

Corporate Environmental Report and Social Review 2001

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Message from the President



At ST we have long recognized the importance of sustainable development and our objectives in the last fifteen years have always closely interlinked the three aspects of economic prosperity, environmental protection and social equity.

Our strong commitment to the protection of the earth is rooted in our Environmental Decalogue first published in 1995, with a revised 1999 edition setting even more aggressive targets. Probably our most ambitious goal is to become a CO₂-neutral company by 2010, largely surpassing the Kyoto Protocol targets, and this report shows our progress in reaching that goal.

The deep recession in the microelectronics industry during 2001 brought a sharply declining demand for our products and a corresponding down turn in manufacturing activity. Since key environmental measurements are normalized on financial added value, our performance in 2001 was therefore slightly below target in some areas. Even in this difficult situation, however, the application of our new environmental accounting index shows that our environmental strategy still produces considerable savings, reinforcing our conviction that “ecology is free”.

This year, in addition to reporting on the environment, we move a step further and include a short review of social issues: how we care for our people; our approach to managing individual and corporate performance; and our interaction with local communities and the broader society. This social reporting will be further developed in the future, and we will follow the Global Reporting Initiative (GRI) guidelines for sustainability reporting.

The real world in which we do business is complex and challenging – as is the achievement of sustainability in economic, environmental and social issues. As a member of the United Nations Global Compact which addresses corporate social citizenship, we will remain total in our pledge to our people, to our planet and to the prosperity of our stakeholders.

Pasquale Pistorio
President and Chief Executive Officer

STMicroelectronics at a Glance

■ STMicroelectronics is a global, independent semiconductor company that designs, develops, manufactures and markets a broad range of semiconductor integrated circuits (ICs) and discrete devices used in a wide variety of microelectronic applications, including telecommunications systems, computer systems, consumer products, automotive products and industrial automation and control systems.

■ In 2001, ST's net revenues were US\$6.36 billion and net earnings were US\$257.1 million. According to recent data for the 2001 global semiconductor market, the Company was ranked number three by independent market analysts Gartner Dataquest.

■ ST provides more than 3000 main types of products to some of the industry's most important players, including Alcatel, Bosch, DaimlerChrysler, Ford, Hewlett-Packard, IBM, Marelli, Motorola, Nokia, Nortel Networks, Philips, Pioneer, Seagate Technology, Siemens, Sony, Thomson Multimedia and Western Digital.

■ ST directly employs more than 40,000 people, working at 12 advanced research and development units, 32 design and application centers, 18 manufacturing sites and 74 sales offices in 27 countries.

■ Each year the Company invests significantly in R&D and capital expenditures. In 2001, ST spent US\$977.9 million (15.4%) of revenues in R&D, filing 636 patent applications and maintaining its track record as one of the industry's most prolific investors across a wide range of technologies, products and applications. ST is also active in numerous collaborative research projects worldwide as well as playing a key role in Europe's advanced technology research programs such as MEDEA+ and its predecessors, MEDEA and JESSI.

■ Corporate Headquarters as well as the headquarters for Europe and for Emerging Markets are in Geneva. The Company's US headquarters are in Carrollton (Dallas, Texas); those for Asia/Pacific are based in Singapore; and Japanese operations are headquartered in Tokyo.

■ ST is quoted on the New York Stock Exchange (NYSE:STM), on Euronext Paris and in Milan on the Borsa Italiana.

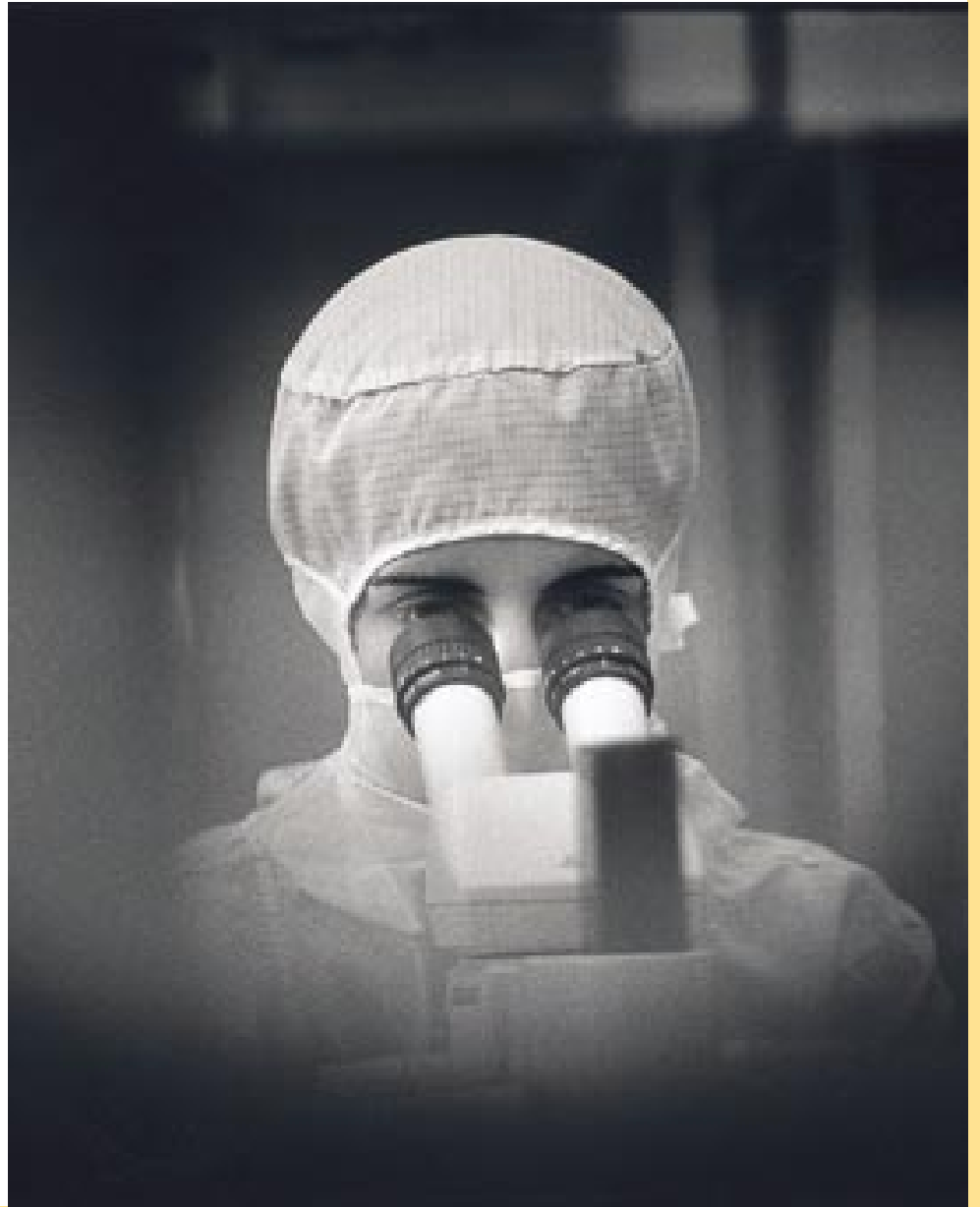
The Company's sites have received more than 70 prestigious awards around the world of which 33 were for environmental issues. Awards and Accolades are noted on page 41.

WHAT IS A SEMICONDUCTOR ?

ST produces a diverse range of semiconductor integrated circuits, from single transistors to microprocessors with millions of components on the same silicon 'chip'. A chip is made up of two major parts: a tiny and fragile silicon chip which implements electronic functions, and a 'package' which protects the silicon chip and provides the user with a practical way of handling the component itself.

Whether writing on your computer, sending email, chatting on your cell phone, watching a DVD movie, snapping photos with a digital camera, printing the resulting images, even turning on the light or toasting your breakfast muffin, ST is likely to have had some involvement.





Our Commitment to Sustainable Development

We recognize the importance of addressing the three interlinked goals of economic prosperity, environmental protection and social equity as we try to balance the positive aspects of wealth creation and economic growth needed to fund a better quality of life for present and future generations. We are deeply committed to our people, our planet and to the prosperity of all our stakeholders. And we have a clear mission with well-defined objectives that reflect our shared values.

OUR MISSION is to offer strategic independence to our partners worldwide, as a profitable and viable broad range semiconductor supplier.

OUR OBJECTIVES are ambitious and specific:

- **Growth:** we will grow faster than our competitors, with a target of 5% market share. The key to profitable growth is Total Customer Satisfaction, our Number One corporate priority.
- **Financial:** we will generate shareholders value and return on equity better than the average of the Top Ten Semiconductor Suppliers.
- **Social:** we will contribute to the well-being of our people and of every community in which we operate with a particular emphasis on environmental responsibility and sustainable development.

These goals, underpinned by ST's Guiding Principles, are the solid foundation on which we operate.

GUIDING PRINCIPLES

■ **Customer satisfaction:** The key to competitive success is Total Customer Satisfaction. We will listen to the voice of the customer and strive to anticipate and fulfill their needs and expectations. Our future relies on strong partnerships which we can ensure if each of us does his best to provide world class Service, Quality, Time-to-Market, and Value.

■ **Business integrity:** We will conduct our business with the highest ethical standards in dealing with each of our stakeholders' communities. We will dedicate ourselves to honoring our commitments, delivering on our promises, being loyal and fair, and standing up for what is right.

■ **People:** We will behave with openness, trust, simplicity and humility; we will be ready to share what we know, encourage everyone's contribution and recognize achievements; we will emphasize

job enrichment and personal realization through empowerment, teamwork and training. Each of us will be loyal, hardworking, committed and personally involved in continuous improvement and learning process.

■ **Excellence:** The only "status-quo" we will accept is one of permanent change and continuous challenge, always for the better. In all aspects of our activities we will strive for excellence, quality, competency and efficiency; we will be flexible and nimble, and will encourage innovation and creativity in every aspect of our activities.

■ **Profitability:** The profit we generate from our activities is the main source of the funds we need to prosper and grow; profit is necessary to provide security and future opportunities for each of us, and to allow the Company to meet its other social and business responsibilities.

A Corporate Culture of Total Quality Management

ST has historically outperformed the industry while steadily climbing the competitive ranks. We have achieved this because of a sustained commitment to the strategies that have given the Company a more than average track record in times of industry downturn, and an ability to outperform the market on the upturn.

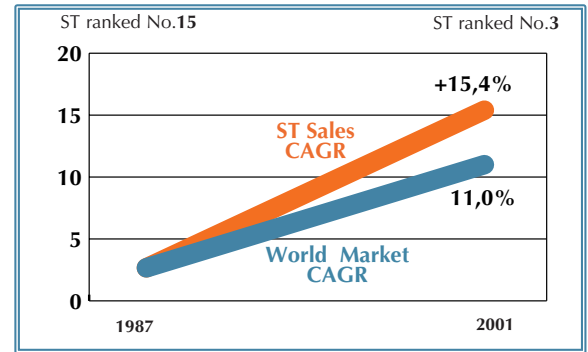
Total Quality Management (TQM) is the enabling framework that has helped us adapt and grow as leaders in a fast-moving industry. For employees, TQM is much more than a philosophy or management tool. It is the measure of the Company's dedication to exceptional individual and corporate performance, a committed way of working that has been developed by sustained and detailed effort at all levels within the business, by every employee and every manager.

The hallmarks of ST's TQM culture are five principles:

- Management commitment - demonstrated every day at top level with managers leading the culture change;
- Employee empowerment - supported by policy deployment, teamwork and suggestion schemes;
- Fact-based decision making - based on the use of tools such as Statistical Process Control, fishbone and affinity diagrams, Pareto charts and Failure Mode Effects Analysis;
- Continuous improvement - a way of life at ST through the Kaizen approach, teamwork and continuous **Plan - Do - Check - Act** cycles;
- Customer focus - the starting point for all our strategies and the vital measure of our success.

From 'top floor to shop floor' we ensure that directives become targets, that they are owned by

ST OUTPERFORMS THE INDUSTRY



the appropriate entity, that resources are allocated and that action plans generate progress. Through these actions, policy deployment becomes the way we manage and there is thus a virtuous circle of increased learning and performance.

A wide range of tools, techniques and methodologies covering these five TQM principles is available to everyone in the Company. ST University spearheads and coordinates comprehensive training programs for all employees, providing knowledge and hands-on training in TQM.

ST's initiatives and successes in quality and business excellence have been recognized at the highest level worldwide by the most prestigious national and international Quality awards.

In recent years, for example, STMicroelectronics Asia Pacific won the 1999 Singapore Quality Award for Business Excellence; the Company's US subsidiary received the 1999 Malcolm Baldrige National Quality Award, the highest level of recognition for quality in the United States; and in 1997 ST won the European Quality Award.

Page 41 lists the main business and environmental awards received by the Company over the past five years.

