

# Reader's Guide

#### Report scope and profile

This report describes our sustainability performance for the calendar year 2013. It covers all STMicroelectronics' activities and sites, including former ST-Ericsson activities and sites which have been transferred to ST (see Change in scope). You can find details of ST's structure and countries of operation in the chart on page 2. Historical information is available in previous years' reports at www.st.com/company-reports

#### Change in scope

In August 2013, ST finalized its exit from ST-Ericsson which has resulted in a number of changes to the reporting parameters. Three former ST-Ericsson sites in Le Mans (France), Rennes (France) and Rabat (Morocco) have transferred to ST. In addition, approximately 1,000 ST-Ericsson employees from former ST-Ericsson sites in France and Italy have been transferred to ST. The safety and social data has been updated accordingly while the environmental data scope remains unchanged.

ST has also integrated the former ST-Ericsson Mobile Legacy Product Division within its Digital Convergence Group. Our financial, products and quality data has been updated accordingly. There was no impact on other domains.

#### **Materiality and** stakeholder engagement

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. 22 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. These targets are reviewed annually by internal experts to ensure that they are relevant. This report shows the progress we have made against these targets; providing data and qualitative information

Other activities whose outputs we have used in the preparation of the 2013 report include:

- A review of stakeholder feedback (email, web requests);
- A review of customer requirements received throughout the year;
- A consideration of questions from Socially Responsible Investment analysts and agencies;
- A review of sustainability issues raised within the Electronics Industry Citizenship Coalition (EICC);
- A high-level benchmarking exercise of competitors and other companies who are recognized for their sustainability approach:
- A review of existing and anticipated worldwide sustainability legislation.

Detailed information about each of our Sustainability priorities, as well as our corporate approach to sustainability, can be found on our website: www.st.com/st-approach-tosustainability

#### **Indicators and use of symbols**

We report on performance against our 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



X No progress/not achieved



On hold



No data available

ST Environment Health and Safety Decalogue

Each of our Sustainability priorities has a dedicated page within this report which clearly sets out the objectives relating to that priority and the performance indicators showing our progress. We also include additional performance indicators at

the end of this report (pages 67-71). These are not necessarily linked to our Sustainability priorities but have been developed in response to the separate external stakeholder queries we receive.

#### Accessibility

Our Sustainability report is also accessible on the web in interactive PDF format at www.st.com/companyreports along with past reports. Printed copies are available on request (see "We value your feedback" to contact us).

#### Assurance

Det Norske Veritas Germanischer Lloyd (DNV GL) has been appointed to provide assurance services to STMicroelectronics. DNV interviewed all relevant corporate departments and visited three sites (Ang Mo Kio - Singapore, Kirkop - Malta and Rousset - France) to review and validate ST's data reporting process and to provide assurance of this year's report. ST Foundation information and data have not been part of the external verification driven by DNV GL DNV GL's assurance statement can be found on page 73.

#### Alignment with GRI and the UN **Global Compact**

This report is prepared 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 72 there is an index that references GRI indicators, UNGC Principles and ISO 26000 core subjects that are contained within this report.

#### 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 Social Responsibility STMicroelectronics International NV 39, Chemin du Champ-des-Filles - C.P. 21 CH-1228 Geneva – Plan-Les-Ouates



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#### We also would like to thank:

in the report:

- everyone who kindly agreed to be quoted in this report and provide testimony of their collaboration with ST: • everyone who kindly agreed to have their pictures published
- our interfaces on ST sites, SE coordinators and EHS teams who support our activity all year round:
- Site Directors and HR Managers
- the teams audited in Ang Mo Kio, Kirkop and Rousset for their availability.

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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- 2013 revenues of \$8.08B(1)
- Listed on New York Stock Exchange. Euronext Paris and Borsa Italiana, Milan
- Approx. 45,000 employees worldwide<sup>(1)</sup>
- 79 sales offices in 35 countries
- 12 manufacturing sites

- Advanced research and development centers around the globe
- 16,000 patents
- Approx. 9,000 patent families
- 598 new filings in 2013

• Approx. 9.000 people in technology, design, product and system R&D

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

### Focus on a region zoom on Sales & Marketing - EMEA...







Paris



Cornaredo



England

France Italy

#### **EMEA ELECTRONICS MARKET**

Europe is a major player in the global electronics market. With its rich history, population, industry and infrastructure, it will continue to drive innovation and new applications to meet the challenges of the 21st century both within the European Union and worldwide.

