alternative energies: adopt, wherever possible, alternative energy sources such as cogeneration and fuel cells.
  - 3.4 Carbon sequestration: compensate for the remaining CO<sub>2</sub> emissions due to our energy consumption through reforestation or other means, aiming at total neutrality towards the environment by 2010.
  - 3.5 PFC: reduce emissions of PFC (tons of carbon equivalent per wafer) by at least a factor of 10 in 2008 compared with 1995.
- 4. Pollution**
  - 4.1 Noise: meet a 'noise-to-neighbors' rate of less than 60dB(A) at any point and any time outside our property perimeter for all sites, or comply with local regulations (whichever is the most stringent).
  - 4.2 Contaminants: handle, store and dispose of all potential contaminants and hazardous substances at all sites in such a way as to meet or exceed the strictest environmental standards of any community in which we operate.
  - 4.3 ODS: phase out all remaining Class 1 ODS, including those in closed loops of small equipment, before the end of 2001.
- 5. Chemicals**
  - 5.1 Reduce the consumption of the six most relevant chemicals by at least 5% per year (tons per production unit), through process optimization and recycling (baseline 1998).
- 6. Waste**
  - 6.1 Landfill: reduce the amount of landfilled waste to below 5% of our total waste by 2005.
  - 6.2 Reuse or recycle at least 80% of our manufacturing and packing waste by the end of 1999, and 95% by the end of 2005.
  - 6.3 Use the 'Ladder Concept' as a guideline for all actions in waste management.
- 7. Products and processes**
  - 7.1 Design products for reduced energy consumption and to allow for more energy efficient applications.
  - 7.2 Contribute to global environmental control by establishing a database containing a life cycle assessment of our products.
  - 7.3 Systematically include environmental impact studies in our development process.
  - 7.4 Publish and update information about the chemical content of our products.
- 8. Proactivity**
  - 8.1 Support local initiatives for sponsoring environmental projects at each of our sites.
  - 8.2 Sponsor an annual Corporate Environmental Day, and encourage similar initiatives at each site.
  - 8.3 Encourage our people to lead/participate in environmental committees, symposia, 'watch-dog' groups etc.
  - 8.4 Include an 'Environmental Awareness' training course in the ST University curriculum and offer it to suppliers and customers.
  - 8.5 Strongly encourage our suppliers and subcontractors to be EMAS validated or ISO 14001 certified, and assist them through training, support and auditing. At least 80% of our key suppliers should be certified by the end of 2001.
- 9. Measurement**
  - 9.1 Continuously monitor our progress, including periodic audits of all our sites worldwide.
  - 9.2 Cooperate with international organizations to define and to implement eco-efficiency indicators.
  - 9.3 Measure progress and achievements using 1994 as a baseline (where applicable) and publish our results in our annual Corporate Sustainable Development Report.
- 10. Validation**
  - 10.1 Maintain the ISO 14001 certification and EMAS validation of all our sites worldwide.
  - 10.2 Certify new sites within 18 months of their operational start-up, including regional warehouses.

**STEV2** In order to meet these commitments, we put in place a training program for all our top managers. This was accompanied by ‘train the trainers’ sessions to help spread the culture of environmental awareness throughout our company.

By 1997, we had:

- Ensured that all our manufacturing sites were both EMAS and ISO 14001 certified
- Eliminated Class 1 Ozone Depleting Substances (ODS) from our facilities
- Produced a First Life Cycle Inventory of our finished products
- Published information on the chemical content of our semiconductor packages.

To help combat global warming, in 1999 we issued a second edition of the Environmental Decalogue, committing ST to becoming a CO<sub>2</sub>-neutral (zero CO<sub>2</sub> equivalent emission) company by the year 2010. This goes far beyond the requirements of the Kyoto protocol. We put in place roadmaps for energy and PFCs, which took into account the use of green energy, the installation of cogenerators and reforestation. In 2004 our reforestation efforts totalled 8,800 hectares, and since March 2003 we have been producing green energy through our 10.5MW wind farm at an annual rate of 30GWh per year.

We have continued to push our suppliers to be EMAS validated and ISO 14001 certified (70% of corporate critical suppliers accomplished this in 2004, compared to 50% in 1999). And we have extended our culture of environmental protection to our non-manufacturing sites, which began to be EMAS validated and ISO 14001 certified in 2001.

By 2003, all of our back-end manufacturing plants had reached the goal of producing zero landfilled waste, two years before the target set by the Decalogue.

We are proud of these achievements, and will continue to work hard to improve our results and do more to promote sustainable development.

### Information regarding values and indicators of environmental performance

As last year, we show absolute values for the whole company. We also refer to impact per unit of production (silicon wafers or finished products).

As in the rest of the report, in this section we refer to the GRI indicators and to our own ST indicators. In each part of this section we also refer to the relevant section of the Decalogue with the symbol §.

Some values presented in this report are given separately for front-end and back-end manufacturing sites, which produce different end products:

- Front-end sites produce finished silicon wafers of different diameters and different technological complexity. We have adopted a reference unit of an 8-inch wafer with a complexity level of 20 ‘masks’ (photolithography processes)
- Back-end sites produce the finished product or ‘package’ (a silicon ‘chip’ assembled into a plastic or ceramic package). We refer to this finished product in million ‘units’. In the sole case of energy, we refer to million ‘pins’ (wire connections on the package) because this is more suitable for measuring the consumption of electricity during the production process.



## Overview of 2004 environmental performance

**STEV3** §10 of Decalogue. *ST certification:* All of our manufacturing sites have been EMAS validated and ISO 14001 certified since 1997. Every site publishes a detailed environmental statement showing its consumption of natural resources and its emissions, together with relevant studies and additional information relating to its environmental management program. These reports are updated and published annually, as required by EMAS.

To maintain ISO 14001 certification and EMAS validation, all sites are independently audited. EMAS full revalidation and ISO recertification takes place every three years with annual surveillance visits. The auditor is BVQI or its equivalent body in different countries.

**STEV17** §8 of Decalogue. *Supply chain certification:* In accordance with our environmental policy we strongly encourage both suppliers and subcontractors to become EMAS or ISO 14001 certified. Figure 51 shows the status of certification of our corporate critical suppliers compared with last year. The results in this table reflect the fact that there has been a turnover of suppliers between 2003 and 2004.

**STEV4** §1 of Decalogue. *Results regulation tracking:* For further details on ST's compliance with existing and future environmental legislation, see the section on product responsibility from p.83.

**STEV5** *Environmental accounting:*

Figure 52 presents the total costs versus savings for the three key resources used in our industrial processes (energy, water, chemicals). The savings (in US\$m) in a given year are calculated with reference to our performance in 1994.

**STEV8** **STEV35** Taking the example of electricity consumption in 2004, we proceed in three steps:

- We look at the consumption of electricity in 1994 and at the number of products manufactured during the same year. The ratio between the two gives our energy efficiency in 1994
- We apply this ratio of energy efficiency to the number of products manufactured in 2004, which gives us the theoretical amount of energy that ST would have used if it had maintained the same energy efficiency as in 1994
- Then we compare this theoretical energy consumption with our actual consumption, which is much lower. The difference between the two gives the savings we have made and can easily be translated into dollars.

**STEV6** In 2004, capital investments in environmental activities amounted to US\$15.3m, or 0.75% of the company's capital investments.

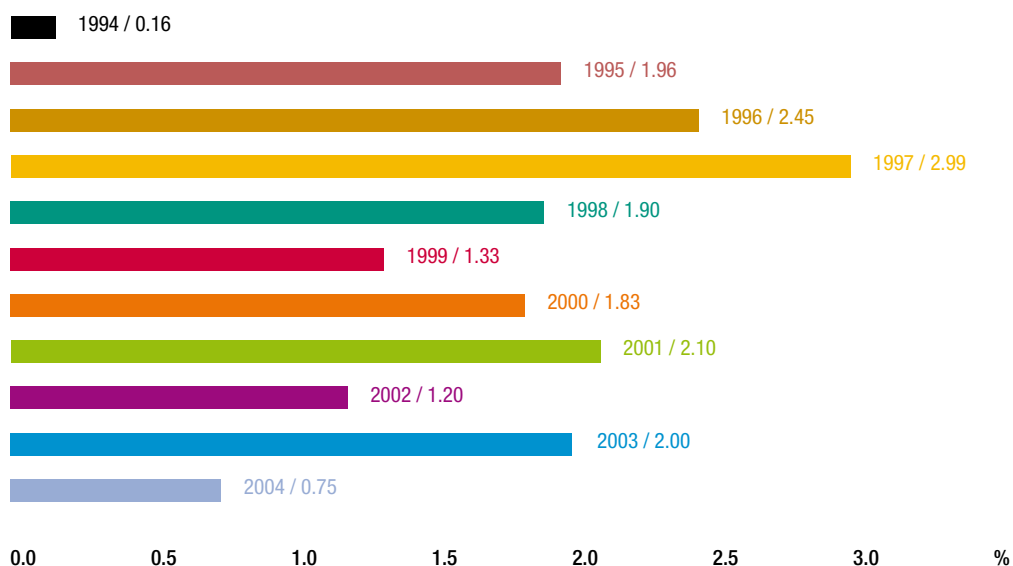
Suppliers of	Number of suppliers		ISO/EMAS certified		Certification in progress		With no certification	
	2003	2004	2003	2004	2003	2004	2003	2004
Materials	92	99	71%	70%	18%	8%	11%	22%
Equipment, facilities	61	61	54%	69%	43%	28%	3%	3%
<b>Total</b>	<b>153</b>	<b>160</b>	<b>64.2%</b>	<b>69.6%</b>	<b>28%</b>	<b>15.6%</b>	<b>7.8%</b>	<b>14.8%</b>

Figure 51

Costs versus savings for three key resources (US\$m)	2001	2002	2003	2004
<b>Total environment cost</b>	<b>30</b>	<b>32</b>	<b>35</b>	<b>35</b>
Energy saving	33	59	78	102
Water saving	6	10	13	17
Chemicals saving	17	31	42	54
Saving	56	100	133	173
<b>Balance (cost savings)</b>	<b>26</b>	<b>68</b>	<b>98</b>	<b>138</b>

Figure 52

## Environmental investments as a percentage of total company-approved investments



STEVI6 Figure 53

### STEVI9 Environmental awards

*Internal recognition:* The Corporate Annual Environmental Award was established in 2001 as part of the company's overall recognition plan and is awarded to the front-end and back-end sites that achieve the best environmental performance. The award is based on the evaluation of the site's ecofootprint (which includes the most important environmental parameters) and its strict compliance with environmental regulations.

*External recognition:* During the year 2004, ST as a whole, its various sites and individuals within the company won a number of awards:

- Best Renewable Energy Partnership with Industry award from the European Commission (as part of the 'campaign for take off' of renewable energies) (ST)
- Green Hero Lifetime Achievement award from AnalogZONE (CEO)
- The Singapore Environment Ministry's Environmental Achievement Award (SEAA) (ST Singapore)
- The 'Innovazione Amica dell'Ambiente' prize (for the program on sustainable mobility) (ST Agrate)
- National Park Board and Energy Market Authority's Singapore Green Plan (SGP) 2012 Award (ST Singapore).

### Incident at Rousset

An incident at Rousset in 2004 underlines how our successful approach to environmental matters is supported by our continuing efforts to be vigilant, to investigate promptly and to take timely and appropriate action. At the end of the summer, we found that there was damage to some of the windshields of vehicles parked in the company parking lot. This was because of an abnormal discharge of water droplets carrying fluorine compounds – a characteristic of fluorine is to react with silicon, which is a base material of glass.

Employees, the authorities and the local elected representatives were all informed and protective measures were taken in relation to car parking. The study carried out by ST engineers, together with external experts, helped to identify what had caused the situation and it was corrected following a series of actions.

The phenomenon was limited to part of our premises, with no impact outside the perimeter of the site. There was no atmospheric pollution and the incident was classified by the authorities as G1-P1 (an incident without environmental consequences). There was no impact on employees' health, as confirmed by the external independent authorities concerned with protection.

**EN16** **EN13** This was the only incident of its kind in 2004. ST received no fines for non-compliance with environmental legislation.