SOCIAL ISSUES

This year, for the first time, we briefly outline our approach to social issues within the context of sustainable development. This short review looks at the way we treat our people, our contribution to local communities and to the wider society. During 2002 we will re-align our present reporting systems and establish others so as to be able to report regularly on our social performance, following the guidelines being developed by the Global Reporting Initiative (GRI). Our aim is to apply the same discipline to our social policy as we do to our business strategies.

SOCIAL ADDED VALUE

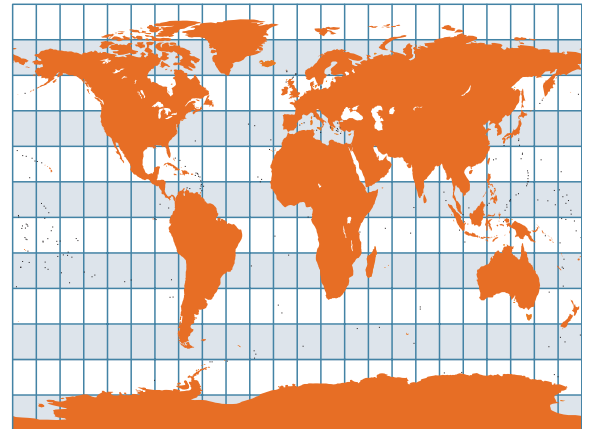
2001 TOTAL LABOR COSTS	US\$	1493	MILLION
2001 INCOME TAXES	US\$	61	MILLION
2001 OTHER TAXES (PROPERTY, PROFESSIONAL, OTHER)	US\$	54	MILLION
1997-2001 CAPITAL EXPENDITURES	US\$	8348	MILLION
ASIA PACIFIC		22%	
EUROPE		62%	
EMERGING MARKETS		2%	
NORTH AMERICA		14%	

OUR PEOPLE

While we are global in outlook, we know that our strength and competitiveness is built on respect for cultural differences. At ST, we have always promoted a 'meta-national' culture that goes beyond simple nationality, where we seek to identify and nurture local strengths around the world. Such an approach optimizes our collective capabilities and underpins our strategic intent to operate fully integrated businesses in every macro-economic system in the world.

Our executive leadership provides broad strategic direction, but individual units are given the independence to bring our strategies to life. This ensures greater creativity within the strong discipline inherent in our corporate culture of Total Quality Management.

ST AROUND THE WORLD



3523 employees
in the Americas
1275 in China
8896 in France
801 in India
9309 in Italy

3829 in Malaysia
2279 in Malta
4434 in Morocco
4457 in Singapore
1425 other European
and Asian countries

DATE: APRIL 2002

ATTRACTING AND RETAINING TALENT

Our aim is to develop the ability to attract and retain the best and most creative talent in a highly competitive market. We strive to be the employer of first choice by providing a workplace that encourages our people to reach their full potential, through education, training and personal recognition. Our retention rate is excellent: the average career length is more than 10 years.

One measure of creative success is our patent record: inventions by our employees produce, on average, two new patents every day. In 2001, ST filed 636 patents giving a total of some 20,000 patents issued or pending worldwide, covering over 11,000 inventions.

We have one of the world's largest semiconductor product portfolio covering more than half of the electronics market. We offer probably the largest range of career opportunities in our field: 104 types of job functions ranging from engineering and integrated circuit design to R&D, Product Development, Marketing and Sales.

ST has a Management team that is highly trained to lead, develop and empower ST's human capital according to the Management Charter shown opposite. The Company's corporate university has structured its Management Development School around basic, advanced and strategic management course cycles to target corporate culture and the specific skills required to manage a business and its people around these three imperatives.

ST University is described on Page 10.

TRAINING AND CAREER DEVELOPMENT

Nurturing talent. We have a formal policy to provide effective career and personal development for our people. Annual performance reviews offer the opportunity to evaluate employee strengths and weaknesses, to compare existing skills against those required and to plan training or recruitment to fill the gap. Personal development plan discussions are an important part of these reviews as they identify career development possibilities in line with each employee's aspirations and serve to define interim steps to further these plans. They also serve to identify possible future bottlenecks of talent or lack of skills within the industry. Exempt employees all have a job description, evaluated consistently across the Company and benchmarked each year with one or more external surveys.

People on the move. We constantly expose employees to new situations, cultures and jobs that develop their strengths and skills, broaden their experience and foster adaptability. All job opportunities are placed on the intranet – anyone can apply - and mobility is encouraged across functions, sites and countries. The HR intranet provides possible career paths within the Company, giving information on cross-functional career moves, with the corresponding generic job descriptions and job grades.

ST MANAGEMENT CHARTER



Sharing knowledge. There is a wealth of knowledge in our Company which, if we and our people are to benefit fully, must be shared. Half of ST professionals are involved in transversal, self-managed knowledge-sharing teams. There are also over 60 Communities of Practice that link people involved in the same areas of expertise, where problems are solved and further knowledge developed. Only by using the knowledge that exists in the Company as efficiently as possible can we transform our tacit knowledge into structural capital such as systems, processes and patents.

A lifetime of learning. ST is committed to bringing education and opportunities for growth to all employees throughout their careers, and in 1994 ST established ST University, a dynamic and keenly tailored response to the needs of our business. As well as formal education at STU, Management ensures the personal development of its employees in the same way as the Company develops new products and technologies. Annual training plans are established at all sites, taking into account the foreseeable evolution of the Company, both from a technological and a business standpoint.

ST UNIVERSITY

Established in 1994, STU is part of our Education and Knowledge Group and underpins ST's drive towards a permanent learning organization. A core team of 30 professionals with outside experts from academia and management institutions offer a flexible and comprehensive curriculum of more than 100 courses.

Over the last five years, 15,300 students have been trained for a total of 400,000 training hours at campuses in Fuveau near Aix-en-Provence in France, Phoenix in Arizona, USA, Singapore, and Catania in Italy. STU offers:

Management courses in basic, advanced and strategic management to target corporate culture and specific skills required to manage a business and its people;

Job specific programs based on strategic corporate objectives and needed competencies for key functions;

Tools and Methodologies programs on learning and applying ST's tools and methodologies, including Business Process Management, Team Problem Solving and Cycle Time Management;

Personal Development to help increase personal, job and team effectiveness; courses include general business knowledge, company culture, communication and personal skills;

Degree courses in conjunction with a number of universities and other academic institutions, include:

- Masters Degree in Microelectronics Technology & Manufacturing Management, developed by STU in conjunction with two engineering schools: Groupe des Ecoles Supérieures d'Ingénieurs de Marseille and the Ecole Nationale Supérieure de Physique de Marseille. This postgraduate degree course is designed to equip engineers with the highest levels of technical and managerial skills, qualifying them to reach senior levels in the microelectronics industry.

- Associate Degree in Semiconductor Manufacturing Technology, offered at Carrollton, Texas, in partnership with Collin County Community College, is a program for employees who lack a two-year degree to gain further technical education.

- Masters Degree in Microelectronics and Systems offered at the ST site in Catania. The emphasis here is on improving knowledge transfer between academia and industry.



ST UNIVERSITY AT FUVEAU, NEAR AIX-EN-PROVENCE, FRANCE

EDUCATION AND RESEARCH PARTNERSHIPS

Where ST is present with R&D activities, a strong link has been established with universities, academic and research institutes to address the need for engineers and scientists required by our industry and in the pursuit of common goals in Research and Development.

Research partnerships include those with international research institutes and government agencies such as with LETI/CEA (Laboratoires d'Electronique et des Technologies de l'Information/Commissariat à l'Energie Atomique) and France Telecom R&D (formerly CNET) in France; in Italy, with the Consiglio Nazionale delle Ricerche, Istituto Nazionale per la Fisica della Materia and Ente per le Nuove tecnologie, l'Energie e l'Ambiente; and in Belgium, with the Interuniversity Micro Electronics Center. There are common research laboratories with the University of Bologna and Pavia in Italy and our sites at Agrate and Catania host labs with INFN and CNR respectively.

At the University level ST partners many prestigious names including: in France with the universities of Bordeaux, Grenoble, Lille, Limoges, Lyon, Montpellier, Orsay, Paris, Toulon and Toulouse; in Italy, the university of Genoa, Milan State University, Milan Polytechnic and Bocconi University, Modena, Naples, Padova, Verona and Udine; in the USA, ST has formal research relationships with the universities of Carnegie-Mellon, Stanford and MIT.

On the job training takes place at all levels and within all functions. For example, all operators at manufacturing plants are certified before being authorized to run any kind of equipment on their own and are re-certified every 15 to 18 months. The obtaining of such certification and of multiple skills is recognized through job evaluation and ranking and helps define career path progression for operators.

On an average, all ST employees receive between 50 and 55 hours of training each year.

MOTIVATION

We want ST to remain a company of entrepreneurs characterized by high performance and motivation. Our remuneration packages are fair, benchmarked and individualized. We offer a wide range of benefits, including variable incentive pay, health insurance, savings and retirement plans, employee stock purchase and stock option plans as well as educational assistance.

SALARIES AND BENEFITS

- Attractive total compensation package optimizes local social and legal opportunities in each country.
- Salaries are based on individual parameters of the job, market value, employee performance and personal skills as well as on global corporate guidelines.
- 9,000 exempt employees have stock options.
- 100% of ST employees are eligible for a stock purchase plan with 15% discount on market value.

We recognize individual and team work through global and local recognition ceremonies and awards which underline the Company's commitment to excellence. Our annual Corporate Recognition Day acknowledges the work of up to 300 employees across all functions and rewards those who have achieved excellence.

COMMUNICATION

Our management ethic is to be as transparent and open as possible according to normal business practices. Our management information system encourages efficient knowledge sharing, effective human resource management and real time reporting. These are some elements of ST's in-house communications.

■ **PeopleFirst.** A unique system that handles employee administration, including recruitment, training, salary planning, headcount and global reporting. It provides instant information on any employee worldwide.

■ **Dolphin.** The Human Resources intranet site is part of ST's Business to Employee strategy. It provides information on all HR processes and services including job opportunities and application procedures, performance appraisals, compensation, benefits, strategy and the employee stock purchase plan.

■ **World Class:** a bi-monthly news magazine, published in three languages, with further local and special editions. It provides Company news for employees and their families and promotes the ST multicultural community.

■ **Electronic Flash Info:** distributed in three languages. Its scope is to inform employees of Company news at the same time or before it appears in the press.

■ **Dedicated websites:** for product divisions and staff functions to inform on products and technologies, competitive intelligence, investor relations, press and advertising, the environment, TQM and STUniversity. There are also on-line communities that allow simple, secure exchange and build-up of knowledge for Communities.

■ **Satellite Broadcast:** a yearly question and answer session with the CEO, broadcast globally in two sessions that cover all time zones.

■ **Opinion Survey:** approximately every 18 months a worldwide employee opinion survey is conducted covering issues such as management practices, career opportunities, strategies and employee satisfaction. In response, ST Management produces improvement programs and action plans. The 2001 survey was completed by 86% of employees. According to the classification of "high tech" companies by global research firm ISR (International Survey Research), ST's satisfaction results were 2.1% higher than global high-tech companies.

HEALTH AND SAFETY

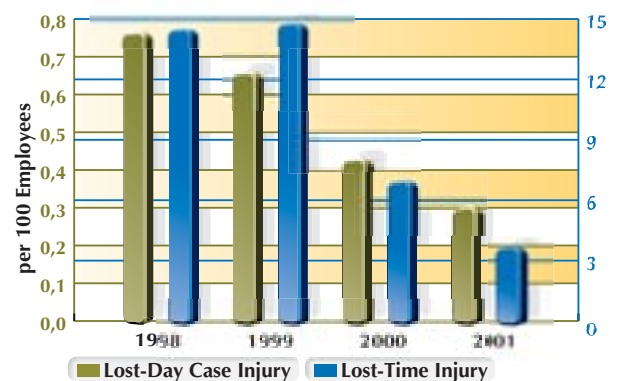
ST is committed to good Health and Safety practices and its corporate Safety and Risk Management organization aims at achieving Occupational Health & Safety Management System validation under OHSAS 18001 international standards at all manufacturing sites by 2003.

Recent safety and health trends have shown remarkable improvements. For instance, ST's Assembly and Test sites worldwide have slashed the Lost Workday Case (LWC) rate by 74% and achieved a target of 60% reduction of Lost Time Injuries from a high 14 in 1998 to 3.6 in 2001.

Reflecting the major effort made to integrate safety, two of our chip assembly and test plants -- Shenzhen in China and Tuas in Singapore -- have performed their work without a single recordable injury for two million and one million hours respectively. This confirms our progress towards the goal of zero incidents.

Beyond 2003, following manufacturing site certification under OHSAS 18001, ST will launch specific advanced programs in areas such as occupational health, chemicals optimization, ergonomics, property conservation and risk management.