#### Middle East

Driven by the growing industrial strength of Turkey, the technology focus of Israel and the fiscal wealth of the oil states, the Middle East is emerging as a key player in the global electronics market.

The African electronics market is a region of untapped potential. It is developing its own small but evolving electronics environment in South Africa and the Mediterranean Coast countries. Africa as a whole will be a major recipient of the new generation of infrastructure and low-cost medical support designed to meet the societal challenges faced by its populations. Electronics will act as an enabler allowing 1 billion people to fulfil their potential.

#### PROFILE OF OUR SALES TEAM

Headcount: close to 600 employees, with 35% women. Teams in Belgium, Czech Republic, Denmark, Finland, France, Germany, Hungary, Israel, Italy, Poland, Russian Federation, South Africa, Spain, Sweden, Switzerland, the Netherlands, Turkey and UK.

Activities: our EMEA sales team carries out a wide range of functions including sales, marketing, application, supply-chain, quality and customer support throughout the sales process. In addition, our sales team is in a unique position to promote ST's innovative solutions to customers. It can also drive ST's capability by bringing knowledge from those customers back into the business in areas such as Automotive, Set-Top-Box, Security, Energy efficiency, Smart Grid and Medical.

#### **KEY FIGURES**

#### 25%

of ST global revenues by location of order shipment.

#### **CERTIFICATIONS**

#### Quality

All sites are ISO9001/TS16949 certified.





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.

#### **Suppliers**



We purchase silicon ingot, raw materials. equipment, energy, gas chemicals and services from many suppliers and subcontractors

## R&D conception and





New products are created in a multi-step process including architecture conception. electrical layout, electrical and logic simulation, chip layout and generation of the mask that will be used to etch the design in silicon

#### Manufacturing Front-end



is a process of around 400 separate stages, starting with a plain silicon wafer, and resulting in the etching of several hundreds to thousands of die

#### **Electrical** Wafer Sorting



We electrically test the die on the wafer. It is also known as wafer sort or probing.

#### Assembly line and final test Back-end





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

#### **Business customers**





We offer a broad range of products and we serve a wide range of customers across the markets described below

# Where you find us





Our MEMS & Sensors are augmenting



Our smart power products are allowing our mobile products to operate longer and making more of our energy resources



are powering the augmented digital lifestyle



Our Microcontrollers are everywhere making everything smarter and more secure





# Significant Events



#### March



ST signed a new € 350m loan agreement with the European Investment Bank.
ST demonstrated its secured access to credits. This new facility supports our activities in R&D and innovation related to the design and realization of the next generation of technologies and electronic devices.

#### April



Ms. Martine Verluyten, member of the ST Supervisory Board and its Audit Committee since May 2012,

succeeded Mr. Tom de Waard as Chair of the Audit Committee of the ST Supervisory Board.

#### May



Jean-Marc Chery was appointed General Manager of the Embedded Processing Solutions Segment and Vice-Chairman

of the Corporate Strategic Committee of which he has been a member since 2008, in order to support ST's new strategic plan.

#### April & May



ST started two advanced technology pilot-line projects that are European Key Enabling Technologies contracted by the ENIAC JU:

- the 30-month, € 28m Lab4MEMS project
- the 3-year, € 360m Places2Be project.

These projects involved several countries, academic institutions and leading European companies.

#### June

ST announced the Nano 2017
Research and Development
program, a five-year public-private
strategic R&D program which will
lead to further advance leadership
in key embedded processing
solutions and technologies. Nano2017 strengthens ST's leadership
in such key technologies as FDSOI (low-power, high-performance
processing), next-generation
imaging (sensors and image signal
processors), and next-generation
embedded non-volatile memories.



June

ST signed an agreement with Rambus Inc. expanding existing licenses between the two companies, settling all outstanding claims, and committing both organizations to explore additional opportunities for collaboration. The multifaceted agreement gives Rambus access to ST's FD-SOI¹ process-technology design environment while giving ST secured license terms from the Cryptography Research, Inc. (CRI) division of Rambus.