## Measuring our performance

### Environmental burden: the impact of emissions to air and water

**STEV20** *the Environmental Burden Method.*

In 2001, ST began to use the Environmental Burden Method (developed with the World Business Council for Sustainable Development) to estimate the potential environmental impact of air emissions and waste water releases, rather than simply giving information on quantities in relation to local limits. In doing so, ST has gone well beyond mere compliance with local regulations, which generally require companies only to stay below a certain concentration (expressed in mass per volume of emission). The Environmental Burden Method is an informative and scientifically sound way of quantifying the environmental performance of a global company. It includes all front-end and back-end manufacturing sites, and treats the company as a single 'ecosystem'. Our objective is to measure our global impact worldwide and to go as far as we can towards being environmentally 'neutral'.

The Environmental Burden approach is also used to set and monitor internal targets for our front-end and back-end manufacturing sites.

We use 10 impact categories – six dealing with emissions to air and four to water. We surveyed all our manufacturing sites for the fourth time in 2004.

Figure 54 shows our net figures for Environmental Burden since 2001.

Net figures for Environmental Burden – total ST							
Indicators		Units	2001	2002	2003	2004	Comments
Emissions to air	Global warming	MTCE	457,214	489,813	511,084	522,877	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)
	Ozone depletion	Kg R11 Eq	591	465	158	122	Deals with marginal releases of Ozone-depleting substances measured in R11 equivalence
	VOCs	Tons	309.7	341.2	331	294	Reported as net volatile organic compounds emissions in tons
	Atmospheric acidification	Kg SO <sub>2</sub> Eq	24,591	36,304	49,040	25,898	Total acidic emissions expressed in Sulfur Dioxide (SO <sub>2</sub> ) equivalence
	Photochemical Ozone creation	Kg Ethylene Eq	29,320	97,640	84,478	59,401	Deals with the potential to form low-level Ozone
	Air emission toxicity	Kg PH <sub>3</sub> Eq	3,227	6,375	11,010	3,543	Emissions of substances are considered with threshold limit values below 3ppm, expressed in Phosphine equivalent
Emissions to water	Eutrophication	Kg [P+N]	345,603	281,650	253,464	177,122	Deals with Phosphorus and Nitrogen emissions
	Aquatic Oxygen demand	Kg COD	699,790	498,670	476,562	518,935	Total Chemical Oxygen Demand (COD)
	Heavy metals to water	Kg Heavy metals	20,269	16,192	18,731	19,520	Total heavy metals emissions
	Aquatic ecotoxicity	Kg Cu Eq	20,269	12,086	12,256	10,772	Includes mass emissions of various metals expressed in copper equivalent

STEV21 EN8 EN9 EN10 EN12 Figure 54

Normalized figures for Environmental Burden	Front-end				Back-end			
	2001	2002	2003	2004	2001	2002	2003	2004
Global warming	100	81.1	73.7	64.0	100	97.4	79.7	77.7
Ozone depletion	100	11.4	0.6	7.8	100	85.4	22.0	14.0
VOCs	100	90.3	74.7	56.5	100	155.8	130.6	126.4
Atmospheric acidification	100	129.8	150.0	68.8	100	65.8	78.2	27.7
Photochemical Ozone creation	100	246.4	207.0	117.9	100	728.6	134.3	209.9
Air emission toxicity	100	164.4	250.5	68.9	100	138.1	86.3	21.9
Eutrophication	100	70.0	47.0	30.5	100	53.6	74.0	34.4
Aquatic Oxygen demand	100	57.1	56.9	55.4	100	59.7	33.8	28.0
Heavy metals to water	100	69.6	69.1	46.0	100	59.0	61.6	79.1
Aquatic ecotoxicity	100	47.7	36.6	30.0	100	53.4	65.5	41.7

STEV22 Figure 55

### Emission to air

In general terms, absolute values are low and all of our sites are well within the limits set by local regulation.

In terms of global warming, the absolute value increase year on year is due to increases in production, and does not take account of reforestation (see the carbon neutrality section on p.74).

With regard to the other parameters, since 2002 we have been installing scrubbers (at Ang Mo Kio, Agrate, Rousset and other sites) in order to compensate for increases in production, and reduce emissions to air, particularly of solvents (VOC and POC).

### Emission to water

Here also, absolute values are low and all sites are well within the limits set by local regulation. These figures take into account all effluents, both in surface water after it has left the waste water treatment station (where these exist), and water that goes directly to the sewer. The figures above are calculated bearing in mind the fact that public water treatment stations are not able to eliminate heavy metals and are able to eliminate only 50% of Phosphorus and Nitrogen.

#### Front-end and back-end normalized figures:

Figure 55 presents the normalized values for the Environmental Burden indicators by total front-end and back-end sites against a base line of 100 in 2001.

**EN1 Ecofootprints**

**STEV23** We use ecofootprints to allow a fast, fact-based evaluation of environmental performance improvement and a comparison of data from different sites.

Every year, and for each parameter, we point out what is best in world-class performance, and take this as the new standard reference. The ratio of performance as against the standard reference is plotted on a radar chart. A footprint equal to or below 1 means we are performing better than the standard.

Up to 2003, only six indicators were included in the ecofootprints (electricity, water, chemicals, paper, waste and global warming). In 2004, we put in place a new set of 10 indicators. Five of them are the same as the previous year's (electricity, water, chemicals, global warming and waste). The 'paper' parameter is replaced by 'material intensity', which includes all the materials that enter the sites and that are consumed in the production process. These materials include chemicals, even though chemicals are also presented separately. The materials used in front-end and back-end sites differ slightly: front-end sites use mainly silicon and chemicals, while back-end sites use mainly resins, chemicals and metal frame.

The four other new indicators are eutrophication, atmospheric acidification, VOCs and fluorides. In order to monitor improvements, ecofootprints are reviewed on a quarterly basis.

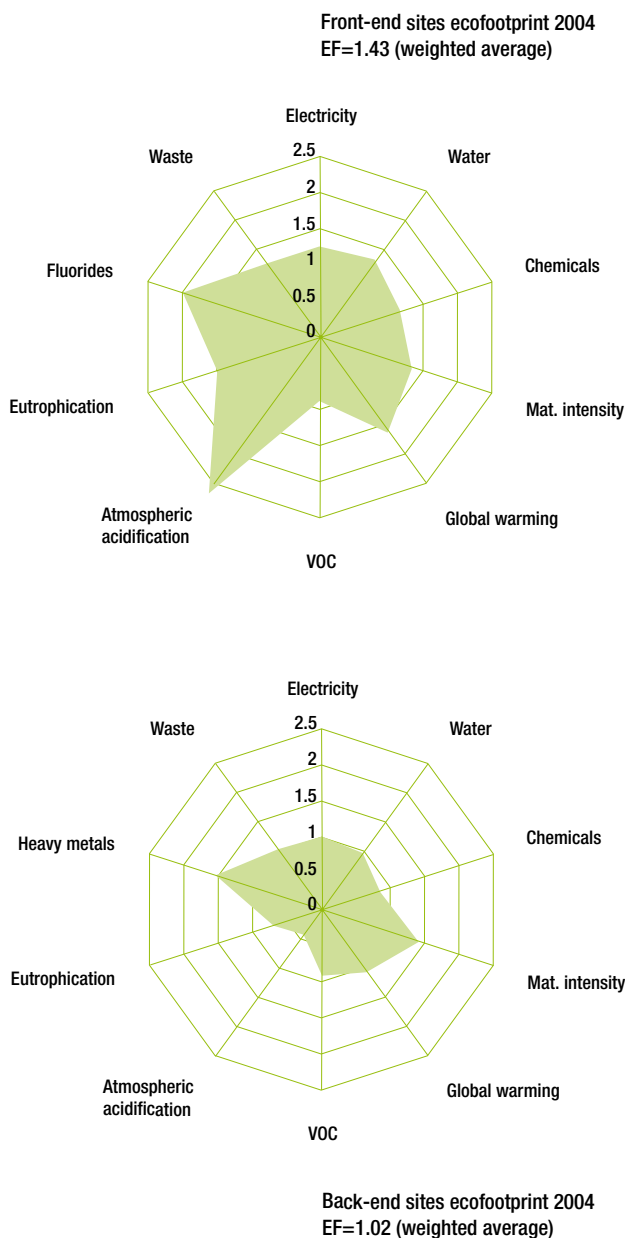


Figure 56

## Carbon strategy

### The path to carbon neutrality

We continue to believe that the most pressing environmental threat is climate change, which is caused by increased levels of greenhouse gases (GHGs) in the atmosphere. Although our total contribution (1.72 million tons of CO<sub>2</sub>) to climate change is relatively small in global terms, we are determined to do all we can to reduce our impact. We have developed a Carbon Roadmap to help us achieve our ambitious target of becoming CO<sub>2</sub> neutral by 2010. This roadmap consists of:

- **STEV36** Our energy management program, covering energy efficiency (we aim to reduce by at least 5% per year our energy consumption per unit of production – §2.1 of Decalogue), and alternative/renewable energy (we aim to develop use of renewable energy so that it accounts for 15% of our consumption in 2010, and develop alternatives sources such as cogeneration or fuel cells)
- Our PFC management program (which aims to reduce our PFC emissions by a factor of 10 in 2008 compared to 1995)
- The Carbon Offset Program
- Our emission reduction trading program.

### Energy management program

**STEV31** *Energy efficiency* – §2.1 of Decalogue. In 2004 we have continued to improve our energy efficiency, as shown in Figure 57.

**STEV33** **STEV34** In 2002, we reported on the identification of 350 energy efficiency measures that we had identified through our 2002 Energy Conservation Self Assessment Survey,

Consumption of energy per production unit

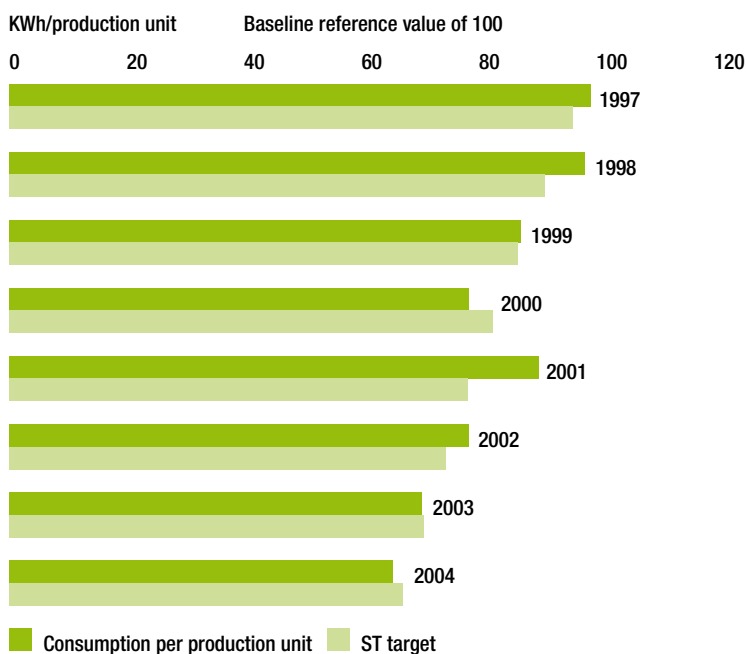


Figure 57

and which we planned to implement by the end of 2005. All of these 350 measures had been implemented by the end of 2004, or are being implemented in 2005. In addition, we identified other actions that can bring about a saving of 135GWh per year, which are being implemented over the 2005-2006 period.

**EN3** Evolution of our energy consumption in absolute values. Our gas consumption has remained stable over the year. The average growth of our global electrical energy consumption is well below the average for production growth.

Consumption of energy	2001	2002	2003	2004
Electricity (GWh)	1771	1862	1972	2148
Gas (GWh)	277	270	260	268

**EN3** Figure 58

### Alternative and renewable energy

**EN17** §3.2 and §3.3 of Decalogue. As mentioned in last year's report, in addition to energy efficiency actions, we plan to source a greater percentage of our energy from:

- Cogenerators (combined heat and power), which are more efficient and emit less CO<sub>2</sub> per unit of energy (a 40MW co-generator is under construction in Catania)
- **STEV40** Renewable energies (wind and solar, which emit no CO<sub>2</sub>). ST's 10.5MW wind farm produced 18.6GWh in 2003 and 30.5GWh in 2004.

**STEV37** We are exploring the possibility of purchasing green electricity rather than making the investment in wind farms ourselves. The percentage of renewable energy used in the whole company is currently around 2% and should increase to 15% by around 2012, or three times the level that the Decalogue commits us to.

So the total savings in CO<sub>2</sub> emissions due to the adoption of renewable and alternative energies plus the implementation of energy efficiency measures will be approximately 15 million tons of CO<sub>2</sub> between 2000 and 2010. We make this calculation by comparing our forecast of emissions following the energy roadmap with the results we would have obtained if we had maintained the same performance as in the baseline – 1997 for back-end and 1994 for front-end – and had not invested in green energy.

