

# Reader's Guide

# Report scope and profile

This Report describes our Sustainability performance in the calendar year 2012.

It covers all of STMicroelectronics activities and sites, and it excludes ST-Ericsson sites and activities unless otherwise stated. You can find details of ST's structure and countries of operation in the chart on page 1.

Historical information is available in previous years' reports at http://www st.com/web/en/about\_st/company\_ reports st.html

# Change in scope and materiality

ST has integrated in July 2012 the Application Processor activities from ST-Ericsson which led to the transfer of ST-Ericsson people in Grenoble and Paris and the former ST-Ericsson site in Sophia Antipolis (France). Additionally, some employees in India already based on ST sites were transferred from ST-Ericsson to ST. This change in scope has been integrated in the safety data but not in the social ones as we have not been able to rebuild the data and then had an incomplete reporting year. We will integrate those new sites in our 2013 reporting.

In 2011, ST completed an extensive materiality exercise involving a review of stakeholder concerns to fully align ST's Sustainability strategy with its business priorities and material issues Twenty two global sustainability priorities, along with related targets, were agreed by ST's Vice Presidents and signed off by ST's President and CEO, Carlo Bozotti.

In last year's report we set out how we planned to embed these Sustainability priorities within our business and measure progress against them. This year we are able to report performance against our new targets for the first time, providing concrete examples to illustrate the progress we have made and the challenges faced across the business.

In 2012, ST undertook its first external stakeholder survey. We asked a wide range of stakeholders for their comments on our new Sustainability strategy and our 2011 Sustainability Report. More than 50 stakeholders accepted to participate in this survey, providing valuable feedback that has helped improve the content and structure of this Report (see more on page 6).

We also used outputs from the following activities to develop the 2012 Report:

- a review of additional stakeholder feedback (email, web requests)
- high-level benchmarking of competitors and companies recognized for their Sustainability approach
- a global review of existing and anticipated legislation

Detailed information about each of our Sustainability priorities, as well as our corporate approach to Sustainability, can be found on our website: http://www.st.com/web/en/about\_st/st\_approach\_to\_sustainability.html

# **Accessibility**

Our Sustainability Report is also accessible on the web in interactive PDF format at http://www.st.com/web/en/about\_st/company\_reports\_st.html along with past reports. Printed copies are available on request.

# **Assurance**

DNV (Det Norske Veritas) is the entity that has been appointed to provide assurance services to STMicroelectronics. In order to do so, DNV interviewed all relevant corporate departments and visited three sites (Catania - Italy, Calamba - The Philippines and Muar - Malaysia) to review and validate ST's data reporting process and to provide assurance of this year's Report. DNV's assurance statement can be found on page 72.



# Alignment with GRI and the UN Global Compact

WF SUPPORT

This report is prepared and presented in accordance with

the 2006 Global Reporting Initiative (GRI) G3 Guidelines. We have self-declared an A+ application level which has been confirmed by GRI. If G3 indicators are not applicable or relevant to us, we have explained this in the Indicator Index, or in the text of the Report.

ST has been a signatory of the United Nations Global Compact (UNGC) since 2000, which commits us to fulfilling its ten principles. This report describes actions we have taken to implement these principles, and serves as our Communication on Progress.

On page 71 there is an index that references GRI indicators, Global Compact Principles and ISO 26000 core subjects that are contained within this Report.

# **Indicators and use of symbols**

Following implementation of ST's revised Sustainability strategy in 2011, we are now in a position to report on performance against new objectives under each of our Sustainability priorities. Progress updates for each objective can be found in the "performance versus objectives" tables, illustrated by the following symbols:



Target achieved



In progress



No Progress



On hold



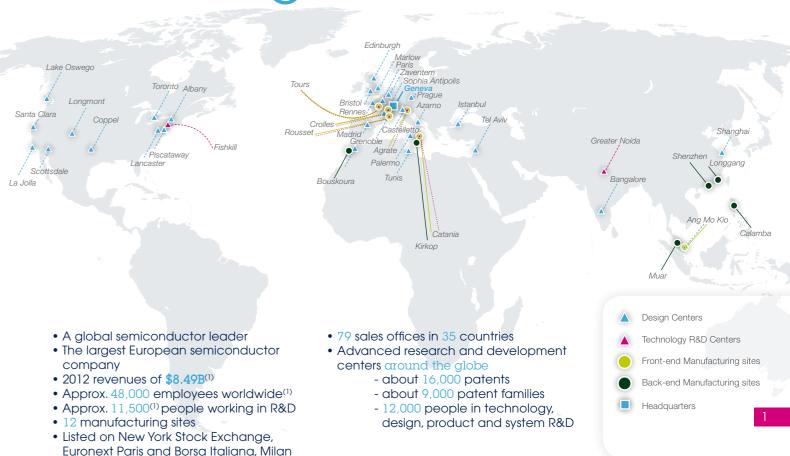
ST Environment Health and Safety Decalogue

# We value your feedback

We are committed to improving both our Sustainability performance and the ways we communicate with our stakeholders. We encourage contributions and debate from all stakeholders and welcome feedback on the content and presentation of this Report - as well as suggestions for next year. Suggestions and feedback can be provided at sustainable.development@st.com

You can also email us at sustainable.development@st.com or write to us at:
Corporate Sustainable Development Group STMicroelectronics International NV 39, Chemin du Champ-des-Filles – C.P. 21 CH-1228 Geneva – Plan-Les-Ouates Switzerland

# ST at a glance



# Focus on a site

(1) Including ST-Ericsson, a 50:50 joint venture with Ericsson

Zoom on Greater Noida (India)...



# 1,447 employees

also 502 interns & subcontractors

### | PROFILE:

Men: 1,168 (81%) Women: 279 (19%) Average age: 32.8 years Split by job category:

exempts: 1,421 (88%), non exempts: 26 (5%), **Domains of expertise**:

electronics, embedded software, computer information systems

# MAIN ACTIVITIES:

VLSI Design, Embedded Software, Application Engineering and Company's Information System

### **KEY FIGURES:**

306 Granted Patents, 431 First filings; Campus area of approx. 72,000m<sup>2</sup> with a built up area of approx.

53 000m<sup>2</sup>

# SITE CERTIFICATIONS:

ISO/TS 16949 (Quality), ISO 27001 (Information Security) and OHSAS 18001 (Occupational Health & Safety)

# INVESTMENTS:

US\$ 51m since 2001 in building Infrastructure, Test & IT Equipment

SITE SPECIFICITIES: ST India has a rich history of providing high-value platforms, SoCs (Systems on Chip), embedded systems, application-specific IP (Intellectual Property), and reference designs in various application segments, including home entertainment, multimedia, telecommunications, imaging, automotive, computer peripherals, and industrial control. ST Designers have contributed to library development in leading edge low power technologies from 45nm down to 28nm.

Although reasonable efforts have been made to ensure the consistency of the summary financial information for the year 2012 in this report with ST's financial reporting, reliance should only be placed upon the complete financial reporting contained in ST's Annual Report on Form 20-F for the year ended December 31, 2012, as filed with the SEC on March 4th, 2013, which can be found at www.st.com. Some of the statements contained in this report that are not historical facts are statements of future expectations and other forward - looking statements (within the meaning of Section 27A of the Securities Act of 1933 or Section 21E of the Securities Exchange Act of 1934, each as amended) based on management's current views and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those in such statements. Certain such forward-looking statements can be identified by the use of forward-looking terminology such as "believes', 'may', 'will', 'should', 'would be' or 'anticipates' or similar expressions or the negative thereof or other variations thereof or comparable terminology, or by discussions of strategy, plans or intentions. Some of the relevant risk factors are described in 'Item 3. Key Information – Risk Factors' included in our Annual Report on Form 20-F for the year ended December 31, 2012. We do not intend, and do not assume any obligation, to update any information or forward-looking statements set forth in this report to reflect subsequent events or circumstances.

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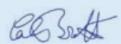
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We also would like to thank everyone who kindly agreed to be quoted in this report and to provide testimony of their collaboration with ST.

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

Carlo Bozotti President and CEO



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# Foreword by Carlo Bozotti,

# President and Chief Executive Officer

2012 was an important year for ST, marked by our 25th anniversary and by the announcement of our new strategy. It was also another challenging year, characterized by a difficult economic scenario as well as by significant structural changes in the market and in end-customer competitive dynamics.

Our longstanding dedication to sustainable excellence helped us to deal with these challenges and ST ended the year showing strong progress in three main areas.

First, despite the significant cash required by our Joint-venture ST-Ericsson and the weakness of the market, we actually improved our net financial position to \$1.19 billion, thanks to careful management of ST's assets and resources.

Second, our advances and breakthroughs in products and technologies in 2012 contributed to ST gaining market share in several of our targeted markets. In the Analog, MEMS and Sensors markets, we achieved 22% year-over-year revenue growth and saw ST's market share in the MFMS mobile and handset market rise to 48%1 — more than twice the share of our closest competitor. In Automotive, ST reached the milestone of having more than 200 million cars in the world equipped with ST's leading infotainment technologies and we established important partnerships with leading car makers such as Audi and Hvundai, Microcontroller billings grew 30% year over year, while in trust and data security, we were confirmed as a leading Secure Element vendor2.

Third, at the end of 2012, we made an important strategic decision and announced our new vision and strategy to be a leader in Sense & Power and Automotive products and Embedded Processing Solutions, the key drivers for our growth, our new financial model and the plan to exit from ST-Ericsson after a transition period.

Our focus is now on five key growth areas: MEMS and Sensors, Smart Power, Automotive, Microcontrollers, and Application Processors including Digital Consumer. We target growing markets of approximately US\$ 140bn that are driven by secular trends and societal needs: smart energy usage and the need for dramatic reduction of CO. emissions, ubiquitous embedded intelligence and the humanization of technology, with more intuitive man-to-machine interfaces for a more natural, immersive and easier interaction of people with devices. This reflects our conviction that we can achieve our aim of being financially successful while remaining socially responsible.

The loyalty, commitment and expertise of our people that helped us navigate a difficult year

were also reflected in our continued focus on achieving our Sustainability priorities during 2012 and ensuring that our new Sustainability strategy, covering our people, products, the environment and the community, became firmly embedded throughout the business.

Our people and organization development programs are aligned with our strategy and business needs. In 2012, we focused on very specific training programs to strengthen the competencies of our sales & marketing and research & development populations. While we focused more on leadership for our management staff, we also reinforced the way we develop individual career paths for technical staff through the "individual path technical and specialists functions" process. At the end of 2012, this process was deployed across 84% of the eligible sites and employee population, with a target to reach 100% by the end of 2013. Moreover, during the first half of 2012, several hundred highly skilled employees from ST-Ericsson started to join ST R&D teams, helping to fuel growth in several key product areas. Numerous integration seminars and workshops were held to welcome them into ST.

Continually enhancing our technical expertise helps us to accelerate the development of products and solutions that contribute to the realization of the societal trends and to our vision. Our internal Product Stewardship program includes product compliance, eco-design and STAR responsible products. Our internal responsible products STAR initiative, which applies to all new products and classifies them into relevant environmental and social categories such as energy saving and healthcare, identified 196 new products that contribute to a more sustainable world. An example is our new Masterlux™ universal lighting controller family which makes lighting more energy efficient, more economical, safer and more flexible. We consider as social products those that relate to health (insulin pumps, remote patient monitoring, glaucoma diagnosis, management and treatment, etc...) or safety (airbags, ABS, etc...). We also remain on track to have 100% of our new devices eco-designed by 2015.

From the point of view of our impact on the ecology, production fluctuations greatly impacted our use of energy, water and chemicals and affected our overall environmental performance in 2012. Nevertheless, we increased our green energy purchased by 85% and improved our water recycling rate by 6%. Our 12 manufacturing sites have been certified ISO 140643 for scope 1 and scope 2 emissions4 based on 2012 results and three of our Front-end manufacturing sites have been certified to



ISO 50001 (energy management system certification).

In addition to these environmental efforts, we reinforced our community involvement approach during 2012. By adopting the LBG methodology5, we are better able to evaluate the impact of nearly 400 initiatives taken worldwide by about 4,500 employees during the year. Young people and education remain the main domain of focus of ST at worldwide level and we will also continue to develop our community involvement in the areas of innovation and high technology, social welfare and charity, environmental involvement and economic development. During 2012, nearly 30,000 people in developing countries benefited from our Digital Unify program, managed by the ST Foundation, which aims at overcoming the digital divide. As a committed supporter of the Electronic Industry Citizenship Coalition, our supply chain management program remains one of our key priorities and we implement controls designed to ensure that we do not source minerals from conflict zones. For example, we have been able to certify 100% of tantalum smelters through the Conflict-Free Smelters' Protocol.

Safety of our employees comes first at ST. A well-established safety record places ST among the best-in-class in our industry. However, unfortunately in 2012, we experienced one employee fatality at one of our Chinese plants. As a result, we have strengthened even further our governance and programs, including an increase in field audits, additional learning modules, and more internal communication to reinforce our safety culture.

Looking forward to the next 25 years, ST will continue to build on its strong heritage, rich technical expertise and its highly skilled and motivated people to provide high levels of sustainable excellence, in line with our vision to be everywhere microelectronics make a positive contribution to people's lives.

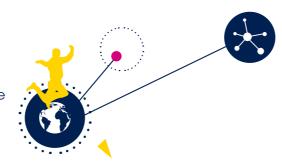
Carlo Bozotti



- 1. IHS: MEMS H2 2012 Special Report
- 3. ISO 14064 is an international standard for calculating and reporting carbon emissions at the organizational level 4. Scope 1 includes direct  $CO_2$  emissions and scope 2 includes
- 5. LBG London Benchmarking Group, is a methodology used by companies worldwide to better assess the real value and impact of corporate community investment to business and society

# Materiality & Sustainability Strategy

Sustainability principles have been integrated into our core business practices and products for more than 20 years. Our company ethos is not only about placing our people and the environment at the heart of the way we operate, but is also about constantly finding ways to innovate and create products that improve the quality of life for the people who use them.



Interview with

Corporate

Sustainable

**Group Vice** 

**President** 

Development,

Alain Denielle.



Interview with Hooghiemstra, **Executive Vice** President, Chief **Administrative** Officer

## How did ST's engagement on Sustainability evolve in 2012?

Sustainability is deep-rooted in the values of our Company and in our way of conducting business. Even though 2012 has been another challenging year for the semiconductor industry as a whole and also for ST, we have been able to maintain our commitment to Sustainability and, as detailed in this report, we have yet again made some significant progress.

# What would you like to highlight in particular?

Our progress on Product Stewardship in 2012 is certainly a highlight for me. This program puts a focus on products that have a clear contribution to a more sustainable world. We go beyond the mere reduction of the impact of our products on the environment. The goal is to bring products on the market that have as their very purpose to save energy when used in e.g. cars, infrastructure and consumer devices. These new products demonstrate the enormous potential the semiconductor industry has to protect the environment. They also provide proof that ST's ability to develop, manufacture and market these products offers us a strong competitive edge that will contribute to the profitable future growth of our business.

In 2012, as a key step in ST's Global Diversity and Equal Opportunities goal, I personally sponsored the preparation of the ST's Women's Network (to be officially launched in 2013) that aims to advance the career development of female employees as part of a wider goal of creating a genuinely diverse and inclusive working environment.

ST also sponsors the Global Enterprise Project, an initiative of the European Roundtable of Industrialists (ERT), in which our CEO himself is involved. aimed at raising awareness of global business amongst secondary school students, helping them to develop an entrepreneurial mind-set. Within this program, the ERT hopes to contribute to reducing youth unemployment. In this same context, ST is also very much involved in raising young people's awareness and interest in science, technology, engineering and mathematics

# How do you think ST should keep moving forward?

It is important to ensure the effective deployment of the Sustainability Strategy that consolidates our top priorities and defines our targets. This report highlights these core elements of the strategy in detail. Our deep conviction that sustainability is a cornerstone of our competitiveness ensures that we move on whatever the business environment and that we will keep seizing opportunities to offer to the market those products that help us protect the environment and save energy.



One year after the launch of ST's new Sustainability Strategy, I am pleased to report some very concrete achievements and improvements across all of our sustainability pillars. The comprehensive materiality exercise we conducted less than two years ago has helped us focus clearly on our most significant challenges and opportunities.

We track our performance across all areas of our Sustainability Strategy using a set of robust indicators. In this report, you will be able to read about the key achievements and the progress we have made against our targets but also the initiatives we had to put on hold and the areas in which we have not made the level of improvement we were targeting. We publish our achievements or challenges in a clear and transparent way in each section.

Two strategic stakeholder reviews have played an important role in helping us prioritize our sustainability activities in 2012; an ISO 26000 evaluation was carried out at three of our major sites Rousset (France), Muar (Malaysia) and Ang Mo Kio (Singapore), and our first official stakeholder survey was undertaken, which included a number of interviews with stakeholders. The very valuable feedback gathered from these initiatives has helped to confirm our existing approach across all areas of our strategy and also provided us with some

food for thought for future sustainability developments.

As reported by our CEO in his statement, we unfortunately experienced a fatality at one of our Chinese sites. We are committed at the highest level in ST to further strengthening our management of safety to ensure this will never happen again, taking all necessary measures we can to reinforce ST's safety culture across all of our sites in 2013. Working safely must remain employees' number one priority.

We have been working now for more than 20 years with our Environment, Health and Safety Decalogue as our guide to enhance environmental protection and reduce our manufacturing environmental impacts. We are currently in the process of reviewing our Decalogue targets to ensure they remain challenging, realistic and in line with industry practices and norms. For 2012, GHG emissions from all ST manufacturing sites have been certified under ISO 14064 (scope 1 and 2) standard and three of our Frontend manufacturing sites, Agrate and Catania (Italy) and Rousset (France), have achieved ISO 50001 (energy management system certification). Looking forward, we have chosen to focus more of our resources on reducing the environmental impact of our products. This is why we have launched our Product Stewardship Program, including a target for 100% of ST's new products to be eco-designed by 2015. We will also be validating our methodology for product life-cycle assessments.

Our journey to find more sustainable ways to operate as a business will continue, as constant advances in technology and thinking inspire us and assist us in our drive for constant improvement.

### **Materiality**

stakeholders

2

mportance

50

Our top-level approach to Sustainability is set out in our Code of Conduct and, at a more operational level, in our Sustainability Strategy. We conducted a comprehensive materiality exercise

to help define ST's new Sustainability Strategy, launched at the end of 2011. Under the guidance of BSR (Business for Social Responsibility), we sought insight from relevant internal and external stakeholders to identify our most material issues and ensure alignment with our business priorities and stakeholder expectations.

Embedding this new Sustainability Strategy was one of our six corporate priorities in 2012. One year on, we are now in a better position to evaluate progress and describe our performance against the objectives we set ourselves under each of our Sustainability pillars.

When compiling data for this year's report we recognized that some of our objectives required further definition. We made the decision to continue to report on our existing indicators this year while developing a more expansive and clearer account of performance data for next year's Report.



Farid Baddache EMEA Director, BSR (Business for Social Responsibility)

"Conducting a Materiality exercise is a great way to guide strategy, focus dialogue and progress on the most meaningful areas of impact for ST. When I discuss with ST customers within the electronic sector, I can see how they value working with trustful company combining future targets with KPIs showing how the group is making progresses on its most important areas of impact. This is to me a good way to build trust and constructive discussion with stakeholders."

# Materiality Matrix

**Energy Management** Labor & Human rights **Chemicals Management GHG Emissions** from Operations Public affairs & Industry Networking Management of Partnerships in R&D and Education Sustainability in **Waste Management Supply Chain** Eco-design **Responsible Products Conflict-free Minerals** 

**Employee Engagement** 

**Innovation Management** 

**Global Diversity & Equal Opportunities** 

**Business Ethics & Compliance Customer Satisfaction** 

Local Sustainability Impacts

**Transport & Logistics** Recruitment, Learning & Development

**Employee Safety** Water Management

**Employee Health & Well-Being** 

Influence on business success

**62%** of respondents were familiar or very familiar **57%** of respondents read the Report with ST's Sustainability program in part or in full

### 47% of respondents received information about ST's **50%** of respondents found the Report Sustainability program through our Sustainability Report, very useful and informative 38% through emails **42%** of respondents rated ST as a Sustainability leader 15% of respondents read the Report

# ISO 26000 evaluation

We undertook an ISO 26000 review in 2012 to help validate our refreshed Sustainability Strategy and priorities. We selected Det Norske Veritas for this piece of work. Their methodology evaluates employees' perceptions of a company's Sustainability approach. Fifty employees and managers were interviewed from three of our major manufacturing sites: Rousset (France), Ang Mo Kio (Singapore) and Muar (Malaysia). Although located in different regions, the employees all shared very similar views, indicating that ST's Sustainability program is consistently implemented across our sites.

Responding to DNV's recommendations, we have:

- Organized ISO 26000 training sessions for Sustainable Excellence coordinators
- Held Sustainability Strategy implementation workshops with site
- Developed new 2013 training plans for specific internal audiences such as newcomers, Human Resources and Purchasing experts



Quote

THE

# Malcolm Guy

Director, The Reassurance Network

"The Reassurance Network was employed by ST to independently research the views of their key stakeholders on a range of topics relating to Sustainability. We were interested in how people gained information on this topic, how useful they found the Sustainability Report and which areas they felt ST ought to focus on in terms of future management input. 65% of respondents indicated that they were either very interested in, or experts in, Sustainability and

particularly valuable. The survey showed that ST's Sustainability Report was the main method through which respondents reviewed ST's Sustainability performance with 97% finding the Report useful and informative. Over 75% of stakeholders rated ST as "above average" or "a leader" in this area. More than

40 recommendations were

responses."

made as a result of stakeholder

so we felt this feedback was

**External stakeholder survey** 

We see stakeholder engagement as

Strategy review process. In 2012,

an integral element of our Sustainability

we conducted our first formal external

would help develop our Sustainability

Strategy and future reporting. Almost

stakeholder survey to obtain inputs that

170 stakeholders with an understanding

of ST's operations, including customers,

employees, suppliers, investors, SRI

analysts, government representatives,

academic and R&D organizations and

Approximately one third responded.

Through the survey, we also identified

a small number of stakeholders who

wished to participate in one-to-one

interviews to provide more in-depth

SUSTAINABILITY STRATEGY FEEDBACK

compared with its competitors

NGOs were invited to participate.

In this year's Report we have undertaken a number of actions as a direct result of stakeholder feedback, including:

to identify examples of best practice

**Employee engagement survey** 

through the Company's annual

information, see pages 16-17.

Employees have the opportunity to share

their thoughts, opinions and suggestions

employee engagement survey. For more

Local stakeholder engagement

The stakeholders we engage with vary

for each site, department and region.

ST has developed general guidelines,

principles in our Code of Conduct and

and departments identify their most

through the process of engagement.

Sustainability Strategy. These help sites

important stakeholders and guide them

SUSTAINABILITY REPORT FEEDBACK

based on feedback from our global

network of Sustainable Excellence

coordinators and best practice

- Prioritizing and developing content that stakeholders viewed as the most important;
- Including a dedicated section that presents overall performance against our objectives:
- Better-explaining our approach to ISO
- Discussing additional topics identified as being of interest to stakeholders.

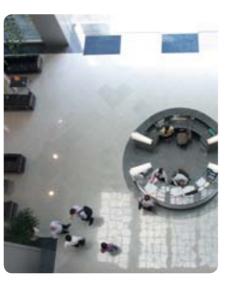






STMicroelectronics is a global leader in the semiconductor market serving customers across the spectrum of Sense & Power and Automotive products and Embedded Processing Solutions. From energy management and savings to trust and data security, from healthcare and wellness to smart consumer devices, in the home, car and office, at work and at play, ST is found everywhere microelectronics make a positive and innovative contribution to people's lives.

STMicroelectronics was formed and incorporated in 1987 and resulted from the combination of the semiconductor business of SGS Microelettronica (then owned by Società Finanziaria Telefonica, STET, an Italian corporation) and the non-military business of Thomson Semiconducteurs (then owned by the former Thomson-CSF, now Thales, a French corporation). We are organized under the laws of The Netherlands and have our corporate legal seat in Amsterdam. Our headquarters and operational offices are managed through our wholly-owned subsidiary, STMicroelectronics International N.V., and are located at 39, chemin du Champ des Filles, 1228 Plan-Les-Ouates, Geneva, Switzerland. Our operations are also conducted through our various subsidiaries, which are organized and operated according to the laws of their country of incorporation, and consolidated by STMicroelectronics NV.



We are listed on the New York Stock Exchange (NYSE), Euronext Paris and the Borsa Italiana in Milan.

Our corporate governance policies and practices are outlined in our Corporate Governance Charter. This is available on our website, along with our Supervisory Board Charter, in the Corporate Governance section at http://investors.st.com.

# **Managing Board**

In accordance with Dutch law, our management is entrusted to the Managing Board under the supervision of our Supervisory Board. Mr. Carlo Bozotti, President and Chief Executive Officer, is currently the sole member of our Managing Board. The member of our Managing Board is appointed for a threeyear term, as described in our Articles of Association, which may be renewed one or more times in accordance with our Articles of Association upon a nonbinding proposal by the Supervisory Board at a shareholders' meeting and adoption by a simple majority of the votes cast at a shareholders' meeting where at least 15% of the issued and outstanding share capital is present or represented. | 4.1 | 4.2 |

# **Supervisory Board**

Our Supervisory Board advises our Managing Board and supervises the policies pursued by our Managing Board and the general course of our affairs and business. Our Supervisory Board currently consists of nine members appointed for a three-year term, as resolved by our annual shareholders' meeting by a simple majority of the votes cast at a meeting where at least 15% of the issued and outstanding share capital is present or represented. Mr. Didier Lombard has been the Chairman of our Supervisory Board since May 2011. Our Supervisory Board has implemented criteria to assess the independence of its members, in accordance with the corporate governance listing standards of the New York Stock Exchange. It is also responsible for managing potential or reported conflicts of interest between the Company and its Board members.

In accordance with criteria as reflected in the Supervisory Board Charter (available on our website), members of our Supervisory Board are carefully selected on the basis of their specific business, financial, technical and/or legal expertise, prior professional experience, soundness of judgment, ability to make analytical enquiries and willingness to devote the time required to adequately perform their activities as Supervisory Board members. Our Supervisory Board is assisted by a Secretariat whose responsibilities include ensuring the continuing education and training of Supervisory Board members. 14.414.101

The Supervisory Board has determined the following independence criteria for its members, based on the evaluations by an ad-hoc committee: Supervisory Board members must not have a material relationship with STMicroelectronics N.V., or any of our consolidated subsidiaries, or our management. A material relationship can include commercial. industrial, banking, consulting, legal, accounting, charitable or familial relationships, among others, but does not include a relationship with direct or indirect shareholders.

Information on the composition of the Audit Committee, Compensation Committee, Strategic Committee and Nominating and Corporate Governance Committee of our Supervisory Board, as well as the compensation of the members of the Supervisory Board and the attendance at the meetings of our Supervisory Board are set out in our Dutch Annual Report or SEC Form "20-F", which are available on our website and can be downloaded at http://investors.st.com

# **New Nominations at Supervisory Board Level**

Ms. Martine Verluyten was appointed as a member of the Supervisory Board at our annual shareholders' meeting on 30 May 2012 and has also served on its Audit Committee since then.



Ms. Verluvten succeeded Mr. Tom de Waard as Chair of the Audit Committee on 22 April 2013.

Ms. Janet G. Davidson was appointed as a member of the Supervisory Board at our annual meeting of shareholders on 21 June 2013. Ms. Davidson also serves on the Audit Committee and the Strategic Committee of the Supervisory Board.

# **Independence of the statutory** auditors and of the Corporate **Internal Audit Organization**

# The statutory auditor's independence is monitored at the highest level of the Company:

Our Audit Committee is responsible for selecting the independent registered public accounting firm employed to audit our financial statements, subject to ratification by the Supervisory Board and approval by our shareholders. Our Audit Committee also assumes responsibility (in accordance with Dutch law) for the retention, compensation, oversight and termination of the independent auditor.