SAFETY TRENDS: OVERALL ASSEMBLY AND TEST SITES



ST IN THE COMMUNITY

We take our impact on the economy, employment and on the social structure of the communities in which we operate very seriously. This is especially true in places where we are a significant presence. Over the years our considerable capital investment on five continents has created many thousands of jobs and significantly contributed to the growth of local economies.

- In Malaysia ST is the 5th largest employer in the semiconductor sector. Our Muar site is the largest employer in the state of Johor.
- In Malta we are the largest private employer.
- In Morocco we are amongst the Top Three and the largest foreign employer in the country.
- In southern Italy our Catania site is the largest industrial employer in the region.
- In Singapore ST is listed in the country's Top Ten Companies.

On a practical level, there is much we can do to support the communities that host our sites, both on a daily basis and in times of crisis. Our contribution is expressed through a wide range of small, but relevant partnership projects focusing on some of the pressing needs of local people. Besides providing jobs, we contribute to communities through countless local activities in the form of donations of cash, products and a broad range of activities where ST employees volunteer their personal time to helping the community.

Some examples common to all sites include:

- support for local medical initiatives;
- donations of supplies and computers to schools and universities;
- help for underprivileged children;
- sponsorship of the arts and local culture;
- a broad range of environmental initiatives;
- community and national education.

In China, for example, where ST has been present since 1995 as a joint venture partner with the Shenzhen SEG Hi-Tech Industrial Co., Ltd., known as STS Microelectronics, we participate in the Hope Project, a nationwide charity for building primary schools and will donate US\$16,000 during 2002. STS also gives computer equipment to universities and offers tuition scholarships to university students. To date, STS capital investments in China total US\$238 million.

In France, ST and other major companies support the 'Fondation de la Deuxième Chance' (the Foundation for a Second Chance) which provides financial aid to individuals in difficulty to help them to a second chance in life through setting up their own business or commerce. A pilot project is being established at ST's site in Rousset, near Aix-en-Provence in France.

Our charitable work is increasingly being co-ordinated by the ST Foundation, established in 2001 and described on page 16. The Foundation, for example, co-ordinated our contribution to disaster relief after the Gujarat earthquake in India in 2001. US\$100,000 was donated by the Company and local employees donated a further US\$14,600.



SHOWN HERE IS PART OF ST'S FAB IN AGRATE, NEAR MILAN, ITALY WHERE THE WORKFORCE NUMBERS SOME 4,185 PEOPLE.

Case studies

ST IN MALTA

- Largest private employer in Malta, with 2,279 employees; 30% are graduate engineers or highly specialized technicians.
- Capital investment in Malta since 1981 totals US\$681 million.
- ST provides 55% of the country's total domestic exports.
- Winner of the 2000 award for Achievement in Industry and the 2001 Management Award for Sustainability.

With such a large presence on this small Mediterranean island ST is a prominent member of the Maltese community. The plant, a showcase for industry, is high on the list of attractions for visitors, ranging from secondary school and university students to engineering and business management executives.

ST is involved in many social and educational initiatives that in small ways make a real difference to the everyday lives of the people. These include employees organizing donor campaigns to the hospital's blood bank, and a whole range of environmental activities.

ST specialists lecture at the University in engineering electronics and business management, technologies and work practices. The Company also organizes a reading room in the university library. ST is regularly asked to support local, private and state organizations in their introduction of the TQM culture, as well as other successful ST corporate policies.

ST IN MOROCCO

- Among the Top Three employers in Morocco; largest foreign employer.
- 4,434 employees.
- Capital investment in Morocco totals US\$445 million.
- Winner of the Moroccan Government National Quality Award in 2000.
- Winner of the Hassan II Award for Outstanding Contribution to Environmental Protection in 1999.

We have three assembly and test plants in Morocco located at Ain Sebaa and Bouskoura near Casablanca. The recently opened Bouskoura 2000, when fully equipped will be the most advanced back-end semiconductor plant in the world in terms of equipment and technology and will eventually represent a capital investment in Morocco of US \$300 million.

ST enjoys a long and mutually beneficial relationship with the people of Morocco. The Company is deeply committed to the welfare of the city's youth, especially the underprivileged, and donates medical, school and computer equipment to neighborhood schools, hospitals and orphanages. ST also sponsors holiday camps for children of employees, and negotiates special interest rates for home loans with local banks.

ST has strong links with the country's universities and institutes of higher learning and is an important source of employment for newly qualified graduates. Educational initiatives include:

- the sponsoring and training of hundreds of young technicians and engineers by providing work experience at ST's three sites in Casablanca;
- the creation of a microelectronics design center at EMI, one of the country's best known engineering schools;
- ST leads a program at the American University of AlAkhawayne, in semiconductor manufacturing technologies. A project, coordinated by ST, is underway between the University of AlAkhawayne and the University of Malta to cooperate on university-level teaching in technical disciplines;
- ST sponsors new microelectronics departments within Moroccan institutes of higher learning. Initiatives include the provision of a university-level microelectronics course; the training of Moroccan university professors at ST in Grenoble in France; and the organization of practical, 'hands-on' training at ST's design center at the University of Rabat.

ST IN SICILY

- Largest industrial fab employer in South Italy with 4,084 employees; 88% have diplomas or university degrees.
- 208 patents from engineers and scientists at the Catania site have been registered in the United States.

In Catania, “Etna Valley” is becoming as well known as the trailblazing Silicon Valley in California, with ST’s Sicilian success serving as a catalyst to regional development. Other companies, including IBM, Nokia, Magneti Marelli, have been attracted by the infrastructure, services and contacts with public and academic institutions that ST has built over the years and they have now established their own local research and development centers.

Some 60 businesses have been founded to serve the local high technology industry, employing over 2,000 people. In addition to the direct and indirect employment, the presence of a major global enterprise has fuelled the creation of an essential network of relationships with Italian and foreign research centers, professional experts and local enterprises, thereby supplying the fundamental conditions for economic growth.

ST has strong links with the University of Catania and is, by far, the largest local source of employment for graduates. On site, ST hosts research laboratories for the CNR IMM, the Consiglio Nazionale delle Ricerche, Istituto di Microelettronica e Microsistemi and for SuperLab, the Laboratory for Surfaces and Interphases, run by the consortium *Catania Ricerche*, which includes the University of Catania and other research institutions.

In 2001, ST University’s Catania campus was opened to local business, engineering and governmental communities, making available the Company’s expertise in technical, marketing and TQM disciplines - an important contribution to improving local industrial culture.

ST EUROPEAN WORKS COUNCIL

According to the European Union Directive 94/45 published in 1994, and to promote the participation of every worker in the social dialogue within the Company, a European Works Council was set up at ST comprised of France, Germany, Italy, Spain, Scandinavia, Benelux and the UK.

The Council meets annually and is composed of 20 representatives. Should exceptional circumstances occur that affect the interests of the workers and employment, extraordinary meetings may be called.

The Council is informed on issues of a transnational nature which affect the interests of the workers.

EUROPEAN WORKS COUNCIL ISSUES

- Financial and economic situation;
- Investments;
- Production and sales amount;
- Introduction of new work methods or production procedures;
- Production transfers;
- Mergers;
- Reduction of Company size, partial or complete shut down of plants;
- Collective redundancies;
- Composition of shareholders;
- Current situation and probable evolution of employment;
- Environment.

ST: CITIZEN OF THE WORLD

ST has always endeavored to bring certain values to the global workplace. We bring education. We bring technology, and we are among the leading participants working to bridge the digital divide. As a leading technology company, we have a strong obligation to help cultivate technological development worldwide, not just in the most economically advantaged nations and communities.

■ **THE GLOBAL COMPACT.** We are a signatory to this UN initiative that promotes responsible corporate citizenship, based on the Universal Declaration of Human Rights, the International Labour Organisation's core standards and the Rio Principles on the environment (URL).

Companies that form part of the Global Impact are asked to make a commitment to action within their spheres of influence by undertaking activities jointly with the United Nations that advance the principles of the Compact.

■ **GLOBAL, REGIONAL AND TRADE ORGANIZATIONS**
ST is an Executive Committee Member of the World Business Council for Sustainable Development, chairs the European Union delegation to the World Semiconductor Council, and is a member of numerous national and international trade associations.

■ **UNITED NATIONS INFORMATION AND COMMUNICATIONS TASK FORCE.** This task force brings together corporations, governments, humanitarian and non-profit associations. Through the ST Foundation we aim to play a leading role in an initiative to narrow the digital divide that separates those with access to modern digital technologies from those who do not.

Initially, we are preparing courses on PC and internet literacy for ST people, their relatives, teachers and other members of the community where ST operates.

STMICROELECTRONICS FOUNDATION

This charitable foundation was established in August 2001. Its mission is to:

- make known the vital importance of microelectronics in world development and to highlight the contribution that this technology can make to human progress;
- promote the ideals of environmental protection and Total Quality Management;
- coordinate ST's charity initiatives worldwide.

In our next report we will explain our progress further, including the measures we have taken to structure and focus our activities under the new STMicroelectronics Foundation umbrella.

Corporate Environmental Report 2001

Herewith is our Corporate Environmental Report for 2001. We outline the Company's environmental management systems and highlight corporate results with specific achievements from several of our manufacturing sites. These examples are part of our knowledge-sharing network, helping others to benefit from good practices.



GENERAL PRINCIPLES

■ The ST Environmental Policy goes beyond the principle of Customer Satisfaction and aims for stakeholder satisfaction through initiatives and programs based on the ST Decalogue for the Environment. First published in 1995, the revised 1999 edition set even more aggressive targets with objectives up until the year 2010. (See page 39).

OUR VISION

To be recognized by all our stakeholders as a leader in environmental care by following our Environmental Decalogue and by exceeding regulatory requirements in both degree and timing wherever possible.

OUR MISSION

To strive for sustainable development in minimizing the impact of our processes and products on the environment by maximizing the use of recyclable or reusable materials and, where possible, adopting renewable sources of energy.

OUR POLICY

To aim for ambitious improvement of our environmental performance with a view to reducing our impact on the environment to levels which do not exceed those corresponding to the Economically Viable Application of the Best Available Technology (EVABAT).

Our objectives are:

- to ensure management commitment to a culture of environmental protection throughout the Company;
- to design products and processes to minimize their environmental impact from “cradle to grave” and to inform customers on recycling and safe disposal of ST products at the end of their life;
- to strive for continuous reduction of waste and pollution and in the consumption of water and energy, in a quest for sustainable

development and as proof that ecological methods are both responsible and profitable;

- to benchmark ST against leading companies the world over, so as to equal or exceed the best performing companies;
- to apply the most advanced statistical and environmental tools to environment parameters so that environmentally responsible manufacturing processes are developed and implemented;
- to promote an open dialogue with workers and the communities in which ST operates; cooperate in a positive spirit with industrial and scientific communities, governments and non-governmental organizations to develop laws, regulations and guidelines for the continuous improvement within these communities, promoting a global and healthy competitiveness.

ENVIRONMENTAL MANAGEMENT

Environmental protection is a key element of our corporate culture. In a fast-changing world our global success depends on our ability to react quickly. We do this through independent operational units that are bonded by a strong common culture of Total Quality Management. Teamwork, the empowerment of individuals and a focus on continuous improvement, help us pursue our Decalogue goals across the Company.

ORGANIZATION

Environmental care is a high-level concern. The Corporate Environmental Steering Committee is chaired by our CEO. A Corporate Vice-President heads our Total Quality Environmental Management organization.

The Corporate Environment Support Group promotes a company-wide culture of environmental protection and the implementation of our vision, mission and policy. It defines the strategies enabling

the Company to approach environmental neutrality by minimizing the impact of our processes, products and behavior. It also establishes the programs and the roadmaps to implement these strategies, with a special focus on greenhouse gas mitigation. The group promotes a culture of continuous improvement and knowledge sharing and controls the global implementation of the programs.

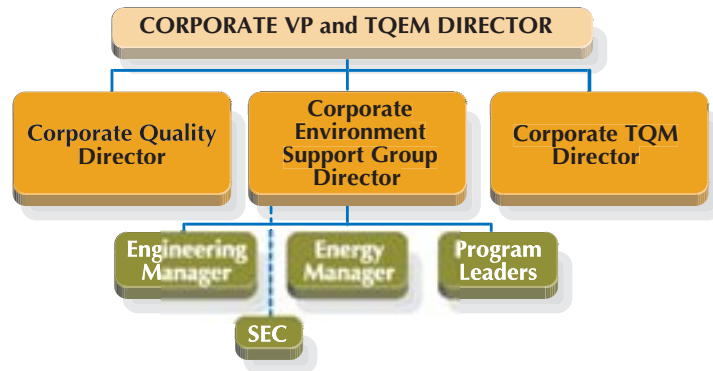
Locally, an Environmental Steering Committee and a Site Environmental Champion (SEC) are active in all environmental initiatives. They provide a link between the Corporate Environment Support Group and Site Management (Purchasing, General Services, for instance), as well as with other functions such as R&D and Operations.