In September, our Kirkop back-end manufacturing facility in Malta began to use only biodiesel fuel for its boiler systems and the diesel-powered vehicles in its transport fleet.

### Perfluorinated Compound (PFC) management program

**STEV44** §3.5 of Decalogue. The World Semiconductor Council (WSC), in which ST is a leading European participant regarding the use of PFCs, has set an ambitious goal of reducing the aggregate of absolute PFC emissions to 10% below 1995 levels by 2010. ST has set its own, more ambitious internal target for PFCs, which is to reduce its emissions to 10% of 1995 levels (reduction by a factor of 10) per unit of production by 2008, two years before the WSC deadline.

### Results in the reduction of PFC emissions

**STEV46** In last year's report we made a special mention of PFC reduction and the measures we planned to put in place to bring this about, after our net emissions of PFCs in 2003 increased by 12.3% compared to 2002. In 2004, despite a huge growth in production, the increase of net emissions due to PFC is only 5.9%. In order to come back in line with our PFC road map, and to help us reach the WSC goal in 2008, we have approved US\$5m to be spent on abatement systems in 2005.

CO <sub>2</sub> emissions from PFCs	2000	2001	2002	2003	2004
Net emissions due to PFC	689	532	601	677	718
kgCE/wafer eq base 100 in 1995	65.7	52.2	48.5	46.7	42

Figure 59

Putting the results of the past two years into perspective, ST has managed to cut the emission rate, expressed in kg of carbon equivalent per wafer, by 57% compared to the 1995 baseline, and 9.7% compared to 2003. These results are mainly due to:

- The work of the PFC task force in reviewing and standardizing all the technical options, and providing clear instructions to the manufacturing operations (with solutions defined per process type)
- The numerous tests performed by several sites (Rousset, Singapore and Catania) to find innovative solutions without compromising safety
- The installation of abatement systems when new equipment is installed
- The use of alternative gases (NF<sub>3</sub> and C<sub>3</sub>F<sub>8</sub>) which are less likely to contribute to global warming.

We have saved around one million tons of carbon equivalent (TCE) from 1996 to 2004.

### Closing the carbon loop: Carbon sequestration and emissions trading

CO <sub>2</sub> emissions (PFC+energy) kTons	2003	2004
Without Carbon Roadmap	3102	3566
With Roadmap (actual)	1639	1744

**STEV49** Figure 60

#### Carbon sequestration

In 2004, our greenhouse gas (GHG) emissions from energy consumption and PFCs totalled 1.74 million tons of CO<sub>2</sub>, compared to about 1.64 million tons in 2003. Nevertheless, in terms of normalized figures (TCO<sub>2</sub>/unit of production) our efficiency is improving, and the absolute figures would be much higher without the action we are taking.

Given our economic growth, if no action had been taken, our emissions would have been 3.1 million tons of CO<sub>2</sub> in 2003 and 3.5 million tons in 2004.

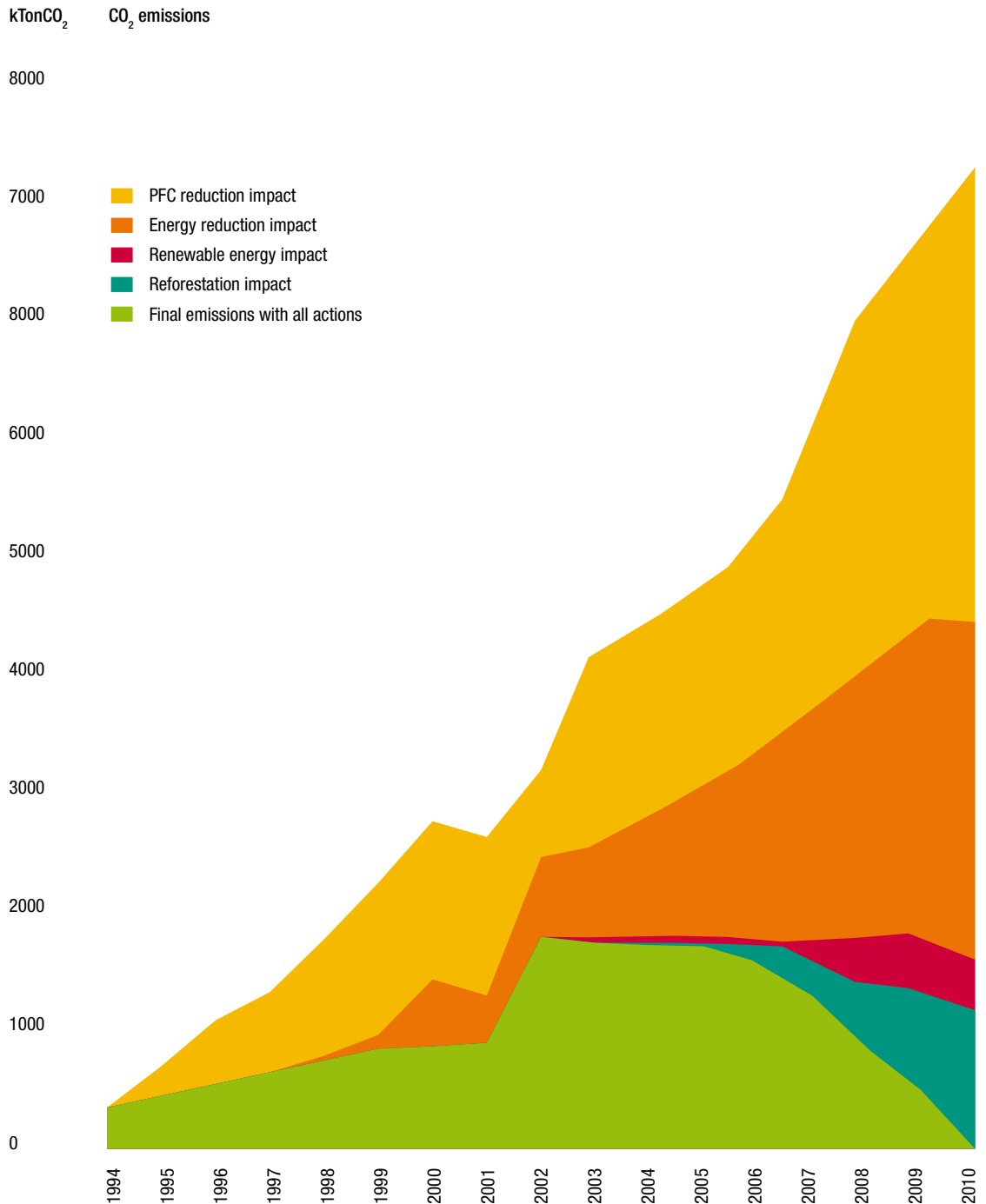
**STEV52** Our Carbon Offset Program aims to neutralize any remaining carbon emissions (both direct and indirect) by 2010. It will allow us to sequester three million tons of CO<sub>2</sub> between 2001 and 2010 through reforestation projects in different countries around the world.

According to the Carbon Roadmap we will avoid emitting over seven million tons of CO<sub>2</sub> in 2010 thanks to our energy and PFC management programs and to our Carbon Offset Program.

**STEV50** By the end of 2004 our Carbon Offset Program had resulted in approximately 8,800 hectares (4,800ha in Morocco, 2600ha in New South Wales Australia, 1400ha in Texas and 17ha in Italy) being reforested.



### Forecast of reduction of CO<sub>2</sub> emissions



STEV28 Figure 61

### Emission trading program

**STEV53** ST is currently taking part in the Chicago Climate Exchange (CCX) program, a voluntary greenhouse gas trading program in North America involving around 30 companies from different industry sectors. ST is participating through its two manufacturing sites in the USA, at Phoenix, Arizona and Carrollton, Texas.

Since the Kyoto Protocol entered into force, regulation has been put progressively in place, particularly in Europe, and we are beginning to see the first allocations of emissions. ST is ready to comply with these new regulations

### Sustainable mobility

ST's promotion of sustainable mobility is also helping to reduce CO<sub>2</sub> emissions. This aims to reduce the environmental impact of the transport used by ST employees. Our Grenoble site's sustainable mobility plan continues to be implemented, with consistently good results. At ST's Agrate site, 1,000 employees have switched from coming to work in their own cars to using shared transport. For this, the site won the prestigious 'Innovazione Amica dell'Ambiente 2004' award from Regione Lombardia e Legambiente. In 2005, the aim is to persuade a further 200 people to use shared transportation. The Rousset site has also put in place a system of 'ride-sharing', with a website to help people find a colleague to share their car for the journey to work.

Our standard operating procedures on company cars specify that they must not consume more than 7.5l/100km.

Total CO <sub>2</sub> emissions and savings	1999	2000	2001	2002	2003	2004
<b>STEV27</b> CO <sub>2</sub> due to energy (direct and indirect emissions)	701	822	929	940	971	1,047
<b>STEV46</b> PFCs direct emissions	605	689	532	601	677	718
<b>STEV47</b> Total emission	1,306	1,511	1,561	1,541	1,650	1,765
<b>STEV38</b> Saving due to investment in renewable energy	-	-	-	-	1.14	1.86
Sequestration due to the implementation of reforestation projects	-	-	-	-	6	14
<b>STEV53</b> Savings due to the emission trading program	-	-	-	-	3.99	5.27
Total net kTonCO <sub>2</sub>	-	-	-	-	1,639	1,744

Figure 62

## Water

### Reductions in water consumption

The reduction of water consumption is another of the areas in which we are making good progress. Although, in 2004, ST's total operations consumed 20.6 million m<sup>3</sup> of water compared to 19.8 million m<sup>3</sup> in 2003, we have consistently exceeded our Decalogue target, which is to reduce our water consumption per unit of production by 5% a year).

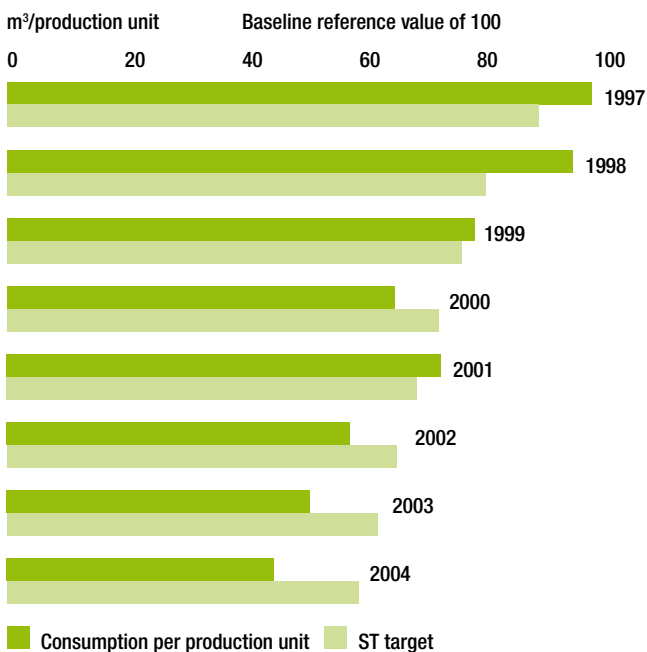
**STEV56** As a result we have cut our water consumption by unit of production by an average of about 10% per year (see Figure 63). This has achieved savings of more than US\$62m since 1997.

**STEV58** In 2004 we saved 32 million m<sup>3</sup> of water, which translates into a saving of US\$17m (compared with US\$13m in 2003).

This reduction is due in large part to the recycling of water at many of our manufacturing sites through:

- Microfiltration to remove silicon dust after wafer cutting
- The use of reverse osmosis ion-exchange resin to clean water from plating processes
- The recovery of waste water
- The reduction of water usage in wafer saw machines
- Reducing evaporation when possible
- Electro-deionization technology for ultra pure water (UPW) systems
- Improving equipment efficiency.