We adopted a policy (the Policy), agreed by our Audit Committee, for the pre-approval of audit and permissible non-audit services provided by our independent auditors.

All engagements with the external auditors, regardless of size, must be authorized in advance by our Audit Committee, pursuant to the Policy and its pre-approval authorization or otherwise.

In 2012, non-audit services amounted for only 0.5% of the total audit fees paid to our statutory audit firm (and pertained to tax compliance services).

# The Internal Audit function is strictly independent from Corporate and **Local Management:**

The mission of Corporate Internal Audit, as defined in the ST Internal Audit Charter, which is consistent with the Institute of Internal Auditors (IIA) Standards and approved by the Chairman of the Audit Committee and the CEO, is as follows:

Corporate Internal Audit is an independent function designed to provide objective assurance and consulting activity, which adds value, improves the ST's operations at all levels, and evaluates and promotes compliance with ST's Standard Operating Procedures and

Corporate Internal Audit helps ST accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

Corporate Internal Audit is a key component of ST's governance framework and assists the Audit Committee of the Supervisory Board and the Company's certifying officers in their fiduciary duties (Corporate Internal Audit promotes a sound management control structure at a cost justified by the risk and exposure involved).

Our Chief Audit & Risk Executive, Franck Freymond, is the head of Corporate Internal Audit. He reports directly to the Audit Committee of the Supervisory Board, attends all Audit Committee meetings, has direct interactions with the Chairman of the Audit Committee throughout the year and attends executive management quarterly meetings. The current functional reporting line and the practices now

in place ensure the head of Corporate Internal Audit the appropriate level of organizational independence and unrestricted access to executive management and the Supervisory Board.

This reporting approach is in line with standards defined by leading international organizations such as The Institute of Internal Auditors.

The audit results and the follow-up of the audit recommendations made by the internal audit team are regularly presented to both executive management and the Audit Committee of the Supervisory Board.

# **Our Sustainability Governance**

ST manages sustainability in line with the following international guidelines and standards:

- International Labor Organization Conventions, United Nations Global Compact Principles, United Nations Guiding Principles on Business and Human Rights, OECD Guidelines for Multinational Enterprises, Electronic Industry Citizenship Coalition Code of Conduct, ISO 26000, OHSAS 18001, ISO 14001, EMAS, ISO 50001, ISO 14064, QC 080000.

Our commitment to align with these standards is outlined in our Code of Conduct which provide guidelines for informing our behavior and decisionmaking. Policies and procedures are then defined at corporate level, and endorsed by our CEO, Carlo Bozotti, to ensure effective deployment throughout the

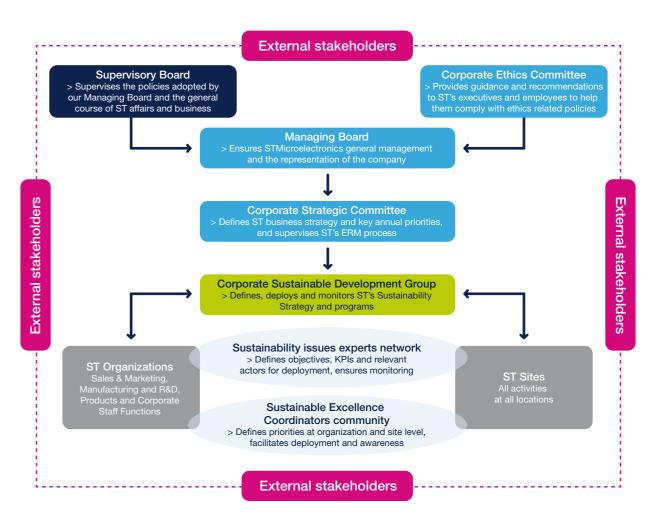
Other significant standards in terms of sustainability are our Business Conduct and Ethics, Human Resources, Health and Safety and Environmental Policies.

Sustainability is one of ST's six corporate annual priorities. Executive Vice President, Chief Administrative Officer, Tjerk Hooghiemstra, has overall responsibility for sustainability. Part of his remit is to provide sustainability updates

to the CEO and Executives Officers at quarterly Corporate Staff Meetings. Every three to five years, a group of ST's Vice Presidents conducts a materiality exercise, taking into account both ST's business priorities and our main stakeholders'

expectations, in order to review and update the Sustainability Strategy. The ST Sustainability Governance Framework is shown below:

# Sustainability Governance



# Our risk management approach

Enterprise Risk Management's purpose is to systematically, consistently and effectively identify, evaluate and manage risks across the Company, including the set-up of effective risk mitigation action plans for identified key risks and top priority risk areas. ST ERM applies a holistic approach and has been developed / designed to comply with the ISO 31000 standard.

The ERM governance and process at ST are defined as follows:

The ST ERM process combines topdown and bottom-up approaches:

- Top-down: in 2012, a risk assessment was conducted with executive management. The output from this exercise was a top-down risk map and identification of top priority risk areas. Risk owners were appointed for each of these risk areas in order to develop risk mitigation action plans, which will be reviewed by executive management on a periodic basis.
- · Bottom-up: in 2012, the ERM bottomup process has been launched with

four pilot organizations (representative of each of ST's macro organizational areas). The objective of this pilot process is to start to embed risk identification, evaluation and management activities within each individual department's functions and business units at the most effective level.

Going forward, the objectives are to further embed ERM in the organizations and key processes, and to bolster risk awareness and ultimately innovation through informed risk-taking anticipation versus reaction.

All taxes of the year (US\$m) / EC1

# Financial & Extra-Financial Performance

# **Financial performance**

In 2012 overall, ST has been able to improve its net financial position compared to 2011 despite the significant cash used by ST-Ericsson as well as the impact of weak business conditions. We were able to end the year with significant financial flexibility and strong cash balances while providing shareholders with the same level of dividend compared to 2011.

**COMPANY** 

Net revenues for 2012 decreased 12.8% to US\$8.49 billion mainly due to lower unit volumes which were driven by a significant drop in sales at our former largest customer and weaker market conditions.

Gross profit and gross margin decreased 22% to US\$2.78 billion and 390 basis points to 32.8% respectively.

The principal components of the gross margin decrease were negative price

(Total Available Market)

effect and unused capacity charges of US\$172 million compared to US\$149 million in 2011, as well as a one-time US\$53 million charge to ST's cost of sales due to an arbitration award recorded in the first quarter 2012, partially offset by positive currency

We have sought to develop a competitive advantage by building an integrated presence in each of the world's economic zones that we target: Europe, Asia, China and America. An integrated presence means having product development, sales and marketing capabilities in each region, in order to ensure that we are well-positioned to anticipate and respond to our customers' business requirements.

Important decisions were made in 2012 that are shaping a new, more focused, higher-performing ST. In December 2012, our CEO announced a new strategic plan to target leadership in two product

segments: Sense & Power and Automotive Products and Embedded Processing Solutions.

This strategy includes a sharper focus on five growth drivers: MEMS and sensors, Smart Power, automotive products, microcontrollers, and application processors including digital consumer products. Importantly, from a financial model perspective, we are targeting an operating margin of 10% or more. A key component to achieving this objective is bringing our net operating expenses to an average quarterly rate in the range of US\$600 million to US\$650 million by the beginning of 2014.

ST KEY FIGURES / EC1	2008	2009	2010	2011	2012
Net Revenues (US\$m)	9,842	8,510	10,346	9,735	8,493
Gross profit (US\$m)	3,560	2,626	4,015	3,574	2,783
Gross profit as a percentage of sales (%)	36.20	30.90	38.80	36.70	32.80
Net earnings (US\$m)	(786)	(1,131)	830	650	(1,158)
Earnings per share (diluted) (US\$)	(0,88)	(1,29)	0,92	0,72	(1,31)
Market share versus TAM (%)	3.96	3.76	3.47	3.21	2.87

ST SALES BY MARKET CHANNEL* (%) / EC1 / 2.7	2008	2009	2010	2011	2012
OEM	81.7	84.2	79.1	77.3	77.6
Distribution	18.3	15.8	20.9	22.7	22.4

2009

(1.023)

227\*\*

2010

476

972

2012

(2.081)

34

46

(278)

2008

(198)

648\*

(\*\*) Excluding net proceeds received in business combination (Ericsson Mobile Platform) which totalled US\$1,137m

(\*) Excluding payments for mergers & acquisitions (Genesis and NXP) which totalled US\$1,694m

(\*) Original Equipment Manufacturers ("OEM") are the end-customers which are directly followed by us in terms of marketing application engineering support, while Distribution customers refers to the distributors and representatives that we engage to distribute our products around the world.

NET REVENUES BY LOCATION OF ORDER SHIPMENT* (%) / EC1 / 2.7	2008	2009	2010	2011	2012
EMEA	30.7	28.4	25.0	23.9	24.7
Americas	13.6	11.9	12.9	13.8	14.7
Greater China-South Asia	39.9	40.6	44.1	44.8	41.9
Japan-Korea	15.8	19.1	18.0	17.5	18.7

(\*) Regions have been redefined to better take into account our activity. We have reconstructed the data since 2008 to give an idea of the trend.

# **Extra-financial performance**

OPERATING INCOME

Operating income

Net operating cash flow

AND CASH FLOW (US\$m) / EC1

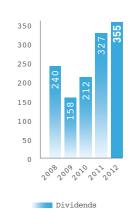
Recognition of extra-financial performance through rating agencies' evaluations, investor ranking and inclusion in sustainability indexes is an important element of ST's overall objectives. It helps us better understand our performance and identify the focus for further improvement. Throughout the year we receive numerous requests and questionnaires from rating agencies, extra-financial analysts and investors on a wide range of topics e.g. governance, risk management, business ethics, social, labor and human rights, health and safety, environment, community involvement.

The annual Sustainability Report is designed to address the majority of

information requests as we report already many indicators but also detail our management system or approach, and document many projects and initiatives. We have also reworked our sustainability webpages to provide more comprehensive descriptions of our policies and actions.

In 2012, we maintained a strong position in most major sustainability indices and were recognized by some newly created indices as shown below. Unfortunately we were not included in Dow Jones Sustainability Index in 2012. We keep on actively work on all sections of this evaluation to ensure a better description of our approach and relevant evidences to demonstrate our robustness.

# Dividends paid (US\$m) / EC1





	ST INCLUSION IN THE MAIN SUSTAINABILITY INDICES	ASPI (UE)	Ethibel Sustainability Index (Belgium)		ECPI (Italy)			ndex series aly)	FTSE4 (United-l	I <b>GOOD</b> Kingdom)	<b>Eurone</b> (Fra	<b>xt Vigeo</b> nce)	TOTAL
			ESI Excellence Europe	Ethical Index Emu	Ethical Index Euro	Ethical Index Global	FTSE ECPI Italia SRI Benchmark Index	FTSE ECPI Italia SRI Leaders Index	FTSE- 4G00D Europe index	FTSE- 4G00D Global index	Euronext Vigeo World 120	Euronext Vigeo Europe 120	
	2012	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	11



# Our People





Key figures for 2012









Total medical services provided 71,287

medical examinations, screening tests, immunizations

# 👊 Talent management

company-wide Development Booster programs target accelerating their development, retaining and engaging them. Identified through the people review process, the selected candidates are enrolled in a two-year program including a 360° assessment, mentoring and a collaborative project in order to prepare ST's future

Initiated in 2010 at corporate level for top managers, and then expanded to regional high-level managers in 2011, the program was extended to middle managers in 2012. At the end of the year, there were 135 This is a promising start for this highly visible program. The target for 2013 is to have 250 participants enrolled.

Recruitment, Learning & Development

ST is a high-technology company where engaging people is strategic to constantly stay on the edge of the business. This is why our Human Resources strategy aims at ensuring the right level of hiring and development of our people to match the company's evolving requirements in terms of profiles and competencies. This strategy plays a key role in reinforcing employees' ability to perform better and contributes to their evolution within the Company.



The cornerstone of career management is to provide employees with a clear understanding of their job positioning within the Company and to support their vertical and transversal progression. This is performed through the deployment of three career paths: managerial, crossfunctional/program management and individual (Technical and Specialist functions).

Starting in 2010, one of our key objectives has been to promote and develop the individual career path (for technical functions), through the deployment of the process individual path technical and specialists functions, within our core business job functions (product design, technological development...), reaching key milestones by 2012.

After being sponsored by management, candidates are evaluated; validation is granted according to technical expertise level of knowledge, influence and business impact.

By the end of 2012, the process has been deployed covering 84% of the eligible sites and employee population, reaching almost 400 employees in ST's Technical Staff community. After nomination, Technical Staff members have a set of rights and duties e.g. the right to be recognized with a job title linked to position level (intranet profile and business card), to participate in dedicated in training curriculum and conferences; and a set of duties e.g. to create publications articles, patents...), networking (inside and outside ST) and to undertake knowledge transfer such as tutoring, teaching... Developing

our Technical Staff community aims at creating value through solving technical problems, innovation, new business development and at recognizing our core business expertise and our people.

In 2013, the objective is to complete the deployment by covering all eligible employees and strengthening the development of this community through assessments, networking, knowledge sharing and the deployment of a specific training curriculum.

# **Review of our learning offer**

Another key objective in 2012 was the complete review of ST's learning offer that focused on business needs and used a blend of locally and globally deployable solutions.

A network of internal business stakeholders and training professionals worked to define the training offered across ST's job categories, ensuring alignment with the Company priorities

Courses were mapped, either to the professional job function competencies, behavioral competencies or to the leadership model providing employees with easily accessible solutions that meet their development needs. We reviewed existing courses and existing vendors, compared internal and external solutions and defined global volume solutions whilst maintaining local offers when the cultural needs required.

of over 2,500 courses addressing 81 iob functions, now constituting our unique worldwide reference. The offer was integrated into HR tools, enabling managers and employees to build development plans during their annual assessments to be conducted early 2013, by selecting competencies to develop and then selecting from the list of relevant courses.

whilst maintaining the practicality of known deployment channels.

# By the end of 2012, the networked taskforce delivered a learning catalogue

# Performance against objectives

• Increase the percentage of open positions for exempts filled by internal candidates by 5% per year (compared with a 2010 baseline), with a long term-target of 60%



• Ensure that more than 50% of employees have a development plan, linked to their annual performance



• Increase employee retention - percentage of employees with more than two years service



• Further align ST's learning with its business strategy to contribute to company transformation, employee productivity and being an 'employer of choice'

"When I received the certification, I felt honored, and also proud to join the ST Technical staff community. ST was recognizing a software expert at this level for the first time, a strong sign that things are changing, and going in the right direction. I'd like to share with all my colleagues what I find very useful and interesting in being part of this community: - First, whether they admit it or not, technicians appreciate to be recognized, that others understand who they are and that their expertise be known and visible.

Christian Bertin

**Expertise Center** 

Fellow

Director of Compilation

Quote

- Then, ST has put in place very useful training cycles for the technical community. I attended several of them which I really appreciated. It is a fact that technicians are "not always" experts in how to present or communicate, how to sell their ideas, manage innovation and practice lobbying. Such training has taught me a lot.

- Finally, I have found it very enriching to meet other experts from domains completely different from mine, to confront our ideas and methods and to see that we share the same values, motivations and problems."

EMPLOYEES WITH A FORMAL INDIVIDUAL DEVELOPMENT PLAN (%) / LA12	2009	2010	2011	2012
Exempts	51.5	69.4	44.5	26.5
Others	-	-	19.0	17.3

INTERNAL MOBILITY (%)	2008	2009	2010	2011	2012
Job for exempts filled internally	84	48	41	42	35

(\*) Number of job requests for exempt positions (JG11-18) posted internally divided by total



From left to right: Delphine Segura (PLD). Frédéric Artuphel. Christian Bertin, Jean-Marc Chéry (EVP, General Manager, Embedded Processing Solutions (EPS))



Employee Engagement

Employee engagement is a critical driver of organizational performance to achieve superior business results. The feedback provided is a unique opportunity for ST to respond by making continuous improvements to the working environment and for managers to improve their effectiveness (defined by their relative strength across key underlying competencies), identifying where and how they can act to improve business results with their team.



In our 2011 report we described our new "leadership model" program. We continued to roll this out in 2012 throughout Asia Pacific, to our manufacturing organizations thanks to "train the trainers" sessions and workshops for managers. They were taught how to build efficient and effective teams by creating a work culture of selfconfidence. For operators' integration, we launched the "integration buddy program", based on mentoring and coaching, which after implementation rapidly reduced the turnover rate in our Longgang (China) Back-end facility.

The Executive steering committee set up at corporate level analyzes results at various levels in ST groups, launches workgroups based on focus points and tracks action items initiated at ST level. We also introduced several initiatives developed as a consequence of employees' feedback from the previous survey or to celebrate our 25th anniversary:

- We launched the "Buy ST" program which helps connect employees with their contribution to ST tangible results through the publication on our intranet of ID cards of end products using ST products
- The "ST pioneers" and "What ST means to me" initiatives were also featured on our intranet with the aim of gathering employees' ST stories
- A special 25th anniversary STAR award was created as part of the annual company recognition awards
- CVP's leadership sessions were rooted in providing opportunities for their teams to question them on

- the company's strategy and results. 36,000 employees took part in either town hall meetings or round tables
- engagement survey results was clearly defined. They are required to analyze the detailed results of their organization and site, build quantitative and qualitative interpretation with key stakeholders and communicate regularly the status and strategy to their teams, and to act on the key opportunities for improvements.



Managers' accountability for

86.75% of employees participated in the 2012 survey, an increase of 0.75% on last year. Performance against benchmark, discretionary effort, and learning and development remained the same as last year. Overall employee engagement (0.32 vs. 0.33 in 2011) shows a small decrease, but we achieved a 59% favorable score despite the survey being run during a period of organizational uncertainty. This stemmed from the fact that we had announced we would unveil a new company strategy, but it was not known during the survey period. The new strategy, as anticipated, was announced by our CEO after the survey had closed.



and recognition.

During 2013, we build on these results and while we continue our efforts on the programs in place, we also work towards achieving the priorities we set during the year to improve managers' skills, including giving performance feedback.

# **Celebrating ST's 25th anniversary**

ST reached its 25th anniversary in 2012. We could not have achieved this milestone without the dedication of thousands of ST employees around the world. We held several celebratory events throughout the year:

- We captured the richness and diversity of our company in a single montage displayed at more than 70 ST sites, representing great moments in our company (see photo).
- Sites organized their own events such as musical performances, special editions of site newsletters and exhibitions.



# Quote

Here are just a few of the quotes from the many "What ST means to me" employee testimonies we received.

# Orio Bellezza

FMT - Front-end Manufacturing & Technology

"It is a company that allows me to develop a lot of skills in terms of interpersonal relationships, dealing with people, managing people..."

# Bob Krysiak

Sales & Marketing - Region Americas

"The people, the technology and the passion of the organization"

# Manu Khullar

CIS - Company Infrastructure & Services

"ST allows any individual, without discrimination, to excel and find their own path of growth and excellence"

# Francesco Giannetto

FMT - Front-end Manufacturing & Technology

"ST always on the crest of the wave"

# Ela Mia Cadaa

PTM - Packaging & Test Manufacturing

"ST is not just a company, but the home of excellent people"

# Giuseppe Castania

IMS - Industrial and Multisegment Sector

"I can touch the future with ST"

# Otto Kosgalwies

CIS - Company Infrastructure & Services

"Continuous learning, continuous challenges, continuous contacts with many colleagues around the globe, and for sure last but not least, ST means for me a lot of friends"





# Maria Bonaffini

IMS - Industrial and Multisegment Sector

"ST is a big company having as goal to augment the life looking always at multicultural needs"

# David Uhlar

FMT - Front-end Manufacturing & Technology

"The technology, innovation, success!"

# Pascale Joulaud

PQE - Product Quality Excellence

"ST has new energy around challenges and programs and new direction where we can do our best"

## Marco Cassis

Sales & Marketing - Region Japan &

"Very rich in important emotions and very good memories, and a lot of challenges of course"

# Nikhil Kulshrestha

IBP - Imaging Bi-CMOS ASIC & Silicon **Phototonics** 

"Great set of people working together to make things happen... a company with values I am proud to be a part of"

# Performance against objectives



 Annually increase the percentage of employees who demonstrate the highest level of discretionary effort



• Increase ST employee engagement relative to the benchmark

• Following engagement surveys, action plans to address key expectations should be defined and communicated in 100% of organizations



• Implementation of action plans should be done at 50% on an annual basis

Employee Engagement 2012 - Rating by pillar (%)



# **OUR PEOPLE**

# Employee Safety

ST is committed to ensuring the health, safety and well-being of its employees, including achievement of work-life balance, safe working conditions and the mitigation of risk and danger to employees and subcontractors.



## Overview of 2012

and associated hazards.

Governments and corporations continue to strengthen their commitment to ensuring employee safety. New laws have been passed in many countries, EHS information and training campaigns are becoming more accessible, helping to improve both employees and supply chain workers practices and awareness. ST has a long history in this field, and began certifying sites to the OHSAS 18001 safety management standard in 2002. By 2003, all manufacturing sites had been awarded the standard and, with the certification of Loyang, Singapore in 2012, we now have twenty three sites that have achieved OHSAS 18001. A key element of our safety approach is our dedicated 'loss prevention' program which ensures that major sites have an appropriate level of protection against fire

A well-established safety record places ST amonast the best-in-class in our industry, showing several years' continual decrease of our Recordable Cases rate (see "Recordable cases rate benchmarks" graph). However, unfortunately in 2012, we experienced one employee fatality at one of our Chinese plants. This fatality, the first ever recorded in ST, occurred whilst heavy equipment was being moved. A thorough root cause analysis was immediately carried out, resulting in the implementation of preventive and corrective actions on all similar sites. We also immediately re-boosted our governance and programs built to strengthen our Safety culture and efficiency. They contain a new matrix of 38 Key Performance Indicators, more field audits, more learning modules fitted to site type or level of management and more communication. It will be fully deployed in 2013.

Integrating safety culture at all levels

Over the years, safety has become an integral part of our company culture. Our sites continuously innovate to make safety a way of life for everyone, including external contractors working on our sites. While we continually strengthen our safety management robustness, we also promote employee empowerment through regular communication, awareness and training. Indeed in 2012, we totalled an average of 4.8 hours of EHS Training/Awareness per employee.

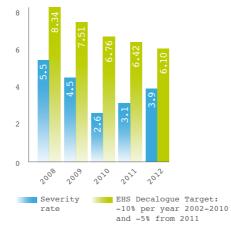
In 2012, after previously achieving 0.29 for two years running, we were able to reduce our recordable cases rate further to 0.27, beating our target of 0.28. This equated to a 10% decrease in our on-site "domestic" Recordable Cases rate and 8% in our "industrial" Recordable Cases rate.

We are pleased to announce that we maintained all our EHS Management Systems certifications. Within our internal Loss Prevention program, 2 more sites were rated Adequately Protected Risk. While most of ST's safety results are better than targets and improving (Recordable Cases rate, EHS training hours, evacuation practice drill coverage, contractor injury rate, loss prevention achievements...), we know that in the matter of safety relentless attention must be exerted in all situations and roles, at all times.

ST is therefore working to further embed its safety culture overall, strengthening management leadership and deploying company-wide training. A program addressing major risks management and emergency preparedness, and engaging site management and teams, has been strengthened with all scheduled procedures issued. Additional KPIs have been developed to track the efficacy of our approach to improving employee safety.

These will be monitored quarterly across all major sites from 2013. To validate our approach and confirm our efficiency, we carry out corporate audits and follow-up visits on the ground. More than 12 audits were conducted in 2012, bringing the total to 20 in the past two years. This method increases transparency, providing a clearer view of issues and requirements, faster implementation of solutions and the sharing of good practices between sites.

# Severity rate (%) / LA7 / Dec. 9.3



Injuries / illness cost and savings (US\$m) / LA7



# Our sites take safety in their hands



ghlighted that EHS

to people's homes. In 2012, ST received clearly demonstrating the maturity level reached by our sites and individuals in this area (see our Awards page). We now turn to ST Kirkop (Malta), another

major ST site, which can pride itself of no significant involvement of Site management, line managers and all teams on site.

ST Kirkop received 1st prize for Health and Safety Best Practices from the national Occupational Health and Safety Authority and the European Agency for Safety and

initiatives includes Emergency Response Team, Health & Safety Champions, EHS Steering Committee, Employee suggestion Plan and Health & Counseling clinic. The site has now been selected to represent Malta in the European H&S competition.

"EHS weeks" are one of ST good practices. They include safety-related visuals, presentations and animations for all employees on site, as well as dedicated including ST Kirkop together with four sites in Asia (see photo from EHS week in Longgang) demonstrated their commitment All sites showed clear success in terms of attendance and impact.





# Quote

# Ali Dincmen Director - Business Development International - BVC - Lead Auditor ISO9001 / ISO20000 / ISO 27001

"The STMicroelectronics facilities audited by Bureau Veritas Certification (BVC) Lead Auditors in 10 countries, namely China, France, India, Italy, Malta, Malaysia, Morocco, the Philippines, Singapore and the United Kingdom, were found to be extremely well controlled sites internally and externally very impressive all with a clear desire to exceed standards. This is also reflected in the common level of commitment seen on all sites and from all those involved, especially taking

# Performance against objectives



• Continuously reduce work-related injuries and illnesses rate (recordable case rate) and severity rate by 5% per year



• Ensure that, by 2012, ST employees have an average of four hours of training and awareness per year on Environment, Health and Safety (EHS)

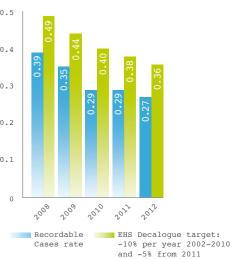
into consideration the diverse workforce across the different countries.

Furthermore, there is a clear effort on all sites to demonstrate commitment in relation to OHSAS 18001: 2007 systems compliance. We observed excellent Safety Record Systems on each site during the BVC Audits. The challenge is to maintain this record. As a result. STMicroelectronics is on the right path in becoming a world class company on

Operational Health and Safety."



Recordable Cases rate (%)





**OUR PEOPLE** 

# Labor & Human Rights



ST strives to be an employer of choice by fostering a workplace environment that encourages people to reach their potential. Ensuring that our employees are treated with respect and dignity is a fundamental principle of how we operate and we closely support and monitor our sites and departments to ensure we meet our responsibilities in this area.

# From rules and quidelines to concrete improvements

International standards covering labor and human rights guide companies to comply with sustainability legislation, set internal standards and promote improvement. Besides, the attention of media on employees' work and living conditions in high technology companies and their supply chains has increased progressively during recent vears and has been prominent in 2012. Amongst our stakeholders, customers are particularly attentive to our practices and performance. Indeed several key customers are now deploying large scale audit programs with specific requirements that extend beyond regulation or legislation.

ST, as a signatory of the UN Global Compact and a full member of the EICC, is committed to respect its workers' rights and continuously improve labor conditions in its operations. To drive continuous improvement and to detect and correct gaps versus our commitments, we progressively integrate guidelines such as the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises and ISO 26000 into our management systems.

We also strongly believe that training and awareness are key elements of effective and sustainable implementation. which is why we participate in several collaborative networks (Entreprises pour les Droits de l'Homme (Companies for Human Rights) and Euromed Management. Through these collaborations, we develop learning tools and encourage the sharing of good practice.

Labor and Human Rights are addressed in our Code of Conduct, which define our values and how we conduct business. Our continuous efforts on this subject of high concern led us to major breakthroughs in 2012 which enabled us to better evaluate our policies and practices and to share our results more transparently with customers and other external stakeholders:

- Significant progress was made on the deployment of EICC risk assessment and audit of our facilities. At the end of 2012, 71.4% of our Back-end sites in Asia had been audited, showing a satisfying level of conformity. We set up an efficient corrective action plan process enabling ST to reduce risks and improve performance.
- A Human Resource Policy was adopted and deployed by all sites, mainly to describe management responsibilities and provide further detail of corporate standards. It newly addresses subjects such as forced labor, working hours and housing conditions.