1.Fully-Depleted Silicon On Insulator

#### August



ST and Ericsson announced the closing of the split up of ST-Ericsson and Carlo Ferro's return to ST as Chief Financial Officer with extended responsibilities. Carlo Ferro remained ST-Ericsson's President & CEO through the joint venture wind-down. ST has taken on some of the existing ST-Ericsson products as well as certain assembly and test facilities. In total, approximately 1,000 employees have joined STMicroelectronics from ST-Ericsson.

# Foreword by Carlo Bozotti,

#### President and Chief Executive Officer



Our Sustainability report describes our strategy, achievements and contributions to sustainable development through everything we do in our business, working together with our customers, partners and employees. Sustainability is deeply embedded in ST's DNA, and we continue to build on our position as a long-time pioneer in our industry.

During 2013 we made important, focused advances in the four pillars of our sustainability strategy: our **people**, our **products**, the **environment** and the **community**.

#### People

We completed the announced split-up of ST-Ericsson as planned and in a socially responsible manner. While doing this, we internalized **key competencies** from the joint venture to strengthen product development teams across our Company and we are already seeing the benefits of this effort in a new wave of products that we have started to launch this year.

We remained committed to be among the best-in-class in our industry in ensuring the **safety** of our employees worldwide. In 2013, we delivered an average of 6.4 training hours per employee on safety; this action contributed to a 24% and 45% decrease in our safety recordable cases and severity rates, respectively, in 2013 compared to 2012.

In health and well-being, we continued to encourage employees to take medical checkups and screening tests, accumulating a total of more than 58,000 medical examinations conducted worldwide during the year.

We also continued to develop our **diversity** and equality strategy, ensuring equal opportunities for our employees; this led to our recognition by one of the sustainability rating agencies for our leading approach to the prevention of gender discrimination and promotion of diversity.

#### **Products**



During 2013, as part of this program, we brought to market more than 450 "responsible products." For example, we introduced many products in our MEMS sensors and ultra-low power microcontroller portfolios to enable the creation of wearable devices that provide real-time health monitoring or improve wellness and fitness. We also introduced many power-related products that contribute to increasing power efficiency and lowering power consumption in the home, in buildings and factories, on the street and in wearable devices around the body.

Technology results are also in line with our sustainability efforts: during 2013 we made significant progress with customers on our power-efficient FD-SOI technology, which has the potential to significantly reduce the energy and cooling requirement of the rapidly growing Internet infrastructure as well as power needs for the digital home.

#### **Environment**

After 20 years of steady progress, our consumption of energy, water and chemicals per unit of production continued to decrease. To cite a few achievements, 17.6% of the energy we purchased came from renewable sources compared to 7.4% in 2012 and 91% of waste generated was recycled and re-used. During the year, we continued to look for ways to anticipate legislation and find alternatives to some chemicals and to reduce their use or exposure through the development of greener manufacturing techniques.

#### Community

We contribute to our community development in many ways. One way is by helping young people **enter the work environment**. During 2013 alone, we offered internships, apprenticeships and PhDs to more than 500 students within 20 different ST organizations worldwide.

We also continued to support the efforts made by the ST Foundation, whose mission is to spread the benefits of digital technologies by providing both the tools and the basic training to those who want to develop their computer skills or reach higher education goals. After 10 years of activity in 22 different countries, ST Foundation's Digital Unify program has now reached more than 218,000 beneficiaries. During 2013, we set up twelve new labs in Morocco and we installed 30 new informatics centers in Burundi, Congo, Senegal and Sierra Leone, as well as rolling out the program to China and the Philippines.

# Sustainability is driving business performance

All of these achievements in 2013 helped us achieve good progress in our business and financial performance, advancing us toward our financial model that targets an operating margin improvement by mid-2015.

On the business side, we continued to effectively execute on our strategy focused on five key growth drivers: Analog and MEMs, Power and Smart Power, Automotive, Microcontrollers, and Digital Consumer and ASICs. In fact, although the market in total grew less than initially forecasted, we outperformed our served market, with our core business growing 3.2% last year compared to a served market decline of 1.6%. We are particularly proud of our customersatisfaction survey's results, which showed solid improvement compared to 2012, with an overall satisfaction rate close to 90 percent.