Several strategic teams (Corporate Environmental Working Groups) ensure environmental consistency at ST sites around the world, providing guidance and support.

At the beginning of 2002, 16 of ST's 18 manufacturing sites are EMAS validated and ISO 14001 certified. One recently acquired site in Tuas, Singapore will be certified in mid 2002 and our new plant in Bouskoura, Morocco which was inaugurated in 2001 will be certified next year. As a prerequisite to obtaining EMAS validation, every site prepared and published a detailed environmental statement outlining its consumption of natural resources and releases. All sites update this statement annually, as required by EMAS.

To maintain ISO 14001 certification and EMAS validation, all sites are independently audited. EMAS revalidation and ISO recertification (every three years) of all ST manufacturing sites was completed successfully before November 2000.

Our product design plant in Grenoble, France, was the first non-manufacturing site to achieve certification to EMAS and ISO 14001 at the beginning of 2001. There remains in Europe one more non-manufacturing site to be EMAS and ISO 14001 certified.



REGULATIONS

The Corporate Environmental Working Groups, assisted by external resources when necessary, closely monitor environmental regulations worldwide, in order to keep our environmental standards updated.

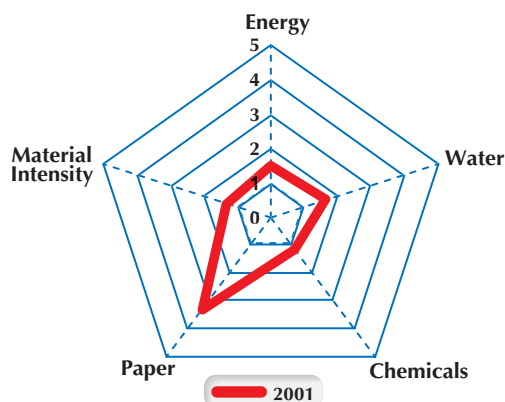
MEASUREMENT

Measuring drives behavior. Without measuring our performance, we cannot achieve excellence. Environmental data from each site is measured against the relevant Decalogue target. This process is managed through the Environmental Database, which enables environmental indicators to be compared, site by site. Internal benchmarking and sharing of information are done through the dissemination of best practices.

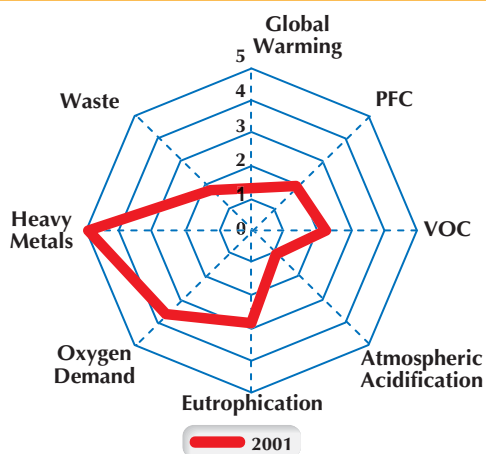
Our Environmental Decalogue calls for cooperation with international organizations to define and implement eco-efficiency indicators. ST has worked closely with the World Business Council for Sustainable Development (WBCSD) on the definition of these indicators and their implementation at ST, and we are measuring the environmental burden approach in several categories of air and water emissions.

In addition, we have developed a new tool to allow a fast, fact-based evaluation and a comparison among sites. The ratio of actual performance versus standard (where “standard” is typically the best-in-class achievement) is plotted on a radar chart to indicate the “footprint”. Obviously a footprint equal or below 1 means that we are performing well. The smaller the footprint, the better the performance. We apply two footprints: one for input (electricity, water, chemicals, paper, material intensity) and one for output (waste, global warming, PFC, VOC, acidification, eutrophication, oxygen demand, heavy metals). An example of a calculation relating to one of our wafer fab manufacturing sites is shown in the figures below.

ECOFOOTPRINT (INPUT PARAMETERS)



ECOFOOTPRINT (OUTPUT PARAMETERS)



ENVIRONMENTAL BURDEN

We have begun to use a method - called environmental burden - to measure the potential of a group of substances that exert effects on a particular environmental impact category, such as acidification or aquatic eco-toxicity.

This is an informative and scientifically sound way of quantifying the environmental performance of a global company and to set and monitor targets to improve. It draws on developments in environmental science to estimate the potential environmental impact of emissions and wastes, rather than merely stating quantities. Our 10 impact categories are among those used in environmental management. We have chosen those that help us reduce our main impacts. Six categories deal with emissions to air and four with water.

AIR

- Global Warming: includes direct greenhouse gases emissions from our plants, indirect emissions from energy consumption and transport and reported in tonnes of carbon equivalence (MTCE);
- Ozone Depletion: deals with marginal releases of ozone-depleting substances and measured as Ozone Depleting Potential (ODP);
- Total VOC Emissions: reported as net volatile organic compounds emissions in tonnes;
- Atmospheric Acidification: total acidic emissions expressed in sulphur dioxide (SO₂) equivalence;
- Photochemical Ozone Creation: deals with potential to form low-level ozone;
- Air Emission Toxicity: emissions of substances are considered with threshold limit values below 3 ppm, expressed in Phosphine equivalent.

WATER

- Aquatic Oxygen Demand: total Chemical Oxygen Demand (COD) released to water in mass;
- Eutrophication: deals with Phosphorous and Nitrogen emissions;
- Heavy Metals: total heavy metals emissions;
- Aquatic Eco-toxicity: includes mass emissions of various metals expressed in copper equivalent.

We have surveyed all our manufacturing sites to establish our overall burdens. These are summarized in the table below.

AUDITS

Corporate Environmental Audits are conducted every 18 months at every site. Each audit ends with an action plan and scoring of the audited site. Audits are verified during EMAS and ISO 14001 certifications.

SUPPLY MANAGEMENT

Our supplier audits include questions on environmental performance, which account for 10% of the total score. We also strongly encourage our suppliers and subcontractors to become EMAS validated or ISO 14001 certified and assist them to do so.

Our goal was for 80% of our key suppliers to be certified to either of these standards by the end of 2001. We have met 87% of our goal and evaluation of new suppliers is ongoing.

ENVIRONMENTAL AWARENESS AND TRAINING

Training is provided at each site to increase the environmental awareness of employees and outside contractors. A variety of training modules covers:

- key environmental issues;
- how we affect the environment;
- how ST achieved its environmental lead in its sector.

Training course include:

- a detailed commentary on the Decalogue and the site's environmental statement;
- an overview of the Corporate and Site Environment Manual;
- an explanation of the role and responsibility of each new employee in the site's environmental management system;
- a tour of the site's main environmental facilities;
- an environmental session in the induction training for new employees.

Local trainers, with support from the Site Environment Champion, offer specific instruction on the control of the potential environmental effects listed in the relevant site register.

KEY SUPPLIERS

ISO 14001/EMAS Certification Status at February 2002



BURDEN	POTENTIAL EFFECT	UNIT	VALUE 2001 (BASELINE)
GLOBAL WARMING	CLIMATE CHANGE	MTCE/M\$ AV	100.6
OZONE DEPLETION	CLIMATE AND HEALTH	KG R11EQUIVALENT/M\$ AV	0.13
TOTAL VOC EMISSIONS	URBAN SMOG; HEALTH AND SAFETY	TONNES VOC/M\$ AV	68.3
ATMOSPHERIC ACIDIFICATION	ACID RAIN; HEALTH	KG SO ₂ EQUIVALENT/M\$ AV	5.42
PHOTOCHEMICAL OZONE CREATION	URBAN SMOG; HEALTH	KG ETHYLENE EQUIVALENT/M\$ AV	6.46
AIR EMISSION TOXICITY	AIR POLLUTION; HEALTH	KG PHOSP EQUIVALENT/M\$ AV	0.71
AQUATIC OXYGEN DEMAND	THREAT TO FISH AND AQUATIC LIFE	KG COD /M\$ AV	154.2
EUTROPHICATION	REMOVES OXYGEN FROM WATER	KG (P+N)/M\$ AV	76.1
HEAVY METALS	ACCUMULATE IN FOOD CHAIN	KG /M\$ AV	4.5
AQUATIC ECO-TOXICITY	IMPACT ON ORGANISMS	KG CU EQUIVALENT/M\$ AV	5.7

M\$ AV: \$MILLION ADDED VALUE

This applies to all personnel operating, supervising, monitoring or maintaining environmental infrastructure, such as wastewater treatment, scrubbers, chemical and waste stores. Employees working with or around chemicals are trained in the use of protective equipment and how to respond to incidents.

The training is part of our job certification program. ST personnel are given a yearly refresher course or whenever there are major changes. In addition, an advanced environmental awareness seminar on a CD-ROM, designed and developed at ST University has recently been updated and is available to ST's suppliers and customers.

INVESTING IN THE ENVIRONMENT

We believe that in the long term companies investing in environmental protection have a significant advantage over those who delay. This is because any investment will be largely repaid if production processes are pollution free and the use of natural resources and energy is reduced.

We have already proved that business can be both environmentally responsible and profitable. None of our investments in energy conservation has taken longer than three years to pay back with an average of two years. Environmental measures represented more than 2% of ST's capital investments in 2001, roughly in line with the previous year.

ENVIRONMENTAL ACCOUNTING

It is important to fully understand the costs related to environmental activities - to evaluate the necessary investments and calculate the cost of environmental protection. We have started to use an index we devised to get a more accurate picture of our environmental efficiency and to correlate our economic and environmental activities.

There are no standard definitions for environmental accounting, and we are therefore moving in stages. We have started our evaluation

using data from 2000, splitting the costs into two categories: pollution prevention, including conservation and recycling activities; and environmental management. This information will enable us to be more efficient in our understanding of the costs, to improve and to be more open about our performance.

Total environmental costs for 2000 were around \$29 million, (about 0.97% of the total production value). The 2001 figure amounts to M\$30 (1.1% of the total production value).

Environmental conservation and recycling led to these major savings:

	2000 M\$	2001 M\$
ENERGY	38	5
WATER	8	4.5
CHEMICALS	31	19.5
TOTAL	77	29

The 2001 figure reflects the dramatic downturn in the semiconductor market during the year.

PAYBACK FROM ENVIRONMENTAL INITIATIVES

Increasingly, investors - including banks and socially-responsible funds - are choosing companies that deliver an excellent environmental and financial performance. Good environmental and social performance indicates the company is actively managing its reputation and is forward looking. As well as attracting investment, environmental improvements can help us save money through efficiency gains.

ST continues to be highly ranked among the leading companies pursuing sustainability. In the semiconductor industry, the Dow Jones Sustainability Group Indexes (DJSI) rank us as leader in the integration of sustainability in a comprehensive Total Quality Management System.

ST is represented in the following main financial indexes based on sustainable development and ethical issues:

- SAM: DJSGI created in 2000, including about 200 companies on a worldwide basis;
- ASPI: Arese Sustainable Performance Index created in June 2001, including 110 Euro-zone companies;
- FTSE 4 GOOD launched in July 2001. We are present both in FTSE 4 GOOD Global 100 index and in FTSE 4 GOOD Europe 50 Index.

STAKEHOLDER DIALOGUE

We have a long history of being good community citizens. We want our neighbors to know about our environment successes and challenges. Good community relations - built on excellent performance, genuine dialogue and trust - bring benefits to our stakeholders and to our Company.

As a leader in environmental issues, we are better placed to attract young talent and the top human resources we need to maintain our performance in this fast-moving business.

Since 1994, ST has coordinated the European participation in the International Semiconductor Conference on Environment, Safety and Health sponsored by the Semiconductor Industry Association (SIA), the European Semiconductor Industry Association (ESIA), the Electronic Industry Association of Japan (EIAJ), and the Korean Semiconductor Industry Association (KSIA).

ST is also on the Executive Committee of the World Business Council for Sustainable Development (WBCSD), and the World Semiconductor Council ESH (Environment Safety and Health) Task Force where priority projects include reductions in perfluorinated compound (PFC) emissions, energy use and chemicals. We are also involved with a wide range of national and international trade and non-governmental organizations worldwide.

PROBLEMS AND CHALLENGES

At our Phoenix site in Arizona, an overflow at the reverse osmosis water treatment plant was diverted to drywells. The water did not contain any harmful or regulated chemicals. We reported this and the State authorities ordered us to do a study of the drywell, including samples of the soil and water. Although no chemicals of concern were found we still received a violation for the practice, because our site does not have a permit to discharge industrial water to a drywell. We have taken measures to ensure that the site can handle such overflow in the future.