# **Controlling working hours to improve** employees' working conditions

The audits enabled us to identify weaknesses in the management of working hours. Thus we reinforced our monitoring and control by raising awareness to top management and developing tools to ease sites' overtime control. Most of our sites now closely monitor their compliance to a maximum of 60 hours worked per week, as required by the EICC Code. Some of our sites, ST Muar (Malaysia) and ST Calamba (the Philippines) for example, where effective action plans have been deployed, are now demonstrating a level of compliance close to 100%.

# **Ensuring employee well-being** through dormitories management

In 2012, we formalized and deployed a corporate procedure defining the housing standards for the building, maintenance and management of ST workers' dormitory facilities. The specification is based on stringent requirements from our customers, on the EICC standard and on best practice within ST sites.

# Performance against objectives



• Ensure 100% of ST manufacturing sites update their EICC Self-Assessment Questionnaire (SAQ) on an annual basis



• Ensure 100% of ST Asian and Back-end sites are audited every two years versus the EICC Code of Conduct and that the other sites are proactively engaged in the EICC approach



• Ensure that all ST organizations have a continuous improvement plan versus ST's Human Resources Policy to reinforce their management of social issues



It covers all aspects related to dormitory location, structure and ownership, and sets requirements on living conditions and facilities; health, safety, security and maintenance. It includes the management of dormitory suppliers and providers and enables us to raise the minimum standards for dormitories and also provide pleasant living places for our employees.

Four of our manufacturing sites provide accommodation for ST workers: Ang Mo Kio (Singapore), Muar (Malaysia), Longgang (China) and Shenzhen (China). To assess the conformity of each site versus specification requirements. a detailed gap analysis was performed. Some non-conformances were identified and thorough corrective action plans deployed through strong collaboration between sites and corporate organizations. Several best practaices have been identified and reinforced. By the end of 2012 we had closed more than 50% of our major gaps. Management reviews are now conducted regularly with the dormitory and service providers to ensure that contractual management responsibilities, monitoring and reporting requirements are met. Communication has also been improved to raise employees' awareness of their rights.



Erich Hoch Senior Vice President, Chief Supply Chain Officer - Jabil

"Our commitment to ethical principles and EICC standards are embedded (factored) into every single sourcing decision we make at Jabil. And, we drive our supply chain to the same standards we expect of ourselves. Like ST. Jabil

employees a safe and respectful working environment. We are continually working to improve our employee experience, from creating dormitory standards and instituting new safety controls to providing educational and training opportunities. Building a sustainable supply chain, like all social responsibility challenges, is an on-going process that requires trusted partners like ST who demonstrate their leadership in Social and Environmental Responsibility."

believes in providing all

### SCOPE: 5 SITES OVER 2011-2012 findings **Working hours** 6 4 **Occupational Injury and illness** 2 Wages and benefits 2 **Emergency preparedness** Freely chosen employment 1 **Supplier responsibility Child Labor Avoidance** 1 Non-discrimination Hazardous substances Machine safeguarding **Occupational safety** Protection of Identity Fair Business, Advertising and Competition Food, sanitation and housing 0 0 **Corrective action process** Responsibility and accountability 0 Legal and customer requirements **Air Emissions Business Integrity** 0 **Freedom of Association** Total

for two sites

Focus on dormitories

new specification, our objective was to raise the minimum standards of living improvements were triggered in addition to the gap assessments and related corrective action plans. Main focus points for two sites:

- integrated alarm system and fire-extinguishers; fire drills; short transportation time to work (20-30 min); guarterly meetings with service providers. The conditions are included in work contracts and documentation is widely posted in each unit in English or bi-lingual version (Chinese).
- ST Shenzhen: the newly built dormitory enabled to group reporting; potable water tests are implemented on a regular basis; communication has been improved.

While ST raised the bar for living conditions in dormitories, This is key to ensuring high level living conditions. Respecting local specificities is one of ST's commitments in terms of employee labor and human rights.

**EICC AUDIT PROGRAM RESULTS** 

external nursery, to reduce the high cost of child care by offering 10-15% discount on fees.

the Province's agreement. Their needs

were assessed and they were provided

 Other positive actions put in place through labor unions included offering part-time roles for production employees and improving paternity leave. Employees can request to go part time by completing a simple form, then submitted to HR and management; ST's paternity benefits go beyond legal requirements. Indeed Italian paternity law pays 30% of salary whilst ST offers 50%, if the father asks for a 3 months or more leave.

Global Diversity & Equal Opportunities

ST remains committed to ensuring equal opportunities and appropriate representation of gender, age, race, disability and nationality at all levels of the organization.



# **Our main improvement axes**

ST's strategy for equal opportunities, with a specific focus on gender equality, was defined in 2006, taking a soft approach. Nowadays, we run formal equal opportunities programs. Ensuring equal opportunities for disabled employees is another important aspect of our strategy, as well as ensuring continuous development of our senior employees. ST has made steady progress in these areas but we know there is still room for improvement.

# Preparing the ST women's network

Women in business is a hot topic within the corporate world. During Q4 2012, an enthusiastic steering committee of 37 women from ST locations around the world, participated to a series of working groups to prepare the launch of the "ST women's network". The initiative came about as a result of the commitment made by ST's top management to increase the number of women leaders in the company. The key steps of the project involved:

- Sending an email to all women in the company asking them for their opinion and advice on the initiative, for example on what they would like, what the network should do and their expectations. We were delighted to learn that 90% of women were interested in a women's network
- Establishing a steering committee of 37 women who addressed 5 work streams (benchmark, governance, structure, communications and career), meeting once a month from September, increasing to once every two weeks from December.
- Choosing Woman's Day 2013 to launch the network and preparing

- a series of associated events such as internal conferences on several sites and news items on intranet.
- Providing a team workspace for the network to publish and share information, and start forum discussions, opened to all intranet

We believe we are building strong foundations for gender equal opportunities at ST bycreating and promoting a favorable working environment and culture for women in the company.

# **Supporting female students**

Looking ahead, we are aiming to promote more technical jobs to female students to ensure more employment equality. In France, a national initiative, "Capital filles", was launched in 2010 between the educational institutions and corporations. It is an innovative program that aims to encourage girls in sensitive urban and rural areas to continue their studies through apprenticeship. ST promoted this tutorship project with volunteer "godmothers" from several ST French sites. Each ST godmother coaches and supports a girl in her last school year to help her map out her career, fight against family's stereotypes and support her motivation for higher studies.

In France, our efforts to promote diversity have been consistent over the years, providing employees with opportunities to access employment and maintain their roles within the company by adapting working conditions where necessary. By remaining open minded and regularly raising employee awareness through newsletters and other forms of communication we enable to scale up innovative initiatives to achieve progress and results at a faster pace.

The 'disability agreement' has resulted

WOMEN IN MANAGEMENT (%) / LA13	2008	2009	2010	2011*	2012
Women in experienced management (JG15 and above)	-	-	-	13.77	13.77
Women in senior management (JG17 and above)	8.02	8.9	9.91	9.56	9.79
Women in executive management (JG19 and above)	6.78	7.6	9.71	9.80	8.78
Women in the Supervisory Board	-	-	-	-	1

(\*) figures changed following data review

# **Promoting diversity in France**

People with disabilities often do not have the same access to education as the rest of the population. To increase their employability, we provide them with additional training prior to them joining ST to ensure their knowledge and the competencies match the job requirements. As part of the integration of people with disabilities, we also give subcontracting activities to sheltered workshops. A company providing administrative services has been identified whose employees will be trained to note taking for punctual formal meetings, such as assemblies. This is an innovative initiative.

in the recruitment of more than 130 disabled employees between 2010 and 2012 through specific training

# Achievements of the "Equal Opportunities committee" in Italy

programs, professional insertion In Italy global diversity and equal contracts, internships and recruitment opportunities are managed through the with standard contract. In 2006, 1.2% Equal Opportunities committee, which of people in our French workforce had has implemented some very practical a disability, this figure increased to 3% and concrete initiatives, some of which before the signature of the national agreement and has now reached 3.78% The renewal of the agreement in March 2013 will enable us to maintain our dynamic approach.

are described below: • "Fiocco in Azienda" is a project set up to provide coaching to mothers and help them peacefully face all changes related to motherhood as well as recognize the symptoms of post natal depression.

> Specific agreements have been signed with Provinces to ensure the recruitment of disabled employees, involving several temporary agencies. At the end of 2012 the total number of disabled employees working in ST Italy reached 120. In Agrate, 7 disabled employees were hired in Staff functions and Manufacturing areas, in line with

An agreement was signed with an

with any necessary equipment to

help make their working lives more

comfortable.

# Quote

# Virainia Melba A. Cuyahon

General Manager - ST Calamba, The Philippines

"Equal gender career opportunities in big corporations have given women increased flexibility and broader perspective when it comes to decision and policy making. I pursued a career in engineering and worked my way up in manufacturing. The companies I have worked for in the past and today, ST Calamba, are open to talents and capabilities regardless of gender. More and more HR programs are focused on talent and potential development and are offered to deserving employees. ST wants to increase the percentage of women at executive level. Women should take this opportunity to experience diverse and interesting careers."

# Performance against objectives



- Ensure gender equality at higher level of job grade by increasing the women to men ratio by 4% for Job Grades 15 and 16
- Ensure that all sites have a seniority plan to maintain employability in the second part of people's careers
- Ensure that all ST sites have disability plans to keep increasing the percentage of disabled employees in ST
- Ensure that hiring ratio of women to men is equivalent to the gender ratio of graduated students in partner schools and



• Increase the proportion of women in leadership positions worldwide from 9.8% to 15% by 2015

DISABLED EMPLOYEES / LA13	2008	2009	2010	2011	2012
Disabled people employed as % of total workforce	0.89	0.95	1.01	1.05	1.28
Budget spent on disability programs (US\$k)	-	3,489	2,321	3,567	3,597

## Gender split by category (%) / LA13



launched to show case the creativity of

our employees. Artwork is displayed in

a gallery at our Greater Noida site.

employees via email, telephone or face

Quote



and local initiatives

**OUR PEOPLE** 

We are committed to ensuring the well-being of our employees both

during, and outside of work, through promoting a work-life balance,

ST's approach is continuous improvement and we also propose

high quality working conditions and access to healthcare.

a range of personal services at ST locations.

We develop health and well-being programs centrally to ensure all of our employees are provided with the same level of care and benefits. However, we recognize local programs are often better equipped to identify local health care requirements. We therefore continue to promote local initiatives and have begun to share best practices through ST's Sustainable Excellence Coordinators network, encouraging global deployment.

## At corporate level

The Health Plan launched by our CEO, Carlo Bozotti, to ensure all employees receive the same level of medical care wherever they are based in the world, has again reached its target. We offer a wide range of medical services to employees from general medical examinations to tests relevant to specific roles, such as blood analyses, bio monitoring, X rays, screening, immunization, etc. After two peak years, the total number of services we offer our employees remains high: our employees have made 71,000 visits to our medical services. In parallel, we launched a campaign to equip all ST sites with a defibrillator. Now, 98% of our population is covered.

### At site level

We believe that tackling health and well-being issues on many different fronts is also the best way to increase performance. Our sites offer multiple services and support to employees on all kinds of health, hygiene, comfort at work and home life related issues. Here are some examples:

In Italy: "Work-related stress", a project in collaboration with Università di Milano involving interviews with a significant sample of more than 500 employees to conduct in depth analyzes of stress at

Employee Health & Well-being

- Healthy diet campaign involving the support of canteen suppliers.
- Specific counseling to help managers deal with employees with emotional difficulties.
- Various campaigns in collaboration with external health authorities about smoking, osteoporosis risk; physical exercise, prevention of breast cancer and large-scale flu vaccinations.
- Medical fund for all employees (a labor union agreement).
- Subsidized company and public transportation for employees.
- Facilities for cyclists, such as changing rooms and showers.

In France: in addition to medical visits, the "Stresslab", a tool mentioned in our 2011 report, that measures the employees' exposure to psychological risks, has enabled us to go one step further in reducing stress related issues. When cases of stress are identified, the doctor immediately prescribes corrective measures to support the employee. Now, in addition to stress management, we are also focusing on prevention. Our approach consolidates and maps individual results and risks associated with specific categories including socioprofessional, seniority or work area, so that we can identify and implement preventive actions.

In India: World Health & Safety Day: We dedicated a full day in April to common health concerns. Talks were given on spine, headaches, ergonomics and physiotherapists then assessed employees at their workstations, advising them on correct seating postures and exercises.

# Performance against objectives

- Ensure 100% of employees have benefited from the health plan by the end of 2013
- Expand and promote the well-being services offered to employees at ST sites to facilitate day-to-day life



• Promote employees' health and well-being through local initiatives and campaigns on the following aspects: sport practices, tobacco, overweight & obesity, blood pressure, cholesterol

# • STart for your Heart: We organized a run to mark World Heart Day, with the aim of bringing everybody together, promoting fitness, having fun and recognizing the importance of having a healthy heart. 200+ employees participated. Awareness was built around "Matters of the Heart" through banners, posters and bookmarks. Discounted health coupons were also

- Quit smoking: We held a one-day session for 23 employees addicted to smoking. Following the event four
- of sporting tournaments such as volleyball, soccer, cricket and bowling.

measures.

• Employee Assistance Program: The '1to1help.net' agency has been set up to give free counseling services to

employees completely quit and seven

significantly reduced their intake.

• Well Woman Program: We organized

breast cancer and provided hand-

for a health specialist to give a talk on

outs about symptoms and preventive

• Sports: We regularly run a wide range

# Additional benefits of improving employee well-being

In Italy, an initiative to increase wellbeing, started in 2011 as a trial and has now been deployed across all our Italian sites, resulting in very positive feedback from employees and managers. 150 people participating in the "Mobile Work" project have been given the necessary equipment to enable them to work from home via a remote connection, saving them travels and commuting time. We have also found that work and management quality has improved as a result of having better defined tasks and thus better focused employees.

Many ST initiatives are also interconnected with other sustainability priorities such as Employee Safety, Labor & Human Rights or Local Sustainability & Impacts. Whilst safety is our highest priority, next comes well-being, and in our approach on better conditions of living for our employees, better management and quality of dormitories is a clear step forward for our employees concerned. And also, even if not yet measurable, we have first signs that favoring a healthy way of life for our employees also starts to positively impact on their families whose awareness is increased.

# Amit Rathee

Manager, Software Competence Center - ICT group - Greater Noida (India)

"As an employee working at Greater Noida (India), I really appreciate the employee health and well-being programs being run by the Human Resources department on our site. In my opinion a healthy employee is always more productive and efficient. Having personally attended programs like 'Complete health checkup', 'Employee Assistance Program', 'sports' and many other such programs, I sincerely want to thank and congratulate ST as an organization. Our HR team has really proved time and time again, that people are assets and that at ST life is really 'AUGMENTED'."

# Health Plan - Medical examinations

EXAM TYPE	2008	2009	2010*	2011	2012
Medical Examinations	36,022	50,295	69,180	70,480	60,216
Check up with a physician	14,057	20,687	32,472	35,689	34,604
Blood analyses (including biomonitoring tests**)	9,287	12,287	17,344	15,954	11,986
Chest X rays	3,788	7,205	9,763	8,881	5,624
Colorectal cancer immuocult test	754	851	523	966	310
Electrocardiograms	5,019	5,257	5,728	5,497	4,682
Mammography	1,160	1,138	1,080	1,094	1,026
Pap smear tests	1,487	2,084	1,691	1,586	1,572
Prostate cancer screening	470	786	579	813	412
Screening test	9,028	11,923	10,958	13,097	8,837
Immunization	3,121	4,347	3,505	3,019	2,234
Total services provided	48,171	66,565	83,643	86,596	71,287

(\*) 2010 results slightly modified in 2011 after adjustments communicated by some sites.
(\*\*) These tests are dedicated to employees working in manufacturing areas (and especially on some specific maintenance



# Our Products



Key figures for 2012





100% of ST Tantalum



ST has reached the objective of on-time delivery to committed



of involved suppliers and subcontractors have completed the EICC-GeSI Due Diligence Survey on Conflict-free Minerals

# Customer Satisfaction

ST is committed to ensuring its products meet customer expectations in all respects, all along the product life cycle, from conception to delivery and post-sales, including service and appropriate management of quality.



# ST's approach to customer

Since its inception commitment to customer satisfaction has been one of ST's core company values. This culture evolved from our early Total Quality and Environment Management programs and now forms a foundational pillar of our Sustainable Excellence strategy.

Listening to our customers, fulfilling their needs and expectations and building strong partnership with them helps both ST and our clients maintain competitiveness and jointly explore new business opportunities.

We define our approach to customer satisfaction using the following five areas of excellence:

- Innovation and R&D
- Business Excellence
- Supply Chain

satisfaction

- Quality
- Sustainability

# ST quality strategy & roadmap

Our quality strategy sets the directions for reaching our goal and is elaborated around seven fundamental pillars: customers, change management, product and technology development, manufacturing and supply chain, people, business processes, tools and indicators and economical value. Our approach also includes the development of stateof-the-art programs and processes for improving quality, combining innovative approaches and continuous improvement. It is supported by a detailed roadmap for strategy execution with clear ownership, timelines and resources for achieving targets.

The certification of an Automotive microcontroller to the ISO 26262 Functional Safety standard by the EXIDA certification body is one example of our commitment to provide our customers with high quality products.

Lives depend on microcontrollers when they are used in automotive and other safety applications. Where safety measures like software countermeasures or failure alerts exist, both in automobiles and at systems level, product analysis and validation are necessary to ensure functional safety. The ISO 26262 Functional Safety standard guarantees to our customers that safety features will work reliably throughout the product's entire life time.

By achieving this certification ST demonstrates its ability to create safe and reliable products as measured against the most rigorous of safety standards. It is vital for the future of our company that we are able to produce technology that both meets safety standards and contributes towards making lives safer.

# **Customers' sustainability** demands

We are continually providing our customers with information regarding our Sustainability management systems, activities and performance.

In 2012 we received more than 700 Sustainability customers' demands at corporate level. 72% were concerning our approach to Environment Health and Safety aspects and 28% concerning Social and Ethics.

These customer demands can be very diverse, from questions linked to our practices and products, general sustainability surveys, signature of Code of Conduct to specifications and letters to review and approve or audit requests.

# **Supply Chain governance**

2012 has been a year of focus on Supply Chain governance. In May 2012, Alberto Della Chiesa was appointed Group Vice President of the Company Supply Chain Management reporting to Otto Kosgalwies, Executive Vice President, Member of the Corporate Strategic Committee, Company Infrastructures and Services (CIS).

In the same year we reinforced the Supply Chain Governance where all organizations pertaining to the supply chain are represented. The following priorities were agreed:

- Forecasting & Demand Management: optimizing forecasts, processes, KPIs
- · Fragmentation: reinforcing links between all organizations along production flows and capacity and assets management
- Inventory Model & Asset utilization: reviewing and aligning inventory policy to customers' portfolios and market
- Planning processes: continuing to shorten and simplify processes to increase their effectiveness
- Organization & People: optimizing the organization and flow to become agile

We also implemented common key performance indicators (KPI) throughout the entire supply chain covering:

 Customer satisfaction with Just In Time Requested Date and Committed Date

Demand Management with

flexibility KPI's

Forecast accuracy measurements

 Asset utilization and responsiveness trough cycle time and manufacturing

We focus on simplifying processes

through our Speed and Agility Initiative

with the aim of maintaining our supply

chain competitiveness and responding

to the Time To Volumes requirement of

the semiconductor industry.

Quote



# Fabio Gualandris

**Executive Vice President for Product** Quality Excellence - ST Geneva (Switzerland)

"Quality is a priority throughout ST. We work hard every day to meet and exceed customer expectations. Our goal is to provide our customers competitive solutions that are the best, safest and most reliable in the industry."

# How does ST evaluate its customer performance?

ST has formalized a process to manage external and internal feedbacks in order to continuously improve its performance and consequently customer satisfaction and loyalty. Every ST employee is involved in this process:

## Internal feedback: Satisfaction index

ST has defined and monitors a set of internal indicators which provide an accurate and factual measurement of customer satisfaction. These indicators represent our customers' major areas of interest, for example, number of customer complaints, failure analysis cycle time, percentage of customer returns and just-in-time figures.

# **External customer feedback: Customer scorecard**

It is the duty of each ST account manager to:

- Collect the feedback of his customers following the rating system in place at the customer if any (Customer score card, frequency, form, ...) or ST system otherwise
- Identify positive points and major area of improvements

- Cascade feedback to the relevant stakeholders in the Company
- Determine and agree with the customer milestones to reach scores, targets and relevant improvement actions
- Monitor improvement action plans until targets are reached.

All score cards are normalized according to the five areas of excellence and periodically reported to ST's executive management of the Company.

# **Customer Perception Survey**

mentioned above, every two years ST also performs a "Customer Perception Survey" to assess and benchmark its overall performance as perceived by geographical markets and industry domains as well as to identify the new market trends. The survey is also structured around our five areas of excellence. We analyze the survey results in detail and implement appropriate improvement actions.

# Performance against objectives



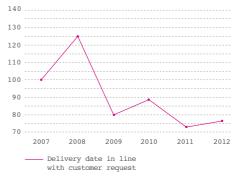
• Just in Time on Committed Date at 90%



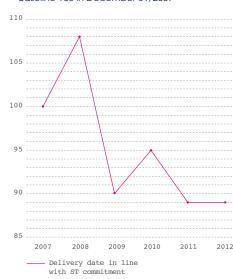
• Just in Time on Requested Date at 65%

• Reduce customer complaints per million units by 5% by Q4 2012 compared with a 2011 baseline

## On time delivery to customer request Baseline 100 in December 31, 2007



## On time delivery to ST commitment Baseline 100 in December 31, 2007



More performance indicators are available on pages 67 to 70

Management

Innovation Management at ST is a three-part process which involves; creating an environment that fosters the generation of ideas; ensuring company-wide implementation of our technology and product development processes, sanctioned by formal maturity steps, rigorously managing the various phases of product development.

In 2012, despite a challenging business environment, we have continued with our implementation plans and have undergone major internal restructuring within certain businesses. Below are some examples that illustrate our journey towards excellence in Innovation Management.

# **New Ventures entity will invest** in innovation

ST has created its own investment fund to promote innovation in selected startup companies that are working in new technologies that are relevant to ST's business while not necessarily at its core today e.g. health, cleantech and smart infrastructures. In addition to financial returns, this initiative also provides ST with valuable insight into emerging technologies, products and services.

# Partnerships are critical to innovation

In July 2012, ST and the Harbin Institute of Technology (HIT), one of China's most renowned national universities, announced the opening of a joint laboratory to encourage innovation in electronics. Its aim is to support the study, research and development of innovative and emerging electronics applications e.g. medical, power management and multimedia convergence.

ST contributes various products, including samples and technical documentation, as well as training to educate students in the design and development of innovative electronics

projects. HIT provides general-purpose facilities and management of the joint laboratory. During the early stages of this partnership, the joint lab will focus on smart-sensor applications. ST has donated its advanced iNEMO®1 development tools supported by a software platform.

The integration of multiple sensors with processing capabilities and dedicated software in a single device is a significant leap forward in functionality and performance for a wide variety of applications, including Gaming, Human Machine Interface, Robotics, Portable Navigation Devices, and Patient Monitorina.

For more information on Partnerships in R&D and Education, see pages 60-61

# Standardizing electronics: a key ingredient to open innovation

ST was awarded the Corporate Award 2012 by the Institute of Electrical and Electronics Engineers Standards Association for its contribution to the development and progress of electronic and electric standards. ST takes an active role in many standardization initiatives at several electronics industry associations as part of ST's active participation in technology/IP ecosystems. Participating in these initiatives is a fundamental pre-requisite to being able to leverage open innovation and collaborative R&D in our industry.

ST PATENTS FILED	2008	2009	2010	2011	2012
Total	485	589	739	602	516

INNOVATION ACTIVITY (INCL. ST-ERICSSON)***	2010	2011****	2012
Median age of immature projects (months)	17	15	17
% of immature projects* younger than 1 year (value)	29	42	29
% of projects* maturing within year (value)	29	35	29
% of Open Innovation** in R&D (value)	20	21	18

(\*) immature project: product development project, defined in accordance with IFRS criteria, measured in asset value, not yet at

(\*\*) open innovation: aggregate spending towards external R&D technology licensing partners, in % of total R&D + licensing

(\*\*\*) In July 2012, part of the development activities of ST-Ericsson was transferred to ST. In December 2012, ST announced its Multiple write-offs and write-downs were recorded in our books, materially impacting the performance metrics for 2012 for the

aggregate ST consultated permission (\*\*\*\*) 2011 figures changed following data review.

# Focus on technological innovation breakthroughs in 2012

# FD-SOI: shaking up the industry with innovative semiconductor technology

Moore's Law—the observation that the number of transistors on a chip doubles about every two years—has driven the semiconductor industry over the past 50 years to shrink the size of the transistors, which are essentially miniature on/off switches. The increase in the number of transistors in a product as a result of their size reductions have given consumers a plethora of new and more exciting features at a lower-cost. In parallel, these new features are able to operate at speed allowing phones for example to respond to commands, by keypad, touchpad, and now voice.

As transistors shrink to nano-scale dimensions, where approximately 450 transistors can fit within the diameter of a human hair, physics is challenging the traditional highspeed and low-power advantages of planar CMOS (Complementary Metal Oxide Semiconductor) technology,



Quote



# Philippe Magarshack

**Executive Vice-President** and head of Design Enablement and Services - ST Crolles (France)

"IP Sourcing: a key stepping stone towards open innovation. Until recently, most semiconductor companies were vertically integrated-designing, fabricating, packaging and testing their own chips using internally developed software design tools, manufacturing processes and equipment. This is no longer the case: as the cost and skills required for designing and manufacturing complex semiconductors increased,

manufactured on bulk silicon wafers. FD-SOI (Fully Depleted Silicon on Insulator) technology is a major breakthrough in the pursuit of electronic circuit miniaturization. It enables production of highly energy-efficient devices with the dynamic body-bias allowing instant switch to highperformance mode when needed and a return to a very-low-leakage state for the rest of the time. FD-SOI can operate well at low voltage with superior energy efficiency versus traditional CMOS (on bulk substrate).

In 2012, ST successfully prototyped commercial products designed in 28nm FD-SOI technology, finally demonstrating to the market the full potential of this technology, which was conceived over a decade ago by ST research fellows.

# New technology and product on **Galvanic Isolation**

As a result of a successful Companywide program involving teams from

business units and central departments, ST has been able to develop and launch cutting-edge Industrial Drives and Automotive IGBT (Insulated-Gate Bipolar Transistor) Drivers.

The manufacturing technology and the level of feature integration achieved by the IGBT Drivers are unique in the market. The breakthrough comes from a high voltage galvanic isolation which, thanks to the embedded digital interface, allows the microcontroller to directly control the power stage of the application while monitoring any faults with the digital diagnosis. The integration of important safety, protection and diagnosis features makes the system more compact, more reliable, and less costly than other solutions.

Once fully tested in December 2013, this technology should benefit multiple markets such as Industrial, Power conversion, Automotive and Home / Consumer segments.

# Performance against objectives



• Increase creativity: Number of patents for fundamental innovations filed per year

• Increase efficiency of product

• Increase R&D partnerships: % of R&D spending incurred via partnerships or external IP sourcing

the semiconductor industry diversified and specialized along its value chain.

The ultimate phase in this trend relates to so-called "design IPs", or blocks of circuitry implementing well-defined functions e.g. connectivity, processing, graphics rendering or video compression. A modern chip contains hundreds of such blocks, making their design no longer practical for a single company at reasonable cost and risk. Sourcing those blocks via collaboration therefore becomes a basic necessity for successful chip design.

It is an ongoing process that relies on an increasingly open innovation model with our partners and suppliers: ST benefits from the dedicated skill set and the larger R&D investments that a broad market reach allows; they benefit in return from early debug and performance tuning provided to our selected partners by ST. In December 2012, ST organized a very successful "Happy IP Days" event where hundreds of ST engineers were exposed to, and could interact with, the latest innovations from our partners on site."