On the financial side, we significantly improved our operating result: from a loss of \$2,286 million in 2012 to a loss of \$567 million in 2013; we also maintained a strong cash position and solid capital structure, with a net cash balance exiting the year of \$741 million.

At ST, we strongly believe that our commitment to sustainability is a key enabler of our business success now and in the long term and of a better world, thanks to the positive contribution that microelectronics can and will bring to people's lives.

Carlo Bozotti
President and CEO



### Sustainability is important for all our employees,

So sustainability is fundamental to our business

# Sustainability Strategy

"We believe that sustainability is about our ability to make business success now and in the long term. It is embedded in our way of working in all our sites, when developing product leadership, financial health, responsibility towards people, communities and the environment.

At the end of the day, sustainability is about people. Our mission is to develop people who develop leading products for the world."

Philippe Brun, Corporate Vice President, Human Resources and Sustainable Development

ST has been committed to sustainability for twenty years. We believe this commitment has played an important role in helping us to achieve long-term business success. Our company vision 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 people's lives.

ST's current Sustainability strategy was implemented in 2011, following a materiality exercise conducted in 2010. It consists of four pillars and 22 Sustainability priorities as disclosed in this Sustainability report. For consistency reasons, we have now included information on Governance, Business Ethics and Compliance in the Company section (pages 8 to 11).

During 2013, the company focused on continuing to implement the previously launched sustainability programs and on defining an enhanced Sustainability strategy.

In fact, at the end of the year we made several key decisions about how we will take sustainability forward in 2014. These included:

- First meeting of our new Sustainability
- A review of ST Sustainability strategy through a new materiality exercise;
- Better integration of sustainability within ST management systems.

In addition to business benefits and risk mitigation, sustainability also drives employee engagement and

generates employee company pride. ST's Sustainability team works closely with internal communications to ensure employees in all organizations are kept informed of ST sustainability programs and achievements.

ST Sustainable Excellence network also plays a vital role in raising employee awareness. Sustainable Excellence Coordinators are involved in:

- Implementing the ST Sustainability strategy;
- Designing local sustainability road
- Disseminating sustainability information to employees and managers;
- Celebrating local sustainability achievements;
- Sharing their good practices with the

Sustainability is also increasingly scrutinized by our stakeholders, particularly customers and investors (for more information read pages 12-13 and 30-31). Our approach to stakeholder engagement addresses all our key stakeholders including customers, suppliers, employee representatives, investors or local authorities, as detailed through this report.

At local level we have identified local authorities and local communities as the highest priority stakeholders. These stakeholders are managed directly by the local Sustainable Excellence Coordinators and site management due to the range of locations and cultures where we operate.

At corporate level, being a full member of the Electronics Industry Citizenship Coalition (EICC) allows us to follow the trends in our industry and keep a watch on external events which may impact us.

1. For more information, see our Governance section on



Antonella Redaelli Sustainable Excellence Coordinator, Agrate and Castelletto (Italy)

"In my role as Sustainable Excellence Coordinator I am in charge of sustainability activities involvina ST employees and local communities. My primary objectives are to promote the Principles for Sustainable Excellence, to engage with the local community in a constructive and transparent manner, and to promote a sense of employee belonging through the provision of knowledge, involvement and direct participation. One initiative that I'm particularly proud of is the school project "One day in ST, one day at school" involving hundreds of students each year. This program has become so popular that each year many schools, both new and loyal ones, contact me to participate because they find the experience so stimulating!"

#### Interview with

#### Georges Penalver,

Chief Strategy Officer - Executive Vice President Strateay, Communication, Human Resources and Quality

In August 2013, you were appointed as Corporate Strategy Officer, taking responsibility for Human Resources, Social Responsibility, Environment Health and Safety, Communications, Public Affairs and Product Quality Excellence. What are your short and long-term objectives for sustainability at STMicroelectronics?