### Consumption of water per production unit



**STEV56** Figure 63

Total water use	2000	2001	2002	2003	2004
1000m <sup>3</sup>	18,630	20,330	19,450	19,850	20,550

**EN5** Figure 64

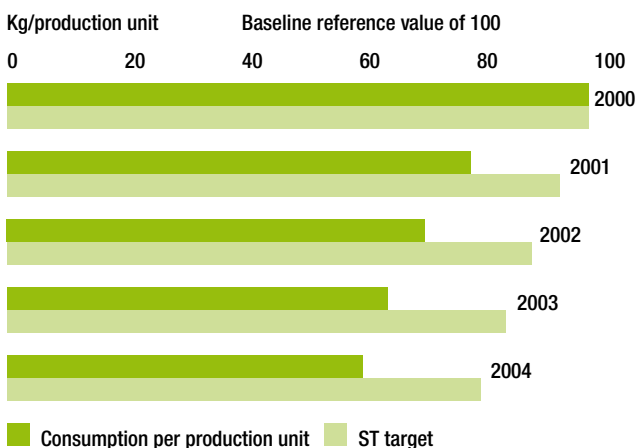
## Chemicals

**STEV64** §5.1 of the Decalogue. Semiconductor manufacturing processes require significant amounts of chemicals. Since some chemicals have potential impacts on the environment and also on health and safety, we have been active in minimizing their use. We have achieved this through substitution, process optimization, hardware modifications, on-site generation and recycling for reuse – in partnership with key chemical suppliers. The chemicals we target are photoresists, developers, sulfuric acid, hydrogen peroxide, hydrofluoric acid and a selection of solvent compounds. The Decalogue sets a target of reducing by 5% per year the consumption of chemicals per unit of production. As shown in Figure 65, we far exceeded this, with a reduction of approximately 7% compared to 2003.

To achieve these results, particular emphasis was given to the following programs for front-end:

- The use of diluted chemicals in spray processors through hardware modifications (low flow pick-up in FSI spray tool)
- Total sulfuric acid substitution by deionized water (DI H<sub>2</sub>O) and Ozone (O<sub>3</sub>) for the resist removal processes
- Pre-diffusion cleaning recipes standardization to very diluted chemistries for our existing wet benches tool base (SC1 and SC2 recipes)
- The replacement of old wet benches with new equipment consuming smaller quantities of chemicals and providing better process performance
- The replacement of hazardous solvents for post metal etch and oxide etch for polymer removal processes
- The development of advanced cleaning sequences for reducing and substituting the main chemicals used in wet cleaning processes.

Consumption of chemicals per unit of production



**STEV65** Figure 65

And for back-end:

- The introduction of pre-plating frame processes
- The use of electro-stripping options instead of chemical strippers
- The conversion of dipping process to plating process.

Figure 66 shows the absolute tonnage of chemicals consumed by ST per year. In net consumption, we are at the level of 2000, while the volume of production has increased considerably. These net figures would have been much higher without the actions we have taken.

Net consumption of chemicals	2000	2001	2002	2003	2004
Tons of chemicals	16,947	13,053	14,188	15,345	16,938

Figure 66

**Waste**

**EN11 EN2** 2004 results: In 2004, waste produced by ST totaled 40 ktons (compared to 33 in 2003).

**STEV72** 93.3% of this waste is either reused, recycled, burned with energy valorization, or incinerated.

**STEV71 STEV73** Only 6.7% of it is landfill waste. This is very close to our Decalogue target of 5% in 2005. Figure 67 shows landfill waste as a percentage of total waste over time.

In 2004 we recycled or reused 75% (compared to 73% in 2003, 65% in 2002 and 25% in 1994). In 2004 the company reused or recycled 32,000 of the 40,000 tons of waste generated.

Examples of reuse and recycling activities:

- Sludge produced in ST’s waste water treatment plants is used by the cement and brick industry
- De-flashing waste powders are sent for precious metals recovery
- Gloves and overshoes are cleaned and reused
- Waste silica (a by-product of our epitaxial growth processes) is sold as raw material to the optical fiber industry
- Reject silicon wafers are used in solar panels
- Waste resin from assembly sites is used to manufacture floor tiles and bricks.

**Organic waste**

Waste is not always industrial. Our back-end site in Muar, Malaysia has made a valuable contribution to our zero landfilled waste policy. By the third quarter of 2004, it had reached its goal of recycling 100% of canteen waste. Our front-end plant in Phoenix, USA, has also made a valuable contribution by recycling canteen waste and transforming it into organic fertilizer.

Landfill waste as percentage of waste over time

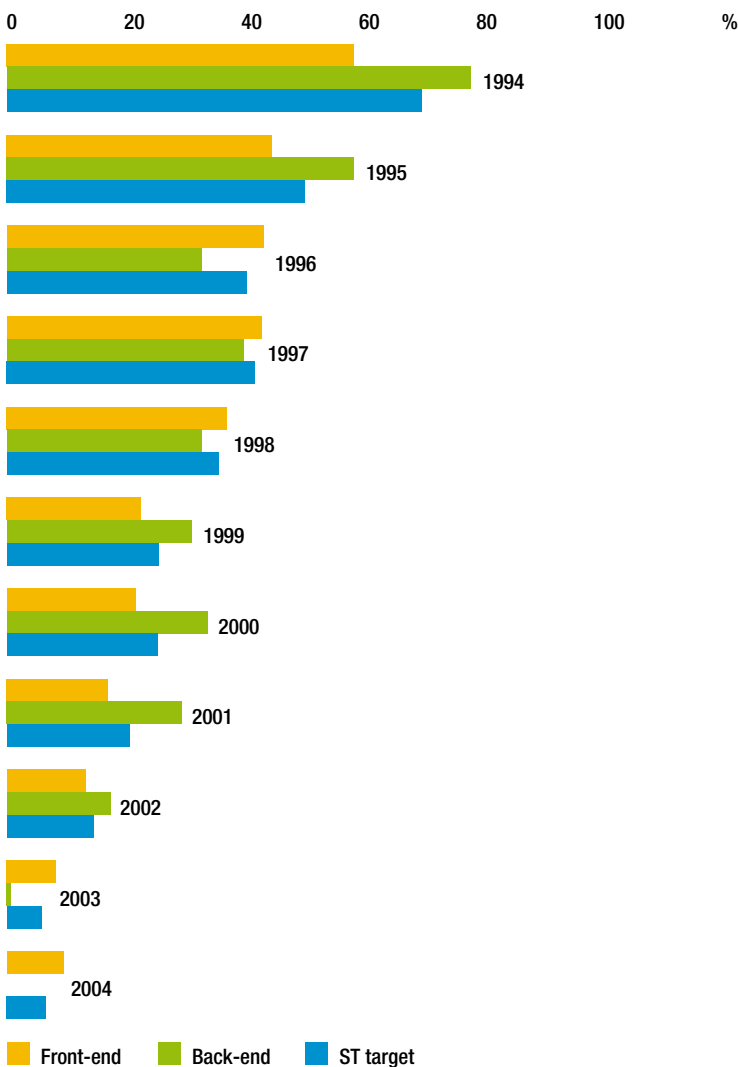


Figure 67

**Total Waste Management**

These improvements result from the fact that ST has developed a system for coordinating waste management across its sites worldwide. A specific in-depth study was carried out at each site to understand how waste was managed, segregated and collected, and to analyze the type of disposal or treatment, weight of waste involved, and cost and frequency of generating waste. We began implementing a zero landfill waste management program in 2001, and achieved 'zero landfill' in 2003 in all back-end sites, with both environmental and economical benefits.

For all industrial wastes, this zero landfill waste management program is supported by a Total Waste Management (TWM) project, based on a global contract agreement with other companies acting as our TWM partners. All other non-industrial wastes are managed at the plant level through various local initiatives and by on-site waste contractors. Our TWM partners guarantee us a precise and accurate waste management process and complete traceability on material movement, destination and recycling. This gives us a competitive advantage by enabling us to simplify our internal procedures, reduce direct and indirect overheads, and reduce operating costs.

The final goal of TWM is the achievement of a complete reuse of every form of waste, through advanced recycling applications and integrated procedures adopted at a worldwide level.



## **Product responsibility and supply chain management**

Corporate Responsibility covers many areas and the field it embraces is constantly widening. That's why we are advancing beyond our traditional concerns into new areas where we can take positive action. We continue to seek solutions to minimize the impact of our products and are also striving to improve the ethical management of our supply chain.

New challenges. New solutions.  
But the same determination to  
make a positive difference.

ST's approach to Corporate Responsibility is active and dynamic. It is continually evolving as we respond to changes in the environment we work in and as we join with others in the Corporate Responsibility community to develop the concept of Corporate Responsibility itself. As a long-established pioneer in Corporate Responsibility, we are advancing beyond traditional considerations of what our impact might be to new areas where we can also make a positive difference. These new areas have both social and environmental aspects.

### Product responsibility

**EN14**

One area in which we continue to work is product responsibility. This involves trying to minimize the impact of a product not just during its manufacture, but throughout its working life and even once it has become of no further use.

Throughout 2004, we have been pursuing our goals of sustainable product design and development. These goals recognize the need to consider what effects our products have once they have left our factories. This includes providing detailed information, notably to our customers, on the materials that we have purchased from our suppliers and then used in our products.

We have been working:

- To continually improve our products, so that they consume less energy and can be used in energy efficient applications
- To establish a database containing a life cycle assessment of our products
- To publish and update information regarding the chemical content of our products.

### Energy efficient product design

**EN17** We are very conscious of the need to reduce power consumption. And that is something that all of our engineers bear in mind, from their first ideas for a product through to final production.

ST developers are trained to use a number of different technologies and processes – including silicon process technology and software/hardware system partitioning – in order to create low power consumption products.

We have identified four main scales at which we can work to make our products more energy efficient:

- System level ( $10^1$ m), using software/hardware partitioning, low power algorithms and choice of interfaces
- Architectural level ( $10^3$ m), using pipelined or parallel processing, power-management control units and clock-gating
- Blocks/cells level ( $10^5$ m), using low power libraries, adaptive power functions and switched-capacitors techniques
- Silicon Process level ( $10^7$ m), using low voltage processes, low-leakage transistors, low-k dielectrics and Silicon On Insulators.

Though processes at the smaller scales use smaller amounts of power, this is balanced by the fact that more processes are used. To achieve the best overall efficiency, processes at all the different scales need to be considered together.

### *The low power philosophy*

Many ST products already benefit from our low power design and manufacturing expertise.



The main product families targeted are:

- Application specific standard products (ASSPs) like cathodic ray tube class-D drivers, audio class-D amplifiers, switched power supplies management circuits and so on
- High performances analog and logic circuits like high-speed amplifiers, data-converters etc. This corresponds to around 60% of the total 2003 integrated circuit market in which ST intends to increase its market share.

#### **STEV78 Life cycle assessment**

We currently provide product life cycle assessment details to our customers on request. But we are also working to create a database containing life cycle assessments of our products to help disseminate this information more widely. Where there is an obstacle, we are endeavoring to overcome it. For example, analyzing the environmental impacts of electronic components from a life cycle perspective is difficult, due to long supply chains and the complexity of manufactured products. In order to understand this complicated situation more fully, in 2004 we began a partnership with the International Institute for Industrial Environmental Economics at Lund University, Sweden. Greater knowledge should enhance our ability to create better solutions.

#### **STEV79 Chemical content of our products**

As we have been doing now for several years, we publish regularly updated information on the chemical content of our products on our website: [www.st.com/environment](http://www.st.com/environment)

#### **STEV4 Tracking and compliance with legislation for product responsibility**

ST supports the Registration, Evaluation, and Authorization of Chemicals (REACH) objective of protecting human health and the environment. ST intends to adopt the new REACH system of chemical classification and to

use aspects of it also in our non-European sites.

Use of all PBT (Persistent, Bioaccumulative and Toxic), vPvB (very Persistent and very Bioaccumulative) and CMR (Carcinogenic, Mutagenic and Toxic for Reproduction) materials is forbidden within the company unless no proven alternative exists. In this case, specific adaptations of the corresponding workstations and operating procedures are implemented.

Some substances are the intellectual property of the suppliers. Consequently, ST, like the majority of other downstream users, does not have full knowledge of all the substances contained in the company's chemicals or preparations, even if the material safety data sheet (MSDS) we receive is compliant with the current legislation. It is therefore possible that ST may be using some substances covered by the REACH requirements without our knowledge.

ST is working in close partnership with other semiconductor companies on the identification and phasing-out of potentially harmful chemicals.

ST is looking to phase-out PFOS (Perfluorooctane Sulfonate). Until a proven alternative is found, PFOS will continue to be used only in critical applications.

#### ***Restriction of Hazardous Substances (RoHS) Directive***

ST is implementing the demands of the RoHS Directive ahead of schedule. Starting in July 2006, all producers of electronic and electrical equipment manufactured and sold in Europe – or imported or exported into or from a country member of the EU must comply with the EU's RoHS Directive 2002/95/EC of the European Parliament and of the Council of January 27, 2003. The RoHS Directive

mandates the maximum concentration level of six hazardous materials – Lead (Pb), Hexavalent chromium (Cr+6), Mercury (Hg), Cadmium (Cd), PBB (PolyBrominated Biphenyl) and PBDE (PolyBrominated Diphenyl Ether).