# Product Stewardship



Quote

ST is committed to reducing the impact of its products on the environment, continually improving their performance to enhance the quality of life of end-users. We developed our Product Stewardship framework to gain a deeper understanding of the societal and environmental impact of our products in order to continuously enrich our product portfolio, exploring new and innovative sustainable solutions.

# ST product stewardship approach

Since the development of its environmental strategy in the early 1990s, ST has been fully committed to reducing any negative effects of its activities and its products on people and the planet as a whole.

ST's Product Stewardship program brings our approaches under a single framework to reduce the impact of our products on the environment and improve the quality of life of the end-user. The materiality exercise we conducted in 2010, identified the key topics relating to product stewardship, including eco-design, responsible products and communication. Further on, we refined our approach and developed an integrated product stewardship program comprising three main components:

# **Product Compliance**

Complying with applicable legislation and our customers' requirements regarding EHS and the social and ethical impacts of our products is the cornerstone of our program. ST endeavors to anticipate regulation by working with customers and other stakeholders to find common solutions to sustainability challenges.

### **Eco-design**

ST launched its eco-design program in 2009 with the objective of eco-designing 100% of new products by 2015. Our approach takes into account the life-cycle of our devices by evaluating the results of environmental impacts assessments, seeking greener options during product design.

# **STAR** responsible products

In 2011, ST launched a taskforce to enable the tracking and effective communication of products that have a contribution to sustainability.

# **Expected benefits**

Our product stewardship program provides quantitative and qualitative data about the sustainable value and benefits of our products. We expect to continue to grow revenue and market share on the back of innovation. In 2012 ST's responsible products generated around US\$ 408m. ST provides detailed product information relating to compliance with legislation, reduction of environmental footprint, energy-saving and social characteristics.

Package development senior manager, Corporate Packaging & Automation, ST Calamba

Arnel Villaroman

(The Philippines) "The rules of the game to be successful in business slowly emerge in favor of resource and energy efficient products we want to be a leader in

and services. At ST Calamba, creating sustainable products that address the needs of our customers, by proposing eco-friendly semiconductor solutions. In 2012, we achieved to manufacture only ECOPACK® products without the use of any RoHS exemptions. The constant challenges to overcome are to always anticipate markets requirements, and to find the right solutions to meet the

business needs with our product

stewardship principles."

# Rating of the level of innovation of ST devices in key social and environmental categories: e. g. health & fitness, safety & security, energy-saving. Internal project to measure and reduce the environmental footprint of new products Eco-design across the life cycle: e. g. CO<sub>2</sub> emisssions, water. Baseline set to ensure compliance with legislation and align with requirements of our stakeholders. It includes a number **Product Compliance** of individual programs (ECOPACK®, Material Declaration, Conflict-free Minerals, HSPM).

# Product Compliance



Complying with applicable legislation and our customers' requirements regarding EHS and the social and ethical impacts of our products is a fundamental component of our sustainability program. ST annually reviews its banned, exempted and declarable substances against applicable regulations and agreed customer requirements, and deploys it along our supply-chain. Internally, ST has developed strategic programs to ensure we remain compliant:

# **ECOPACK®**

The voluntary ECOPACK® program started in 2000 to remove polluting and hazardous substances from our products. We meet all applicable requirements such as REACH and RoHS, developing solutions that eliminate RoHS chemical compounds from our manufacturing lines and products.

In 2012, we went a step further to remove halogens, enabling us to reach the ECOPACK®3 level.

- ECOPACK®1: Compliant with the Restriction of Hazardous Substances (RoHS) directive and 'lead free'1
- ECOPACK®2: ECOPACK®1 + free of brominated, chlorinated and antimonyoxide flame retardants
- ECOPACK®3: ECOPACK®2 + free of halogens with no RoHS exemptions In 2012, ST began a packing materials review against ECOPACK® levels, setting a future target to ensure packing compatibility with ST ECOPACK®2 grade definition.

# **Material Declarations**

To provide our customers with the detailed material composition of our devices, ST has a material declarations program in place to disclose the full chemical identity of any product launched since 2006. We use the IPC 1752 standard to report declarable substances and material groups.

As a member of the IPC<sup>2</sup> working group. ST is at the forefront of standards deployment. In 2012, ST adopted the newer and stricter version of the IPC 1752-A standard. Anticipating an evolution, ST started to disclose the full product material chemical composition of its devices in 2008<sup>3</sup>. To achieve this, a new Material

Declaration format definition was adopted, in-house IT tools developed, and our quality management system database was upgraded. ST has aligned its quality and marketing systems with the demands of the new standard and customers can access our latest product information on the ST website4.

# **Hazardous Substances Process Management (HSPM)**

To strengthen our hazardous substances management with a focus on product, ST has decided to align its processes with the IECQ5 QC 080000 Hazardous Substances Process Management System Requirements (HSPM) standard.

A working group, co-sponsored by our Corporate Sustainable Development and Corporate Product Quality departments, is currently defining the steps and actions necessary to progressively align ST's management systems to the HSPM requirements. We aim to ensure that our processes and management systems, from product design and development through to engineering, purchasing, manufacturing, warehousing and dispatch, will be compliant, robust and effective with regard to hazardous substances in products.

# **Conflict-free minerals**

Since 2007, ST has been complying with legislation and customer requirements to prevent the use of illegal and unethically sourced minerals from conflict areas. This topic is discussed in more detail. in the Conflict-free minerals section on pages 36-37.

# Performance against objectives



- ECOPACK®2:
- 90% of new packages implemented in ECOPACK®2 by the end of 2012
- 80% of products in ECOPACK®2 by the end of 2012
- Start tracking products eligible for ECOPACK®3 (halogen-free and no RoHS exemption) in 2012



 Start alignment of ST packing materials to ECOPACK® levels 2 and 3 in 2012

- 1. With adapted reliability for soldering at higher temperature, as some exemptions are necessary mainly for the automotive market with regard to RoHS regulation
- 2. IPC is an Association Connecting Electronics Industries. Visit
- 3. ST adopted the IPC 1752-2 Class 6 standard in 2008
  4. Visit ST Materials Declaration webpage http://www. st.com/web/en/support/materials\_declaration.html?s\_
- 5. IECQ = International Electro-technical Commission Quality ssment System for Flectronic Components

% of ECOPACK® products in k units\*

	ta di anti-				
ECOPACK® program	2009	2010	2011	2012	
Non ECOPACK®	2.4	1.8	1.3	0.8	
ECOPACK®1 Compliant with the Restriction of Hazardous Substances (RoHS) directive and 'lead free**	58.1	43.6	28.7	16.8	
ECOPACK®2  ECOPACK®1 + free of brominated and chlorinated flame retardants	39.5	54.7	70.0	82.4	

(\*) Our ECOPACK® values since 2009 were reviewed in 2011 after a revision of our methodology used to estimate the annual percentage of ECOPACK® products both in value and in volume.

(\*\*) With adapted reliability for soldering at higher temperature, as some exemptions are necessary mainly for the automotive

# **OUR PRODUCTS**

# **Eco-Design**

Energy-efficiency and eco-design are now key consumer requirements for products. ST has included the target in its EHS Decalogue to eco-design 100% of new products by 2015.

ST is committed to design its products by systematically taking into consideration the environmental impacts of the device during its whole life-cycle (raw materials, transportation, manufacturing, usage,

# ST's approach to eco-design

To successfully integrate eco-design, ST has adopted a dynamic and systemic approach based on innovation, performance and awareness. We are working to integrate this methodology into our product design and development.

To help us reach this objective, our experts have developed a decisionguiding tool that enables designers to evaluate the environmental footprint of products in the design phase. It relies on a complete database of environmental impacts for each stage, based on the Life Cycle Analyses we have conducted over recent years. This cross-departmental tool:

- Covers all Front-end sites manufacturing technologies;
- Takes into account for the calculation the most representative packages of Back-end manufacturing phase;

 Will be implemented on selected products across all ST Products Groups by the end of 2013.

# **Life-Cycle Assessment (LCA)** methodology

ST has been undertaking complete Life-Cycle Assessments since 2009 covering some cutting-edge products. These assessments have resulted in the development of a bespoke methodology to perform LCAs on assembled devices at the first stage of eco-design, in accordance with ISO 14040 and ISO 14044 standards.

Due to ST's huge portfolio of products, it is not feasible to carry out complete LCAs on them all, so ST has developed a screening LCA methodology that enables us to provide a quick calculation of products' carbon (in kg of CO<sub>2</sub> equivalent) and water footprint (in m³) of our products within a shorter time frame<sup>1</sup>. In order to verify and review our internal methodology, ST will undergo third party validation with Quantis in 2013.

# Quote

# Michele Galatola

Product team leader, Directorate General Environment, European Commission, Brussels (Belgium)

"Since 2003, the European Commission has supported the consistent and coherent use of Life Cycle Assessment in European policies; the most reliable and comprehensive method for calculating the environmental performance of products, services and organizations. Life Cycle Assessments help provide clear, reliable and comparable environmental performance data to all stakeholders, including supply chain participants. The Commission's recent adoption of the package «Building the Single Market for Green Products<sup>2</sup>» represents a key step towards improving the way the environmental performance of products and organizations is measured and communicated."

# Life cycle stages













ST production site

# **Environmental indicators**









eutrophication



# Performance against objectives



- Ensure 100% of ST new products are eco-designed by 2015 through deployment of:
- eco-design strategy
- new eco-design tools
- product eco-labeling

# **STAR** Responsible Products

Advances in semiconductor technology offer exciting opportunities to address global sustainability issues through innovative products that address a diverse range of social and environmental challenges e.g. ageing population, more affordable and accessible healthcare.

# What are 'responsible products'?

For ST, the term 'responsible products' refers to the design, development, sale and marketing of devices that:

- Reduce energy consumption and/or provide new environmental solutions e.g. smart grid, start/stop systems, converters to manage solar cells and wind turbines;
- Provide new social solutions to key societal challenges and improve enduser quality of life e.g. all health-related and fitness products, safety and security applications, environmental and social solutions for developing countries.

# ST's STAR Responsible Products

In 2011 we developed the STAR Responsible Products program which aims to identify, track and communicate new ST products that make a contribution to sustainability.

Specifically, this program aims to provide detailed information about products that feature in the target growth areas of ST's

Investors are increasingly asking us to communicate the percentage of and

associated revenues from our products with energy-saving characteristics. The STAR Responsible Products program enables us to do this and also demonstrate the wider societal value of our portfolio by applying an innovation rating. Split into two main macrocategories; "Social" and "Environmental / Energy saving", ST Responsible Products are awarded 1, 2, or 3 STARS according to their level of innovation. Ratings have a two-year validity and capture the degree of innovation on specific sustainability characteristics. The three levels of innovation are defined as incremental, significant and breakthrough. For social products the rating is applied based on qualitative evaluation, and for environmental/energy savings products

In 2012, we carried out a data collection exercise to develop a dashboard of all new products launched during the last two years. The dashboard indicates that 196 individual products with 250 STAR ratings have generated approximately 30% of all new product revenue, corresponding to approximately 7% of all ST products.

it is based on quantitative assessment.

To ensure we can catalogue ST's Responsible Products portfolio, we are updating our internal STAR rating system and should be soon able to automatically classify our products. We are also focusing on making responsible products an integral part of product development and communication.



# Serge Palmieri

Quality management system and Sustainable Excellence coordinator of Analog, MEMS and Sensors Product Group, ST Grenoble (France)

"To accurately identify responsible product characteristics, all ST Product Groups actively participate in the product stewardship program, providing ST with full visibility on specific market segments, products and application fields. This knowledge drives innovation and is continually being fed back into ST's product development."

# Performance against objectives



 In 2012, track the percentage of 'STAR responsible products' in ST's overall product portfolio and associated revenues (following STAR environmental and social criteria) for the year



• Prepare a complete communications plan for responsible products in 2012

RESPONSIBLE PRODUCTS CATEGORY AND STAR CLASSIFICATION CRITERIA / ENG EN26					
Social Products	Associated STAR rating	Number of products in 2012	Environmental / Energy Saving Products	Associated STAR rating	Number of products in 2012
Health/Medical/Fitness     Embedded in applications dedicated to physical well-being	★ 1 STAR: incremental changes to a solution already on the market	43	• Energy saving of the ST chip itself	★ 1 STAR: incremental improve- ment versus previous generation (at least in line with standard market offering)	95
Safety/Security:     Contributes to transportation/ car safety or safety in general; or to personal security	★ ★ 2 STARS: not just improve an existing solution, add to it in new ways	24	Energy saving of the application thanks to the ST chip	★ ★ 2 STARS: significant improvement versus previous generation (above standard market offering)	63
Social (general):     Products supporting ageing population, disabilities; to improve quality of life in developing countries etc.	* * * 3 STARS: solves a problem for which there is not yet a solution on the market	16	Environmental (not related to energy saving) Contributes to resources saving and environmental preservation (water, chemicals, emissions etc.)	* * * 3 STARS: dramatic improvement vs previous generation OR providing a solution for energy saving that does not yet exist on the market	9

<sup>1.</sup> For more information and products test, visit our website on

www.st.com
2. For more information,

# **OUR PRODUCTS**

# Conflict-free Minerals

ST is committed to complying with legislation and aligning with customer requirements relating to conflict minerals. We take careful measures to avoid procuring 3TG metals that are directly or indirectly associated with human rights violations or environmental damage in the Democratic Republic of Congo and its neighboring countries.



# **Assurance of conflict-free** minerals

ST manages conflict minerals in accordance with the following legislation and best practices:

- Section 1502 of the US Dodd-Frank Act and its application rules from the US Securities and Exchange Commission (SEC)
- OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from conflict-affected and high-risk areas, for more information, see www.oecd.org/daf/inv/mne/mining.htm
- Working groups within the EICC and GeSI supporting documents and audit trails
- ITRI's Tin Supply Chain Initiative supporting documents and audit trails

We have developed a comprehensive process to provide our customers with evidence to demonstrate that our products only contain conflict-free

- ST requires suppliers to:
- sign a written commitment annually stating that no metals used in ST



- have a DRC Conflict-Free Minerals Policy
- conduct a thorough supply chain analysis to identify and provide ST with the names of smelters and refiners involved in mineral processing
- disclose the country of origin and the mining location of procured minerals
- implement due diligence to verify suppliers' compliance with its Conflict Free Mineral Policy
- source 3TG metals from smelters who themselves have been validated as using DRC Conflict-Free minerals by a third party certified organization
- A supplier's ability to meet these requirements is then reviewed, and if any of them are not met we ask the supplier to provide us with evidence that corrective action plans have been implemented.
- Collected information is aggregated and shared with customers when requested.

 Anv identified smelters are contacted by both ST and the supplier to invite them to join the Conflict Free Smelter (CFS) program. In fact smelters' engagement rate with the CFS engagement is one of our internal key performance indicators. If suppliers provide other evidence of being conflict-free, we conduct a risk assessment to evaluate whether the information received is sufficient to meet our requirements.

In 2010 the US Congress passed legislation, the Dodd-Frank Act, which requires manufacturers of electronics devices to undertake due diligence on their 3TG supply chains, to publicly disclose their conflict minerals policy and to enforce conflict-free measures in their procurement processes. This ruling was adopted by the US Securities and Exchange Commission in August 2012. Under the ruling, companies are required to disclose their use of conflict minerals; Tantalum, Tin, Tungsten or Gold, if those minerals are necessary to the functionality or production of a product manufactured by those companies. Companies are required to provide this disclosure annually to the SEC.

# Performance against objectives

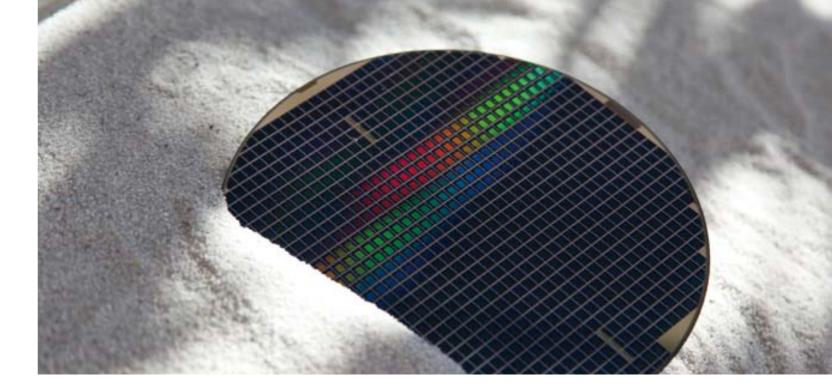
Define and deploy systems and processes to provide trustworthy evidence that our products are conflict-free. In 2012, we will:



• Maintain EICC-GeSI Due Diligence Tool update for 100% of our material suppliers, Front-end and Back-end subcontractors



• Engage all the smelters identified in our supply chain to join the EICC-GeSI Conflict-Free Smelter Program incurred via partnerships or external IP sourcing



ST has been working on conflict minerals mapping and disclosure since 2007. In 2012, we concentrated our efforts on mapping smelters within our supply chain. This exercise was undertaken using the Due Diligence tool developed by the EICC GeSI Extractive Working Group. Smelters were also invited to join the EICC's Conflict Smelter Program. Starting in 2014, ST will publish an annual conflict minerals report, in line with SEC requirements.

We review each mineral (Tantalum, Tin, Tungsten or Gold) individually due to the varying levels of complexity found within each mineral supply chain. For Tantalum, for example, we have been able to certify 100% of smelters through the Conflict-Free Smelters' Protocol. We are still in the process of identifying smelters for the other minerals with significant progress made for sources of Gold (around 30% of declared smelters are now certified).

In parallel, the EICC revised its Due Diligence tool at the end of 2012 to include a pre-defined list of smelters. We found this to be an extremely valuable addition that will help us to accelerate the process of identification.

In order to engage all relevant departments within ST, we worked on defining internal roles and responsibilities with; global purchasing, wafer foundry, compliance, finance, corporate sustainable development, product quality excellence and group external communication. These will be formalized



# Jérôme Roux

Corporate Vice President, Global Procurement and Outsourcing ST Ang Mo Kio BHQ (Singapore)

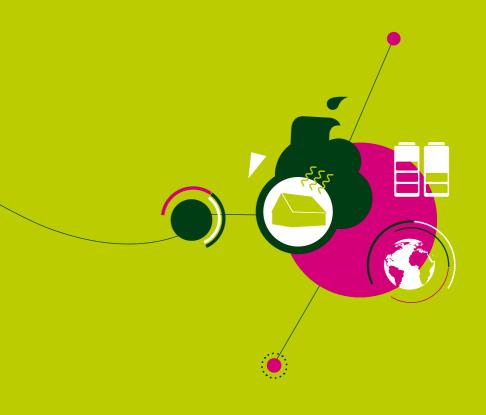
"This is a challenging activity since our Procurement supply chain is wide and complex with various and numerous materials suppliers and subcontractors involved. Awareness and responsibility are the drivers we are diffusing and engaging with all the actors of that chain, relying on a collaborative

approach and continuous monitoring. We in ST are well engaged in the deployment of the Conflict Free Minerals Program and have established robust company management systems by adopting a conflict minerals policy, defining systems of controls and suppliers risk assessment."

CONFLICT-FREE MINERALS	2012
Number of materials suppliers and subcontractors involved in the EICC-GeSI Due Diligence survey	168
Number of suppliers and subcontractors that are associated with at least one 3TG metal (involved suppliers)	88
% (number) of involved suppliers and subcontractors that have completed the EICC-GeSI Due Diligence survey	100 (88)
Number of smelters identified in ST's raw materials supply chain	74
Number of smelters identified in ST subcontractors' supply chain	102
% of ST Tantalum suppliers that use conflict-free smelters	100



# The Environment



ST Environment involvement







85% increase in our purchase of green energy



Water recycling in 2012 vs 2011



Achieving ISO 14064

# **GHG** Emissions from Operations

ST is committed to managing and reducing its direct and indirect greenhouse gas (GHG) emissions, including perfluorinated compounds (PFCs), from its manufacturing and other business operations, in accordance with scopes 1 to 3 of the GHG Protocol.

Since the early 1990s, reducing and adapting to climate change have been core elements of our environmental strategy. We have implemented a multifaceted approach that takes all aspects of the value chain into consideration, working with stakeholders, wherever possible, to bring about emission reductions.

# Mitigation of global warming

Since 1995 and its first EHS Decaloque. ST has consistently delivered annual decreases in the level of greenhouse gases emitted from its manufacturing activities.

### **Emissions**

More than 90% of our direct emissions result from the use of PFCs in our manufacturing processes<sup>1</sup> ST has a carbon roadmap to help us achieve direct emissions neutrality by 2015. We have faced difficult economic times over recent years and acknowledge that our strategy needs to be reviewed. We are committed to the World Semiconductor Council's 2020 climate change targets to decrease our normalized emissions by 30% from a 2010 baseline. We require all new processes and tools adopted by our sites to be equipped with abatement systems. ST also has an investment strategy to upgrade existing equipment, providing US\$ 2million for abatement devices in 2012 for ST Ang Mo Kio (Singapore) and ST Crolles (France) factories. PFC reduction is also achieved through the development of greener manufacturing techniques, the optimization of process recipes and the replacement of high Global Warming Potential (GWP) gases with lower or GWP-free alternatives. ST gained ISO 14064<sup>2</sup> certification of its scope 1 and scope 2 emissions

based on 2012 results. ST's programs on scope 2 and scope 3 of the GHG Protocol are further detailed in the Energy Management, and Transport and Logistics pages of this Report.

# **Compensation and reforestation**

To offset the remaining emissions, ST has developed at company level reforestation programs in Australia, Morocco, Texas and Italy. Our internal methodology to calculate the CO<sub>o</sub> sequestrated by these programs was verified in 2010 by a third party, MWH. In 2012, the 9,000 hectares of trees planted in 2002/03 have sequestrated 298 ktons of CO<sub>a</sub>, compensating around 53% of our direct annual emissions.

At local level, our sites are very active in regional reforestation programs. ST Calamba (The Philippines) has set a target to plant 20,200 trees by 2020. Partnering with local associations, ST volunteers planted 5,000 native and medicinal trees in 2012. In Singapore, ST sponsored the Singing Forest project to reintroduce 38 indigenous tree species to attract more native birds back to the

# Adaptation to climate change

As well as reducing our impact we must also adapt to increase our resilience to climate change.

## Risk management programs

ST has two key programs to mitigate risks associated with climate change and to ensure it is able to respond. Our Enterprise Risk Management (ERM) program plays a key role in identifying and assessing climate-related risks. We have also developed robust Business Continuity Plans (BCPs) which are implemented by each site to prevent and protect against climate change and natural disasters.

### Carbon risk assessment

In 2012, a climate change exposure risk assessment was conducted at corporate level across all of our manufacturing sites. The scope of this assessment covered our entire value chain, enabling ST to assess, map and test assumptions for direct and indirect emissions in order to evaluate our overall carbon footprint.

ST annually participates in the Carbon Disclosure Project. On the CDP Investor, we achieved a score of 92/100 which ranked us 2<sup>nd</sup> in Italy and 2<sup>nd</sup> in the IT sector in France. Moreover, for the first time ST was included in the CDP's Climate Disclosure Leadership Index (CDLI).

- 2. See focus page 413. For more information, see Governance pages 7-9

# Performance against objectives



• Reduce absolute PFC emissions by 30% in 2020 from 1995



• Offset the remaining direct CO<sub>2</sub> emissions through reforestation or other sequestration methods, to reach carbon-neutrality of direct CO<sub>2</sub> emissions by 2015



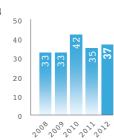
# Paul Simpson

Chief Executive Officer, Carbon Disclosure Project (CDP), London (UK)

"Companies that make the CDP's Climate Disclosure Leadership Index have demonstrated strong internal data management practices for the measurement of greenhouse gas emissions and energy use. They are also giving clear consideration to the business issues related to climate change and their exposure to climate-related risks and opportunities. This is vital to realising greater efficiencies, protecting the business from risk and capitalizing on opportunities."

CO<sub>2</sub> emissions: normalized values (kTons CO<sub>2</sub> / production unit) / EN16 / Dec. 3.0

Baseline 100 in 1994



SUMMARY OF NET CO <sub>2</sub> EMISSIONS (ktons) / En16 / En17 / En18 / En29 / CD Dec. 3.1 / CD Dec. 3.2 / CD Dec. 3.4	2008	2009	2010	2011	2012
Direct emissions (scope1)	536	393	551	626	561
Direct emissions due to PFCs (FE+BE)	493	352	519	595	527
Direct emissions due to boilers	43	41	32	31	31
Direct emissions due to direct transportation	-	-	-	-	3
Indirect emissions (purchased electricity) (scope2)	882	876	907	903	828
Other indirect emissions (transportation*)	89	104	126	116	107
Total emissions**	1,507	1,373	1,584	1,645	1,497
Sequestration due to the implementation of reforestation projects	176	215	249	277	298
Total direct net emissions	360	178	302	349	263

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





# Water

# Management

ST is committed to reducing water use and ensuring high standards of effluent and waste water treatment, together with identifying and managing water-related risks and opportunities, including impacts on local communities.

ST and its stakeholders view water management as a critical component of any sustainable growth strategy. Identified as a key issue in the first release of ST Environment Health and Safety Decalogue, we implemented a water strategy covering all operations, and have reduced our water footprint by 72% since 1994.

# Water strategy and programs

# 3R approach: Reduce, Recycle,

To maximize the use of each drop of water, ST's conservation strategy is based on the 3R approach. We include water conservation features in the design of our facilities, and our manufacturing processes are constantly upgraded to meet more stringent water reduction targets. Each site regularly monitors its patterns of water usage and we constantly develop innovative measures to save water by aligning the operating procedures with the best equipment and processes.

# **Treatment of water discharge**

Waste water is treated in dedicated treatment plants, either located on-site or developed in collaboration with local authorities to remove polluting substances such as fluoride, which cannot be treated by municipal plants. Once it has obtained a sufficient level of purity, and any risk of pollution is eliminated, it is discharged into the natural environment.

# **Water risk mitigation**

# Water scarcity assessment

ST operates a worldwide network of Front-end and Back-end plants. In 2011, to assess and map the water risks related to our operations, we

conducted a preliminary evaluation using the World Business Council for Sustainable Development Global Water Tool. In 2012, we complemented this approach and conducted a water risk assessment at corporate level for all our manufacturing sites in order to further analyze and test assumptions for direct and indirect water use in order to evaluate ST's overall water footprint. Partnering with Quantis, this exercise reviewed the entire value chain, from raw material production to product use and end-of-life.

The assessment, using the Pfister water stress index and the Global Water Tool. identified that 42% of ST's sites are located in water stressed areas. Based on this study, we weighted the sites' water use by the local water stress level to prioritize our potential risks, evaluating also quantitative impacts related to human health and ecosystem quality. ST also mitigates risk through internal Business Continuity Plans that involve mapping risks, taking into account local factors, and linking them to our measured KPIs.

## Supply chain water management

Mapping water-related risks in the supply chain is a complex process due to the

large number and diverse locations of suppliers and subcontractors. To overcome these challenges, ST deploys several initiatives:

- ST has been a full member of the Electronics Industry Citizenship Coalition (EICC) since 2005 and assesses the performance of key suppliers and subcontractors via an annual Self-Assessment Questionnaire1 that includes questions on water management;
- Internal knowledge-sharing to reinforce our overall risk assessment process;
- Regular engagement with stakeholders including industrial associations and sustainability initiatives.

## **Collaborating with local** communities

ST has a long-standing reputation for engaging with communities in areas where our operations are based. Our sites work closely with local stakeholders to reduce water extraction and consumption, and to ensure sustainable community development.