ST'S GOAL IS TO REDUCE THE TOTAL ENERGY CONSUMPTION (kWh PER k\$ OF ADDED VALUE) BY AT LEAST 5% PER YEAR, THROUGH PROCESS AND FACILITIES OPTIMIZATION, CONSERVATION AND BUILDING DESIGN. SHOWN HERE IS A SECTION OF THE ROOF AT OUR GRENOBLE PLANT WHERE A 35kW PHOTOVOLTAIC SYSTEM WAS INSTALLED ON THE FAÇADE OF THE DESIGN CENTER. THE TOTAL YEARLY SOLAR ENERGY PRODUCED WILL BE 30MWh -- 1.5% OF THE BUILDING'S TOTAL DEMAND. CO₂ EMISSIONS WILL BE REDUCED BY TWO TONNES PER YEAR.

We believe that the most pressing environmental threat is climate change, caused by increased levels of greenhouse gases (GHGs) in the atmosphere. Carbon dioxide (CO₂) is the principal greenhouse gas and is produced when fossil fuels - gas, coal and oil - are burned, mainly to produce heat and electricity for homes and industry and as fuel for transport.

We use energy in our factories and for distribution of our products. In 2001 our consumption was 1,774 GWh - about the same as an Italian town of 400,000 people or a US town of 150,000. Although our total consumption is relatively low in global terms, we are determined to do all we can to reduce our impact.

Our goal is to ensure that our operations will not contribute to climate change. We have therefore set the highly ambitious goal of becoming CO₂ neutral by 2010. We intend to achieve this in the following ways:

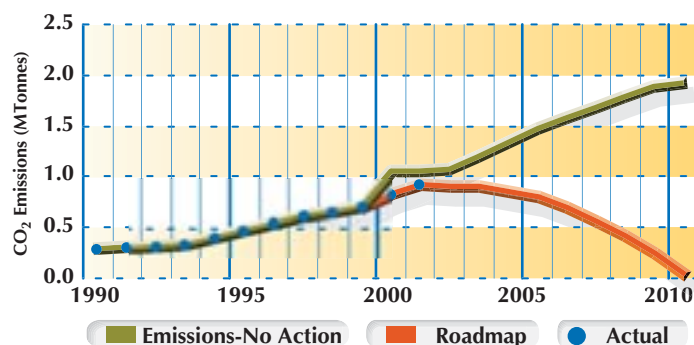
- our target is to reduce total energy consumption by at least 5% a year for each million dollars of added value (i.e., sales revenue minus purchasing costs) by increasing energy efficiency;
- we plan to buy a greater percentage of our energy from heat and power plants, which are more efficient and emit less CO₂ per unit of energy, and from renewable energies such as wind and solar (zero CO₂);
- we aim to neutralize the remaining carbon emissions by creating carbon sinks through reforestation.

For a typical semiconductor manufacturer, electricity can be the largest single expense - in 2001 it was 1.7% of ST's net revenue. If the improvement in energy mix foreseen for 2010 is achieved (65% cogeneration, 30% conventional, 5% renewable), this will allow us to reduce CO₂ emissions for each million dollars of added value by more than 80% from the 300 tonnes in 1990 to only 60 tonnes in 2010.

We estimate that overall CO₂ savings of more than 10 million tonnes can be achieved for the period 1994-2010, with company-wide energy savings of M\$900 for that period.

ENVIRONMENTAL NEUTRALITY

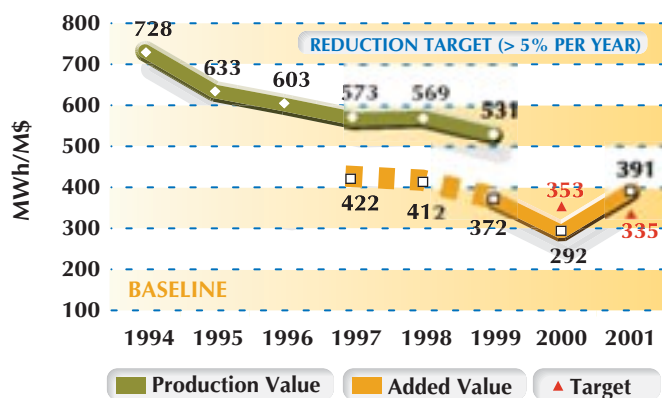
CO₂ Savings 1999-2010: 8.5 MTonnes



ENERGY EFFICIENCY

Energy consumption performance in 2001 was dramatically affected by the market slow-down and the marked fall in the price of our products. While total production decreased by 2% compared to 2000, the added value fell dramatically by 15%. This has increased our total energy consumption in relation to added value. Nevertheless, our energy efficiency measures produced savings of around \$60 million in the period 1994-2001.

ELECTRICITY CONSUMPTION

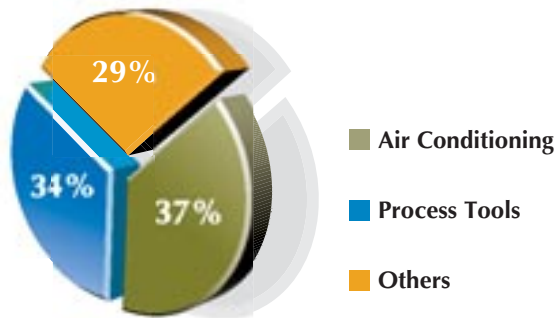


EXAMPLES

During 2001 an Energy Conservation Self Assessment Survey was implemented at all ST sites. Its purpose was to:

- review energy conservation programs;
- identify major opportunities to reduce energy consumption;
- measure the energy efficiency levels of the systems;
- support sites in achieving their goals;
- share best practices among the sites.

CONSOLIDATED ENERGY BREAKDOWN



The chart above shows the energy breakdown of manufacturing sites: 71% of total energy used is directly related to process tools and air conditioning of clean rooms. Clearly these areas are the most significant ones to investigate for energy efficiency opportunities.

Increased energy efficiency could result from a change in management strategies, redesigning tools or support systems, or replacing components with more efficient alternatives. More than 350 energy efficiency actions have been identified and will be implemented over the next three years. These actions will contribute to an annual saving of more than M\$11.

A “free” chilling system (free cooling) - using evaporation in cooling towers - enables us to produce chilled water for process cooling and air conditioning systems without the need for energy-intensive equipment.

This was first implemented in our Agrate site two years ago. Conventional cooling costs about \$15 for 1MWh, while the Agrate system brings the cost down to just \$3 per 1MWh. Total savings in Agrate alone are around k\$500 a year. Payback is between one and three years, depending on the weather. We are planning to use similar systems at sites that have the right weather conditions.

Equipment needed to control air quality inside our manufacturing sites uses a lot of energy. We have found that design changes can produce considerable savings with a short payback period.

USING COMBINED HEAT AND POWER PLANTS

Conventional power stations that burn fossil fuels give off a lot of heat, wasting as much as 70% of the energy they consume. We are starting to use a more efficient generating technology that uses a system known as combined heat and power (CHP), or cogeneration, that captures most of the waste heat and uses it to make steam or provide heating.

ST aims to source 65% of its electricity from combined heat and power energy by 2010. Electricity from conventional sources will be reduced to 30%.

EXAMPLES

At Catania in Italy, we intend to buy electricity, heat and cooling from a new gas-driven CHP plant being built close to our site. This will cut CO₂ emissions at this site by more than 50,000 tonnes a year.

RENEWABLE ENERGY

There is a lot of energy in the wind and the sun. While new technologies are clean and the power endlessly renewable, they are a lot more expensive than fossil-fuel technologies at current prices.

Wind power can be competitive in certain windy areas. The cost of solar power is falling as the technology improves and demand for solar cells increases. Pilot projects in both wind and solar energy have been started at ST.

EXAMPLES

■ In 2001 we installed a 35kW PV system on the façade of a new office building at our Grenoble design center. It will produce 28MWh a year - 1.5% of the building's total demand - and reduce CO₂ emissions by two tonnes a year. The total investment is k\$190. 80% of the total cost (k\$152) was financed through government grants.

■ Wind farm opportunities are being investigated in France, Italy, Switzerland and the United States. A Memorandum of Agreement has been signed with a French company to develop a joint project in France in 2002-2003.

CARBON SINKS

Burning of fossil fuels is responsible for about 80% of global CO₂ emissions. Since the industrial revolution, atmospheric concentration of CO₂ has increased by 30%. These emissions are altering the natural balance of the global carbon cycle.

ST and Stephen F. Austin State University (SFASU) in Texas, USA are implementing a reforestation project in East Texas where initially a total area of 530ha has been planted. The goal is to optimize carbon sequestration while maintaining a sustainable, healthy forest. ST will purchase and prepare the land and plant the trees under the technical guidance of the university. Students will collect data on carbon sequestration.

ST will hold the land for one year from the time of purchase and then donate it to SFASU. The land will remain as a permanent forest. ST will maintain ownership of carbon credits associated with the land and provide funding for land and timber management costs until the first thinning (after 17 years). ST will have the right to use the forest as a recreation area for an unlimited period of time,

provided there are no adverse effects on the safety and health of the forest or on people. Timber revenues will be reinvested in land management and net profits from timber revenue will be given to the university.

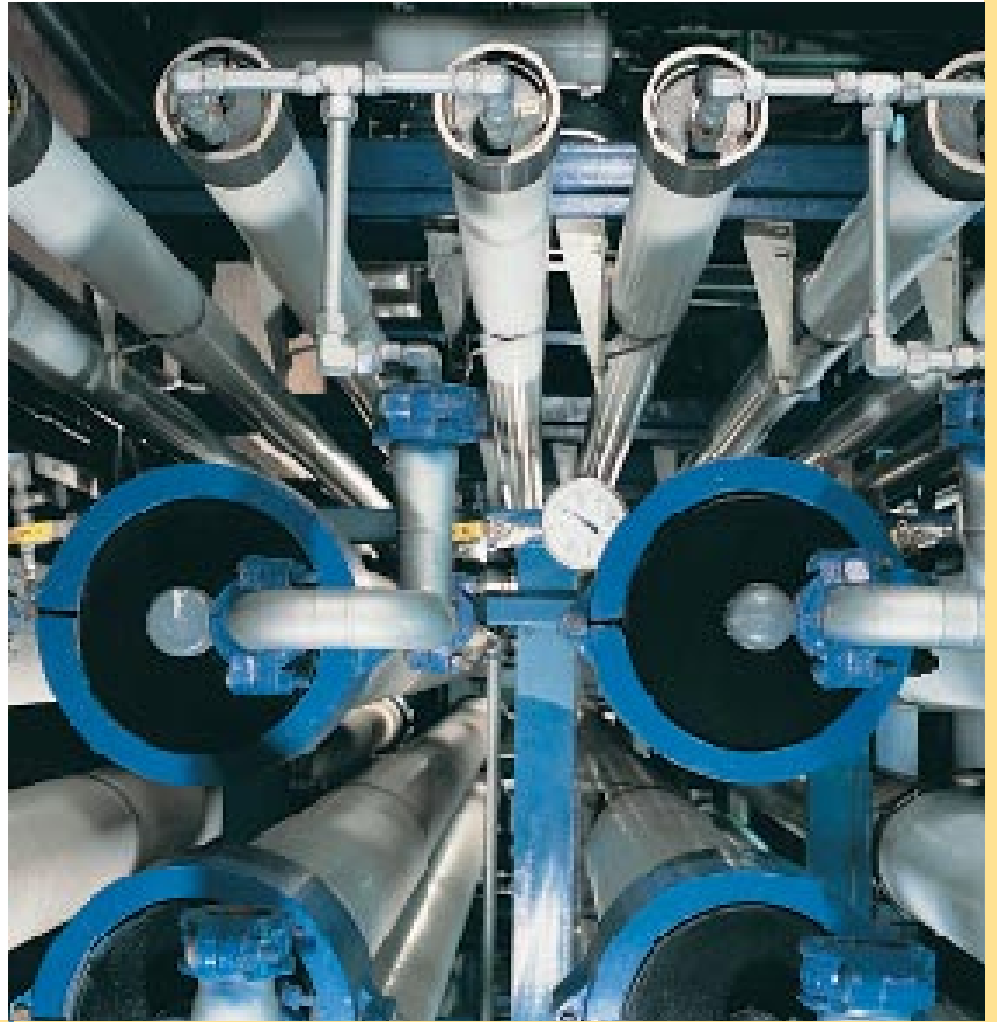
CARBON STRATEGY

We are in the process of fine tuning our strategy on Carbon dioxide in order to be consistent with the implementation of the Kyoto Protocol and associated mechanisms (Clean Development Mechanisms and Joint Implementation). We have started on a Carbon (GHG) report with historical data, details and excerpts based on our calculation methodologies.

THE GLOBAL CARBON CYCLE

Carbon dioxide is released into the atmosphere through plant and soil respiration, diffusion from oceans, and by human activities. In the long term, the absorption and release of carbon is more or less in balance except for slow changes in geological time scales. However, human activity is disturbing this cycle with the annual release of six to seven billion tonnes of carbon. Part of this additional carbon is accumulated in the atmosphere, leading to increased concentrations of greenhouse gases. Some is taken up by enhanced plant growth and the oceans.