ST provides a certificate of compliance to its customers to indicate that, in advance of the deadline of July 2006, ST is implementing the requirements of the RoHS Directive. Lead is the main substance of concern to ST in terms of RoHS compliance.

### **Lead**

In 2004, we continued with our program to remove lead from our products, partly through our joint initiative with Philips Semiconductors, Infineon Technologies and Freescale Semiconductor (the E4 group), focusing on accelerating the use of lead-free packages while stimulating further development of environmentally-friendly package technologies.

The microelectronic industry is not a major user of lead, as it accounts for less than 0.5% of the worldwide consumption of lead. Nevertheless, in 2000 we introduced our strategic Ecopack program, to remove hazardous substances, including lead, from our manufacturing lines. This precedes, by several years, the EU RoHS Directive, which will enter into force in July 2006. By taking lead out of our components, ST will be compliant with the RoHS Directive by mid-2005.

Most of the lead in our products is found in the metallic connections between the silicon-based component and the printed circuit board of the customer application. Lead is present in:

- The coating of connections (through plating or dipping)
- The 'balls' of Ball Grid Array (BGA) packages

- The 'bumps' for flip chips (silicon chips used directly on the printed circuit board without being integrated in a plastic or ceramic package).

Lead can also be found in very small quantities inside the ceramic package – in the form of solder paste for example – but this is exempted under the new regulation.

### ***Actions put in place at ST to replace lead***

Our engineers have pioneered three major technologies to replace the use of lead:

- Our preferred solution is that nickel/palladium/gold alloy is used as a pre-plated coating for the terminals of signal surface mount devices
- Pure tin is used as a post-plated or dipping coating for the terminals of power surface mount devices and for insertion packages
- Tin/silver/copper metallurgy is used for the solder balls of all BGAs and bumps.

These solutions meet industry standards and customer specifications. We are now converting all our manufacturing lines to use these new technologies.

Since our lead-free technologies are (with the exception of BGA) compatible with older manufacturing processes, ST has taken a lead in promoting its lead-free solutions among its customers. Nevertheless, we have maintained the capacity to use the old technologies, for example for customers who want to delay conversion, such as those in the automotive industry and other sectors which are exempted under the Directive.

50% of our production was already lead-free at the end of 2004. Our target is to reach 85% in June 2005, with the remaining 15% accounted for by the automotive industry and high-end telecoms, which are exempted under the RoHS Directive. This will allow us to clear our inventories of leaded products well before the Directive comes into force.

Our overall strategy and roadmap for taking lead out of our products are described on our website.

#### **Waste of Electrical and Electronic Equipment**

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

#### **Sales to the military**

We do not have any direct sales to the military sector but we do have direct sales to the aerospace sector in Europe for civilian applications. We also sell our products to distributors, but we do not have any control over their subsequent sales.

It is important to note that these products are standard and that they are employed in hundreds of different applications and sectors. They are voltage regulators, diodes and transistors, for example, that can be purchased from any distributors and employed in the construction of thousands of products. It is unlikely military clients would use any of our standard products entering the distribution network because such clients usually require very specific, customized applications.

## **Supply chain management**

ST is investigating its wider impact in supply chain management, which is a major area. In line with new initiatives such as the UN Global Compact – which sets out guidelines, supported by ST, for companies in the areas of human rights, labor, the environment and anti-corruption – and also in response to requests from ST customers and NGOs, we are seeking to expand the areas where we can have a positive influence within our supply chains. This includes both among our suppliers and our customers because at ST we are seriously committed to the ethical management of our supply chain.

In 2004, we expanded the range of industry standards that we ask our suppliers to meet. We now require them to measure up to our standards in health and safety, and business ethics – as well as environmental performance. We have also been working to develop a Supplier Code of Conduct. Consequently, we have had discussions with other companies, NGOs and representatives of the socially responsible investment community on the subject of a shared industry Code of Conduct.

### Our suppliers\*

As reported last year, our aim at ST is to work more closely with our suppliers to tackle sustainable development issues more effectively. We are increasingly aware of the importance of ethical supply chain management, both in terms of its key contribution to wider sustainable development and to the success of our company.

The information given in this section relates solely to suppliers, not to subcontractors. However, in 2005, we intend to be able to provide more information about subcontractors.

#### *Our traditional approach to ethical supply chain management*

Our approach to embedding Corporate Responsibility in our purchasing activities has, until recently, focused on the general environmental performance of our suppliers and on the material product content that they supply us with. This reflects the fact that the use of hazardous chemicals in our industry has significant implications for the environment. This is true for both the manufacturing processes of our suppliers and the chemical products that they supply for use in our operations and end products.

We assess the overall environmental performance of our critical suppliers according to their ability to obtain and maintain ISO 14001 certification or EMAS validation. We include supply chain 'proactivity' in our

Environmental Decalogue, where we state that "we strongly encourage our suppliers to be EMAS validated or ISO 14001 certified, and assist them through training, support and auditing". Our rolling target is for 80% of corporate critical suppliers to be validated in this way.

**STSC3** We provide support to our suppliers through the assistance of local plant experts such as the environmental champions in each of our manufacturing sites, a CD-ROM training tool developed by ST University, and the availability to suppliers of our internal training courses on environmental issues.

**STSC4A** Our selection process for new suppliers consists of:

- The request for ISO 14001 certification/ EMAS validation or the commitment to be certified
- The requirement to provide a Certificate of Compliance with our 'Environment-related banned substances list', an internal ST specification based on the most recent and stringent international rules and guidelines regarding hazardous substances, which can be found at:

[www.st.com/corporateresponsibility](http://www.st.com/corporateresponsibility)

ISO/EMAS certification of suppliers	Number of suppliers			ISO EMAS certified			Certification in progress			With no certification		
	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
Materials	82	92	99	72%	71%	70%	16%	18%	8%	12%	11%	22%
Equipment, facilities	57	61	61	36%	54%	69%	55%	43%	28%	9%	3%	3%
<b>Total</b>	<b>139</b>	<b>153</b>	<b>160</b>	<b>57%</b>	<b>64.2%</b>	<b>69.6%</b>	<b>32%</b>	<b>28%</b>	<b>15.6%</b>	<b>11%</b>	<b>7.8%</b>	<b>14.8%</b>

**STSC1 STEV17** Figure 68

\* See Figure 69 for definition of different categories of suppliers.

In 2004, we introduced some new aspects into our approach by expanding the requests we make of suppliers beyond environmental issues to cover health and safety and business ethics.

**STSC4B** The request to be certified to the international standard for health and safety (OHSAS 18001) was introduced into the supplier performance evaluation for new and existing material suppliers.

**STSC2** In 2004, 15% of corporate critical material suppliers were either certified or in the process of being certified to OHSAS 18001.

**STSC5** In 2005, we will require all new suppliers to comply with our banned substances list.

**STSC6** We introduced the requirement for existing direct material suppliers to comply with our banned substances list.

**STSC7** In 2004, 72% confirmed they comply and 80% of critical material suppliers provided laboratory analyzes.

**STSC8** We also introduced a request for existing corporate suppliers to state that they comply with our Business Conduct and Ethics Policy. In 2004, 20% did so.

**STSC4C** In addition to the information given above, our management systems for supply chain management have the following characteristics:

- Our purchasing activities are mainly decentralized throughout the company, with procedures at corporate and local levels for requesting compliance with the relevant international standards: ISO 9001 (quality), ISO 14001 (environment) and OHSAS 18001 (health and safety)

- **STSC4D** Local sites have the responsibility for auditing corporate critical (by delegation) and local critical suppliers. Our target is to audit 90% of all corporate critical material suppliers over a rolling three-year period for adherence to quality, environment, and health and safety standards. In 2004, 70% of corporate critical material suppliers were audited (this will be taken as our baseline). Audits are mainly performed by local ST people, by delegation from Corporate Purchasing. The audits are based on ISO 9001 requirements with an additional few ST-specific items on environment, and health and safety. A questionnaire is sent to suppliers for self-assessment one month before the audit
- **STSC4E** We carry out evaluations of our material suppliers covering ISO 9001, ISO 14001 and OHSAS 18001 and our banned substances list, and we attribute a negative score to non-compliance with our standards. The evaluation of the performance of facilities and equipment suppliers is more recent and only covers quality and service.

#### ***Expanding our traditional approach***

Expectations regarding supply chain management have evolved rapidly over recent years. Today, multinational companies are under pressure from stakeholders to use their global influence and resources in the supply chain to make a positive contribution to sustainable development within their sphere of influence. We fully support this vision and are committed to continuous improvement in our ethical management of the supply chain.

In June 2004, we began working on developing a Supplier Code of Conduct that integrates our own evolving standards in Corporate Responsibility within the context of emerging common standards in the ICT sector. We have closely followed developments in the creation of an ICT initiative for the supply chain, proposed by Business for Social Responsibility (BSR) and the Global e-Sustainability Initiative (GeSI). And we have engaged in discussions with companies, NGOs and representatives of the socially responsible investment community on the subject of a shared industry Code of Conduct and tools for its implementation in the supply chain.

We support the Electronics Industry Code of Conduct (EICC), and we are committed to reporting on our own performance against the standards it contains for those of our customers who choose to adopt it (e.g. HP). We will also work progressively, within our sphere of influence, to promote the standards contained in the EICC within our own supply chain.

The Supplier Code of Conduct that we have been working to develop is consistent with the minimum standards contained in the EICC. It covers the performance we expect of our suppliers in environment, health and safety, labor standards and human rights, and business ethics. We have had the support of human rights NGOs (Amnesty International and The Rights Practice) in preparing the human rights content of our Supplier Code, and we will continue working with them in 2005.

Our objective for 2005 is to finalize our Supplier Code and the strategy for its implementation over the coming years, based on our existing management systems for the supply chain. As part of this continuous improvement process, we are seeking independent evaluation of our management systems for the supply chain by The Reassurance Network, a company that provides external assurance on Corporate Responsibility performance. In the first three-year phase, 2005-2007, we intend to define and implement our approach, which is based on the assessment of risks in the supply chain; the evaluation of the performance of suppliers against ST and ICT sector standards; and our support and assistance for suppliers in reaching those standards.

We are not yet in a position to report against the following three GRI indicators:

- HR2** Evidence of consideration of human rights impacts as part of investment and procurement decisions, including selection of suppliers/contractors
- HR3** Description of policies and procedures to evaluate and address human rights performance within the supply chain and contractors, including monitoring systems and results of monitoring
- EC4** Percentage of all contracts paid within terms of contract.

Category of supplier	Definition of category
<b>Critical suppliers</b>	Any supplier delivering a product (material, equipment, CAD, service, etc.) which could potentially impact on ST's product quality or reliability
<b>Corporate critical suppliers</b>	Those critical suppliers managed at the company level
<b>Local critical suppliers</b>	Critical suppliers not considered to be corporate suppliers
<b>Corporate material suppliers</b>	Those suppliers managed at corporate level providing the direct material content of our products or providing specific indirect materials used to manufacture ST products (used in processes but not in the products themselves)

Figure 69

## Our customers

We have extensive management systems in place to meet our customers' expectations in relation to quality, environmental, health and safety, and wider Corporate Responsibility issues.

As well as reviewing our influence with our suppliers, we also carefully consider our obligations to those who are further down the supply chain from us: our customers.

We pay particular attention to the requests for information that we receive from our customers, which may have an important impact on their own ability to sell their products. For example, consumers may want to be reassured, and so our customers may want to know that we do not use banned substances, or they may want information on our lead-free products. In most cases, we publish this information on our website, as well as responding to customers' requests for information directly.

We not only monitor this information-providing process to make sure that our customers get what they need, but we also monitor the kinds of requests that we receive, so we can be sure to have the product information our customers ask for.

In 2004, we noticed a significant increase in interest in Corporate Responsibility on the part of our customers in different locations around the world. We received a number of different requests from customers during the year, going well beyond requirements relating to environmental legislation. Some were directed at local sites, but the majority focused on ST's activities in Corporate Responsibility at group level. We understand that our customers' expectations regarding our social, ethical and environmental performance reflect the increasing importance that is being attributed to Corporate Responsibility in wider society. We welcome this trend, and we are actively collaborating with our customers and our suppliers to promote the improvement of standards in the supply chain within our sphere of influence.

**STSC9** Figure 70 shows the main requests and requirements on Corporate Responsibility that our customers made of us in 2004.