# Performance against objectives



• Reduce water draw-down (cubic meters per production unit) by 5% per year



• Achieve an overall Company recycling rate of 45% by 2015



• Conduct a water risk and opportunity assessment for each manufacturing site by 2012



RECYCLED AND REUSED TOTAL WATER / EN10 / ( DEC. 2.2	2008	2009	2010	2011	2012
Total water used (1,000m³)	27,791	25,622	27,736	29,113	28,315
Water recycled and reused rate (%)	34.53	36.20	37.29	40.53	42.96

TOTAL WATER DISCHARGE / EN21	2008	2009	2010	2011	2012
Water discharge (1,000m³)	14,931	12,867	14,000	13,650	12,444
Treated in ST waste water treatment plant (%)	76	75	73	74	76
Treated in external waste water treatment plant* (%)	51	43	57	55	54

Quote

(\*) Part of this water has already been treated in ST waste water treatment plant, meaning that 100% of water discharge is treated

### Consumption of water (m³ per production unit): normalized values / EN8 / Dec. 2.2 Baseline 100 in 1994





# Yves Loerincik

Chief Executive Officer, Quantis, Lausanne (Switzerland)

"Responsible water management within a business's direct operations and supply chain has become a mandatory pillar of any sustainability strategy. Water risks, closely linked to climate change, together with reputational and regulatory risks are on the increase. ST, in collaboration with Quantis, performed a water risk assessment using lifecycle analysis in 2012, to prioritize the actions required to manage and mitigate these risks. This work needs to be updated to reflect the ever-changing landscape of our world. In particular ST should focus on water-related risks within its supply chain."

# Recycling 45% of our water at Back-end sites



<sup>1.</sup> For more information, see Management of sustainability in supply-chain, pages 54-55

THE ENVIRONMENT

# Energy Management

ST is committed to reducing its energy consumption and carbon footprint from its operations through energy efficiency and conservation programs, along with the purchase of CO<sub>2</sub>-free and renewable energies. To mitigate its business exposure to climate change, ST carefully monitors and anticipates changes in the energy market.

# **Energy strategy**

Responsible energy management has been a key pillar of ST's environmental strategy since our first Environment, Health & Safety Decalogue was launched in 1995. Our multi-faceted strategy is supported by a culture of Sustainable Excellence, and covers:

ST's strategy incorporates both the

generation and purchase of green energy.

# **Energy sourcing**

Our energy sourcing department monitors and anticipates regulation, along with energy needs and prices for each of our sites. When purchasing energy, we take into account both financial and environmental considerations. In 2012, for economic reasons ST's wind farm, located in the south of France, was taken over by a major energy supplier. We are committed to increasing the amount of green energy purchased worldwide. In 2012, 7.4% of the energy purchased by ST came from renewable sources compared to 4% in 2011. ST also encourages sites to install greener energy technologies, such as solar panels, which generated 2.1 GWh in Catania (Sicily) and 50,000 kWh for both our Grenoble (France) and Geneva (Switzerland) sites in 2012.

# **Energy consumption**

Production fluctuations greatly impact energy use, and have affected our energy performance in 2012. We acknowledge that whilst ST continues to reduce its energy consumption, it is becoming increasingly difficult for us to make significant improvements and achieve our EHS Decalogue targets which we set more than 15 years ago.

Before any new major facilities equipment is purchased it is assessed under the TCOO (Total Cost of Ownership) framework which evaluates the total cost of the equipment acquisition, maintenance and energy consumption over a ten year period. ST Crolles (France) used the TCOO process to select a new supplier for Uninterruptible Power Supply¹ (UPS) equipment (higher purchasing cost). We predict this will reduce our energy consumption by 48% over a ten year period.

# **Energy efficiency and conservation**

For nearly 20 years, ST has been reducing its energy usage and gaining efficiency through regular upgrades of its existing equipment and manufacturing processes. In 2012, Front-end sites consumed 70.4% of ST's total energy consumption. Conservation efforts at these sites during the same year reduced electricity consumption by 1.4%, equivalent to 20 GWh and US\$ 2.6m. Efficiencies were achieved for example, by improving the water cooling process optimizing chiller performance; and also by finding the optimum balance between humidity, temperature and laminar flow velocity in our clean rooms.

ST sites also raise employee awareness through regular energy conservation campaigns and by participating in environmental events. For example, in 2012 our Singapore offices took part in Earth Day.

# ISO 50001 certification of Front-end sites

Beyond the ST Decalogue targets, we have set ourselves the challenging goal of achieving ISO 50001<sup>2</sup> certification of all Front-end sites to increase energy efficiency, reduce costs and improve overall energy performance. We plan to certify six Front-end sites by July 2013.

Sites in Agrate, Catania (both in Italy) and Rousset (France) have been ISO 50001 certified since 2011. All sites achieved zero non-conformities. The certification process involved developing tools to systematically measure the energy consumption of each piece of equipment (e.g.: buildings, chiller and compressed dry air equipment), and analyze the site's overall energy usage. A common platform, which, includes a documentation database, reporting tools and processes has been developed and shared internally to promote best practice. From an initial US\$ 300k investment, ST estimates that the certification process will contribute to 14 GWh of energy and US\$ 2m in savings.

# Performance against objectives



 Reduce energy consumption by 5% (per unit of production/year compared to the 1994 baseline)



• Increase our green energy purchase up to 7% by 2012



 Formally include criteria on energy efficiency and use of CO<sub>2</sub> emission-free and/or renewable energy as part of the evaluation/ selection process in all tenders for energy and facilities contracts in 2012





# Wilfried Ataé

Energy Efficiency project manager, Industrial Services of Geneva (SIG), (Switzerland)

"In 2012, ST enrolled in AMBITION NEGAWATT, an energy efficiency program developed by the SIG - the Geneva public utility - which committed the Company to the sustainable management of energy at its Geneva office. By setting a target to reduce its electricity consumption and greenhouse gases emissions by 6% by 2015 (2011 baseline),

Consumption of energy (kWh per production unit): normalized values / EN4 / Dec. 2.1



ST joined 60 other engaged companies in the Geneva Canton who are helping to reduce carbon emissions. Since 2011, it is estimated that ST Geneva has saved 12 GWh in electricity and 700 tons of CO<sub>2</sub>

equivalent."

DIRECT AND INDIRECT ENERGY CONSUMPTION BY PRIMARY SOURCES / EN3 / EN4 / 🛄 3.3	2008	2009	2010	2011	2012
Breakdown of energy consumption (GWh)					
Electricity consumption	2127	1986	2018	2058	2041
Natural gas consumption	234	214	171	166	153
Others sources	0.00	0.00	0.00	0.00	3.77
Total energy consumption	2,361	2,200	2,189	2,224	2,197
Percentage of energy consumption due to electricity	90.09	90.27	92.19	92.54	92.87
Breakdown of energy sources (%)					
Green electricity purchased	2.04	2.63	5.79	8.56	7.38
Electricity produced by ST's windfarm	0.92	1.03	1.09	1.13	0.00
Photovoltaic and thermal solar electricity produced by ST	0.01	0.01	0.01	0.09	0.10
Electricity purchased from nuclear (CO2 free)	28.78	22.15	23.72	23.23	22.13
Electricity purchased from fossil fuel sources	58.34	64.48	61.57	59.53	63.27
Natural gas	9.91	9.70	7.81	7.46	6.96
Other fuels	0.00	0.00	0.00	0.00	0.17
Total	100	100	100	100	100

ııl

Green offices

at ST Munich

UPS provides emergency power to electrical equipment when the main power source fails. Even in off mode, they still consume energy.

ISO 50001 requirements include establishing, implementing, maintaining and improving energy management process.

# Chemicals Management

ST is committed to reducing and managing its environmental, health and safety risks, achieving legislative compliance and alignment with customer requirements. We base the selection, use and substitution of materials on the precautionary principle and our relevant specifications and procedures. We also aim for suppliers and subcontractors to be compliant with ST's

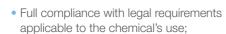


specifications and procedures.

# **Materials of concern** management process

ST has an integrated and proactive strategy to manage chemicals throughout its manufacturing activities and supply-chain within the ISO 14001 and OHSAS 18001 certification schemes, ensuring compliance with applicable regulation on chemical use and product chemical content.

We have been working on integrating the precautionary principle into the early stages of the selection of new chemicals. Before being introduced, chemical products are assessed against our banned, exempted and declarable substances specification. ST requires chemical risk assessments to be performed at all sites before introducing any new substance. Chemicals (liquid, gases and solids) are screened and evaluated based on hazard identification, engineering aspects and personal protective equipment in order to reduce the risk to the environment and employees' health and safety. ST procedures require the site's Chemical Committee to ensure:



- Facilities and equipment modification according to stringent technical standards;
- Availability verification of possible alternative materials and/or processes;
- Performance of medical checks on employees who may be exposed;
- Collection of industrial hygiene data.

To further enhance our approach, ST management systems will be progressively aligned with the IECQ QC 080000 Hazardous Substances Process Management System Requirements (HSPM) standard1.

# **Substances reduction,** replacement and elimination

ST has been reducing its chemical usage since the late 90's by developing corporate and local reduction plans which included waste treatment and recycling across all ST sites. Since 2000, this focus on chemicals usage reduction has been maintained with an overall percentage decrease of more than 5%

To comply with REACH legislation, ST has developed a substance substitution strategy and detailed roadmap for Frontend and Back-end sites. To date, we have replaced 6 regulated substances.

# **Chemicals and our employees**

People safety is our first concern. ST has strict rules regarding chemical handling to protect employees' health and create a safe manufacturing environment. In 2012, ST prepared a training course to heighten the understanding and awareness of ST chemicals management and chemical risk assessment processes amongst manufacturing, operational and product group managers. It will be deployed to approximately 2,000 employees in 2013.

# **Management of chemicals** in ST's supply chain

ST's banned, exempted and declarable substances list includes more than 1,600 substances. ST assesses the alignment of key material suppliers and subcontractors with this list by requesting a legal statement and evidence to support compliance. Management of chemicals is also integrated in the Supplier Performance Evaluation (SPE) conducted twice a year. Under SPE, we request improvement plans if a supplier's score is below the target or does not meet ST standards.

<sup>1</sup> For more information on HSPM, see article on Product Stewardship – Compliance, page 33

DEPLOYMENT OF ST SUBSTANCES SPECIFICATION TO KEY SUPPPLIERS AND SUBCONTRATORS (%)	2008	2009	2010	2011	2012
Response rate from key partners	100	100	100	100	100
Full commitment from key partners to ST substances specification	92.5	93.0	91.0	98.5	99.0



# Steve Bishop

Director, Implant Technologies Materials Solutions, ATMI, Suwon (Korea)

"In 2012, ATMI worked together with teams at ST Crolles (France) to change from Carbon Dioxide to Carbon Monoxide gas on the silicon wafer carbon implantation process. ATMI designed a Vacuum Actuated Cylinder to deliver carbon monoxide without the risk of gas leakage. The new process decreased contamination, maintenance frequency and employee exposure. This implementation has significantly improved carbon implantation productivity (increase of 7% in manufacturing capacity plus savings of US\$ 50,000 per year) and gas safety at Crolles."

# Substance replacement at ST Calamba (The Philippines)

In 2010. Potassium Chromate was classified as a candidate Substance of Very High Concern (SVHC) by the European Chemical Agency (ECHA) for future inclusion in Annex XIV of EU REACH<sup>1</sup> regulation. Anticipating legislation, that will restrict the usage of this substance in the next years, ST had already phased out this substance across all ST sites by 2008, with the exception of ST Calamba site that joined ST in 2008 and which still used the chemical for an essential quality process on copper analysis.

Aligning with ST standards, the site prepared a detailed substitution plan in 2010, identifying the possible technical solutions for replacement. As the use

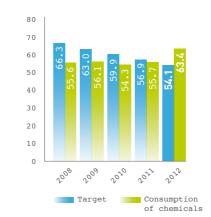
was very specific, ST Calamba could not benefit from other ST site experiences. Close cooperation with the supplier was undertaken to substitute and completely phase out Potassium Chromate from Calamba's manufacturing lines. After extensive testing, to ensure that process reliability was not affected, a suitable alternative substance has now been approved for this particular process. The replacement was finalized in February 2012.

Today, no ST site uses Potassium Chromate. ST moved beyond compliance with REACH in completely phasing out this substance.

1. Registration Evaluation and Restriction of Chemicals (EC 1907/2006)

ELIMINATION OF SUBSTANCES OF VERY HIGH CONCERN (SVHC)	2012
Action plans completed on time for the elimination and reduction of Substances of Very	100%

Consumption of chemicals (kg per production unit): normalized values / EN1 / CD Dec. 2.3 / Baseline 100 in 2000



2009/2010 figures changed from previous publications

# Performance against objectives



• Reduce total consumption of chemicals by 5% per year (weight per production unit)



• Strive towards continuous reduction and elimination of Substances of Very High Concern in our processes



• Ensure 100% of key suppliers and subcontractors fully commit to ST specifications and procedures (through ST Banned and Exempted Substances specification).



• Strengthen our management of materials of concern in our manufacturing processes through Chemical Risk Assessments

# Waste Management

ST is committed to continuously reducing, re-using, recycling and managing waste streams from manufacturing sites including hazardous substances, metals, packing, plastics and other non-biodegradable materials.

Waste management, including the treatment, transportation and elimination of hazardous waste from manufacturing, is a strategic environmental focus for every ST site.

# **Waste performance**

Since 1995, we have set ambitious targets in ST Environmental Health and Safety (EHS) Decalogue to increase the re-use and recycling of materials, dispose of waste safely and to minimize waste to landfill. In 2012, 91% of waste generated was recycled and re-used, while 4.6% was sent to landfill. Whilst these figures indicate the continuous progress we have made in our waste management performance over the last 15 years, it is becoming increasingly difficult for us to find additional ways to continually improve our performance and meet our Decalogue targets. In 2012, our performance has been impacted by the difficulty to find a viable recycling partner to revalorize a concentrated sulfuric acid waste (due to production increases and manufacturing changes) at our Crolles site (France). The EHS team appointed a partner, and the site managed to reach ST's Decalogue target in December. To secure the process, the site is looking for a second partner.

## Waste strategy

ST's EHS Decalogue requires that all sites meet stringent national or local



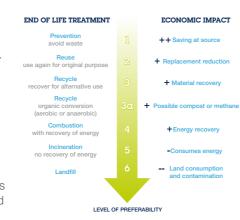
regulations or ST's internal standards, whichever is the more stringent. We established an integrated process for the environmental management of waste covering compliance, monitoring of the quantity of waste produced each year, data collection and reporting, and strict controls over the whole process. We also evaluate waste storage, recycling, treatment and disposal of subcontracting and waste transport companies.

ST's waste strategy covers all waste streams, from operations (metals: plastics, chemicals, etc.), surrounding activities (offices, canteen, etc.), and products<sup>1</sup>. In 1999, ST introduced a seven-step ladder to ensure the appropriate end-of-life treatment for each waste stream, based on its economic value and ecological impacts. Most hazardous waste is recycled or re-used and the remaining waste is safely disposed of by authorized companies. As in previous years, none of our sites exported hazardous waste in 2012, in accordance with the Basel Convention.

ST goes beyond EHS Decalogue targets through initiatives to revalorize office and

canteen waste in partnering with local subcontractors to increase organic waste composting and recycling of cardboard, bottles and cans. In 2012, ST Grenoble (France) installed a biotechnological solution to treat liquid canteen waste, and reached an abatement ratio of nearly 100%. A cocktail of organic bacteria is added to the waste on a daily basis to break down and treat the effluent, saving ST the equivalent of 2,000 litres of water, 20 tonnes of CO<sub>2</sub> and US\$ 15k per year.

### Ladder Concept Synthesis of European Union Strategy for Waste Management Apendix 3



# Performance against objectives



• Reduce the generation of waste by at least 5% per year (kg per production unit)



• Reduce the generation of hazardous waste by at least 5% per year (kg per production unit)



• Re-use and recycle at least 95% of waste



• Reduce landfill waste to less than 2%

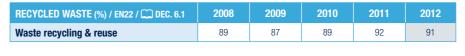
# ...Waste is profitable at ST Kirkop (Malta)

Implementing a comprehensive waste treatment process on the Island of Malta is a challenge due to strict European regulations, restricted market availabilities and a range of waste types. ST Kirkop experts have overcome these challenges and developed innovative solutions to manage waste streams. Since 2003, 100% of the site waste has been recycled or reused. Waste management is even turned into a profitable activity,

contributing to nearly US\$ 4m in 2012. To achieve this, they implemented a thorough waste segregation and collection process storage in secure depots and recording waste data using an online waste management database. All waste streams are video monitored and performance is automatically inputted in to the database, enabling real-time management. Where possible, ST Malta recycles glass, paper, resin,

plastics, biodegradable waste, etc. locally. It then sells other manufacturing and treatment waste (scrap metals, frames, sludge, etc) to specialized contractors in mainland Europe to ensure waste receives the best reclamation treatment possible. ST Malta's waste management system is regularly monitored by the Maltese Environment and Planning Authority.

Landfill waste / EN22 / Baseline 71 in 1994



WASTE (TONS) / EN22	2008	2009	2010	2011	2012
Total hazardous waste	12,756	9,391	11,365	10,415	12,624
Total waste	46,314	33,439	40,775	38,593	37,511

2008/2011 figures changed from previous publications following data review

5	5.0
3	3.3
2	2.0 2.0 2.0 2.0
1	
0	208 209 2010 2011 2012
	Target % of total waste Our fourth decalogue

launched in 2010 contains



# Shane Belvin

Product management Director. Iron Mountain, Boston (USA)

"US businesses use about 21 million tons of paper every year. Iron Mountain's secure shredding program meets ST's request to address its paper-based information destruction challenge in an environmentally-friendly monner. After we securely shred information, the processed materials are transported to paper and tissue mills for pulping. This destruction process provides both security and environmental benefits by reducing pollution, preserving landfill space and saving trees, water and oil resources.

Total environmental benefits generated by the material recycling of the ST's thirteen sites located in the America region<sup>2</sup> in 2012<sup>3</sup>:

### 01/2012 - 12/2012



2. US (Coppell, Santa Clara, La Jolla, Longmont, Scottsdale, Burlington, Livonia, Kokomo, Redmond and Piscataway)

<sup>1.</sup> Product-related waste is detailed in the product

# Transport & Logistics

ST is committed to managing the social, safety and environmental impacts resulting from transportation and logistics for products, materials and employees, considering overall efficiency and reduction of CO<sub>2</sub> emissions.



# **Product transportation** and logistics

At ST, transport represents 7.2% of total CO<sub>a</sub> emissions and we have a range of initiatives and programs to minimize both our direct and indirect CO<sub>2</sub> emissions, as covered by Scope 3 of the Kyoto Protocol. Product transportation includes the transportation of semi-finished and finished goods between ST sites and its customers, and the transfer of equipment during manufacturing processes. We optimize and regularly update routes to align with business strategy, economic fluctuations and customer demand.

## **Transportation network**

ST's strategy is to explore all opportunities to make direct deliveries of finished goods from manufacturing plant to the customers, while optimizing internal routings to minimize transportation. To reach our 2014 target, ST is implementing several options:

- Review long haul flight (>2.000km) to short haul flight (<2,000km) or truck, as they account for almost 90% of ST transport emissions;
- · Adopt direct shipment where manufacturing origin and delivery point are in the same region e.g. direct shipment from Back-end plants to our Hong Kong distribution hub (3,000km average reduction in flight distance);
- Review all short haul airfreight for opportunities to use alternative modes of transport, either switching to road or using the Europe multi-modal network model. Short haul airfreight has the highest level of transportation CO<sub>o</sub> emissions. The flight traffic for ST in Asia represents 10% of our total transportation emissions and so, in

2012, to reduce flight dependency from Singapore to our Shanghai hub, a re-routing plan has been agreed with the logistics provider that reduced transport emissions by 2.4%.

# **Packing optimization**

ST's lean packing program commenced in 2010, aims to optimize package design and transportation at all manufacturing sites to decrease logistics costs, air-freight space and CO<sub>2</sub> emissions. ST classifies four packing levels:

- 1st level: Product (reel or tray);
- 2<sup>nd</sup> level: Inner box (bulk), in which the product is packed;
- 3rd level: Outer box (carton), in which the bulk is packed:
- 4th level: Container (skid or pallet), in which the outer box is packed.

Global Logistics & Warehousing Organization (GLWO) teams continued optimizing the third level packing, with a particular focus on Asian Back-end sites. In 2012, two new outer cartons have been designed to fit the 13" tape and reel bulks, which accounted for 86% of the total non-optimized weight at the third level packing.

ST also started to align its packing material with the ECOPACK® levels, to ensure a minimized environmental impact of ST's overall product chain<sup>1</sup>.

# **Employee commuting**

At local level, many of our sites deploy employee mobility programs, offering alternative solutions to the use of individual cars. Incentives are provided to encourage employees to use the greener networks.

Many transport initiatives are conceived and developed at local level, for example ST Paris (France) shares in a transport community with other companies to create common transportation plans.



1. For more information, see Product Stewardship/

# Optimization of road haulage in Shenzhen (China)



 Optimization of the inbound dice shipment traffic with road freight frequency being lowered from a daily service to a three times per week. This single initiative eliminated the need for 208 trucks and 8,320 kilometers of road transportation;

- Deployment of smaller trucks to increase the efficiency and utilization of movements between Shenzhen and ST's regional distribution center for local delivery and Chinese customers in Hong Kong, decreasing road freight CO<sub>o</sub> emissions by 21 tons;
- Removal of the return load capacity from Hong Kong to Shenzhen, reducing road transportation by 3,400 km.

In 2012, ST Shenzhen achieved a CO<sub>2</sub> road freight footprint decrease of nearly 3% while maintaining a high level of service. Driven by a continuous improvement mindset, the team is exploring further efficiency opportunities.





# Prem Sharma

Transport Services Deputy Manager, ST, Greater Noida (India)

"To commute from home to work, more than 80% of ST Greater Noida's 1,350 employees use company transport every day which is heavily subsidized. To lower pollution emissions, all ST's coaches run with compressed natural gas, covering 46 routes that offer a balance of convenience, timing, cost and environmental impact. As certain roads in the outskirts of Indian main cities can be uncomfortable, we have also equipped coaches with air suspension to improve employees' comfort and wellbeing of women on the familyway. Our goal is for 100% of our employees to commute in this way, but changing people's habits takes time. We must be patient and continue our efforts in this area."

# Performance against objectives



• Reduce the carbon footprint of ST product transportation by 15%



• Ensure that all sites have a formalized mobility plan to promote alternative and greener modes of transportation and evaluate

CARBON FOOTPRINT OF ST PRODUCT TRANSPORTATION*	2010	2011	2012
Transport component of ST's total CO <sub>2</sub> emissions (%)	8.1	7.4	6.9
CO <sub>2</sub> emissions due to product transportation per year (ktCO²)	110.00	99.42	82.87

\*Values reviewed in 2010 after a revision of methodology to estimate the annual carbon sequestration

CARBON FOOTPRINT OF ST PRODUCTS PER MODE OF TRANSPORTATION	2012
Air <2000km	0.11
Air >2000km	0.89
Road	0.16
Ocean	0.00

PACKING DENSITY REDUCTION	2010	2011	2012
Packing volume reduction (compared with a baseline of 100 in 2010)	100.0	96.7	93.9

EMPLOYEE MOBILITY PLAN	2012
ST sites with an employee mobility plan (%)	56
Employees covered by a mobility plan (%)	48.09
Modes of transportation proposed to employees	Private and public buses, trains, bikes and electrical bikes, car-pooling networks, shuttles, taxi service for employees working late



# The Community



# ST Community involvement









**\$** Total contribution

US\$8,5 million

# Management of Sustainability in the Supply Chain (-)

ST suppliers and subcontractors are required to commit to ST and EICC policies and standards, comply with legislation and meet customer requirements. This includes managing health, safety and the environment, along with social and ethical aspects. These partnerships contribute to raising the overall levels of corporate responsibility across the electronic industry's supply chains.

# **International pressure** on suppliers

The United Nations Guiding Principles on Human Rights and ISO 26000 are driving companies to extend their corporate responsibility programs to cover their whole supply chain. In 2012, the international context, as well as laws such as the Dodd-Frank Act, also caused the intensification of requirements by customers onto ST as a supplier. Similarly, this triggered ST to increase controls on its own suppliers and to drive and support them on their improvement path for greater compliance, rigor and transparency, thus spreading our commitment to environmental, health, safety, social and ethical standards. Our approach to Conflict-Free Minerals and Chemical Management within the supply chain is described in dedicated

# **Supply chain sustainability** management program

sections of this Report.

While we have continued to deploy sustainability management programs to our supply chain partners, we have globally reinforced our process. We have implemented new policies and specifications and increased their scope, for example by requesting suppliers to provide KPIs and more visibility on their own sustainability programs. Migrating to the EICC-ON platform has also enabled us to track our suppliers' environmental, health safety and social performance more easily.

Supplier Performance Evaluation the backbone of our management process

has been rolled out to all our key suppliers. It aims to identify and resolve supplier issues through close monitoring and regular supplier interactions. It consists of a global evaluation which incorporates EICC-ON results and a follow-up plan: We provide extensive feedback and work with our suppliers to define and implement effective improvement plans: All the sections at risk and the critical questions

are studied, then a follow up plan is put in place to look for solutions, leveraging on various tools including a Pareto; Progress against the follow-up plan is monitored and any weakness found with one supplier will trigger a review of all other similar suppliers.

We also extended the EICC-ON Self-Assessment Questionnaire to include some key equipment suppliers and we

# Performance against objectives



• Ensure 80% of suppliers (by purchasing volume) are involved in the EICC compliance program (annually)



• Ensure none of these suppliers are classified "high risk" based on Self-Assessment Questionnaires (SAQs)

- Continuously reduce the number of non-conformances arising from SAQs and audits
- Ensure 100% of ST major sites deploy the EICC approach to local suppliers



• Progressively deploy our Sustainable Procurement program



• In 2012, deploy the Green Procurement guidelines in Italy



- In 2012, deploy the "Charter for Sustainable Purchasing" to French suppliers
- Promote fair access to business opportunities for Small and Medium-sized Enterprises (SMEs) by encouraging purchasing departments at French sites to include SMEs in tenders



• By the end of 2012, define and deploy internal tools to track ST part of business with these actors

engage with all of our suppliers to encourage them to adopt ESH management systems and to report on safety, water, energy, waste and climate change performance.

# Our improvement path

In 2012, while we continued our improvement path, focused on expanding the volume of business, the areas covered and the number of suppliers involved in our sustainability management program, lower priority was given to 3 activities: green purchases, water management and sustainability audits.

Supplier Self Assessment Questionnaires results in 2012 highlighted a need for improvements to be made to our purchasing program, which we plan to achieve by reworking our guidelines and extending our requirements.

Our strategy for supplier audits is to involve low performing suppliers, prioritized using the following internal criteria: purchase volume; plant location; type of activity; SAQ results. Concentrating on our Back-end subcontractors, we have been able to verify the performance of our subcontractors for 53% of our purchasing volume through third party audits. Audits are a load we cannot easily absorb, so we engage our suppliers on the path of certifications such as the ISO14001, the OSHAS 18001, etc.

TOTAL NUMBER OF SUPPLIERS AND SUBCONTRACTORS' SAQ'S BY LEVEL OF RISK	Low Risk	Medium Risk	High Risk	Average Score
Back-end Materials Suppliers	79	18	0	88.90
Front-end Materials Suppliers	61	22	0	83.30
Subcontractors Back-end	36	6	0	89.40
Equipments	8	5	0	87.90
Subcontractors Front-end	8	0	0	89.00
	102	51	0	

# Suppliers SAQ's average scores by EICC Code of Conduct section

FACILITIES SAQ'S SCORING BY MAIN SECTIONS* (%)	2012
Health & Safety section	90.2
<b>Environment section</b>	86.8
Labor & Ethics section	87.9

(\*) Electrical energy consumption, Waste, Water use, GreenHouse Gases emissions, Safety Recordable Rate & Severity Rate, employee based on priorities and business case

EHS & SOCIAL KPI'S DEPLOYED FOR SUPPLIERS*	2012
Number of FE Materials suppliers engaged in reporting	18
Number of BE Materials suppliers engaged in reporting	45
Number of Key BE Subcontractors plants engaged in reporting	24

88.90%

# Sharing our data on a new platform The evolution of the Labour Rights model with the release Quote

of the EICC Code of Conduct Version 4 was an important development deployed throughout our supply chain in Q3 2012. Deploying the revision required extra bandwidth and efforts, but we consider that integrating updated requirements and practices to all our supply chain is absolutely necessary, and it has been a satisfaction for us to successfully manage this evolution.