Carbon is taken from the atmosphere by plants through respiration, as part of their life support process. Photosynthesis by plants uses light energy to convert CO₂ and water into carbohydrate (which contains carbon) and oxygen. Plants use carbohydrate in cell tissues as they grow, and consequently some of the carbon from the atmosphere is transferred to the living system. Plant respiration converts carbohydrate and oxygen into CO₂, water and energy. Where photosynthesis exceeds respiration, the net carbon is stored (sequestered) in the plant biomass. Because forests sequester carbon, it is generally recognized that they can be used in global efforts to combat the threat of climate change.



WATER PLAYS A CRITICAL ROLE IN SEMICONDUCTOR MANUFACTURING AND BECAUSE OF THE PRECISION REQUIRED, ONLY ULTRA CLEAN WATER CAN BE USED AND THIS IS CREATED BY REVERSE OSMOSIS AND DE-IONIZATION. THE LOW PRESSURE REVERSE OSMOSIS SYSTEM SHOWN HERE REMOVES MICROSCOPIC TRACES OF DIRT OR OTHER CONTAMINANTS TO PROVIDE ULTRA PURE WATER FOR THE WAFER MANUFACTURING PROCESS. WATER IS THEN RECYCLED FOR REUSE IN VARIOUS PLANT PROCESSES.

Water quality is declining due to pollution and increased salinity. Shortages of clean water impact the quality of people's food and domestic life, their health and general welfare. Around a billion households in developing countries do not have access to safe drinking water. Rapidly growing populations, especially in cities, are placing growing demands on limited resources. The health of natural habitats and eco-systems is also dependent on the availability of water.

Water plays a critical role in the manufacturing of semiconductors. It takes about 1,500 liters to make a six-inch wafer. Only ultra-clean water can be used because of the precision demanded. Conservation of water is one of our corporate goals and it is an imperative at several sites where water supplies are scarce or diminishing. We are concentrating our efforts in developing methods to reuse wastewater in manufacturing.

Chemicals and metal residues which we wash off our products end up in wastewater. These impurities must be removed before the water is reused or released to rivers and seas.

We have largely met our Decalogue target, reducing our water consumption by an average of 30%, compared with the 1994 baseline.

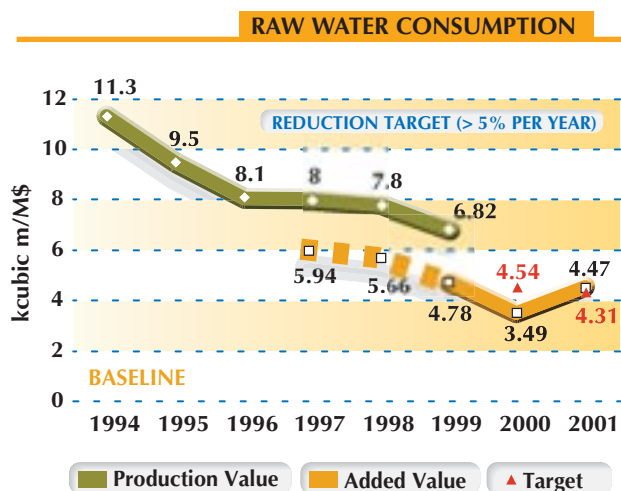
The dramatic downturn in the semiconductor market in 2001 affected our water indicator (measured in cubic meters per million dollars of added value - m³ /M\$ AV). Despite this, savings for the period since 1994 remain high - more than M\$20.

EXAMPLES

- Our Malta plant has made dramatic improvements in water use through:
 - microfiltration to remove silicon dust after wafer cutting;
 - use of reverse osmosis ion-exchange resin to clean water from plating processes;
 - recovery of waste brine from the Electrodialysis Reverse (EDR) water purification system (for use as toilet flush water);
 - storing of rain water;
 - using less fresh water for the regeneration of ion-exchange resins.

The site recycles 75% of water against a target of 90% to be met by 2005.

■ In our Muar site (Malaysia) we have consolidated all the plating lines into one, so that we can increase water recycling and pollution control in line with our Environmental Decalogue. The segregation of piping and the collection sump have allowed recovery of reused wastewater, a more stable pH level, reduced the use of treatment chemicals and a better control of treatment of concentrates is obtained. This has enabled us to recover 60m³ per hour of plating water with an investment of k\$2,150, saving k\$500 a year.



Emissions to air



ALMOST ALL SEMICONDUCTOR MANUFACTURING PROCESSES USE CHEMICALS AND GASES THAT CAN BE HARMFUL TO THE ENVIRONMENT IF NOT PROPERLY CONTROLLED. ACID FUME SCRUBBERS AND VOLATILE ORGANIC COMPOUND (VOC) ABATEMENT EQUIPMENT ARE THEREFORE INSTALLED AT ST'S MANUFACTURING PLANTS. SHOWN HERE THE VOC ABATEMENT SYSTEM IN CARROLLTON, TEXAS, WHICH IS CONTROLLED BY SOPHISTICATED COMPUTER SYSTEMS AND ACHIEVES MORE THAN 95% ABATEMENT OF VOLATILE ORGANIC COMPOUNDS.

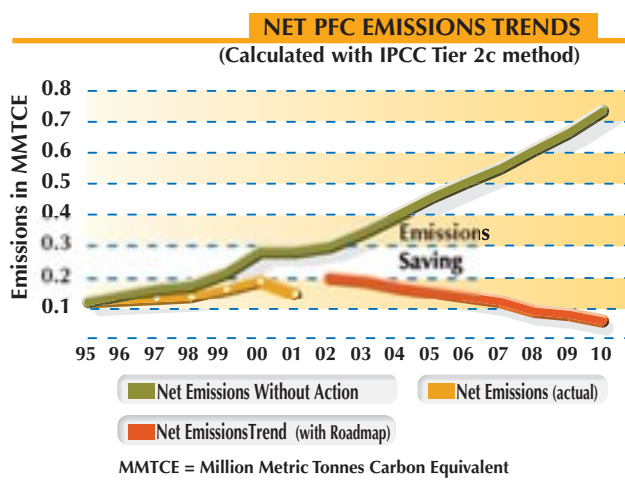
Almost all semiconductor manufacturing processes use chemicals and gases that can be harmful to the environment. For example, the wet etch process uses acids such as hydrochloric, hydrofluoric, or sulfuric acid. Without treatment, emissions could acidify the environment.

Scrubbers are installed at most of our manufacturing facilities to abate emissions such as acids, alkalis and solvents. All scrubbers are equipped with variable frequency drives to conserve energy and to maintain the standard exhaust pressure needed by the equipment.

Each site monitors the air emissions parameters to ensure they are within the corporate specification limit. These are based on the most stringent regulations of any country where we operate. Monitoring of critical parameters is continuous.

EXAMPLE

At our Carrollton site in Texas, USA, a system was installed in 2000 to segregate acids, VOCs and ammonia exhaust emissions for treatment. Over 95% of all VOCs are removed. The treatment involves VOC emissions being absorbed on a rotating wheel, then separated out and destroyed in a thermal oxidizer. This system has already been replicated in our new 8-inch wafer fab in Rousset (France) and project studies are running at other ST sites.



PERFLUORINATED COMPOUNDS (PFCs)

PFCs are greenhouse gases, which trap heat in the earth's atmosphere and contribute to climate change. A number of gases have been identified as GHGs - they have varying impacts on global warming, depending on their different properties. The unit used to measure their impact is known as the global warming potential. PFCs are very stable and have a long life time in the atmosphere. However, they are non-toxic and do not damage the ozone layer.

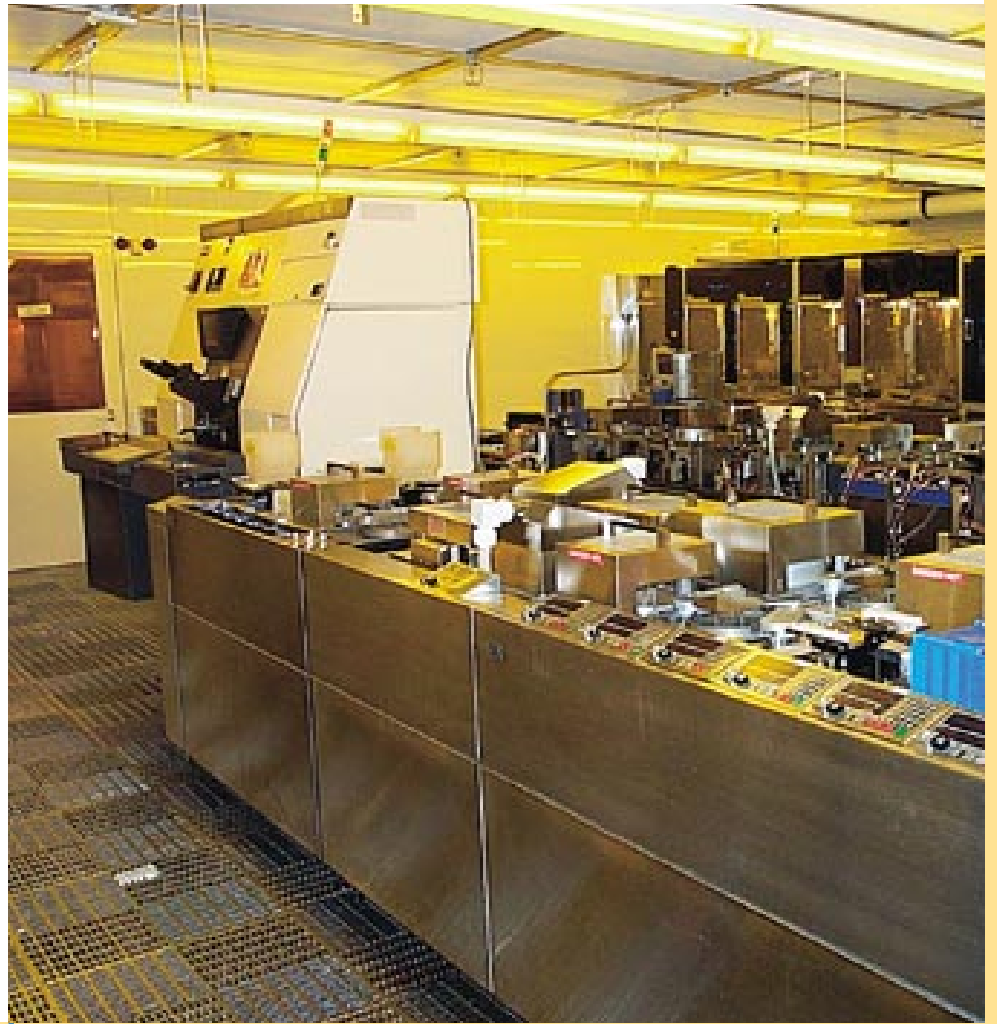
PFCs are widely used in the semiconductor industry for CVD chamber cleaning and etching processes. The semiconductor industry uses several types of PFCs with global warming potentials ranging from 6,500 to 23,900 times the CO₂ equivalent. The World Semiconductor Council (WSC) where ST leads the European participation, has set a challenging goal of reducing the aggregate absolute PFC emissions to 10% below 1995 levels by 2010. This aggressive target is expressed in absolute emissions (rather than emissions per unit) to assess the real benefit for environment. ST's emissions are expected to increase up to 2003-2004, after which they will decrease.

ST will contribute to the program by reducing its emissions to 10% below 1995 levels by 2008, at least two years before the WSC deadline.

We have already cut our emission rate, expressed in kg of carbon equivalent per wafer, by roughly 50%, compared with the 1995 baseline.

EXAMPLE

Around 80 PFC point-of-use abatement systems have already been installed in our manufacturing sites. Alternatives such as C₃F₈ have been widely tested and implemented in several of our locations in Europe, US and Asia. Substituting C₃F₈ reduces PFC emissions by 40-70% compared with traditional processes. New equipment using NF₃, which can reduce emissions by more than 95%, is now operating in at advanced front-end manufacturing sites.



ST'S DECALOGUE GOAL IS TO REDUCE THE CONSUMPTION OF THE SIX MOST RELEVANT CHEMICALS BY AT LEAST 5% PER YEAR. HARDWARE, SUCH AS THE EQUIPMENT SHOWN HERE, AND PROCESS OPTIMIZATION HAVE ENABLED ST TO OBTAIN HUGE REDUCTIONS IN THE USE OF PHOTO RESIST AND DEVELOPER CHEMICALS IN ITS WAFER FAB MANUFACTURING SITES.

We are minimizing our use of hazardous substances through, for example, substitution, process optimization, hardware modifications, on-site generation, recycling or reuse, and the installation of Total Chemical Management (TCM) in partnership with key suppliers.