Main customer requests/requirements on Corporate Responsibility 2004		
Customer and date	Description of request or requirement	Origin of request
Vodafone January 2004	<ul style="list-style-type: none"> <li>Adherence to Ethical Purchasing Code</li> <li>Completion of environmental questionnaire</li> </ul>	Italy
Sefocoe July 2004	<ul style="list-style-type: none"> <li>Taking part in Environmental and Social Responsibility Survey</li> </ul>	Singapore
Alcatel October 2004	<ul style="list-style-type: none"> <li>Completion of questionnaire on ethical trading, social practices and environmental purchasing within supply chain relationships</li> </ul>	France
Nokia October 2004	<ul style="list-style-type: none"> <li>Completion of self-assessment questionnaire on environmental and social responsibility</li> <li>Participation in a supply chain workshop with a selection of Nokia's key customers and suppliers to discuss supply chain issues within the framework of a collaborative approach</li> </ul>	Finland
Telecom Italia November 2004	<ul style="list-style-type: none"> <li>Adherence to Ethical Code</li> </ul>	Italy
Cellon December 2004	<ul style="list-style-type: none"> <li>Providing supplier declaration on sustainability</li> </ul>	France and China

**STSC9** Figure 70





**A truly ethical company** We believe that Corporate Responsibility is an imperative and not a choice. Why? Because we know that our approach not only benefits the world but also enhances our success.

We also believe that our long-standing commitment to environmental issues and Corporate Responsibility makes us special. As does our continuing willingness to 'go the extra mile' in terms of ethical corporate behavior – and our insistence that we put our values first. But that's not all. We reinforce our good intentions by target setting – because establishing measurable and appropriate targets is the key to assessing the quality of our direction, focus, progress and achievement.

And when we reach our targets we do what you would expect of an ethical company. We celebrate.

And then we raise them.

# Report data verification and assurance

The data contained in this 2004 Corporate Responsibility report, and the data-gathering process used to compile it, have been verified by BVQI within the scope described in the statement below.

## Independent attestation statement, July 27, 2005

### Attestation statement

To: the management of STMicroelectronics NV

### Introduction

Bureau Veritas Quality International France (BVQI France) has been engaged to provide assurance services to STMicroelectronics.

This Attestation Statement applies to the STMicroelectronics 2004 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 January 1, 2004 to December 31, 2004
- 2 Information reported, including that against the GRI indicators
- 3 Review of systems and procedures for the collection, compilation and consolidation of environmental and social data
- 4 Review of internal quality and consistency controls against such data
- 5 An overview of the complete Corporate Responsibility 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 2004 reporting period, as defined above
- Our attestation does not extend to the information hyper-linked from the 2004 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 MILAN, ROUSSET and PARIS\* sites of STMicroelectronics.

\* Agrate (Italy) and Rousset (France) are major manufacturing sites. Paris is a non-manufacturing site at which consolidation of social data at the corporate level has taken place in 2004.



### Assurance conclusions

It is our opinion that:

- The management of 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 and social performance.

### Areas for ongoing improvement

- The internal tools should respect the same format to ensure consistency in the aggregation and consolidation of data
- There is a need to further progress formalization of social data controls at site level.

### 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 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 BVQI of independence, impartiality and competence

BVQI is the independent certification body of Bureau Veritas specialized in Quality, Health, Safety, Social and Environmental assessment.

BVQI has implemented a code of ethics across the business which is intended to ensure that all our staff maintains high ethical standards in their day-to-day business activities – we are particularly vigilant in the prevention of conflicts of interest.

Competence: our team completing the work has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes.

**Romain PETIT**  
Chief Operating Officer  
BVQI FRANCE



**In 2004, we worked with The Reassurance Network, an independent assurance provider based in the UK, to prepare for assurance on our management systems for Corporate Responsibility, to be carried out in 2005.**

**Statement describing the scope of The Reassurance Network's 2005 Remit, June 2005\***

The Reassurance Network has been contracted by STMicroelectronics to provide assurance on its Corporate Responsibility program. The main purpose is to provide independent feedback on the implementation of corporate policies in key areas of non-financial business risk, including:

- Ethical business conduct
- Employee responsibility
- Supplier integrity and responsibility
- Protection of the environment
- Civic responsibility.

These encompass a wider range of specific issues, including human rights, health and safety, business conduct, conflict of interest, discrimination, fair treatment, freedom of association, labor conditions, stakeholder engagement and so on.

The Reassurance Network has been assessing processes, capabilities and the effectiveness of existing management programs for implementing corporate policies in these areas, and also the reliability of performance monitoring and internal assurance processes. Our activities to date have included:

- A series of interviews with corporate directors and business division managers to place CR in the wider context of ST's business risks and strategic plans, and to understand their expectations of ST's operating facilities and suppliers
- A selection of site visits in France, Italy, Malta, Singapore and China to assess the communication of policies and expectations, local interpretation, operational implementation and behavioral response
- Several workshops at corporate and facility level to review key aspects of supplier management and operational implementation of Corporate Responsibility.

The primary output of our work takes the form of an independent opinion and set of recommendations to the board on the current effectiveness of risk management and assurance relating to Corporate Responsibility. As a result of our findings this year, we have also been able to provide support for the revision of ST's business policies and codes with a view to achieving improved Corporate Responsibility and, therefore, business risk management.

\* The statement refers to work being carried out in 2005, details of which will be published in our 2005 Corporate Responsibility report.

# Stakeholder feedback

## Engagement with the socially responsible investment community

Throughout the year, we respond to numerous questionnaires and specific questions from the socially responsible investment (SRI) community so that they can analyze our performance in Corporate Responsibility. The feedback we receive from them helps us to identify Corporate Responsibility issues and to benchmark our performance against other companies within and outside our own sector. Below we present two examples of feedback, from SiRi and UBS.

### SiRi Rating Report 2004

SiRi, the Sustainable Investment Research International Company Ltd, is the world's largest independent provider of SRI research and consulting services for institutional investors and financial professionals. In its 2004 report on ST, it described our performance in quality and environment as "impressive":

*"In the last year, the company made considerable improvements in business ethics, human resources and transparency (it now publishes a comprehensive 'Sustainable Development Report' that encloses all areas of the SiRi Profile and follows very strictly the GRI reporting framework).*

*The company has implemented virtually all possible procedures and programs in the field of quality and environmental protection (with ambitious reduction objectives for the environmental field, such as total carbon neutrality by 2010). This is shown by the high degree of certification both for quality and environmental management systems. Furthermore, ST publishes a Quality Report (called SURE).*

*On social issues, ST improved its transparency by publishing information on employees and community in the 'Sustainable Development Report' following the GRI reporting framework.*

*ST has a formal policy on business ethics that explicitly mentions corruption. There are now programs addressing corruption. On community issues, ST describes its numerous charitable donations and its cooperation with the UN for the digital divide project. The amount of donations is also disclosed. However, the percentage of donations against net earnings remains low (0.16%).*

*In the Corporate Governance field, the company also has the necessary policies (they include insider trading, remuneration and conflict of interest).*

*On the employees' side, the company has a stock purchase plan accessible to all employees throughout the Group. Furthermore, the company has a health and safety management system for all its sites and has OHSAS 18001 certifications for all its sites. The health and safety data show a good record during the last years with a drastic reduction of workplace time lost. The company conducts regular employee satisfaction surveys and disclose the results (that highlights strengths and areas of improvement for the company).*

*The company also has included social criteria (especially health and safety criteria) in the suppliers' auditing process. But the program does not seem well implemented yet and will be implemented in a near future.*

*Overall, the company has a very good and impressive sustainability record."*

**Feedback on STMicroelectronics' CR performance  
from Laura Würtenberger, SRI Analyst UBS Global  
Asset Management, Zürich**

*"We have identified ST as a sustainability leader within the semiconductors industry.*

*ST shows a high commitment to corporate responsibility. In our view, the integration of Corporate Responsibility on a policy and operating level via the Corporate Responsibility steering committee and via EHS (environment, health and safety) management systems gives ST the strategic ability to react quickly to changing Corporate Responsibility challenges.*

*The level of disclosure regarding Corporate Responsibility-related issues is high compared to competitors. ST can prove that it has continuously reduced electricity, water and chemicals use and the production of waste. With its ambitious goal to achieve carbon neutrality by 2010, ST takes a leading role within the sector. We also hope ST will continue and strengthen its efforts to enhance energy efficiency of its chips.*

*Managing environmental and social issues in their supply chains will be of increasing importance for companies in the IT hardware sector for various reasons: tightening legislation on product content and hazardous materials has to be met, product quality needs to be secured, and lack of engagement to meet basic labor standards can result in reputational damage. ST seems to be on a good track by strongly encouraging suppliers to become ISO 14001 certified and extending its new comprehensive social policy to suppliers. We are interested to learn about ST's experience with these requirements once they are put into practice.*

*Semiconductor manufacturing has increasingly moved to the Asia-Pacific region in the last few years. Manufacturing companies are facing the challenge to decide if and how a relocation of workforce should take place and how Corporate Responsibility standards can be ensured on a global level.*

*ST should use its above-average Corporate Responsibility performance to enhance its competitive position, be it by achieving higher cost efficiency, mitigating risk by proactively tackling upcoming Corporate Responsibility issues or by retaining a qualified and motivated workforce."*

# Index of indicators

## UN Global Compact Principles

The UN Global Compact (UNGC) is an international initiative that brings together companies, UN agencies, labor organizations and civil society in support of 10 principles covering human rights, labor, the environment and corruption.

This table shows the UNGC Principles and the main GRI indicators that relate to them, together with the section of this report that they appear in.

UN Global Compact Principles	Corresponding GRI indicators	Section
1 Businesses should support and respect the protection of internationally proclaimed human rights within sphere of influence	HR1 HR2, HR3 HR4, HR8	Human rights Supply chain management Diversity; Human rights
2 Businesses should make sure that they are not complicit in human rights abuses	HR2, HR3	Supply chain management
3 Businesses should uphold the freedom of association and the effective recognition of the right of collective bargaining	HR5, LA3, LA4	Human rights
4 Businesses should uphold the elimination of all forms of forced and compulsory labor	HR7	Human rights
5 Businesses should uphold the effective elimination of child labor	HR6	Human rights
6 Businesses should eliminate discrimination in respect of employment and occupation	HR4 LA10, LA11	Diversity; Human rights Diversity
7 Businesses should support a precautionary approach to environmental challenges		Environmental impact
8 Businesses should undertake initiatives to promote greater environmental responsibility	EN1, EN2, EN3, EN4, EN5, EN6, EN7, EN8, EN9, EN10, EN11, EN12, EN13, EN15, EN16 EN14	Environmental impact Product responsibility
9 Businesses should encourage the development and diffusion of environmentally friendly technologies	EN14, EN17	Environmental impact Product responsibility
10 Businesses should work against all forms of corruption	S02, S03	Business conduct

## Index of indicators used in this report

Here, we provide an index of the indicators used in this report. These include the Global Reporting Initiative (GRI) indicators (EN refers to environment, EC to economic impact, LA to employment, HR to human rights and SO to society) and ST's own company indicators (all begin with ST). We have published our own indicators in an effort to show how we measure our performance across the triple

bottom line in support of and beyond the GRI indicators. They may be particularly useful to socially responsible investment analysts and other companies in and outside our sector, and they may be of interest to a wider audience.

We have also included the UNGC Principles covered in the main index of indicators below.