"Most of the activities in my scope have a key role to play in driving a strong sustainability culture and systematic implementation

approach in ST. In terms of short-term objectives we are leveraging our long-lasting commitment to sustainability by deploying  $\alpha$ structured approach within the company, aligned with our business goals. In early 2014, ST's first Sustainability Council was held with senior management representatives from across all organizations. The objective was to raise their sustainability awareness and increase their engagement in further embedding sustainability within ST's business and processes. Another key objective for 2014 is the review of our Sustainability strategy to be even more aligned with our business priorities and our stakeholder expectations I think these 2014 activities will lay the foundation for a new turning point in ST's sustainability approach. In the longer term we recognize that sustainability challenges and opportunities are constantly evolving, and we must continue to ensure that every organization remains aligned with the latest developments in the field."

#### 2013, was the first year of execution for ST's new strategy. How does ST envisage sustainability in this new context?

"Our new strategy encompasses a continued strong commitment to sustainability. It is about focus and this is one of the reasons why, during 2013, we decided to prioritize our efforts, reinforcing some of our programs such as Safety First (see pages 22-23). These focused efforts resulted in a wide variety of achievements, such as the numerous awards we have received in 2013 (see pages 64-65) or the re-integration in the DJSI Europe index after an absence of two years.

#### How do you think sustainability can contribute to ST business and success?

"ST chose to address sustainability well before many other companies and this is still part of our DNA

Our vision, being everywhere microelectronics makes a positive contribution to people's lives, our new brand positioning, life.augmented and the 2013 results I just mentioned earlier, show that sustainability is deeply embedded in everything we do.

Our awareness and understanding of global sustainability challenges and consumer expectations allow us to propose innovative and responsible products that address the needs of society.

and showing them tangible evidence of ST's commitment increases their engagement and contribution. It is now also a license to operate. Customer requests related to social responsibility have increased tenfold over the past five years, as have the requests we make towards our suppliers and partners.

in terms of the way we operate. It requires a structured approach and hard work but also brings many benefits. These include new business opportunities, improved employee satisfaction and higher customer and supplier loyalty. It also allows us to reduce our consumption of natural resources and achieve associated costs savings."

### **Focus**

#### ST 5th Environment Health and Safety Decalogue

ST has a long tradition of striving to improve its environmental performance. In 1993, we were one of the first global companies to implement an environmental policy with objectives linked to specific targets.

Twenty years on, ST has made significant progress in all of the Environment Health and Safety (EHS) Decalogue areas, including climate change, waste, risk management and Health and

Today, it has become increasingly difficult to find additional ways to continually improve our performance. In order to reflect this and also to align with our Sustainability strategy, the ST EHS Decalogue<sup>2</sup> was revised at the end

of 2013 with the aim of maintaining the excellent performance we have achieved so far. Our focus has now shifted from corporate to site specific level with each of our sites working to achieve the best environmental performance they can according to their own specific circumstances.

In order to support sites, Decalogue operational guidelines have been published and will be reviewed annually to ensure the targets we set remain achievable in the economic climate ST is operating within.

1. Detailed results are available in our Employee Safety pages 22-23. Environmental section pages 40 to 53 and additional indicators pages 67 to 7 2. ST 5th EHS Decalogue is available at



EHS

#### **Corporate governance structure**

While STMicroelectronics N.V. is our parent company, we also conduct our operations through various subsidiaries, which are consolidated by STMicroelectronics N.V. STMicroelectronics N.V. is organized under the laws of the Netherlands and its shares are listed on the New York Stock Exchange (NYSE), Euronext Paris and Borsa Italiana in Milan.

In accordance with Dutch laws, we have a two-tier corporate governance system, with the management of our company being entrusted to a Managing Board under the supervision of a Supervisory Board.

#### **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, which may be renewed one or more times in accordance with our Articles of Association upon a non-binding proposal of our Supervisory Board at a shareholders' meeting for 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 |

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 or senior managers. I 4.6 I

In accordance with criteria as reflected in our Supervisory Board Charter, 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 members of our Supervisory Board. | 4.7 | 4.10 |

Upon the proposal of our Supervisory Board, our 2013 Annual General Meeting of Shareholders resolved to abolish and terminate any stock-based compensation for our Supervisory Board's members and professionals, which as a result significantly decreased their total compensation.