Engineers working on wet processes (wafer cleaning processes using chemicals) are at the forefront of our efforts to reduce the use of chemicals, in order to bring environmental improvements, better safety and cost savings. The chemicals we target are photoresists, developers, sulphuric acid, fluorhydric acid, hydrogen peroxide and solvents.

In 1999, ST formalized a corporate chemical-saving road-map based on best practices.

Total chemicals consumption per manufacturing units has improved from 1.36kg per wafer in 2000 to 1.24kg in 2001 for front-end sites and from 0.38kg per thousand units in 2000 to 0.21kg in 2001 for assembly sites.

Overall, after two years of reduced chemical consumption, the rate increased by 0.2 tonnes per \$ million of added value in 2001. This result is mainly affected by a lower added value because of the market downturn in 2001.

Our goal remains to reduce overall consumption by 5%.

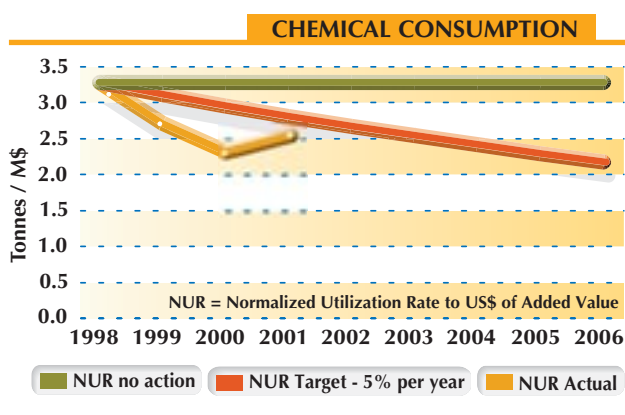
EXAMPLES

Use of diluted chemicals in spray processors through hardware modifications. The cost of the diluted formula can be reduced by 46% as it uses less chemicals. This recipe is being rolled out to our manufacturing sites where the same equipment is available.

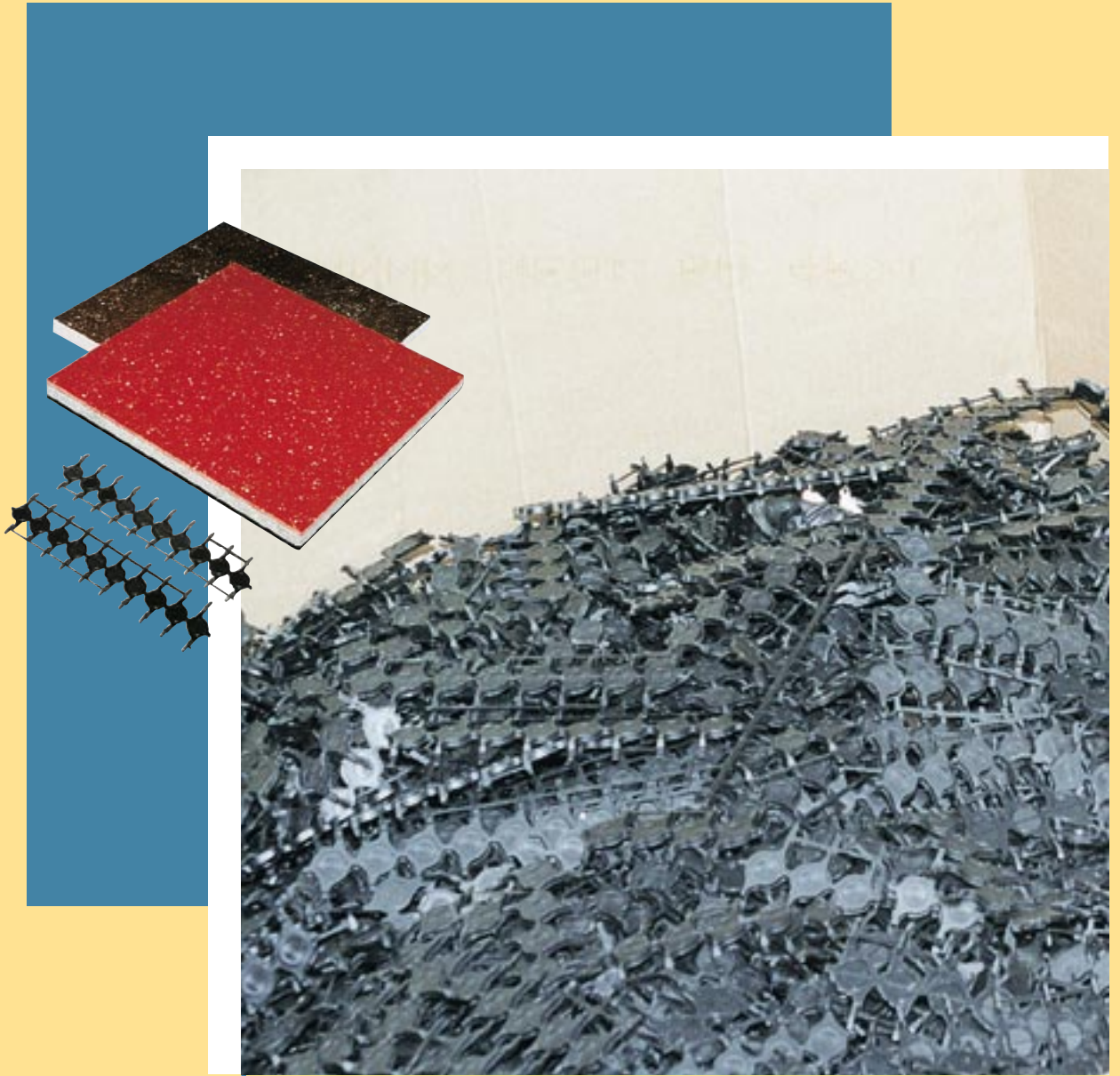
Total sulfuric acid substitution with de-ionized water and ozone in a particular process. Our site in Agrate, Italy has already processed four million wafers saving more than 90,000 liters of sulphuric acid, 20,000 liters of hydrogen peroxide and 6,000 liters of ammonia compared with 2000. This has led to savings of more than k\$175.

Replacement of old wet benches with new equipment, which consumes less chemicals and gives better process performance.

Our manufacturing site in Tours (France) has drastically reduced its sulfuric acid consumption from 2.1kg per wafer in December 1999 to 0.7kg in December 2001. The net saving on chemicals over one year is evaluated at 400 tonnes of sulfuric acid and 133 tonnes of hydrogen peroxide. Return of investment was below two years.



Waste

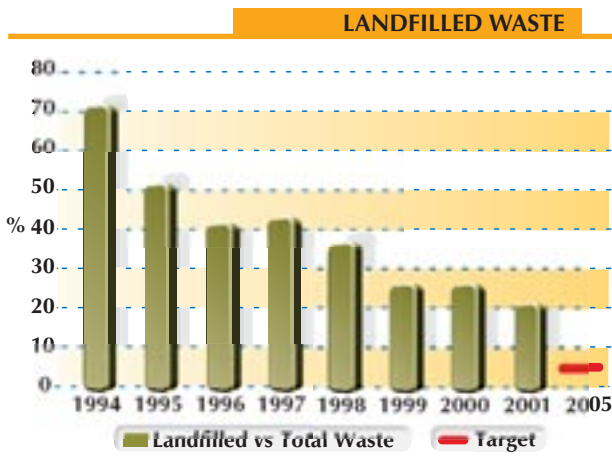


ST's DECALOGUE GOAL IS, BY 2005, TO RECYCLE 95% OF ITS MANUFACTURING WASTE. RECENTLY A CONTRACT WITH A MAJOR WASTE RECYCLING COMPANY WAS SIGNED FOR THE TOTAL WASTE MANAGEMENT AT OUR ASSEMBLY SITES. THE RESIN WASTE WILL BE RECYCLED TO MANUFACTURE FLOOR TILES AND BRICKS AND WILL DRASTICALLY REDUCE OUR LANDFILLED WASTE, ALLOWING US TO REACH OUR DECALOGUE GOAL WELL IN ADVANCE.

Waste may pose a threat to the environment and is subject to legislation. It can also be turned into a source of revenue. The best way of reducing waste is prevention (see Ladder Concept on page 41).

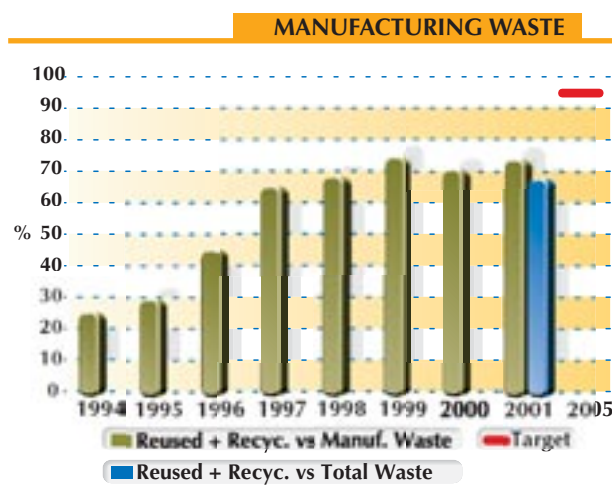
LANDFILL

Landfilling waste is becoming more expensive because of tougher legislation and the increasing scarcity of sites. At ST we separate our waste into more than 30 different categories, facilitating reuse and recycling thus reducing the quantities that go to landfill. This graph shows reductions achieved.



MANUFACTURING

Recycling waste is less expensive than discarding it. The graph below shows the achievement obtained in manufacturing waste reuse/recycling.



EXAMPLES OF REUSE AND RECYCLING ACTIVITIES INCLUDE:

- sludges produced by the waste water treatment plants are sent to the cement and brick industry;
- deflashing waste powders are sent for precious metals recovery;
- extensions of laser deflashing avoids resin flash waste;
- cleaning and reusing gloves and overshoes where possible;
- reject silicon wafers are increasingly used in solar panels, which avoids landfilling and resmelting; silicon scrap from all sites is sold, generating an income of M\$0.5 in 2001.

In April 2002 we signed a contract with a large waste recycling company for the management of the waste generated in our assembly sites, and where resin represents the majority of waste. The resin waste will be recycled to manufacture floor tiles and bricks. By 2003, two years ahead of the Decalogue target of 2005, we plan to reduce the present ratio of landfilled/total waste (which is about 30%) to 5%.

PACKING

We have arrangements with recycling and packaging companies to take back packing tubes and plastic trays for recycling.

To save money we buy a mix of recycled and new plastic trays. Our site at Malta, for example has more than halved its packaging costs between 1998 and 2001. At our Catania site, wafer packing is reused for inter-company shipments, saving approximately M\$1.1 a year.

HAZARDOUS CHEMICALS

We provide detailed information on all ST products to customers, including technical descriptions of the chemicals used in packaging materials and the physical characteristics of ST packages.

We have also launched the ECOPACK® program which is intended to identify environmentally friendly packaging materials. Through this program ST will eliminate hazardous materials (lead, antimony and bromine) in the manufacturing of integrated circuits and discrete packaging. This requires the re-engineering of solder joint technology and the substitution of bromine and antimony as flame retardant in plastic packaging.

The program was started in 1997 with the introduction of nickel-palladium plating. However due to the increasing cost of palladium (a 15-fold increase in three years), we have started to develop an alternative based on lead-free tin alloys. They will be extended to the large majority of "leaded" packages in 2002-2003.

A lead-free BGA (Ball Grid Array) package was developed and validated in 1999. In 2000 the first TSOP (Thin Small Outline Package) using bromine/antimony-free molding compounds was qualified and is now in full production. A lead- and bromine/antimony-free BGA was validated in the fourth quarter of 2001.

PAPER

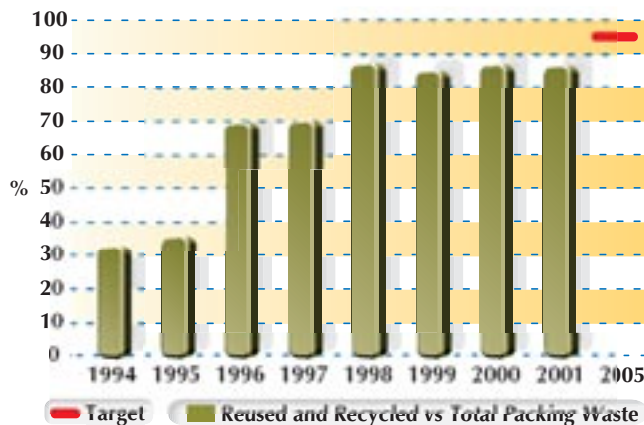
We use significant amounts of paper. Specifications for each of our different products need to be documented in detailed technical manuals, datasheets and user notes. We also use paper in publications, printouts, photocopies, office forms and clean-room paper (lint free).

Use of recycled paper has risen from about 50% in 1994 to over 98% in 2001 and we have reduced the use of paper per employee by 46% from 1997-2001.