Stakeholder group or theme	Code	GC Principles		Page	Comment
<b>Economic impact</b>					
Customers	EC1		Net sales	32	
	EC2		Geographic breakdown of markets	32	
Suppliers	EC3		Cost of all goods, materials and services purchased	33	
	STE1		Split of purchases between PPE (plant, property, equipment) and materials	33	
	EC4		Percentage of contracts that were paid in accordance with agreed terms, excluding agreed penalty arrangements	33, 90	Not yet monitored at company level
Providers of capital	EC6		Distribution to providers of capital broken down by interest on debt and borrowings, and dividends on all classes of shares, with any arrears of preferred dividends to be disclosed	34	
	STE8		Annual share price performance of STMicroelectronics	34	
	STE9		Shareholding structure of STMicroelectronics	14	
	EC7		Increase/decrease in retained earnings at the end of the period	15	
Public society					
R&D	STE3		Universities we collaborate with by country	35	See also STS44
	STE4		R&D expenditure	15	
	STE5		Number of people employed in R&D by region	36-37	
	STE6		Number of patents filed by region	36-37	
Taxes	EC8		Total sum of taxes per geographic region	36-37	No breakdown by region provided
	EC9		Subsidies received per geographic region		We consider this confidential – not provided
	EC10		Donations to community, civil society and other groups broken down in terms of cash and in-kind donations per type of group	36 60-61	
Employees	EC5		Total payroll and benefits (including wages, pension, other benefits and redundancy payments) broken down by country or region	36-37	No breakdown by country or region given
	STE7		Breakdown of new jobs created and job losses by category	36-37	



Stakeholder group or theme	Code	GC Principles		Page	Comment
<b>Social impact</b>					
Employment	LA1		Breakdown of workforce, where possible, by region/country, status (employee/non-employee), employment type (full/part time) and by employment contract (indefinite or permanent/ fixed term or temporary) Also identify workforce retained in conjunction with other employers (temporary agency workers or workers in co-employment relationships), segmented by region/country	36-37 42-43	Partial answer
	LA2		Net employment creation and average turnover segmented by region/country	36-7 44	Turnover by region not provided
	STS1		Offer to acceptance ratio	44	
	STS2		Fresh-out recruitment rate	44	
	STS3		Recruitment cycle time (average cycle time to recruit engineers and managers; from job opening to acceptance)	44	
	STS4		Average age	44	
	STS5		Seniority	44	
	STS6		Career length	44	
Diversity and opportunity	LA10		Description of equal opportunity policies or programs, as well as monitoring systems to ensure compliance and results of monitoring	44, 58	
	LA11		Composition of senior management and corporate governance bodies (including the board of directors), including female/male ratio and other indicators of diversity as culturally appropriate	44, 46	
	STS7		Number of nationalities	45	
	STS8		Percentage of top management not French/Italian	44	
	STS9		Number of men/women by region	46	
	STS10		Percentage of professionals by gender	46	
	STS11		Percentage of women in senior management (JG17 and above)	46	
	STS12		Percentage of women in executive management (JG19 and above)	46	

Stakeholder group or theme	Code	GC Principles		Page	Comment
Training and development	STS13		Percentage of jobs requiring experience posted internally	48	
	STS14		Percentage of jobs requiring experience filled internally	48	
	STS15A		Number of training hours by ST University core team by year	47	
	LA9		Average hours of training per year per employee by category of employee. (e.g. senior management, middle management, professional, technical, administrative, production and maintenance)	47	
	STS15		Average training hours for exempts	47	
	STS16		Average training hours for operators	47	
	STS17		Average training hours for others (non-exempt, non-operator)	47	
	STS18		Percentage of employees having received more than 35 hours training	46	
	STS19		Kirkpatrick evaluation rate (1st level result)	47	
	STS20		Kirkpatrick evaluation rate (2nd level result)	47	
	STS21		Percentage of performance appraisals completed	48	
	STS22		Percentage of employees (non-operator) with personal development objective(s)	48	
	Performance reward and recognition	LA12		Employee benefits beyond those legally mandated (e.g. contributions to health care, maternity, education and retirement)	49
STS25			Percentage of employees with benefit package covering health insurance	50	
STS23			Percentage of employees with up-to-date job descriptions	49	
STS24			Percentage of exempt positions benchmarked for compensation	49	
STS47			Stock options: number of beneficiaries	49	
STS26			Number of people recognized	50	
STS27			Number of overall recognition ceremonies	50	
STS28			Overall company recognition budget	50	
Employee empowerment and engagement	STS29		Number of employees participating on Online Communities (teamwork)	50	
	STS30		Percentage of non-operators with team goals included in annual objectives	50	
	STS31		Percentage of non-operators with incentive/recognition based on team results	50	
	STS32		Average number of suggestions per employee	51	
	STS33		Acceptance rate for suggestions	51	
	STS34		Percentage of accepted suggestions which are implemented	51	
	PR3		Description of policy, procedures management systems, and compliance mechanisms for consumer privacy	53	

Stakeholder group or theme	Code	GC Principles		Page	Comment
Health and safety	LA5		Practices on recording and notification of occupational accidents and diseases, and how they relate to the ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases	53	
	LA6		Description of formal joint health and safety committees comprising management and worker representatives and proportion of workforce covered by any such committees	54	
	LA7		Standard injury, lost day and absentee rates and number of work-related fatalities (including subcontracted workers)	54	
	STHS1		Number of OSHA recordable cases per 100 employees (recordable cases rate)	54	
	STHS2		Number of days lost per 100 employees (severity rate)	54	
	STHS3		Number of work fatalities (deaths)	54	
	STHS4		Number of health and safety fines	54, 55	
	LA8		Description of policies or programs (for the workplace and beyond) on HIV/AIDS		We are not yet in a position to report on this
	STHS5		OHSAS 18001 certification	53	
	STHS6		Financial Cost Indicator to evaluate the direct and indirect cost of work-related injuries and illnesses	55	
	STHS7		Distribution of health and safety hours by category		
	STHS8		Number of trained internal health and safety management system auditors	55	
	Human rights	HR1		Description of policies, guidelines, corporate structure, and procedures to deal with all aspects of human rights relevant to operations, including monitoring mechanisms and results	56
HR2			Evidence of consideration of human rights impacts as part of investment and procurement decisions, including selection of suppliers/contractors	90	We are not yet in a position to report on this
HR3			Description of policies and procedures to evaluate and address human rights performance within the supply chain and contractors, including monitoring systems and results of monitoring	90	We are not yet in a position to report on this
HR4			Description of global policy and procedures/programs preventing all forms of discrimination in operations, including monitoring systems and results of monitoring	45, 58	
HR5			Description of freedom of association policy and extent to which this policy is universally applied independent of local laws, as well as description of procedures/programs to address this issue	58	
LA3			Percentage of employees represented by independent trade union organizations or other bona fide employee representatives broken down geographically OR percentage of employees covered by collective bargaining agreements broken down by region/country	60	
LA4			Policy and procedures involving information, consultation, and negotiation with employees over changes in the reporting organizations operations (e.g. restructuring)	60	
STS35			Employees having at least one day off every 7 days	59	
STS36			Employees with regular work time less than 48 hours per week	59	
STS37			Average overtime (hours per employee per year)	59	
STS38			Ratio total time lost to strikes – time worked	60	

Stakeholder group or theme	Code	GC Principles		Page	Comment
Human rights (continued)	HR6		Description of policy excluding child labor as defined by the ILO Convention 138 and extent to which this policy is visibly stated and applied, as well as description of procedures/ programs to address this issue, including monitoring systems and results of monitoring	58	
	HR7		Description of policy to prevent forced and compulsory labor and extent to which this policy is visibly stated and applied as well as description of procedures/programs to address this issue, including monitoring systems and results of monitoring	58	
	HR8		Employee training on policies and practices concerning all aspects of human rights relevant to operations	56	
Community and society					
<i>Contributions to local community and society</i>	EC10		Donations to community, civil society, and other groups broken down in terms of cash and in-kind donations per type of group	36, 60	
	S01		Description of policies to manage impacts on communities in areas affected by activities, as well as description of procedures/programs to address this issue, including monitoring systems and results of monitoring	60	Partial answer provided
	STS39		Total cash donated to charitable causes in US\$	60	
	STS40		Total employee hours spent for environment	60	
	STS41		Total employee hours for education	60	
	STS42		Employee hours for other non-business related activities	60	
	STS43		Number of company citizenship awards received	60	
	STS44		Number of partnerships with universities, colleges, schools	60	
	STS45		Number of students from schools, colleges, universities	60	
	STS46		Number of universities, colleges, schools sponsored with funding or equipment	60	
<i>Bribery and corruption</i>	S02		Description of the policy, procedures, management systems, and compliance mechanisms for organizations and employees addressing bribery and corruption	19, 24	
	S03		Description of the policy, procedures, management systems, and compliance mechanisms for managing political lobbying and contributions	19, 24	
<b>Environmental impact</b>					
	STEV1		Description of Environmental Policy and Decalogue	65, 67	
	STEV2		Description of training activities to support culture of environmental protection	68	
Certification	STEV3		Number and percentage of ST sites certified ISO/EMAS	69	
Incidents, non-compliance, fines	EN16		Incidents of and fines for non-compliance with all applicable international declarations/conventions/treaties, and national, sub-national, regional and local regulations associated with environmental issues	71	
	EN13		Significant spills of chemicals, oils and fuels in terms of total number and total volume	71	
Regulation tracking and results	STEV4		Compliance with new regulations and preparation for future regulations	69, 85	

Stakeholder group or theme	Code	GC Principles		Page	Comment
Investment in environmental protection	STEV5		Environmental investments in US\$ by year showing evolution over years	69	
	STEV6		Environmental investments as percentage of capital investments	69, 70	
Environmental accounting	STEV8		Methodology used to calculate savings due to reduction of consumption of resources	69	
Environmental KPIs supply chain	STEV17		Percentage of key corporate suppliers EMAS validated or ISO certified total and by category (material/equipment)	69, 88	
Measuring our performance	STEV19		Number of external awards won for environmental performance	70	
	STEV20		Description of Environmental Burden Method	71	
	STEV21		Environmental Burden results absolute figures with evolution over years	72	
	STEV22		Environmental Burden results normalized figures with evolution over years (for front- and back-end)	72	
<i>Materials</i>	EN1		Total materials use other than water, by type	73	
	EN2		Percentage of materials used that are waste (processed or unprocessed) from sources external to the reporting organization	81	
	STEV23		Description of ecofootprint method	73	
<i>Emissions and effluents</i>					
– Emissions to air	EN8		Greenhouse gas emissions	72	
	EN9		Use and emissions of Ozone-depleting substances Kg (CFC 11 equivalent)	72	
	EN10		SO <sub>x</sub> and other significant air emissions by type (tons)	72	
– Effluents	EN12		Significant discharges to water by type (tons)	72	
<i>Carbon strategy</i>					
<i>Energy efficiency</i>	EN3		Direct energy use segmented by primary source (GWh)	74	
	EN4		Indirect energy use	77	We only refer to direct use of energy; we make the distinction between direct and indirect CO <sub>2</sub> emissions.
	EN17		Initiatives to use renewable energy sources and to increase energy efficiency	75, 84	
	STEV27		Energy emissions due to electricity and gas	78	
	STEV28		Trend + forecast of CO <sub>2</sub> emissions reductions due to efficiency actions only	77	
	STEV31		Electricity consumption KWh/wafer baseline 100 in 1994 with evolution over years	74	
	STEV33		Percentage of identified energy efficiency actions fulfilled per year with evolution	74	
	STEV34		Concrete actions carried out to reach year's targets	74	
	STEV35		Savings in US\$m as a result of actions to reduce energy consumption	69	

Stakeholder group or theme	Code	GC Principles		Page	Comment
<i>Alternative and renewable energy</i>	STEV36		Target use of alternative/renewables as a percentage of total energy use in 2010	74	
	STEV37		Percentage of total energy use represented by alternative/renewables	75	
	STEV38		Trend and forecast of savings in CO <sub>2</sub> emissions due to use of alternative/renewables	78	
	STEV40		Total energy produced by ST wind farms and evolution over years (GWh)	75	
<i>PFCs</i>	STEV44		ST and WSC target reduction of use of PFCs	75	
	STEV46		Net emissions of PFCs against targets for year and showing evolution over years	75, 78	
<i>Reforestation</i>	STEV47		CO <sub>2</sub> emissions from energy (direct + indirect) and from PFCs	78	
	STEV49		Trend and forecast of CO <sub>2</sub> emissions saved considering energy + PFC management programs	76	
	STEV50		Number of countries where ST has reforestation programs and number of ha planted in each + total	76	
	STEV52		Amount of carbon sequestered so far and projection to 2010	76, 78	
	STEV53		Emissions trading programs in which ST participates	78	
Water	STEV56		Reduction of water consumption against Decalogue target per production unit	79	
	STEV58		Savings in US\$m as a result of actions to reduce consumption	79	
	EN5		Total water use (x1000)m <sup>3</sup>	79	
Biodiversity	EN6		Location and size of land owned, leased or managed in biodiversity-rich habitats		Not applicable
	EN7		Description of major impacts on biodiversity associated with activities and/or products and services in terrestrial, freshwater, and marine environments		Not applicable
Chemicals	STEV64		Decalogue targets on reduction of consumption of main chemicals	80	
	STEV65		Results in reduction of consumption of main chemicals by front-end and back-end showing evolution over years	80	
	STEV67		Description of management systems in place to assess and manage chemical risks	56	
	STEV68		Results of risk assessment of workstations to evaluate exposure and toxicity	56	
Waste	STEV71		Percentage of waste sent to landfill (against target)	81	
	STEV72		Percentage of waste reused/recycled (against target)	81	
	EN11		Total amount of waste by type and destination (kTons)	81	
	STEV73		Landfilled waste as a percentage of total waste	81	