Ms. Martine Verluyten, who has been a member of our Supervisory Board since 2012, has also been appointed as the Chair of the Audit Committee of our Supervisory Board in April 2013. In June 2013, Ms. Janet G. Davidson was appointed as a new member of the Supervisory Board and she also serves on the Audit Committee and Strategic Committee of our Supervisory Board.

In June 2014 Ms. Heleen Kesten and Mr. Maurizio Tamagnini were appointed as new members of our Supervisory Board. Mr. Maurizio Tamagnini was also appointed as the Chairman and Mr. Didier Lombard as the Vice-Chairman of our Supervisory Board.

More information on our Supervisory Board, the composition and roles of its Audit Committee, Compensation Committee, Strategic Committee and Nominating and Corporate Governance Committee, the compensation of the members of our Supervisory Board and their attendance at the meetings of our Supervisory Board as well as our corporate governance practices are available in our annual reports (SEC Form "20-F" and Dutch statutory annual report), which are available on our website and can be downloaded at http://investors.st.com.

Our Corporate Governance Policy, Corporate Governance Charter and Supervisory Board Charter are also available on www.st.com.

#### **Managing Board**

Our management is entrusted to the Managing Board under the supervision of our Supervisory Board. Mr. Carlo Bozotti

is currently the sole member of our Managing Board with the function of President and Chief Executive Officer. As described in our Articles of Association, the member of our Managing Board is appointed for a three-year term, which may be renewed one or more times upon a non-binding proposal of our Supervisory Board at a shareholders' meeting for 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. In accordance with our Corporate Governance Charter, the sole member of our Managing Board, as well as our senior managers, may not serve on the board of a public company without the prior approval of our Supervisory Board. I 4.1 I 4.2 I

## Independence of the Corporate Internal Audit Organization

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 Chair 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 ST's operations at all levels, and evaluates and promotes compliance with ST's Standard Operating Procedures and Policies.

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.



Our Chief Audit and 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 Chair 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.

#### 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 these standards is reflected in our Principles for Sustainable Excellence which provides guidelines for informing our behavior and decision-making. Policies and procedures are then defined at corporate level, and endorsed by our CEO, Carlo Bozotti, to ensure effective deployment throughout the company. I 4.8 I

Corporate Vice President, Human Resources and Sustainable Development, Philippe Brun, reporting to the Chief Strategy Officer, 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.

To strengthen our governance and fully integrate sustainability within all areas of our business, we have created a new enhanced Sustainability Council. The Council, which has the mission to manage the vision, strategy and governance of sustainability in ST, consists of 10 Vice Presidents representing activities ranging from Product Development, Manufacturing and Quality to Sales and Marketing, Compliance, Corporate Communications and Investor Relations. One of the first decisions taken by the Council is to conduct a new materiality exercise in 2014, to take into account the evolution in business priorities and our main stakeholders' expectations, and to review and update our Sustainability strategy accordingly.

The updated ST Sustainability
Governance Framework is available at
www.st.com/sustainability-governance

#### Risk management

The purpose of Enterprise Risk Management 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 to comply with the ISO 31000 standard. For information on ERM governance see the diagram on page 67.

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

- Top-down: in 2013, a top-down risk assessment refresh exercise was conducted with executive management. The output from this exercise was a top-down risk map, including 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: the bottom-up approach aims at embedding risk identification, evaluation and management activities at the most effective level within each organization. In 2013, selected organizations (representative of each of ST's macro organizational areas) completed the pilot deployment of the bottom-up approach. In 2014, the deployment of this approach will continue with the objective to implement it within each organization.

# **Business Ethics** & Compliance

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

We believe that how we carry out our business is as important as what we do.

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 decisionmaking and apply to all directors, officers and employees of 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.

- 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 the continuous improvement process.

• Excellence: we will strive for quality and customer satisfaction and create 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 the priorities.

On an annual basis, all managers are also required to certify they have received, read, understood and will abide by our Business Conduct and Ethics Policy.

# ST's Corporate Ethics Committee

Our Corporate Ethics Committee ("CEC") was formed in 2007 and currently comprises nine senior managers nominated by the CEO. The CEC is established to provide support to the company's management in its efforts to foster a company business ethics culture consistent across regions, functions and organizations. In 2013, the Charter of the CEC was reviewed and updated to better align its mission towards our company and restate its responsibilities and positioning.