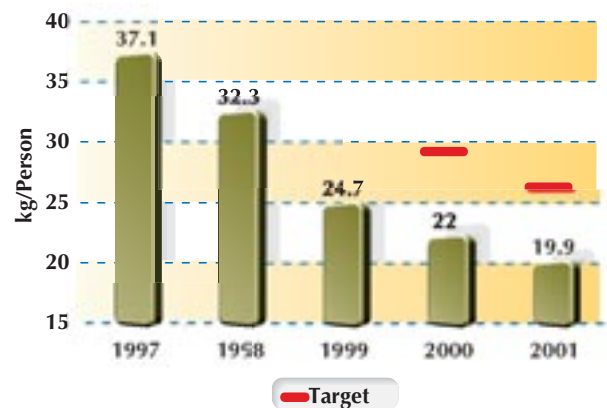
EXAMPLE

By publishing technical documents on CD-ROM and DVD, the number of publications printed by our corporate technical documentation center in Agrate, Italy, has decreased by 95% from the 120 tonnes used in 1995.

PACKING WASTE



PAPER





ST's DECALOGUE GOAL IS TO DESIGN PRODUCTS FOR DECREASED ENERGY CONSUMPTION AND TO ENABLE MORE ENERGY EFFICIENT APPLICATIONS. THE EXTREMELY EFFICIENT AUDIO POWER AMPLIFIERS SHOWN HERE ARE BASED ON SWITCHING TECHNOLOGY. THEY TURN MORE OF THE INPUT POWER INTO SOUND, WASTING VERY LITTLE AS HEAT. THIS MEANS THAT FOR THE SAME SOUND LEVEL THEY DRAW LESS POWER FROM THE SOCKET.

As a broad range semiconductor manufacturer our aim is to make products that are energy-efficient when used. Where possible, our designs comply with the US Energy Star programs, a government-backed energy efficiency initiative for electronic products.

In addition to energy saving applications, such as the stand-by feature on battery chargers, the latest generation of lighting lamps, audio amplification through pulse modulation, there are several other applications in the automotive sector that are making a significant contribution to minimizing environmental impacts.

EXAMPLES:

■ The ST soft computing team is working with Marelli and the Istituto Motori di Napoli on a hybrid car project using a fuel cell and gas. This extremely innovative solution will give performance comparable to a standard car with a petrol/diesel engine. The work is funded by the Italian government.

■ ST has worked on a system to reduce the energy needed for power-assisted steering which could produce 10% fuel savings under normal conditions. Our devices already used in several engine control systems optimize fuel consumption and reduce emissions.

A History of Environmental Progress

These Key Environmental Events are a testimony to our proactive environmental approach.

1993

- Change in attitude: from compliance with international and local regulations to a proactive mode.
- Created the Corporate Environment Strategies Management organization; issued the Environmental Policy.
- Launched a long range company-wide initiative with the goal of establishing ST as the world leader in environmental protection by the year 2000.
- Complete elimination of the ODS Class 1 from our processes.

1994

- Initial environmental review of all manufacturing sites and decision to apply for EMAS validation.
- Adherence to ICC Business Charter for Sustainable Development.

1995

- First Corporate Environmental Day.
- Issued first Environmental Decalogue with environmental objectives (distributed worldwide to all employees, customers, suppliers and partners).
- First site EMAS validated.
- First worldwide Environment Meeting (all sites represented).

1996

- Environmental training for top management and start up of the "train the trainers" sessions.

1997

- All 17 manufacturing sites both EMAS validated and ISO 14001 certified (all 7 European sites EMAS registered by the European Commission).
- ODS Class 1 elimination from facilities.

1998

- First Life Cycle Inventory on a finished product.
- Publication: Chemical Content of a Semiconductor Package.
- Environmental training for suppliers (through CDROM).

1999

- Second Environmental Decalogue issued setting aggressive goal of making ST a zero CO₂ equivalent emission Company by the year 2010.
- Energy, PFC and Chemicals Road Maps defined.
- More than 50% of ST key suppliers gained environmental certification.

2000

- In 2000, at equal production rate, electricity and water consumption were reduced by 29% and 45% respectively compared with the 1994 baseline.

2001

- First global worldwide Energy Survey on all ST manufacturing sites.
- First non-manufacturing site EMAS validated and ISO 14001 certified.

Second Environmental Decalogue (August 1999)

At STMicroelectronics we believe firmly that it is mandatory for a TQM driven corporation to be at the forefront of ecological commitment, not only for ethical and social reasons, but also for financial return, and the ability to attract the most responsible and performing people. Our “ecological vision” is to become a corporation that closely approaches environmental neutrality. To that end we will not only meet all environmental requirements of those communities in which we operate but, in addition, we will strive to comply with the following ten commandments:

1.0 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.

2.0 CONSERVATION

- 2.1 Energy : Reduce total energy consumption (kWh per k\$ of added value) 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 k\$ of added value) 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.

3.0 GREENHOUSE GAS EMISSIONS

- 3.1 CO₂ : reduce total emissions due to our energy consumption (tonnes of carbon equivalent per M\$ of added value) by at least a factor of 10 in 2010 versus 1990, which is a goal five times better than the average of the industries meeting the Kyoto Protocol goal.
- 3.2 Renewable energies : increase their utilization (wind, photovoltaics and thermal solar) so that they represent at least 5% of our total energy supplies by end 2010.
- 3.3 Alternative energies : adopt, wherever possible, alternative energy sources such as cogeneration and fuel cells.
- 3.4 Carbon sequestration : compensate the remaining CO₂ 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 (tonnes of carbon equivalent per M\$ of added value) by at least a factor of 10 in 2008 versus 1995.

4.0 POLLUTION

- 4.1 Noise : meet a “noise-to-neighbors” below 60dB(A) at any point and any time outside our property perimeter for all sites, or comply with local regulations (whichever the most restrictive).
- 4.2 Contaminants : handle, store and dispose of all potential contaminants and hazardous substances at all sites, in a manner 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 included also in closed loops of small equipment before end 2001.

5.0 CHEMICALS

- 5.1 Reduce the consumption of the six most relevant chemicals by at least 5% per year (tonnes per M\$ of added value), through process optimization and recycling (baseline 1998).

6.0 WASTE

- 6.1 Landfill : reduce the amount of landfilled waste below 5% of our total waste by 2005.
- 6.2 Reuse or recycle at least 80% of our manufacturing and packing waste by end 1999, and 95% by end 2005.
- 6.1 Use the "Ladder Concept" as a guideline for all actions in waste management.

7.0 PRODUCTS AND PROCESSES

- 7.1 Design products for decreased energy consumption and for enablement of more energy efficient applications.
- 7.2 Contribute to global environmental control by establishing a database of Life Cycle Assessment of our products.
- 7.3 Systematically include the environmental impact study in our development process.
- 7.4 Publish and update information about the chemical content of our products.

8.0 PROACTIVITY

- 8.1 Support local initiatives for sponsoring environmental projects at each site where we operate.
- 8.2 Sponsor an annual Corporate Environmental Day, and encourage similar initiatives in 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 end 2001.

9.0 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 Environmental Report.

10.0 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.

European Union Strategy for Waste Management Ladder Concept Synthesis

LEVEL OF PREFERABILITY	END OF LIFE TREATMENT	ECONOMIC IMPACT
1	Prevention - avoid waste	++ Saving at source
2	Reuse - use again for original purpose	+ Replacement reduction
3	Recycle - recover for alternative use	+ Material recovery
3a	Recycle - organic conversion (aerobic or anaerobic)	+ Possible compost or methane
4	Combustion - with recovery of energy	+ Energy recovery
5	Incineration - no recovery of energy	- Consumes energy
6	Landfill	-- Land consumption and contamination

Awards and Accolades

Since 1991 the Company has received more than 70 awards, of which 37 were for environmental issues. Listed below are the main awards over the last five years:

1997	Recognition: French Ministry of the Environment - EMAS Certificate of Registration	<i>All ST sites, France</i>
	EPA Ozone Protection Award	<i>Kirkop, Malta</i>
	European Foundation for Quality Management: European Quality Award	<i>All ST, Corporate</i>
	INSEAD International School of Management and French Trade Magazine <i>L'Usine Nouvelle</i> Award for Best Manufacturing Site	<i>Crolles, France</i>
1998	French Ministry of the Environment and French Chamber of Commerce prize for Gestion Environnementale	<i>All ST sites, France</i>
	Award and special commendation from the Jury: European Better Environmental Award for Industry: Managing for Sustainable Development	<i>All ST sites, France</i>
	Winner: Waste Reduction Award Program (WRAP) California Environmental Protection Agency Integrated Waste Management Board	<i>Rancho Bernardo, California, USA</i>
	Trophy: Trophée Enterprise Environnementale Catégorie Grandes Entreprises by <i>Enjeux-Les Echos</i> and Price Waterhouse Coopers	<i>All ST sites, France</i>
1999	President Bill Clinton's letter to CEO congratulating ST on efforts to reduce greenhouse gases emissions	<i>P. Pistorio - ST CEO</i>

Winner: Waste Reduction Award Program (WRAP) California Environmental Protection Agency Integrated Waste Management Board	Rancho Bernardo, California, USA
Winner: United States Environmental Protection Agency's (EPA) Climate Protection Award	All ST, Corporate
Winner: Hassan II Environment Award	ST, Morocco
Dow Jones Sustainability Global Index (DJSGI) Ranking: ST World's Leading Semiconductor Company for Sustainability	All ST, Corporate
<i>Financial Times</i> / Corporate University Xchange Award for Innovative Marketing	ST University, Rousset, France
Cahners In-Stat Group Award for Exemplary Performance during Semiconductor Industry Tough Times	All ST, Corporate
Arthur Anderson and <i>Il Sole 24 Ore</i> Customer Satisfaction Award	All ST, Corporate
Malcolm Baldrige National Quality Award	STMicroelectronics, Inc, USA
Singapore Quality Award for Business Excellence	STMicroelectronics Asia Pacific, Singapore
Co-winner of <i>L'Expansion</i> Magazine award for Innovation.	All ST, Corporate
2000 Winner: Quality Award from Ministry of Trade and Industry, Morocco	ST, Morocco
Italian Environmental Ministry Award for EMAS registered sites	All ST sites, Italy
Innovest Environmental Research (AAA rating)	All ST, Corporate
Akira Inoue Award for Outstanding Achievement in Environment, Health & Safety	P. Pistorio - ST CEO
Best Financial Communications Strategy and Best Financial Communications via Internet from Paris Bourse	All ST, Corporate
2001 <i>Tomorrow</i> Magazine Environmental Leadership Award	P. Pistorio - ST CEO
Seal of Sustainability from Sustainable Business Institute	All ST, Corporate
"Innovazione Amica dell'Ambiente" Award from Legambiente and Milan Politechnique	ST, Italy
Environmental Ministry Award	Kirkop, Malta
Arthur Anderson and <i>Il Sole 24 Ore</i> Customer Satisfaction Award	All ST, Corporate
IMPRESA Europe Award for Best European Practices in India	Noida, India
<i>L'Expansion</i> Magazine Award for Best French Company	All ST, Corporate
Arizona State University College of Engineering and Applied Sciences Engineering Award for contributions to the engineering profession, the university and society at large.	P. Pistorio - ST CEO



ST tries to improve the quality of environmental and social reporting each year. Readers are invited to participate in this process with their feedback.

1. How much of this report did you read?

- ALL OF IT MOST OF IT SOME OF IT

2. Which section(s) was(were) most interesting?

- | | |
|---|--|
| <input type="checkbox"/> OUR COMMITMENT TO SUSTAINABILITY | <input type="checkbox"/> EMISSIONS TO AIR |
| <input type="checkbox"/> SOCIAL REVIEW | <input type="checkbox"/> CHEMICALS |
| <input type="checkbox"/> GENERAL PRINCIPLES AND ENVIRONMENTAL MANAGEMENT SYSTEM | <input type="checkbox"/> PAPER |
| <input type="checkbox"/> ENERGY | <input type="checkbox"/> WASTE |
| <input type="checkbox"/> WATER | <input type="checkbox"/> PRODUCTS AND TECHNOLOGIES |

3. Are there topics of interest that were not covered?

4. Please indicate to which group(s) you belong:

- | | | |
|--|--|---|
| <input type="checkbox"/> EMPLOYEE | <input type="checkbox"/> REGULATOR/AUTHORITY | <input type="checkbox"/> SHAREHOLDER |
| <input type="checkbox"/> FINANCIAL ANALYST | <input type="checkbox"/> ACADEMIA | <input type="checkbox"/> OTHER (PLEASE SPECIFY) |
| <input type="checkbox"/> NEIGHBORS | <input type="checkbox"/> CUSTOMER | _____ |

5. General comments or suggestions:

May 2002

Thank you for your feedback!

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