Stakeholder group or theme	Code	GC Principles		Page	Comment
<b>Product responsibility and supply chain management</b>					
Product responsibility	STEV78		Description of actions to track life cycle assessment of our products	85	
	STEV79		Description of tools to show chemical content of products	85	
	EN14		Significant environmental impacts of principal products and services	84	
	EN15		Percentage of the weight of products sold that is reclaimable at the end of the products' useful life and percentage that is actually reclaimed		Not applicable
Suppliers	STSC1		Percentage of corporate critical material suppliers EMAS validated or ISO certified total and by category material/ equipment and facilities) or in process of obtaining certification	88	
	STSC2		Percentage of corporate critical material suppliers OHSAS 18001 certified or in process of obtaining certification	89	
	STSC3		Description of concrete actions to support suppliers in improving environmental performance and compliance	88	
	STSC4		Description of management systems for supply chain management	88	
	STSC4A		- Description of requests/requirements for new suppliers	89	
	STSC4B		- Description of requests and requirements of existing suppliers	89	
	STSC4C		- Description of corporate and local procedures for requesting/ requiring compliance with ST standards	89	
	STSC4D		- Percentage of corporate critical material suppliers audited locally for quality, environment and health and safety	89	
	STSC4E		- Performance evaluation of material suppliers and facilities and equipment suppliers	89	
	STSC5		Percentage of new suppliers complying with our banned substances list by category	89	
	STSC6		Percentage of existing direct material suppliers complying with our banned substances list	89	
	STSC7		Percentage of critical suppliers providing laboratory analyzes for compliance with banned substances	89	
	STSC8		Percentage of existing key corporate suppliers signed they comply with Business Conduct & Ethics Policy by category	89	
	HR2		Evidence of consideration of human rights impacts as part of investment and procurement decisions, including selection of suppliers/contractors	90	We are not yet in a position to report on this
	HR3		Description of policies and procedures to evaluate and address human rights performance within the supply chain and contractors, including monitoring systems and results of monitoring	90	We are not yet in a position to report on this
	EC4		Percentage of all contracts paid within the terms of the contract	33, 90	Not yet monitored at company level
Customers	STSC9		Customer requests/requirements for Corporate Responsibility	91	

Indicators that cover the GC Principles N.1-2-3-4-5-6



Indicators that cover the GC Principles N.7-8-9



Indicators that cover the GC Principle 10



# Glossary

ASICs	Application Specific Integrated Circuits	ODS	Ozone Depleting Substances	<b>GRI indicator prefixes</b>	
ASSPs	Application Specific Standard Products	OHSAS	Occupational Health and Safety Assessment Series (OHSAS 18001)	EC	Economic Impact
AST	Advanced System Technology	OLC	Online Community	EN	Environment
BGA	Ball Grid Array	P&L	Profit and Loss	HR	Human Rights
BLIHR	Business Leaders in Human Rights	PBB	PolyBrominated Biphenyl	LA	Employment
BLS	(US) Bureau of Labor Statistics	PBDE	PolyBrominated Diphenyl Ether	SO	Society
BSR	Business for Social Responsibility	PBT	Persistent, Bioaccumulative and Toxic	<b>ST indicator prefixes</b>	
CCX	Chicago Climate Exchange	PFCs	Perfluorinated Compounds	STEV	Environment
CEA	Commissariat à L'Energie Atomique	PFOS	Perfluorooctane Sulfonate	STH	Health and Safety
CEO	Chief Executive Officer	POC	Products of Combustion	STS	Social
CFO	Chief Financial Officer	POP	Persistent Organic Pollutant	STSC	Supply Chain
CMR	Carcinogenic, Mutagenic, Toxic for Reproduction	PPE	Plant, Property, Equipment		
COD	Chemical Oxygen Demand	R&D	Research and Development		
COO	Chief Operating Officer	RC	Recordable Cases		
CR	Corporate Responsibility	REACH	Registration, Evaluation and Authorization of Chemicals		
DJSGI	Dow Jones Sustainability Global Index	RoHS	Restriction of Hazardous Substances		
EARTH	(US) Environmental Achievement and Restoration That Help	SBIA	Sustainable Business Institute		
EBEAFI	European Better Environment Awards for Industry	SEAA	Singapore (Ministry's) Environmental Achievement Award		
EFQM	European Foundation of Quality Management	SEC	(US) Securities and Exchange Commission		
EHS	Environmental, Health and Safety	SEE	Social, Ethical and Environmental		
EICC	Electronics Industry Code of Conduct	SIA	Semiconductor Industry Association		
EMAS	Community Eco-Management and Audit Scheme	SoC	System-on-Chip		
EPA	(US) Environmental Protection Agency	SOP	Standard Operating Procedure		
EQA	European Quality Award	SPC	Statistical Process Control		
ESS	Employee Suggestion Scheme	SRI	Socially Responsible Investment		
FTM	Front-end Technology and Manufacturing	STU	ST University		
FP7	Framework Program 7	TCE	Tonnes of Carbon Equivalent		
GeSI	Global e-Sustainability Initiative	TPM	Total Preventive Maintenance		
GHG	Greenhouse Gases	TQCR	Total Quality Corporate Responsibility		
GRI	Global Reporting Initiative	TQEM	Total Quality Environmental Management		
HR	Human Resources	TQM	Total Quality Management		
IC	Integrated Circuit	TWM	Total Waste Management		
ICC	International Chamber of Commerce	UCLA	University of California, Los Angeles		
ICT	Information and Communication Technologies	UCSD	University of California, San Diego		
ILO	International Labor Organization	UN	United Nations		
IP	Intellectual Property	UNEP	United Nations Environment Program		
ISO	International Organization for Standardization	UNGC	United Nations Global Compact		
ITRS	International Technology Roadmap for Semiconductors	UPW	Ultra Pure Water		
MSDS	Material Safety Data Sheet	VOCs	Volatile Organic Chemicals		
MTCE	Metric Tonnes of Carbon Equivalent	VP	Vice President		
NGO	Non-Governmental Organization	vPvB	Very Persistent and Very Bioaccumulative		
NYSE	New York Stock Exchange	WBCSD	World Business Council for Sustainable Development		
		WSC	World Semiconductor Council		
		WW	Worldwide		



#### **Corporate Responsibility Report 2004**

In 2004, ST largely met or exceeded its goals for Corporate Responsibility. Nevertheless, even in those areas where we have achieved substantial success, we intend to secure further improvements in 2005.

As part of our efforts in corporate responsibility, we will continue to engage closely with our stakeholders and our Corporate Responsibility Report is an important part of this dialogue. We are open to contributions and debate and welcome suggestions of subjects – not already covered – which may be appropriate for next year's report. We also appreciate feedback on this year's report.

Please send any comments to  
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# Environmental and social awards and accolades

Since ST began its environmental and social activism, the company has received numerous awards, 41 of which were for environmental achievements.

## 1994

- Recognition: Malta Ecological Society. (ST Kirkop, Malta)
- Trophy: Best Effort, Clean Up the World Campaign. (ST Kirkop, Malta)
- Award: Ministry of the Environment. (ST Toa Payoh, Singapore)
- Certificate of Merit: Recycling and Waste Reduction in the Workplace. (ST Carrollton, Texas, USA)

## 1995

- Trophée Hélianthé: Prévention, Récupération, Valorisation des Déchets. (ST Saint Genis, France)
- Winner: Environmental Achievement and Restoration That Help (EARTH). (ST Carrollton, Texas, USA)
- Certificate of Merit: Recycling and Waste Reduction in the Workplace. (ST Carrollton, Texas, USA)
- Certificate of Environmental Responsibility. (ST Carrollton, Texas, USA)
- Certificate of Plastic Reuse. (ST Carrollton, Texas, USA)
- Certificate of Appreciation: Texas Lake and River Cleanup Program. (ST Carrollton, Texas, USA)

## 1996

- Recognition: Valley Forward Association. (ST Phoenix, Arizona, USA)
- Certificate of Appreciation: Texas Lake and River Cleanup Program. (ST Carrollton, Texas, USA)
- Prize: Puliamo il mondo – LEGAMBIENTE. (ST Agrate, Italy)

## 1997

- Recognition: French Ministry of the Environment. (ST France)
- EMAS Certificate of Registration. (All ST sites)
- Award: EPA Ozone Protection. (ST Kirkop, Malta)
- European Quality Award, from the European Foundation of Quality Management (EFQA). (All ST sites worldwide)

## 1998

- French Ministry of the Environment and French Chamber of Commerce prize for Gestion Environnementale. (All ST sites, France)
- Jury special commendation in Managing for Sustainable Development from European Better Environmental Awards for Industry. (All ST sites, France)
- Trophy: Trophée Entreprise Environnemental Catégorie Grandes Entreprises by Enjeux-Les Echos and PricewaterhouseCoopers. (All ST sites)

## 1999

- Winner: US Environmental Protection Agency's (EPA) Climate Protection Award. (All ST, Corporate)
- Winner: Hassan II Environmental Award. (ST Morocco)
- Dow Jones Sustainability Global Index (DJSI) Ranking: ST World's Leading Semiconductor Company for Sustainability. (All ST, Corporate)
- Singapore Quality Award for Business Excellence from the Singapore Productivity and Standards Board – ST Singapore Malcolm Baldrige National Quality Award. (ST USA)

### 2000

- Italian Environmental Industry Award from EMAS registered sites. (All ST sites, Italy)
- Innovest Environmental Research granted 'AAA' rating. (All ST, Corporate)
- Akira Inoue Award for Outstanding Achievement in Environmental, Health & Safety – P. Pistorio, President and CEO of ST

### 2001

- Tomorrow Magazine Environmental Leadership Award – P. Pistorio, President and CEO of ST
- Seal of Sustainability from Sustainable Business Institute (SBI). (All ST, Corporate)
- 'Innovazione Amica dell'Ambiente' Award from Legambiente and Milan Politecnico. (ST Italy)
- Environmental Ministry Award. (ST Kirkop, Malta)
- Best European Practices in India by the European bi-lateral (Indo-Italian) Chambers of Commerce and Industry. (India)

### 2002

- Management award for Sustainable Development from European Commission Directorate. (ST Kirkop, Malta)
- Seal of Sustainability from Sustainable Business Institute (SBI). (All ST, Corporate)
- Individual Climate Protection Award (EPA) – F. Borri, ST former Corporate Environment Director
- The 'Mrs. Aruna Bhorgava Eco-challenge trophy' from the Fluoriculture Society. (ST Noida, India)
- Among 25 best employers in India by Hewitt Associates, in a study conducted in conjunction with Business Today of India. (India)
- Among the 10 great companies in Europe to work for, according to Fortune Magazine. (Europe)

### 2003

- Prime Minister's 'Hibiscus' Award for Excellent Achievement in Environmental Performance. (ST Muar, Malaysia)
- Best in class scoring by VIGEO (European Financial Agency) for Environmental Products. (ST Corporate)
- Swiss Solar Energy 'Solar price' award 2003, Photovoltaic category. (ST Geneva)
- Appreciation award for eco-efficiency projects from Singapore Polytechnic. (ST Singapore)
- ST selected among the 10 companies included in the Genius Book (inventions and people protecting the climate and fragile ozone layer). (ST Corporate)
- Dangerous Substances Initiative Award (by OHS Authority in association with the European Union Agency for Health & Safety). (ST Malta)

### 2004

- Best Industrial Renewable Energy Partnership Award from European Commission. (ST Corporate)
- ST India included in the Best Employer Category by Hewitt Consultants and Business Today of India. (ST India)
- Green Hero Lifetime Achievement award from AnalogZONE – P. Pistorio, President and CEO of ST
- IEEE Ernst Weber Engineering Leadership recognition – P. Pistorio, President and CEO of ST
- The Singapore Environment Ministry's Environmental Achievement Award (SEAA). (ST Singapore)
- The 'Innovazione Amica dell'Ambiente' prize (for the program on sustainable mobility) (ST Agrate, Italy)
- National Park Board and Energy Market Authority's Singapore Green Plan (SGP) 2012 Award. (ST Singapore)
- Corporate Governance award from Roland Berger Strategy Consultants, in conjunction with the HEC School of Management and the French publication Enjeu Les Echos. (ST Corporate)



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