We managed the migration of our supplier database to the new EICC-ON platform, with subsequent good participation rate from our suppliers on the new tool. We sent the new code and engagement letters to our suppliers in August, triggered the return of more than 240 SAQs representing an important percentage of the business by market, and more than 150 facilities. This corresponds to more than 90% of our Front-end / Back-end materials and of 90% of our BE subcontractors, well above our target, with the extra achievement of involving more than 90% of our foundries. Feedback was sent to suppliers through specific reports for each plant and remediation plans were requested for any identified issues. Focus was placed on higher risks, suppliers being supported to provide efficient mitigation plans.

At the end of 2012, 79% of SAQs were rated low risk, 21% medium risk. The average scoring across the three main SAQ areas (Labor & Ethics, Environment and Health & Safety) was 88.90%, exceeding the low risk target of 85%.

Otto Kosaalwies Executive Vice President - Company Infrastructure and Services ST Geneva (Switzerland)

"Sustainability has become a new challenge to supply chain competitiveness. Relationship with Customers and Suppliers as well as focus on new business opportunities are the foundation of sustainability activities. In this respect, the recent creation of a structured Business Continuity Plan at Company level will reinforce sustainability and strengthen our supply chain."

At ST, we are committed to conducting our business with the highest standards of ethics and integrity, as outlined in our company Code of Conduct.

# **Business Ethics and Compliance Standards**

Our company Code of Conduct sets out the Company's principles in the area of business conduct and ethics around Integrity, People and Excellence. These principles are the top-level reference for guiding our behavior and decision-making and apply to all people working in ST without exception. Business ethics, the respect of human rights, environmental responsibility and a sense of responsibility to all our stakeholders are a matter of personal integrity for each of us, and compliance is mandatory.

Some extracts from ST's Code of Conduct:

Integrity: we will conduct our business with the highest ethical standards, honor our commitments, deliver on our promises, be loyal and fair and stand up for what is right.

People: we will behave with openness, trust and simplicity; we will be ready to share our knowledge, encourage everyone's contribution, develop our people through empowerment, teamwork and training; each one of us will be committed and personally involved in continuous improvement.

Excellence: we will strive for quality and customer satisfaction, creating value for all our partners; we will be flexible, encourage innovation, develop our competences, seek responsibility and be accountable for our actions; we will act with discipline, base our decisions on facts and focus on priorities.

All managers also sign our Business Conduct and Ethics Policy annually to confirm on going awareness and compliance.

At STMicroelectronics, we are dedicated to conducting business with integrity, treating our employees with respect, and pursuing excellence to create sustainable economic value for all our stakeholders. We believe that how we carry out our business is as important as what we do. Therefore, raising the awareness of all our employees through training on subjects linked to our company's Code of Conduct is critical to us.

# **Business Ethics and Compliance** Training

In 2012, we focused on developing and delivering three main training programs focusing on:

- Foreign Corrupt Practices Act: in this course, participants were faced with situations involving possible instances of bribery or corruption; they learned to identify, recognize and deal with them. This training was created for senior ST managers.
- Conflicts of Interest: in this course, participants learned how to identify and manage potential situation of conflicts of interest. This training was developed for senior ST managers.
- Company Code of Conduct: dedicated training on the compliance to Company's Code of Conduct and its application was created and deployed to emphasize that in our daily activities it is vital to safeguard the Company against legal and ethical risks. This training targeted various profiles and levels of ST employees.

The above training modules were delivered through e-learning. In total, more than 7,200 people achieved a score of 70% or greater. exceeding our management target of 7,000.

# **Corporate Ethics Committee** and Misconduct Reporting **Framework**

# **ST's Corporate Ethics Committee**

The CEC was formed in 2007 and comprises ST Executives, nominated by the

In 2012, we re-defined our CEC's mission statement, authority and scope which were included in a revised version of the Committee's Charter, formally approved by the CEO. Under this revised Charter, the CEC provides guidance and recommendations to ST management and employees to help them comply with ethics-related policies, procedures and principles applicable throughout the Company.

The CEC's roles and responsibilities

- Review and update of ST's policy on Business Conduct and Ethics
- Assessment of the implementation of ethics and compliance programs
- Follow-up on ethical breaches and allegations
- Issuing guidance on ethical dilemmas

In its capacity described above, the CEC has responsibility for all ST business units along with majority-owned subsidiaries, branches and affiliates.

The CEC has the authority to address questions, inquiries and documentation requests to any ST employee or executive under its jurisdiction. Confidentiality concerns cannot be used to deny the CEC access to information, except in situations involving a CEC member or a member of the executive management.

In case a situation would involve a member of the Corporate Staff, it would be communicated to the Chair of the CEC who ensures that they are properly handled and monitored by the CEO and/ or the Audit Committee of the Supervisory Board.

Due to its composition and authority, the CEC fulfills a crucial role in providing an independent evaluation of sensitive situations and in advising ST's top management accordingly.

ST Country and Regional Ethics Committees have been formed during recent years. Their roles are overseen by the CEC.

# ST's Misconduct Reporting Framework

ST's Misconduct Reporting Framework is defined in our Code of Conduct and disseminated throughout the Company.

"Every employee plays his or her part in how well we adhere to our Principles. If you think that our Principles are being violated, or if you have a problem applying them, please discuss with your Manager, your site Human Resources Manager, or your Site Manager."

In this context, we engender a management culture that enables employees to discuss concerns relating to adherence to our Principles in an open manner without fear of recrimination.

In addition, ST employees have two whistle-blowing reporting channels at their disposal:

 The Company Ombudsman's hotline. managed by a third party (KPMG) allows all ST employees worldwide to submit their allegations and complaints regarding accounting, internal control and auditing matters. The contact details necessary to communicate with the Ombudsman (toll free phone numbers, emails and postal addresses) are available in ST's Business Conduct and Ethics Policy.

incidents still open as of 2012 year end

 An internal hotline which ST employees are encouraged to use if they require more support to have their issue properly addressed, or if they have a suggestion about our Principles. All emails sent to the hotline are received directly by both the Chairman of the Corporate Ethics Committee and by the Corporate Vice President Human Resources. They are treated in confidence.

ST's response framework to misconduct allegations was significantly revised in 2012 and will continue to be improved over the coming years. Misconduct allegations are now centralized by the Chief Audit & Risk Executive. Information is provided at least quarterly to the Audit Committee of the Supervisory Board. the Corporate Ethics Committee and the Certifying Officers, which enables its recipients to follow up on the progress and conclusion of investigations conducted by the relevant functions depending on the nature of the allegation.

All ethical breaches reported through the Misconduct Reporting Framework, or identified through the internal control and monitoring frameworks (including but not limited to reviews by our Corporate Internal Audit Organization), are duly assessed.

The relevance, criticality and potential impact of each alleged or suspected breach are thoroughly examined to determine the appropriate level of remedial actions.

# Fraud prevention

Fraud and corruption prevention are also priorities for ST, assessed through a risk assessment conducted in 2012 by Corporate Compliance, in conjunction with Corporate Internal Audit.

# Performance against objectives



• Train 7,000 ST employees to increase awareness on key bribery and corruption topics (e.g. FCPA, Insider Trading, Code of Conduct, Conflicts of Interest) and reinforce internal controls.



• Communicate updated whistle-blowing channels to 1,000 employees in EMEA region in 2012 and employees from remaining regions in 2013

e-SIGNATURE OF BUSINESS CONDUCT	2008	2009	2010	2011	2012
AND ETHICS POLICY* (%)	92.00	94.50	93.90	90.30	93.40

(\*) eligible population = approximately 20% of total ST population

# . ST's involvement

Working with our sites, we have identified the main community involvement themes and topics. representing the five main areas where we seek to make a difference.

# Young generation and education

is the main area of involvement we identified across all ST sites. Support in this area may take many forms: internships/apprenticeships, student visits to ST sites, student sponsorship, supplementary teaching programs, computer summer schools, partnerships etc.

Innovation and high technology are key areas of involvement and include aspects such as design contests, robotics' cups, awards, training development, R&D clusters etc.

# Social welfare and charity

donations are organized at our sites and include: charitable event sponsorship, match funding of employee donations, support for natural disasters etc.

### **Environmental involvement**

includes: events to raise energy awareness, recycling and other environmental aspects, fund raising for reforestation or tree-planting days, participation in environmental conferences, sharing of good practices across communities etc.

**Economic development** includes: management networks and committees, coaching of Small and Medium Enterprises, support to start-ups etc.



In today's world, engagement between companies and their local communities is multifaceted, taking into account many diverse views and interests. Effective engagement has the potential to benefit many stakeholders, including local communities, government and other areas of civil society. Within ST, community involvement forms a central pillar of our culture with many site-based initiatives and activities providing social and environmental support.



In 2012, our company level focus was to

identify the initiatives being undertaken

across the Company and the ST sites

that are involved; and also to evaluate

In order to do so, we have decided

to become a member of the London

Benchmarking Group and adopt its

We organized two classroom training

community, one in Paris for our coor-

sessions for our Sustainable Excellence

dinators in Europe and the US, and one

in Singapore for our Asian contributors.

We also organized an additional training

session by conference call to employees.

This was a key step as the methodology

was new to us and we needed to ensure

a good understanding and appropriation

All ST sites contributed to list their

community initiatives, we conducted

the same exercise at corporate level

ology before undertaking evaluation.

and then validated a final list of eligible

initiatives according to the LBG method-

This considered cash contributions, the

volunteering time spent by employees,

in-kind donations and the management

costs associated with the various com-

**Community Involvement** 

our inputs to such initiatives.

methodology.

of the concept.

munity projects.

# Total contribution US\$ 8.5 million

400 initiatives worldwide

shown below:

- Involvement of 42 sites in 22 countries
- Community investment represents 0,1% of 2012 turnover

Some key figures from this evaluation are

- 4,515 ST employees volunteered their time
- 100,972 hours have been donated during company time
- Average contribution per employee is equal to US\$ 191

We will continue the consolidation of community initiatives each year. In 2013 we will start to evaluate the outputs and impacts generated by these projects.

# ST Foundation

Since 2003, the ST Foundation has helped to reduce the digital divide (the gap between those who have access to modern digital technologies, and those who do not) in both developed and developing countries through a worldwide computer literacy program, Digital Unify. As of the year to date, more than 176,443 persons have benefited from the program with the support of 3,112 trainers. In 2012, ST did not contribute financially to the Foundation but contributed in other ways, by donating computers and associated hardware that were used to equip laboratories set up under the Digital Unify program. A network of ST volunteers at our sites also provided training in prison and with the collaboration of local associations for people in need.







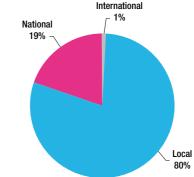
Jon Lloyd Head of LBG

"LBG is used worldwide, by companies that are serious about their corporate community investment, helping them assess the real value and impact of corporate community investment to both business and society. STMicroelectronics is to be commended on joining LBG to better understand its overall contribution, establish where it is making a difference and assess its impact. Since joining in October 2012, STMicroelectronics has taken significant steps to apply the inputs side of the LBG model and so measure and report its contribution; the next challenge is to begin to assess what this contribution achieves for both the community and the business.

# Why does ST contribute?

# International Charitable gift National

# At which level does ST contribute?



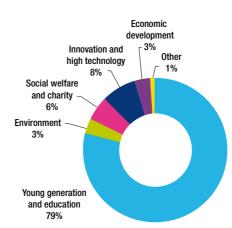
# Performance against objectives

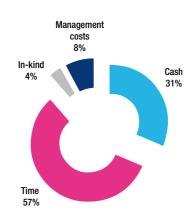


 Support ST Foundation's initiatives

 Formalize a company community engagement strategy and evaluate its impacts

# What does ST support?





# **How does ST contribute?**



THE COMMUNITY

# Partnerships in R&D & Education

We are continually looking for opportunities to strengthen our existing relationships and develop new

advance application and product development, for advanced research, the cluster organization (refer

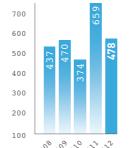
to our 2011 report for details) with poles in France, Italy and Asia continues to work closely with R&D and

educational organizations, reinforcing links, expanding scope and number of ST partnerships. In doing so,

we also increase young people's employability by providing them with access to PhDs, apprenticeships

partnerships in R&D and education. While we collaborate with our customers and competitors to

Partnerships with the academic community / S01 / EC1



Partnerships with universities, colleges, schools: teaching programs, internship programs and recruitment\*

(\*) In 2010, our data for partnerships with the academic (research labs, long term research contracts, any R&D programs...) and those dedicated to teaching or internship

Students were given the opportunity to design innovative applications using ST's latest iNEMO evaluation board and work with the same advanced technology that is powering the latest smart devices.

We also further strengthened our network of university partnerships, creating our latest Joint Laboratory for Innovation in Electronics with the Harbin Institute of Technology, one of China's most renowned universities. This Joint Laboratory's initial focus will be on smart-sensor applications. The collaboration is expected to expand to power management, medical and multimedia areas.

In India, ST also shared its expertise and reinforced its partnerships with the academic community. To help drive engineering curriculum development at universities and bring them up to speed with industry standards and practices, ST conducted free training programs on the STM32 microcontroller family for faculty members from partner universities or engineering institutes. In parallel, interns are managed through the RISE (Real-Time Interning with ST Expert) program, which includes engagement surveys during the internship and on its conclusion. In 2012, ST hired 19 of the 219 interns

In association with the IEEE Solid State Circuits Society. Delhi Chapter, ST also held workshops at our Greater Noida campus. Eminent professors and industry veterans presented lectures on topics of contemporary interest, providing a unique platform for the semiconductor fraternity in the national capital region of India to participate in extensive technical discourse.

Our program, "One day in ST, one day at school", launched in 2010 to increase students' interest in science, reached maturity in 2012. It aims to educate students on the vast array of scientific iobs available

Focus on local initiatives

There are two elements to the program: "One day in ST" takes groups of students aged 17 to 19 to one of ST's sites and fully immerses them, taking them on tours of the labs and manufacturing areas, as well as giving them technical presentations. "One day at school" involves ST employees visiting schools to talk about the company and its activities in a very interactive way, usually to very enthusiastic groups of 60-70 students aged 11 to 19. Twenty dedicated ST employees give their time to the project. In 2012, 8 schools visited the Agrate site and ST employees addressed over 500 middle school students. Several ST sites have put in place similar initiatives. They provide students with an insight into the realities of work and enlarge their inspiration for future careers.

The 'Innovation Cup' is a contest created by ST to leverage students' ideas and creativity. The 2012 edition proposed to create an innovative electronic product (excluding mobile phone applications) using ST technology that could be used in one of the 31 indoor or outdoor sports

ST technologies available to use included a wide range of sensors, cameras, geo-

localization, RFID, wireless transmissions and Ultra low Power devices. In 2011 ST invited selected Universities in France, Switzerland and Italy to enter. ST then provided support to the teams to help them develop their ideas. In 2012 two finalists were selected and ST worked with them to prepare their projects for submission to a sponsor. The top 10 ideas were financially rewarded, with further contributions awarded to the finalists. The winners received full support from ST until prototype realization, as well as international ST internships on our French or Italian partner sites, or grants for the sport students. In 2012, 4 students who participated in the Innovation Cup, including the 2 winners, were hired by ST. The program has been re-launched in 2013 to 9 universities. (www.st-innovationcup.com)

### China

ST signed a new partnership with ECPK, 'Ecole Centrale de Pékin'. Students are offered opportunities to participate in a large range of activities, from research in labs to industrial applications and marketing. Two teams of students in their 5th year have already chosen projects proposed by ST and will be able to explore various whether scientific, technological, economical or human as if in real situation, and will learn to manage their complexity. ST is offering financial support to the school over a three year period. This partnership could be extended to the whole group of Ecoles Centrales.

# The success of our R&D clusters

and internship experience.

In 2012 our efforts to engage with young people and offer educational or career opportunities, benefited 459 interns, 303 apprentices, 74 theses (PhD) and 25-30 VIE (Volontariat International en Entreprises) recruits. We also partnered with 105 laboratories.

For example, we are involved in a long standing partnership with CMP, a service organization working in ICs and MEMS, which are used for prototyping and low volume production. Through CMP, we provide Universities, Research Laboratories or industrial companies with access to silicon fabrication. at preferential prices, in quantities compatible with research and teaching needs. Occasionally we also offer free

In 2012, 266 circuits were made for 83 stakeholders from 23 countries. ST introduced the 28 nm FD SOI, and now offers packages in 6 different technologies. 42 new Institutions received ST design kits.

In 2012, CMP organised the European Workshop on Microelectronics Education and celebrated its 30 year anniversary. ST delivered several presentations. Our involvement with CMP is also visible in Announcements and Press articles throughout the year (http://cmp.imag.fr).

# Italy

The Italian cluster is active around three poles Milano, Naples and Catania, Contribution to R&D programs helps ST create value for its customers and remain among the industry's most innovative companies. It also improves ST's ability to attract the younger generation through its successful involvement with local R&D

and academic organizations. The various programs conducted enable ST to receive funding or grants from European institutions, governments or local authorities and to anchor the positive impact we have at national, regional and local levels. Our key 2012 figures include:



- 40 research contracts with external laboratories (Universities and Research
- 53 partnerships with universities
- 173 student internships at ST sites
- ~ 20 future PhD students working part time for their theses at ST sites

In the Naples area, the "NeaPolis Innovation" initiative brings ST together with 5 universities and the regional industry association, to build new models of collaboration which balance theoretical knowledge with experience to create more efficiency and value. This cooperation offers reciprocal advantages to students and companies. Resources available to participants include labs, a campus and seminars as well as research contracts, internships, theses and training delivered by university professors and tutors. Investment in, and partnerships with, local universities and other institutions help value creation at local level, on the territory of our sites, which is a clear sustainability model.

China, Taiwan and Singapore: ST continued to demonstrate its leadership in sensor technology, sharing its newest fusion sensor with more than 700 students and young engineers from over 60 universities across these countries.



# Professor Antonio Strollo

Quote

Dept. of Electrical Engineering and Information Technology, University of Napoli, Universities Coordinator in NeaPolis Innovation

"NeaPolis Innovation has proved to be a very effective and functional collaboration mechanism. It has contributed to multiply the opportunities for interaction and collaboration between universities and ST. Several "seed contracts" have been signed and some of them have resulted in the launch of a more challenging research project, called "Laboratorio di Microelettronica della Campania". Students appreciated the opportunity to carry out theses and internships on topics of great interest, enabling them to experience what it is like to be part of a team in a global company. Possible improvements include strengthening of cooperation with SMEs, which represent an important part of the productive ecosystem of Campania."

# Performance against objectives



• For the short/mid term: Ensure ongoing growth of ST's technical and specialist populations recognized through the technical ladder (individual paths)



• For the mid- to long-term: raise young populations' employability by providing access to PhD, apprenticeships and internship experience

# Public Affairs & Industry Networking

ST proactively engages at a global, national and local level with a range of stakeholders such as trade associations, industry groups and standard-setting bodies. This engagement contributes to ST's enhanced competitiveness.



One of ST's key objectives is to promote the electronic industry's potential in all countries where ST operates. Whilst our overall company strategy remains the same across all of our locations our approach is tailored to take into account country specifics such as local culture and existing infrastructure.

R&D has become increasingly critical for companies to ensure they remain competitive in the semiconductor sector. Our R&D efforts require substantial resources and are also dependent on alliances in order to develop new processes, technologies and products. As we supply a broad range of products, we are required to make significant investments in R&D across our product portfolio. Many of the products that we market have short life cycles, with some being one year or less. We believe that we can only maintain proprietary R&D for derivative technology investments and share R&D business models if we are supported with adequate state funding.

In Europe, the microelectronics industry must constantly adapt and innovate to remain competitive

It rests with companies to find innovative ways to enhance their competitiveness and ensure their long-term sustainability.

We focus our R&D efforts in France and Italy where we can maximize existing and new funding opportunities at European, national, and local level.

We develop research and investment country strategies in collaboration with divisional and site management.

Our main objectives are to:

- develop the competitiveness of R&D and advanced activities
- strengthen ST's position as a key player in R&D at European and worldwide level
- obtain direct contributions to R&D programs to help ST create value for its customers and remain among the industry's most innovative companies
- reinforce ST's ability to attract and involve the younger generation in local R&D and academic activities

According to Cosimo Musca, Italy R&D and Public Programs Director, R&D and Public Affairs, we undertake significant R&D activity in Italy at both National and European level. In 2012, in Italy, ST coordinated 31 R&D funded projects and partnered on another 67.

In Asia, Francois Guibert, Executive VP, President, Greater China & South Asia Region, believes that the best way ST can contribute to the communities where it operates and strengthen stakeholder relationships, is to provide leadership across all our areas of expertise. For this reason, ST has forged partnerships and provided expert knowledge to healthcare, power, sensor, multimedia and embedded technologies initiatives.

Through its Singapore-based subsidiary, Veredus Laboratories, ST has leveraged its Lab-on-Chip technology as a strategic weapon in the global fight against tuberculosis. Working with the Chinese Center for Disease Control and Prevent-

ion in Beijing, its new VereMTB platform was used in clinical trials to accurately and quickly identify multi-drug resistant strains of tuberculosis for correct treatment. In Asia, China and India have high incidences of tuberculosis and multidrug resistant TB (tubercle bacillus) is a growing threat.

ST sites also contribute to and lead some local initiatives which help develop local partnerships within the semiconductor or electronics industries, maximize employee potential and create more accessible resources and services.

One such example involves Melba Cuyahon, General Manager of ST's Calamba site in the Philippines a board member of the SEIPI (Semiconductor and Electronics Industries of the Philippines, Inc). One of its projects pursued in partnership with DOST (Department of Science and Technology) is ADMATEL (Advanced Device and Materials Testing Laboratory). The project benefits the local community as well as ST by:

- reinforcing and upgrading local industry failure analysis (FA) and materials testing facilities;
- providing shorter turn-around times especially for companies who cannot afford to construct their own FA and characterization laboratories:
- providing less expensive analysis (as this can be done locally instead
- attracting more potential investors seeking a competitive business environment.

# Focus on two concrete contributions...

### Energy@home

Energy@home is a not for profit organization founded in July 2012 by Electrolux, Enel, Indesit Company and Telecom Italia, following a three year collaboration. ST Italy joined the association in 2012 which now has more than 15 members.

This association's mission is to develop and promote technologies and services delivering energy efficiency in smart homes, based on the interaction between user devices and energy infrastructure.

One of Energy@home's key achievements was the release of a set of technical specifications and an interoperable fully-integrated system comprising smart broadband gateway, smart meter, smart plugs, smart domestic appliances and a user interface application.

In 2012, Energy@home started a field trial, involving the installation of its integrated system in 50 homes ST provided the HAN (Home Arena Network) wireless interface for the smart meter. The trial is still ongoing.

ST is also involved in the steering committee, as well as in the technical working groups (Standardization, Internet Protocol) where we use our expertise and wide ranging product portfolio including RF-RadioFrequency /PLC-Power Line Communication connectivity, microcontrollers and power management technology to help develop the Energy@ home roadmap and future programs.

See more on: http://www.energy-home. it/SitePages/Home.aspx

# Performance against objectives



• Strengthen our network of public and industrial affairs activities worldwide, create and observe good sustainability practices as well as efficiently manage sustainability-related risks and opportunities.

# ST's Environment, Health and Safety contribution to the SITELESC in

Our EHS departments in Rousset, Tours and Crolles in France are involved in the Health & Safety and Environmental commissions of SITELESC, the micro and nano electronics French professional union representing research laboratories, component software design centers equipment fitters and suppliers as well as semiconductor manufacturers.

The commissions facilitate sharing of knowledge and best practice and provide a platform through which companies can give legislative feedback and lobby French and European public authorities.

Some of the commissions' 2012 achievements, to which ST actively participated, include:

- Penibility: setting up an exposure traceability datasheet to comply with law 2010-1330 (9th November 2010) on French pension reform which requires to define appropriate methods to measure exposure level and organize databases.
- Running a conference on Psychosocial Risks organized in conjunction with the Social Affairs commission.



Quote

*e*niac

# Nanoparticles:

- Benchmarking all nanoparticle importers who have completed the new public declaration of substances in a nanoparticle state.
- Evaluating quantities of nanoparticles and data available in order to quantify emissions from material consumed and to highlight treatment systems currently in place.
- PFC emissions: We provided evidence to protect the semiconductor industry from perfluorocarbon production and importation shortage quotas in Europe, which was based on the findings from a voluntary project we had undertaken to reduce PFC emissions far below the objective of ESIA (European Semiconductor Industry Association) Memorandum of Agreement in 2000.
- REACH and Chemical Labelling and Packaging (CLP) regulation implementation: The two commissions worked closely on evaluating the impact of REACH on the semiconductor industry's activities and on authorization and restriction procedures.
- A specific group was created to analyze the impact of the inclusion of AsGa III-V (Arsenide of gallium) material in the SVHC (Substances of Very High Concern) list and report findings to the French Labor Ministry and Ecology and Sustainable Development Ministry.

# Andreas Wild ENIAC joint undertaking **Executive Director**

"The European nanoelectronics industry faces fierce global competition and must step up its efforts to raise to the challenge. The European response is centered on breakthrough innovations, like Fully Depleted SOI or advanced MEMS technologies from STMicroelectronics, supported, among others, by public-private partnerships such

as the ENIAC Joint Undertaking. STMicroelectronics, a European and global leader, brings an extraordinary contribution to our program, participating in 26 of the 50 projects, providing almost 20% of the total eligible costs, engaging the whole ecosystem of SMEs, research organizations and academic labs. This is a strong basis to secure the future European competitiveness, growth and jobs."

# COMPANY Awards

Each year our sites receive external recognition for their sustainability practices. Here is an overview for 2012.

# Our People

# **April** Italv

ST Italy sites were awarded the National Prize on Health and Safety in the workplace from INAIL & CONFINDUSTRIA, an organization under the patronage of the President of the Italian Republic, in recognition of good methodologies implemented.



# October Malta

ST Malta received first prize in the Health and Safety Best Practices Award organized by the National Occupational Health and Safety Authority and the European Agency for Safety and Health at Work. The award was presented by the Minister for Health, the Elderly and Community Care, Hon Dr J. Cassar and by Ms. Bogiarka Bola, Network Manager for the European Agency.

# Rousset (France)

The site received the Disability Policy award from IMS-Entreprendre pour la Cité, a French organization promoting Corporate Social Responsibility, and more specifically diversity in companies. A signatory of the French Diversity Charter since 2006, the site was recognized for its practices in recruitment and integration of disabled people and for the innovative training program FAM (Formation d'Adaptation aux Métiers). The program, launched in 2008, is dedicated to equipping people with disabilities with essential competences required for the electronics industry.

## Muar (Malaysia)



ST Muar received the Implementation of Fire Prevention Program certification awarded by the Fire Prevention Centre Malaysia (NGO) in recognition of its commitment to promoting fire safety awareness amongst over 900 ST employees and contractors.

# Edinburgh (UK)

NMI, a trade association of the UK Electronic Systems, Microelectronics and Semiconductor Communities, granted the NMI Young Engineer of the Year Award to Kevin Moore, a Senior Analogue

Designer at our Edinburgh site.



# November Ang Mo Kio (Singapore)

Ang Mo Kio BHQ received a Gold Health Award at the Singapore Health Awards 2012. This biennial national award is presented by the Health Promotion Board (HPB), to recognize organizations with commendable Workplace Health Promotion programs.



# December Calamba (The Philippines)

During the 8th GKK - Gawad Kaligtasan at Kalusugan awards we received:

- The 2012 DOLE Secretary's Award of Distinction for ST sites Calamba/Manila, for demonstrating global commitment to sustainability, through the deployment of Occupational Safety and Health Programs, comprising risks assessments, training, audits and overall quality management.
- The 2012 DOLE Award of Honor, was awarded to Ms. Elizabeth Beronio, ST Calamba Environment, Safety and Security Manager, by Hon. Rosalinda Dimapilis-Baldoz, Secretary of Labor and Employment of the Philippines. Her long standing experience and expertise in implementing site environmental, safety and health management systems, with



the support of the EHS Committee, site management and employees, has resulted in numerous certifications and awards for



# Muar (Malaysia)

ST Muar's Civil Defense Emergency Response Team was trained and accredited by Civil Defense Department Malaysia and was praised for their commitment and skill in handling emergency situations. The team of 35 undertook a number of training sessions with Civil Defense dedicated to fire-fighting and rescue skills.

# Our Products

# July

Automotive Product Group, Germany

We received the Supplier Quality Excellence Award from General Motors, for ST APG's Asics products (used in safety applications such as airbags) which were delivered free from defects to GM Worldwide in a one year period between July 2011 and July 2012. The award is granted only to suppliers who reach this one year milestone.

# October United Kingdom

ST was awarded the 2012 NMI Low Power "Green" team award by NMI. The award recognizes continued commitment to sustainability and "green" design. Teams from Bristol (UK), Grenoble (France) and Greater Noida (India) were honored.

# December Crolles (France)

Considered as the most prestigious R&D award in electronics in France, the Général Ferrié award honors an engineer or team whose work brought significant contribution to the progress of electronics and its applications. In 2012 this award was granted to a team of ST (Stéphane Monfray and Frédéric Bœuf) and CEA-Leti researchers, for its work on Fully Depleted Silicon-On-Insulator technology, a major technological breakthrough in the pursuit of miniaturization of electronic circuits.

# Geneva (HQ)

Top 100 Global Innovator award from Reuters, honoring corporations and institutions around the

We received a 2012 world that are at the heart of innovation. Selection is based on overall patent

volume, patent grant success rate, global

reach of the portfolio and patent influence

as demonstrated by citations.

# The Environment

# March

Shenzhen (China)

ST Shenzhen received the 2010-2011 Energy Conservation Award granted by Shenzhen Futian District Government.

# June & December Calamba (The Philippines)

In June, Makiling Center for Mountain Ecosystems Recognition for Mt Makiling Tree Planting & Nurturing Project, was awarded to the site by the MCME Director Dr. Nathaniel C. Bantayan & UP Chancellor Dr. Rex Victor Cruz, University of the Philippines-Los Banos.





In December, during the Don Emilio Abello Energy Efficiency Awards:

.....**)** 

• The 2012 Outstanding award was conferred to ST Calamba by the National Steering Committee for our contribution to the energy efficiency and conservation goals of the country, and substantial effort to mitigate climate change.



- The Outstanding Energy Manager award was granted to Ronnie G. Mandigma, whose involvement and engagement were instrumental in helping to achieve energy savings at our Calamba site.
- At the same event, we were given the Hall of Fame award, granted to companies which have received three Outstanding awards.

# The Community



# **February** Singapore

ST Asia Pacific Pte Ltd and ST Pte Ltd were certified TradeFIRST (Trade Facilitation & Integrated Risk-based SysTem) "Premium" band by Singapore Customs, the highest level of certification in an integrated assessment framework. supporting the Customs' trade facilitation and compliance efforts. The certifications affirm ST's firm commitment to trade compliance and export control.

# Mav Agrate (Italy)

EHS Award was granted by Confindustria Monza and Brianza to ST Agrate for its commitment and performance in the EHS field, particularly in relation to the good policies we developed and implemented that have had a positive impact on the local industrial area.

# November Singapore



National SSWG - Safety and Security Watch Group - Award was given out by the Singapore Police Force and Singapore Civil Defence Force in recognition of the business community's efforts to the site to adopt robust measures and be prepared for the threat of crime and terrorism.

25

17

36

16

36

# New 2013 Objectives

On a yearly basis, we review with the owners of each Sustainability priority the objectives to be reached within the year or a few years. Some 2012 objectives have been achieved, some will be discontinued because they are not meaningful to ST anymore and some have been revised. Please find below the new objectives set for 2013 and beyond.



RECRUITMENT, LEARNING & DEVELOPMENT

LABOR & HUMAN RIGHTS

INNOVATION MANAGEMENT

Learning: Ensure that more than 60% of employees follow at least 8-hrs training yearly  $\,$ 

Development: Ensure that more than 95% of ST exempts have their potential assessed every 2 years through 'People Review' process

Ensure that ST manufacturing sites and corporate departments continuously improve the global scoring of ST's EICC SAQs

Ensure that our audited sites have 0 Major Non-Conformance on the Labour and Health & Safety section

Ensure all our sites deploy communication and training programs on the EICC Code of Conduct for all their managers and employees

Increase efficiency of product development: Reduce average age of development projects to 15 months

Increase efficiency of product development: Increase proportion of projects less than 1 year old to 33%

Ecopack®3 (no RoHS exemption and Halogen free): 25% of new packages implemented in Ecopack®2 by the end of 2015

Ensure 100% of new ST products are eco-designed by 2015

STAR-rated Responsible Products impact on New Products (24 Months window) Silicon line > = 30%

Integrate line item for Environmentally/Socially responsible characteristics in product Brochures/Flyers across 12 products



PRODUCT STEWARDSHIP

The Environment



ENERGY MANAGEMENT

By 2015, ensure that 100% of call for tenders from US\$ 200k include criteria on energy efficiency and use of  $\rm CO_2$  emission-free and/or renewable energy regarding facilities and site services



MANAGEMENT
OF SUSTAINABILITY
IN THE SUPPLY CHAIN

BUSINESS ETHICS & COMPLIANCE

LOCAL SUSTAINABILITY IMPACTS

participate in the steering committee

Ensure fair treatment of ST suppliers: 100% of our payment terms to be in line with Law on the Modernization of the Economy (LME)

As an active member of "Charte des Relations Fournisseurs Responsables" (Charter for Responsible suppliers relationships),

Ensure Business ethics: 100% of Global Procurement and Outsourcing buyers to sign the Business Ethics letter

To ensure continuous improvement, implement a supplier survey and

Improve the integration process between allegation reporting and investigation management

Strengthen the Ethics Committee network by formalizing the links and reporting lines between the Corporate Ethics Committee and regional ethics committees and by communicating towards ST employees on this updated framework

In 2013, update ST anti-corruption and bribery policy, as well as our insider trading policy

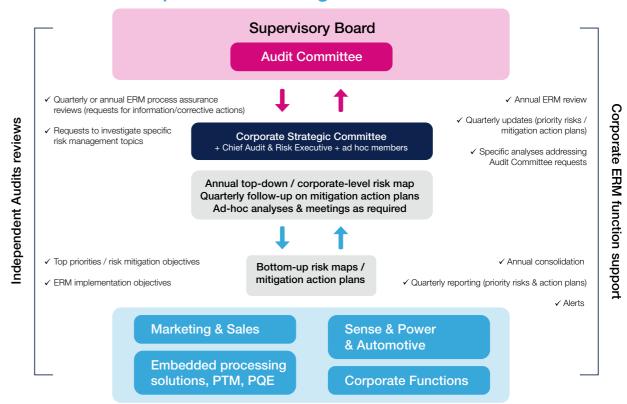
Ensure evaluation of ST community involvement initiatives with a 85% confidence rate

Launch a process to identify ST community involvement outputs and impacts

# Additional indicators & GRI statement

# Company

# **Enterprise Risk Management Governance**



# Our People

EPA - Performance assessment (yearly) / LA12

Employees (%)

Exempts (%)

N/A

78.4

N/A

78

89

89

93

98

Indicator	2008	2009	2010	2011	2012	Indicator	2008	2009	2010	2011	2012
Headcount evolut	tion by re	egion / L	A1			Employees survey	- Engag	jement r	ate		
Americas	3,210	1,802	1,701	1,176	1,158	Participation rate (%)	80	N/A	86	86	87
Asia Pacific	21,409	20,847	22,565	19,965	19,860	Rational Commitment	0,16	N/A	0,20	0,20	0,18
Europe	21,271	18,338	19,022	18,724	19,346	<b>Emotional Commitment</b>	0,35	N/A	0,40	0,39	0,38
Mediterranean	5,848	4,533	4,677	4,348	4,349	Discretionary Effort	0,43	N/A	0,44	0,45	0,45
Total	51,738	45,520	47,965	44,213	44,713	Intent to Stay	0,34	N/A	0,32	0,30	0,25
Hires by job type /	LA1					Career length and	d volunt	ary turno	over rate	e / LA2	
Exempt	5,224	538	3,573	2,563	2,721	% of voluntary turnover of new	/ hires	44.87	45.54	52.67	52.08
Operators	5,502	5,984	8,193	5,154	6,833	(below 2 yrs)		44.07	40.04	52.07	32.06
Non Exempt	1,163	639	1,884	1,728	1,716	% of voluntary turnover of emp from 2 to < 5 yrs	oloyees	13.12	18.07	27.83	24.02
Total	11,889	7,161	13,650	9,445	11,270	% of voluntary turnover of emp	lovees				
Worforce by empl	oyment	type / LA	<b>\</b> 1			from 5 to < 10 yrs		3.40	5.31	7.82	8.03
(% of employees by em	ployment	contract)				% of voluntary turnover of emp	oloyees	1.86	2.02	1.79	1.72
Full time contract	98.04	97.88	97.85	97.74	97.43	from 10 to < 20 yrs					
Part time contract	1.95	2.12	2.15	2.26	2.57	% of voluntary turnover of emp from above 20 yrs	noyees	1.21	1.06	0.72	0.68
Workforce by emp (% of employees by em	,		ict / LA1			Average turnover	rate / LA	2 (%)		'	
Regular contract	97.77	97.41	96.56	97.48	98.21	Average turnover rate	10.12	11.65	15.16	18.49	15.61
Temporary contract	2.23	2.59	3.44	2.52	1.79	A					
External hires in ma	anufact	uring (%)				Average employe	e age ()	/ears)			
Develope of inhe filled autom	- aller		İ	I		Average employee age	34	34	33	36	36
Percentage of jobs filled extern versus overall jobs filled	пану	92	96	90	95	Number of national	alities in c	corporate	e staff / L	A13	
Newcomers induc	tion pro	gram (%	)			Different nationalities					
Newcomers who participated in a formal induction session						represented in the corporate staff	9	7	7	7	6
during their first year of employment*	92.72	72.35	97.23	97.29	97.75	Number of nation	alities in	the hea	idcount	by regio	on*
*e.g. Newcomers Seminar						Europe			68	74	78

Americas

\*Expatriates and assignees are counted in host country

Gender b	itor	2008	2009	2010	2011	2012	Ind	icator	2008	2009	20	10	2011	2012
OCHU <del>C</del> I D	reakdow	n by reg	gion (%)				Average	weekly w	orking	time in	selec	ted o	countrie	s
<b>-</b>	Male	73	74	74	75	75	in 2010 (							
Europe	Female	27	26	26	25	25		ST standard work	ing time	40.00	40	.00	40.00	40.00
A	Male	76	79	79	79	78	China	Overtime		3.59	5.	00	5.03	11.37
Americas	Female	24	21	21	21	22	France	ST standard work	ing time	38.50	38	.50	35.00	35.00
Mediterranean	Male	42	43	42	43	44	France	Overtime		0.23	0.	31	0.26	0.20
mountonanoun	Female	58	56	58	57	56	Italy	ST standard work	ing time	40.00	40	.00	40.00	40.00
Asia Pacific	Male	53	53	55	57	58	ruiy	Overtime		0.82		15	0.95	0.72
. 1014 1 401110	Female	47	47	45	43	42	Malaysia	ST standard work	ing time	48.00	_	.00	48.00	48.00
<b>Employee</b>	s working	g part-ti	me by g	ender (	%)		-	Overtime		5.11	_	.32	9.39	8.50
Men			15,23	15,04	15,75	18,36	Malta	ST standard work	ing time	40.00		.00	40.00	40.00
Women			84,77	84,96	84,25	81,64		Overtime ST standard work	ring time	2.78 44.00	_	.00	4.50 44.00	5.00 44.00
Unplanned	d absent	eeism (%	)				Morocco	Overtime	ang ame	1.15		62	1.46	1.10
Unplanned abser		3.00	2.47	2.67	2.77	2.82	North	ST standard work	ina time	40.00	_	.00	40.00	40.00
Formal red	cognition	<u> </u>	l		'		North America	Overtime		1.62	_	51	0.60	0.85
Overall recognition	Ū							ST standard work	ing time	44.00	44	.00	44.00	44.00
all sites (USk\$)	on buuget or	2,161	1,644	3,305	3,101	2,782	Singapore	Overtime		4.02	5.	88	1.53	3.84
Number of people	le	38,805	38,373	36,697	48,606	33,823	The	ST standard work	king tim <b>e</b>	-			-	48.00
recognized*	uggosties:	,	,	,	-,-50	2,020	Philippines	Overtime		-		-	-	6.00
% of accepted su which were imple		61.00	53.00	54.75	65.20	59.56	Fair wag	jes						
*Can include more	e than one reco	gnition for one	employee ove	the year.	,			employees paid						
Remunero	ation (%)						up to 105% of	the legal or	21.44	13.36	16	.65	12.20	11.95
Employees above	· · ·	num salarv	07.00	00.11	07.10			minimum wage* id above 105% are	not part of t	his scono				
scale in their job		Jundi y	87.00	82.44	87.19	84.62								
Employees below scale in their job		num salary	12.00	16.62	12.79	13.90		able Cases	rate -	oreako	down:	indu	strial/do	omest
Employees cover							/ LA7							
individual salary			0.00	95.24	96.93	98.49	Recordable C Industrial rate		0.23	0.23	0.	17	0.18	0.17
Benefits, b	onus & l	JSA					Recordable C			<u> </u>				
Unwacted Stock Au	worde (IICA)						Domestic rate		0.17	0.12	0.	12	0.11	0.10
% of elligible (exemp	pt > JG 12)	33	23	24	21	22	Decordo	able Cases	rata h	v regio	n			
employees receiving stock awards	g unvested	- 55						INIE CUSES			_	0 1	0.0	
Unvested Stock Av	wards (USA)	5 700	2 670	3,790	3,390	2 570	Asia Pacific	litorror	0.2	0.2	_	.2	0.2	0.14
Number of employe	ees rewarded	5,700	3,670	ა,/90	3,390	3,570	Europe & Med Americas	nterranean	0.6	0.6	0	.5	0.5	0.43
USA - % of referent by category	ntial population	-	-	24	21	22	Americas		0.4	0.2	0	.1	0.0	0.0
					I		Severity	rate by reg	gion					
Average t	raining h	iours / LA	.10				Asia Pacific		2.2	1.3	0	.8	0.5	0.8
		07	26	32	31	29	Europe & Med	literranean	9.0	7.6	4	0		
Exempts		27						itorranoun	0.0	7.0		.9	6.5	7.8
-		72	94	91	78	70	Americas	intorrunoun	0.1	0.6		.0	6.5 0.0	0.0
Operators	mpt)		94 41	91 43	78 38	70 36			0.1	0.6	0	.0	0.0	0.0
Operators Others (non-exen	mpt)	72					Breakdo	wn of Rec	0.1 ordabl	0.6 e case	0	.0	0.0	0.0
Operators Others (non-exen		72 43 43	41 51	43	38	36	Breakdo accider		0.1 ordabl	0.6 e case	0	.0	0.0	0.0
Operators Others (non-exentative Total* *Includes training of	on equipment a	72 43 43 nd outside trai	41 51	43	38	36	Breakdo accider Fall or slip	own of Rec at or expos	0.1 ordabl	0.6 e case	0	.0	0.0	0.0
Operators Others (non-exentative training of the straining of the strainin	on equipment a	72 43 43 nd outside trai	41 51 ning.	43 49	38 50	36 46	Breakdo accider Fall or slip Struck by or a	own of Rec at or expos	0.1 ordabl	0.6 e case	0	.0	0.0	0.0 , 31 26
Operators Others (non-exentative straining of the straini	on equipment a	72 43 43 nd outside trai	41 51	43	38	36	Breakdo accider Fall or slip Struck by or a	own of Rec at or expos	0.1 ordabl	0.6 e case	0	.0	0.0	0.0 31 26 7
Operators Others (non-exent Total* *Includes training of Internal internal job requiposting rate (exe	on equipment a nobility (% nest empt)*	72 43 43 nd outside trai	41 51 ning.	43 49	38 50	36 46	Breakdo accider Fall or slip Struck by or a Overexertion Others	own of Rec the or expos	0.1 ordabl	0.6 e case	0	.0	0.0	31 26 7 3
Operators Others (non-exent Total* *Includes training of Internal internal job requiposting rate (exe Exempt open posin by internal car	on equipment and bility (% lest empt)* sitions filled indidates	72 43 43 nd outside trai	41 51 ning.	43 49 40.5	38 50 36.8 23.0	36 46 34.9 25.9	Breakdo accider Fall or slip Struck by or a Overexertion Others Caught in, un	own of Rec the or exposing ainst	0.1 ordabl	0.6 e case	0	.0	0.0	31 26 7 3 10
Operators Others (non-exer Total* *Includes training of Internal m Internal job requiposting rate (exe Exempt open pos in by internal car *Number of job rec	on equipment a nobility (% lest empt)* sitions filled indidates quests for exem	72 43 43 nd outside trai	41 51 ning.	43 49 40.5	38 50 36.8 23.0	36 46 34.9 25.9	Breakdo accider Fall or slip Struck by or a Overexertion Others Caught in, un Contact with	own of Rec the or exposing ainst	0.1 cordabl ure / LA	0.6 e case	0	.0	0.0	31 26 7 3
Operators Others (non-exent Total* *Includes training of Internal internal job requiposting rate (exe Exempt open posin by internal car *Number of job recrequests for exempt open exempt open posin by internal car	on equipment a  Obility (%  lest  empt)*  sitions filled  indidates  quests for exem  pt positions	72 43 43 nd outside train ) 90.2 - apt positions (J	41 51 ning. 17.9 - G11-18) poste	43 49 40.5	38 50 36.8 23.0	36 46 34.9 25.9	Breakdo accider Fall or slip Struck by or a Overexertion Others Caught in, un Contact with Bodily reaction	own of Recont or expose against der or between chemicals in from slip or mo	0.1 cordabl ure / LA	0.6 e case 7	s by ty	.0	0.0	31 26 7 3 10
Operators Others (non-exentate) Total* *Includes training of Internal Internal of Internal In	on equipment a  nobility (%  lest  empt)*  sitions filled  indidates  quests for exempt positions  be bargain	72 43 43 nd outside train  90.2	41 51 ning. 17.9 - G11-18) poste	43 49 40.5	38 50 36.8 23.0	36 46 34.9 25.9	Breakdo accider Fall or slip Struck by or a Overexertion Others Caught in, un Contact with Bodily reaction	own of Recont or exposingainst  der or between chemicals	0.1 cordabl ure / LA	0.6 e case 7	s by ty	.0	0.0	31 26 7 3 10
Operators Others (non-exental formulation of collective) Others (non-exental formulation) Other (non-exen	on equipment a  Obility (%  lest empt)* sitions filled ndidates quests for exem pt positions  b bargair ective agreem	72 43 43 nd outside train  90.2	41 51 ning. 17.9 - G11-18) poste	43 49 40.5	38 50 36.8 23.0	36 46 34.9 25.9	Breakdo accider  Fall or slip Struck by or a Overexertion Others Caught in, un Contact with Bodily reaction Recordo US Manufactu	own of Recont or exposinguing a second or exposing	0.1 cordabl ure / LA	0.6 e case 7	s by ty	.0	0.0	31 26 7 3 10
Operators Others (non-exer Total* *Includes training of Internal job requiposting rate (exe Exempt open pos in by internal car *Number of job recrequests for exempt Collective Number of collesigned in the ye	on equipment and bility (% lest empt)* sitions filled indidates explositions be bargair ective agreement	72 43 43 nd outside train  90.2	41 51 ning. 17.9 - G11-18) poste	43 49 40.5 - d internally div	38 50 36.8 23.0 23.0	36 46 34.9 25.9 umber of job	Breakdo accider  Fall or slip Struck by or a Overexertion Others Caught in, un Contact with Bodily reaction Recordo US Manufactu (Source BLS**	own of Record or expose against der or between chemicals in from slip or module cases uring	0.1 ordabl ure / LA	e case 7 enchm	s by ty	.0 /pe c	o.o	31 26 7 3 10
Operators Others (non-exent Total* *Includes training of Internal internal job requiposting rate (exe Exempt open posin by internal care) *Number of job recrequests for exempt Open posin by internal care) *Number of collective Number of collesigned in the yeunder of popen posin by internal care)	on equipment a  Obility (%  lest empt)*  sitions filled ndidates quests for exem ppt positions  bargair  ective agreement	72 43 43 nd outside train  90.2	41 51 ning. 17.9 - G11-18) poste	43 49 40.5 - d internally div	38 50 36.8 23.0 23.0	36 46 34.9 25.9 umber of job	Breakdo accider  Fall or slip Struck by or a Overexertion Others Caught in, un Contact with Bodily reaction Recordo US Manufactu	own of Record or exposing a second or exposing a se	0.1 cordabl ure / LA tion	e case	s by ty	.0 /pe c	o.o	31 26 7 3 10
Operators Others (non-exent Total*  *Includes training of Internal internal pobreque posting rate (exe Exempt open posin by internal car "Number of pobrec requests for exempt Ocilective Number of collesigned in the yeunder of peop by representation."	on equipment a  Obility (%  lest empt)*  sitions filled ndidates quests for exempt positions  b bargair  ective agreemear  ple covered ves	72 43 43 nd outside trai ) 90.2 - npt positions (J	41 51 ning. 17.9 - G11-18) poste	43 49 40.5 - d internally div	38 50 36.8 23.0 23.0	36 46 34.9 25.9 umber of job	Breakdo accider  Fall or slip  Struck by or a  Overexertion Others  Caught in, un  Contact with Bodily reaction  Recordo  US Manufactu (Source BLS*  All US semico	own of Record or exposing a second or exposing a se	0.1 ordabl ure / LA	e case 7 enchm	0 s by ty	.0 /pe c	0.0 Df event  4.40 1.10 Not	31 26 7 3 10
Operators Others (non-exent Total* *Includes training of Internal	on equipment a nobility (% lest empt)* sitions filled indidates quests for exem ppt positions bargair ective agreem ear pple covered ves vered by representations	72 43 43 nd outside train ) 90.2 - ppt positions (J	41 51 ning. 17.9 - G11-18) poste	43 49 40.5 	38 50 36.8 23.0 23.0	36 46 34.9 25.9 umber of job 45 31,962	Breakdo accider  Fall or slip Struck by or a Overexertion Others Caught in, un Contact with Bodily reaction US Manufactic (Source BLS* All US semico (Source BLS* SIA*** OHS	own of Record or exposing a second or exposing a se	tion rate be 5.00 1.30 0.71	0.6 e case 7 enchm 4.30 1.00 0.80	0 s by ty 0 carks* 4. 1, 0.	40 40 998	0.0 Df event  4.40 1.10 Not available	0.0 7 31 26 7 3 10 13 10
Operators Others (non-exent Total*  *Includes training of Internal internal job requiposting rate (exe Exempt open posin by internal care "Number of job recrequests for exempt October in the year of peop by representating of people cow Working times.	on equipment and bility (% lest empt)* sitions filled ndidates quests for exempt positions by bargair ective agreement ple covered ves wered by representations.	72 43 43 nd outside train ) 90.2 - ppt positions (J	41 51 ning. 17.9 - G11-18) poste	43 49 40.5 	38 50 36.8 23.0 23.0	36 46 34.9 25.9 umber of job 45 31,962	Breakdo accider  Fall or slip Struck by or a Overexertion Others Caught in, un Contact with Bodily reactic US Manufact (Source BLS* All US semica (Source BLS* SIA*** OHS	own of Recont or expose against der or between chemicals in from slip or module cases aring by aductor by the cases aring by the cases are the	0.1 cordabl ure / LA  tion rate be 5.00 1.30	0.6 e case 7 enchm 4.30	0 s by ty 0 carks* 4. 1, 0.	.0   /pe c	0.0 Df event  4.40 1.10 Not	0.0 7 31 26 7 3 10 13 10
Operators Others (non-exent Total* *Includes training of Internal	on equipment a  nobility (%  lest empt)*  sitions filled indidates quests for exempt positions  b bargair ective agreement ective agreement exercive agreement exerci	72 43 43 nd outside train ) 90.2 - ppt positions (J	41 51 ning. 17.9 - G11-18) poste	43 49 40.5 	38 50 36.8 23.0 23.0	36 46 34.9 25.9 umber of job 45 31,962	Breakdo accider  Fall or slip  Struck by or a  Overexertion Others  Caught in, un  Contact with Bodily reactic  Record  US Manufactt (Source BLS*  All US semico (Source BLS*  SIA*** OHS  ST  *Latest data av  *Bureau of La*	own of Recont or expose against der or between chemicals in from slip or module cases arring had become the control of the cases arring the control of the cases arring the cases are cased to the case	0.1 cordabl ure / LA tion rate be 5.00 1.30 0.71 0.39	0.6 e case 7 enchm 4.30 1.00 0.80	0 s by ty 0 carks* 4. 1, 0.	40 40 998	0.0 Df event  4.40 1.10 Not available	0.0 7 31 26 7 3 10 13 10
Operators Others (non-exent Total* *Includes training of Internal internal job requirements for exempt open posin by internal car *Number of job received Number of collective Number of collective Number of people cov Working till Employees with a worktime less the state of the	on equipment a  nobility (% lest empt)* sitions filled indidates e bargair ective agreem ear ple covered ves vered by repri	72 43 43 43 nd outside train ) 90.2 - hing / LA4 hents essentatives Overtime	41 51 ning. 17.9 - G11-18) poste 59 21,363 - e hours	43 49 40.5 - d internally div	38 50 36.8 23.0 23.0 33	36 46 34.9 25.9 umber of job 45 31,962 72.34	Breakdo accider  Fall or slip  Struck by or a  Overexertion Others  Caught in, un  Contact with Bodily reaction  Recordo  US Manufactt (Source BLS**  All US semico (Source BLS**  SIA*** OHS  ST  *Latest data av  "Bureau of La***Semiconductor  "Semiconductor  "Semiconduc	own of Recont or expose against der or between chemicals in from slip or module cases uring had be cases uring had be cases to reconstruction of Statistics.	0.1 cordabl ure / LA  tion rate be 5.00 1.30 0.71 0.39 attion.	0.6 e case 7 4.30 1.00 0.80	0 s by ty    Oarks*	.0 /pe c	4.40 1.10 Not available 0.29	0.0 31 26 7 3 10 13 10
Operators Others (non-exental form) Internal job requiposting rate (exe Exempt open posin by internal carrequests for exempt of collective Number of job recreations in the year Number of peophy representating of peophy representating of peophy representating of peophy representations of peophy represent	on equipment a  nobility (%  lest empt)*  sitions filled ndidates quests for exempt positions  b bargair ective agreemear ple covered ves vered by representation  me and regular nan eks (%) overtime	72 43 43 43 nd outside train ) 90.2 - hing / LA4 hents essentatives Overtime	41 51 ning. 17.9 - G11-18) poste 59 21,363 - e hours	43 49 40.5 - d internally div	38 50 36.8 23.0 23.0 33	36 46 34.9 25.9 umber of job 45 31,962 72.34	Breakdo accider  Fall or slip  Struck by or a  Overexertion Others  Caught in, un Contact with Bodily reaction  Recordo  US Manufactu (Source BLS**  All US semico (Source BLS**  SIA*** OHS  ST  *Latest data av  "Bureau of La  "Semiconduc  Average	own of Recont or expose against agains	0.1 cordabl ure / LA  tion rate be 5.00 1.30 0.71 0.39 attion.	0.6 e case 7 4.30 1.00 0.80	0 s by ty    Oarks*	.0 /pe c	4.40 1.10 Not available 0.29	0.0 31 26 7 3 10 13 10
Operators Others (non-exent Total* *Includes training of Internal internal job requirements for exempt open positing rate (exe Exempt open positing rate (exe Exempt open positing rate of job recrequests for exempt Office tive Number of job recrequests for exempt open positing rate (exe Exempt open positing ra	on equipment a  nobility (%  lest empt)*  sitions filled indidates quests for exem ppt positions  bargair ective agreem ear ple covered ves vered by repro me and regular nan eks (%) overtime oyee)	72 43 43 43 nd outside train ) 90.2	41 51 ning.  17.9  - G11-18) poste  59  21,363  - Dhours  100  1.97	43 49 40.5 - d internally div 38 24,021 50.08	38 50 36.8 23.0 23.0 33 - 1 - 100	36 46 34.9 25.9 umber of job 45 31,962 72.34	Breakdo accider  Fall or slip  Struck by or a  Overexertion Others  Caught in, un  Contact with Bodily reaction  Recordo  US Manufactt (Source BLS**  All US semico (Source BLS**  SIA*** OHS  ST  *Latest data av  "Bureau of La***Semiconductor  "Semiconductor  "Semiconduc	own of Recont or expose against agains	0.1 cordabl ure / LA  tion rate be 5.00 1.30 0.71 0.39 attion.	0.6 e case 7 4.30 1.00 0.80	0 s by ty    Oarks*	.0 /pe c	4.40 1.10 Not available 0.29	0.0 31 26 7 3 10 13 10
Operators Others (non-exent Total* *Includes training of Internal internal job requirements for exempt open positing rate (exe Exempt open positing rate (exe Exempt open positing rate of job recrequests for exempt Office tive Number of job recrequests for exempt open positing rate (exe Exempt open positing ra	on equipment a  nobility (%  lest empt)*  sitions filled indidates quests for exem ppt positions  bargair ective agreem ear ple covered ves vered by repro me and regular nan eks (%) overtime oyee)	72 43 43 43 nd outside train ) 90.2	41 51 ning.  17.9  - G11-18) poste  59  21,363  - Dhours  100  1.97	43 49 40.5 - d internally div 38 24,021 50.08	38 50 36.8 23.0 23.0 33 - 1 - 100	36 46 34.9 25.9 umber of job 45 31,962 72.34	Breakdo accider  Fall or slip  Struck by or a  Overexertion Others  Caught in, un Contact with Bodily reaction  Recordo  US Manufactu (Source BLS**  All US semico (Source BLS**  SIA*** OHS  ST  *Latest data av  "Bureau of La  "Semiconduc  Average	own of Recont or expose against agains	0.1 cordabl ure / LA  tion rate be 5.00 1.30 0.71 0.39 attion.	enchm 4.30 1.00 0.80 0.35	0 s by ty 0 arks* 4. 1, 0. catego	.0 /pe c	4.40 1.10 Not available 0.29	0.0 31 26 7 3 10 13 10
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		20	09	20	10	20	11	20	12
		Female	Male	Female	Male	Female	Male	Female	Male
	Exempt	6	4	15	12	20	15	25	21
Americas	Non Exempt	1	2	10	10	6	13	8	7
	Operators	N/A*	N/A*	10	19	0	0	0	0
	Exempt	10	9	22	26	21	21	34	36
Asia-Pacific	Non Exempt	39	13	7	5	10	16	8	6
	Operators	12	5	6	6	14	15	8	11
	Exempt	6	6	19	19	20	18	29	26
Europe	Non Exempt	4	5	20	17	19	16	5	5
	Operators	1	0	23	16	25	16	2	2
	Exempt	6	7	12	16	30	27	12	33
Japan	Non Exempt	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
	Operators	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
	Exempt	12	17	34	24	10	11	26	34
Mediterranean	Non Exempt	17	16	19	12	6	4	18	10
	Operators	0	2	7	8	0	0	9	2

Indicator	2008	2009	2010	2011	2012				
Schooling programs*/LA11									
Exempts		2.76	4.39	5.26	1.74				
Operators	2.75	1.02	7.96	2.31					
Others (non-exempts)	4.69	6.01	7.58	0.95					
*% of employees following ST sup	ported extern	al schooling pr	ograms vs tota	al number					

# Our Products

\*The company has no manufacturing sites in these regions

Indicator	2008	2009	2010	2011	2012			
Sustainability Customer Requirements								

Social & Ethics customer 277 252 267 376 requirements received**
--

\*EHS: Environment, Health and Safety.

\*\*This data includes all Sustainability requirements from our customers, received at corporate level for support and validation. Many more are dealt with directly at local and regional level.

Quality <sup>1</sup> / PR5 (baseline 100 in 2004)	Q4' 04	Q4' 09	Q4' 10	Q4' 11	Q4' 12
Customer complaints	100	61.5	55	70.6	67*
Cycle time to process failures analysis	100	65.4	71.1	59.8	65.6**
Customer returns	100	30.8	20	58.9	21.7***

'Quality indicators include ST-Ericsson from Q3 2008.

"Q4 low shipments strongly impacted our customer complaints by volume, even if the number of complaints received was stable.

"In 2011, our failures analysis cycle time significantly improved as a result of an efficient task force on cycle time reduction.

""The customer returns results have been mainly impacted by negotiated returns from distributors.

# WEEE / EN27

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

# The environment

	illulcator	2006	2009	2010	2011	2012					
	Environmental burden: net values / EN16 / EN17 / EN19 / EN20 /										
	EN26 / Dec. 4.1 / Dec. 4.3 / Dec. 4.4										

Emissions to air					
Global warming* (MTCE)	404,319	358,167	413,974	429,187	408,202
Ozone depletion (Kg R11 Eq)	62	8	7	0	0
VOCs (Tons)	244	170	178	192	147
Atmospheric acidification (Kg SO2 Eq)	63,142	55,370	36,581	41,525	34,456
Photochemical oxidant creation (Kg ethylene Eq)	48,969	35,044	25,292	38,125	27,165
Air emission toxicity** (Kg PH3 Eq)	4,720	4,101	4,484	3,075	4,337

Promotion ratio female/male by category and region / LA13 (%)								Indicator	2008	2009	2010	2011	2012		
		20	09	20	10	20	11	20	12	Emissions to water***					
		Female	Male	Female	Male	Female	Male	Female Male		Eutrophication (Kg P+N)	414,730	305,502	396,271	378,339	330,993
	Exempt	6	6 4 15 12 20 15 25 21 Aquatic oxygen demand	Aquatic oxygen demand (COD****)	834,032	626,835	709,202	667,146	529,623						
Americas	Non Exempt	1	2	10	10	6	13	8	7	,					
	Operators	N/A*	N/A*	10	19	0	0	0	0	Heavy metals to water (Kg heavy metals)	10,354	8,934	9,579	9,796	6,458
Asia-Pacific	Exempt	10	9	22	26	21	21	34	36	Aquatic ecotoxicity	7.500	0.000	F 774	4.000	4.400
	Non Exempt	39	13	7	5	10	16	8	6	(Kg Cu Eq)	7,598	6,698	5,774	4,032	4,109

'Includes direct greenhouse gas (GHG) emissions from our manufacturing plants and indirect emissions from energy consumption and transport, reported in Metrics Tons of Carbon Equivalence (MTCE). Does not include GHG emissions from controlled manufacturing sites, subcontractors and foundries. "Emissions of substances are considered only if they exceed the minimum threshold of 3pm, expressed in phosphine equivalent. For Volatile Organic Compounds, Atmospheric Acidification, Photochemical Oxidant Creation and Air Emission Toxicity the Particulate Matter is not covered. ""Domestic waste water is included. ""Total Chemical Oxygen Demand (COD).

## Environmental costs versus savings / EN30 (US\$m)

Total costs	41	48	53	52	47
Energy savings	192	87	219	203	169
Water savings	25	15	25	24	22
Chemical savings	86	58	87	69	62
Total saving	303	160	331	296	253
Balance (cost savings)	262	112	278	244	206

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

1) we set a baseline using the 1994 model with the assumption that there are no installation enhancements, except for chemicals for which the baseline is 2000;

2) this baseline is projected each year (in relation to the quantities produced);

3) each year, the actual value is compared to this projection;

4) the result shows the theoretical benefits due to the installation improvements concerning the savings for energy, water and the use of chemicals. Total costs cover expenditure of environmental management areas (including waste and remediation) and yearly net investment and equipment depreciation.

## **Environmental investments**

# Consumption: absolute values / EN1 / EN3 / EN4 / EN8 / Dec. 2.1 / Dec. 2.2 / Dec. 2.3

Electricity (GWh)	2,127	1,986	2,018	2,058	2,041
Water (1,000m³)	18,194	16,346	17,393	17,314	16,151
Chemicals (tons)	17,883	12,451	17,138	17,076	17,792
Natural gas (GWh)	234	214	171	166	153

# Waste split / EN22 (Tons)

1
2
В
1
В

# Water Risk Assessment by location\* / EN8 / EN9 (%)

	Water withdrawal per site**	Water stress assessment per site***
Ang Mo Kio (Singapore)	100	100
Crolles (France)	76	2
Catania (Italy)	74	74
Rousset (France)	42	32
Agrate (Italy)	36	2
Tours (France)	19	19
Muar (Malaysia)	100	3
Shenzhen (China)	74	6
Calamba (the Philippines)	72	100
Longgang (China)	51	4
Bouskoura (Morocco)	48	79
Kirkop (Malta)	7	12

"ST water risk assessment has been conducted in 2012 with Quantis. The calculation is done for Front-end and Back-end sites, as there are important differences in the water consumption.
"Water withdrawal: anthopogenic removal of water from any water body, either permanently or temporaly.
""Water stress assessment: consumed water multiplied by the Water Stress Index related to water availability.

# Initiatives and changes resulting in a reduction in GHG /EN18 / Dec. 3.3 (Saved kTons CO<sub>2</sub>)

Related to PFC direct emissions reduction per IPPC guidelines	50	-	155	0	21
Saving electricity	295	-	195	0	0
Used green electricity	17	-	41	61	13
Produced electricity by windfarm	8	-	8	7	0
Total GHG gas emissions reduction	370	-	398	68	34

### EHS Incidents / EN23

\*Includes electricity and natural gas

ST Ang Mo Kio (Singapore): On 8th February 2012, an acid scrubber's pH fell from 7 to 3.6 for a duration of about 4 hours. Fine amount: \$\$5,000. All actions necessary to avoid recurrence have been put in place.

ST Calamba (the Philippines): The site was recognized to be at the origin of a fine received by the industrial park waste water treatment plant (WWTP). In fact, ST Calamba overpassed the contractual limit of copper defined between ST and the WWTP. Fine amount: US\$3,642.28

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Indicator	2008	2009	2010	2011	2012		
Consumption of electricity (kWh/production unit): normalized values / EN4 / Dec. 2.1							
Target	48,8	46,3*	44	41,8	39,7		
Consumption of electricity	49,7	71*	48	50,4	54,6		

\*2009: The figures show the global consumption per unit of production for the whole year affected by a decrease of production due to the economic crisis.

Consumption of no	atural go	as (GWh/p	production	unit): norn	nalized
values / Dec. 2.1 (Ba	seline 100 i	in 1994)			
Concumption of natural rac	39.9	51.6	20.4	20.7	20.9

Consumption of natural gas	39,9	51,6	29,4	29,7	29
Energy saved*: ab	solute v	alues / EN	N5 / 💭 De	c. 2.1 (GWI	ո)

Energy saved	130	0	129	0

ETT1	$\sim$	110
TIME	Comm	unitv
1110	CITITI	. CLITTLY

indicator	2012						
Technical ladder (%)							
	WW	Asia Pacific	Europe*				
ST population recognised through the technical ladder	0,8	0,3	1,7				
*The enceified path starts from job grade 14 and above which is the reference population							

This internal program started in Europe and its deployment is currently on going.

Indicator	2008	2009	2010	2011	2012*	
*Suppliers and subcontractors ch changes the reference perimeter.		year to anoth	er. The list is up	odated regular	ly which	

Suppliers' and subcontractors' environmental and health & safety performance / 8.3

# Number of suppliers / subcontractors

Suppliers of materials	107	108	104	102	94
Suppliers of equipment	40	40	40	40	40
Suppliers of spare-parts	NA	NA	35	38	39
Total	147	148	179	180	173
Subcontractors Back-end	59	65	62	59	51
Subcontractors Front-end	11	10	19	22	19

# ISO 14001 certified / EMAS validated (%)

Suppliers of materials	83	81	81	81	76
Suppliers of equipment	85	82,5	83	80	83
Suppliers of spare-parts	NA	NA	54	47	59
Total	84.1	81.5	76.2	73.8	81.9
Subcontractors Back-end	97	97	97	98	98
Subcontractors Front-end	100	100	100	95	100

# OHSAS validated (%)

Suppliers of materials	37	41	44	49	48
Suppliers of equipment	6	10	8	21	18
Suppliers of spare-parts	N/A	N/A	20	15	18
Total	28.6	32.6	31.3	36.2	34
Subcontractors Back-end	92	91	87	62	67
Subcontractors Front-end	82	80	84	77	77

# Suppliers' compliance with EICC - Target number

Suppliers of materials	108	108	104	102	102
Suppliers of equipment/ facilities/IT	104	104	104	87	87
Suppliers of spare-parts	NA	NA	35	35	35
Subcontractors Back-end	40	39	32	32	32
Subcontractors Front-end	11	10	19	22	22

Indicator	2008	2009	2010	2011	2012*

Phase 1 - Introduction: Agreement to comply with EICC (%
--

Suppliers of materials	81	82	89	95	82
Suppliers of equipment/ facilities/IT	34	41	50	99	93
Suppliers of spare-parts	NA	NA	71	94	87
Subcontractors Back-end	97	98	98	97	100
Subcontractors Front-end	86	90	95	95	***

Phase 2 - Assessment:

EICC Self-assessment questionnaire completed\*\*

Suppliers of materials	18	42	76	97	183
Suppliers of equipment/ facilities/IT	0	0	0	0	13
Suppliers of spare-parts	N/A	N/A	N/A	N/A	N/A
Subcontractors Back-end	11	17	20	23	42
Subcontractors Front-end	0	1	3	4	8

licator	2012
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ST Foundation's contribution to the Community according to the LBG\* methodology

Total value of contribution (US\$m)	765,935		
Type of involvement	100% Community investment		
Means of involvement (%)			
Cash contribution	66		
Staff time volunteering	17		
Management cost contribution	17		
*London Benchmarking Group			



# Statement **GRI Application Level Check**

GRI hereby states that STMicroelectronics has presented its report "ST Sustainability Report 2012" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level

GRI Application Levels communicate the extent to which the content of the G3 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content index demonstrates a valid representation of the required disclosures, as described in the GRI G3 Guidelines. For methodology, see www.globalreporting.org/SiteCollect Methodology pdl

quality of the information in the report.

Amsterdam, 18 July 2013





Deputy Chief Executive

The "" has been added to this Application Level because STMIcroelectronics has submitted (port of) this report for external assurance. GRI accepts the reporter's own criteria for choosing the relevant

material submitted to GRI or the time of the Decit on \$15 July 2013. GRI copile th each extensive the statement being applied to or type to each material.



The following table shows the correlation between the STMicroelectronics Sustainability Report and the ten Principles of the Global Compact, the Global Reporting Initiative (GRI) elements and the ISO 26000

	GRI Indicators	Global Compact Principles	ISO 26000 core subjects and issue
Company			
Readers' Guide	2.1; 2.3; 2.4; 2.9; 3.1-3.8; 3.10; 3.11; 3.13; 4.9; 4.14-4.16		
Company	1.1; 1.2; 2.3; 2.4; 2.5; 2.6; 2.7; 2.8; 2.10; 3.5; 3.6; 3.13; 4.1-4.3; 4.7; 4.8; 4.9; 4.11; 4.12; 4.14-4.17 EC1		6.2
Our People			6.3; 6.4
Recruitment, Learning & Development	LA2; LA10; LA11; LA12	GC6	6.4.7
Employee Engagement	4.16; 4.17		6.2.3
Employee Safety	LA7; LA8		6.3.7
abor & Human Rights	4.8; 4.12 EC8; HR5; HR6; HR7; S05	GC1; GC3; GC4; GC5	6.3.10; 6.4.5
Global Diversity & Equal Opportunities	LA13	GC1; GC6	6.3.7
mployee Health & Well-being	LA8	GC1	6.4.4; 6.4.6
Our Products			6.7
Customer Satisfaction	4.16; 4.17; PR5		6.7.3; 6.7.6
nnovation Management			6.6.7
Product Stewardship	EN2; EN5; EN6; EN26; EN27; PR1; PR3	GC1; GC7; GC8; GC9	6.5.3; 6.7.4; 6.7.5
Conflict-free Minerals	4.17 HR2; HR7; PR3	GC1; GC2	6.3.5; 6.6.4
The Environment	4.8; 4.13; EN1; EN2; EN18; EN26		6.5
HG Emissions from Operations	EC2; EN16; EN17; EN18; S01	GC7; GC8; GC9	6.5.3; 6.5.5
Vater Management	EC2; EN8, EN10, EN21; EN25; S01	GC7; GC8; GC9	6.5.4
nergy Management	EC2; EC6; EN3; EN4; EN5; EN7	GC7; GC8; GC9	6.5.4
Chemicals Management	EN1; PR3	GC7; GC8; GC9	6.5.3
Vaste Management	EN2; EN22; EN24	GC7; GC8; GC9	6.5.3
ransports & Logistics	EC2; EN4; EN5; EN7; EN16; EN17; EN29	GC7; GC8; GC9	6.5.3; 6.5.5
he Community	4.16; 4.17		6.6; 6.8
Management of Sustainability n the Supply Chain	4.8; 4.9; 4.12 EC6; HR1; HR2; PR3	GC1; GC3; GC4; GC5; GC6; GC9	6.6.6
Business Ethics & Compliance	4.6; 4.9 HR3; HR4; S02; S03; S04	GC10	6.6.3
ocal Sustainability Impacts	EC1; EC8; EC9; S01		6.8.3; 6.8.5; 6.8.6; 6.8.7; 6.8.9
artnerships in R&D and Education	S01		6.8.4
Public Affairs and Industry Networking	4.13 EC9; S05		6.6.6
Awards	2.10		6.2
Additional Indicators	2.8; 3.9; 3.12 EC1; EC5; EC7; LA1; LA2; LA4; LA5; LA7; LA10; LA11; LA13; EN1; EN3; EN4; EN16; EN17; EN19; EN20; EN22; EN23; EN26; EN28; EN30; PR5		

# Data Reporting Verification Statement

Det Norske Veritas Business Assurance France S.A.R.L. ('DNV Business Assurance') has been commissioned by the management of STMicroelectronics NV ('the Company') to carry out a moderate assurance engagement on the "2012 Sustainability Report" ('the Report') in its draft electronic format. STMicroelectronics NV is responsible for the collection, analysis, aggregation and presentation of information contained in the Report. Our responsibility in performing the work commissioned is solely towards the Management of STMicroelectronics NV and in accordance with the terms of reference agreed on with the Company. The assurance engagement is based on the assumption that the data and information provided are complete, sufficient and authentic. STMicroelectronics NV's stakeholders are the intended recipients of the assurance statement.

The scope of work agreed upon with STMicroelectronics NV to provide a moderate level of assurance includes the following information and entities:

- Key Performance Indicators for People, Products, The Environment and The Community related to the period between January 2012 and December 2012, as contained in the 2012 Report.
- Our verification was carried out in May and June 2013. As part of this engagement we visited selected sites on the basis of their contribution which represents more than 20% of the Group's consolidated environmental and social indicators (a higher level of Assurance would have required a more detailed review): Geneva (Headquarters), Catania (Italy), Muar (Malavsia). Calamba (the Philipoines).

Our assurance engagement was planned and carried out in accordance with the DNV 'Protocol for Verification of Sustainability Reporting'. The available parts of Report were evaluated against the following criteria in accordance with the Protocol: Materiality, Completeness, Reliability, Comparability and Stakeholders inclusiveness.

As part of the verification we have:

- Challenged the People, Products, The Environment and The Community statements and claims made in the Report and assessed the robustness of the data management systems, information flow and controls;
- Examined and reviewed documents, data and other information made available to DNV Business Assurance France by the Company;
- We interviewed the Corporate Sustainable Development Team and conducted interviews with an excess of 40 company's representatives we visited in three sites and the company's headquarter (including data owners and decision-makers from different divisions and functions) to assess compliance by the sites visited with Group procedures, processes and guidance. Interviews with external stakeholders were not included:
- Performed sample-based audits of the mechanisms for implementing the Company's own policies, as described in the available parts of Report;
- Performed sample-based audits of the

processes to review the methods, practices and tools used in the collection, aggregation/calculation, analysis, internal quality control and reporting of qualitative and quantitative data and information, as it is transferred, managed and stored within the Company.

It is the opinion of DNV Business Assurance that the 2012 Sustainable Report is an accurate and impartial representation of the company's sustainability related strategies, management systems and performance. Based on the assurance work we performed on both the Kev Performance Indicators as well as parts of the narratives in the Company's "2012 Sustainability Report", it is our opinion that sufficient evidences have been obtained to achieve a moderate level of Assurance, as information and data communicated and subjected to our verification were found to be reliable. Since the organization has carried out a review of its material sustainability issues, we believe STMicroelectronics NV efforts to strengthen the strategy and the linked action plan have been significantly addressed, to an advanced level, for all material issues among processes and business development. We recognize that strong efforts have been made to reinforce organisation and resources in order to better manage sustainability coordination across the Company and reliability of data. Moreover the achievements versus the objectives are reported in a balanced and transparent way allowing the stakeholders to have an unbiased view of the company's sustainability performance. Based on our review, we evaluated adherence of the Report to the following principles, on a scale of

Materiality: we consider that the Report includes the major material aspects concerning the Company's performance and stakeholders' concerns. In our opinion, the level at which the Report adheres to the principle of materiality is 'Good'.

'Good', 'Acceptable', 'Need for improvement':

Completeness: we believe that, overall, the topics and indicators contained in the Report cover STMicroelectronics NV material impacts sufficiently to enable stakeholders' assessment of the Company's sustainability performance in 2012. In our opinion, the level at which the Report adheres to the principle of completeness is 'Good'.

Reliability: we found that the information and

processes are sufficiently collated, recorded, compiled, analysed and disclosed in a manner that allowed us to examine and assess the accuracy of the information. In our opinion, the level at which the Report adheres to the principle of reliability is 'Good'.

Comparability: we consider that stakeholders have sufficient information that is adequately selected and compiled in order to analyse the changes in the Company's performance over time. In our opinion, the level at which the Report adheres to the principle of comparability is 'Good'. Stakeholders inclusiveness: we consider that the views and concerns of stakeholders have been taken into consideration and that dialogue was effective. In our opinion, the level at which the Report adheres to the principle of stakeholders inclusiveness is 'Good'.

Our verification report includes observations, findings and opportunities for improvement which have been reported back to the Management of the STMicroelectronics NV. These do not, however, affect our conclusions on the Sustainability Report 2012.

DNV was not involved in the preparation of any statements or data included in the Sustainable Report. DNV maintains complete impartiality in the work carried out and expressly disclaims any liability or co responsibility for any decision a person or an entity may make based on this Assurance Statement. DNV is a leading provider of sustainability services, including the verification of sustainability reports. For more information, please visit our web site (www.dnvba.fr.)

For DNV Business Assurance France.

**Federica PAGNUZZATO** Marc-Antoine HORENFELD Reviewer Project Manager



Paris, April 10, 2013



# Glossary

APG	Automotive Products Group	G
BCP	Business Continuity Plans	Н
CDP	Carbon Disclosure Project	Н
CEA	Commissariat à l'Energie Atomique	Н
CEC	Corporate Ethics Committee	IL
CEO	Chief Executive Officer	IE
CFS	Conflict-Free Smelter	IC
CIS	Company Infrastructure and Services	IC
CLP	Chemical Labelling and Packaging	IN
СТО	Chief Technology Officer	IF
DNV	Det Norske Veritas	IS
DRC	Democratic Republic of the Congo	IT
DU	Digital Unify	
ECHA	European Chemical Agency	iT
	Lead-free labelling for RoHS-compliance (the EU Directive	K
ECOPACK®	on Restriction on Use of	
FLIO	Hazardous Substances)	N
EHS	Environment, Health & Safety	IV
EICC	Electronics Industry Citizenship Coalition	N
EMAS	Community Eco-Management and Audit Scheme	N
EMEA	Europe, Middle East & Africa	NI
ENIAC	European Nanoelectronics Initiative Advisory Council	N
e-PA	electronic Performance Appraisal	0
ERM	Enterprise Risk Management	0
ERT	European Round Table of Industrialists	0
ESG	Environment, Social and Corporate Governance	P
ESIA	Electronic Semiconductor Industry Association	P
FA	Failure Analysis	Р
FCPA	Foreign Corrupt Practices Act	P
FD SOI	Fully Depleted Silicon-on-Insulator	R
FMT	Front-end Manufacturing and Technology	R
FTSE	Financial Times Stock Exchange	R
GeSI	Global e-Sustainability Initiative	S
GHG	Greenhouse Gases	S
GLWO	Global Logistics & Warehousing Organization	S
GM	General Motors	S
GRI	Global Reporting Initiative	
		S

GWP	Global Warming Potential
HAN	Home Arena Network
HIT	Harbin Institute of Technology
HPB	Health Promotion Board
HSPM	Hazardous Substances Process Management
IBP	Imaging Bi-CMOS ASIC & Silicon Phototonics
IC	Integrated Circuit
ICT	Information and Communication Technologies
IMS	Industrial & Multisegment Sector
IP	Intellectual Property
ISO	International Organization for Standardization
ITRI	Industrial Technology Research Institute
iTSCi	ITRI's Tin Suppy Chain initiative
KPI	Key Performance Indicator
LBG	London Benchmarking Group
LCA	Life Cycle Assessment
MEMS	Micro-Electro-Mechanical Systems
MMS	Microcontrollers, Memories & Smartcards
MTCE	Metric Tons of Carbon Equivalent
NGO	Non-Governmental Organization
NYSE	New York Stock Exchange
ODS	Ozone Depleting Substances
OECD	Organization for Economic Cooperation and Development
OHSAS	Occupational Health & Safety Assessment Series (OHSAS 18001)
PFCs	Perfluorinated Compounds
PLC	Power Line Communication
PQE	Product Quality Excellence
PTM	Package Test Manufacturing
RC	Recordable Cases
R&D	Research & Development
REACH	Registration, Evaluation and Authorization of Chemicals
RoHS	Restriction of Hazardous Substances
SAQ	Self-Assessment Questionnaire
SE	Sustainable Excellence
SEC	Securities and Exchange Commission
SITELESC	Micro and Nanotechnology Industry Association

Small and Medium Enterprises

	SOC	System-on-Chip
	SPE	Supplier Performance Evaluation
	SRI	Socially Responsible Investment
	STEM	Science, Technology, Engineering and Mathematics
	SVHC	Substances of Very High Concern
	TAM	Total Available Market
	ТВ	Tubercle Bacillus
	TCOO	Total Cost of Ownership
	TR&D	Technology Research & Development
	UN	United Nations
	UNGC	United Nations Global Compact
	VAP	Validated Audit Process
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	VOCs	Volatile Organic Compounds
	WEEE	Waste of Electrical and Electronic Equipment
		Waste of Electrical and

# **GRI** indicator prefixes

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EC	Economic
EN	Environment
HR	Human Rights
LA	Employment
PR	Product Responsibility
SO	Society

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