The CEC's roles and responsibilities

- Discussion and evaluation of ST's code of conduct, other procedural documents or initiatives related to business ethics as well as ethical breaches, allegations and related
- Issuing guidance on ethical dilemmas;
- Coordination of the network of local ethics committees (see below).

In accordance with its mission and scope, the CEC may issue recommendations to the relevant organization.

Local ethics committees have been formed in recent years in key regions and countries upon the decision of local management. The CEC is currently in the process of standardizing and coordinating the roles and responsibilities of these committees locally in order to build a consistent network of ethics committees.

#### ST's misconduct reporting

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 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.

 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 the Chief Audit and Risk Executive, the Chief Compliance Officer and the Corporate Vice President Human Resources. They are treated in confidence.

The update and improvement of ST's response framework to misconduct allegations started in 2012 by refining the management of allegations received through any of the above described channels or sent directly to an ST executive.

Misconduct allegations are centralized by the Chief Audit and 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

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

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

The improvement of the misconduct reporting framework continued in 2013 with a view to simplifying the current

framework and improving communication to employees. An update of the framework was validated by the Audit Committee of the Supervisory Board, our CEO and CFO in late 2013. The global deployment of this updated framework is expected to be initiated in 2014.

#### **Bribery and corruption**

In 2013 we reviewed and updated our policy regarding bribery and corruption and, as a result, we expect to deploy our new anti-corruption and bribery policy throughout our organizations in 2014.

#### Non-compliance / Ethical breaches reporting / SO4 / HR4

	2013
Number of incidents under review at 2012 year end	1
Incidents closed in 2013 by a formal investigation report	0
Incidents closed in 2013 after preliminary assessment	1
Number of incidents reported or identified in 2013	14
Incidents closed in 2013 by a formal investigation report	8 (*)
Incidents closed in 2013 after preliminary assessment	2
Incidents still open as of 2013 year end	4 (**)

(\*) Includes 2 cases pertaining to ST-Ericsson (\*\*) Includes 1 case pertaining to ST-Ericsson

### E-signature of Business Conduct and Ethics Policy (%)

	2009	2010	2011	2012	2013
e-signature	94.50	93.90	90.30	93.40	93. 48

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



• Improve the integration process between allegation reporting and investigation



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

Financial & Extra-Financial Performance

#### **Financial performance**

#### Performance 2013

ST 2013 net revenue was US\$ 8.08 billion, a 4.8% decrease on 2012, mainly reflecting lower Wireless Product Segment (former ST-Ericsson products) sales. Excluding the Wireless product line, our revenues increased 3.2%, a better performance than the SAM, with the main contributions coming from our microcontrollers and automotive products. We also made good progress on our customer diversification, mass market and distribution initiatives, with no customers above 10% of total revenues and an increase of revenues in distribution, which was up by approximately three percentage points, reaching a 26% share of total revenues. Our operating losses were US\$ 465 million in 2013 compared with US\$ 2,081 million losses suffered in 2012.

This improvement was achieved through a reduction in operating expenses and lower impairment charges.

#### **Execution of our new strategy**

In 2013, we made solid progress in executing the strategy we announced in December 2012, but we still have much to accomplish. We completed the splitup of the ST-Ericsson joint venture in a timely manner, and by integrating some of their employees into the business we strengthened our product development teams. Our strategy takes into account the evolution of the markets we are in and the environment and opportunities we predict in the years to come. It is based on leadership positions within our two product segments, Sense & Power and Automotive (SP&A) and Embedded Processing Solutions (EPS). Each segment is supported by the global Sales & Marketing organization with a particular focus on our major accounts, as well as on expanding our penetration of the mass market.

More particularly, in terms of products we focus on five growth drivers, expected to bring solid growth rates driven by secular trends and alignment with our market-leading positions and competitive

- Automotive Products, which make driving safer, greener and more entertaining:
- Digital Consumer and ASIC Products, which power the augmented digital
- · MEMS and Sensors, which augment the consumer experience;
- Microcontrollers, which make everything smarter and more secure;
- Smart Power, which makes more of our energy resources.

We continued to work towards meeting our target financial model, including attaining an operating margin of about 10% expected by mid-2015. This will be achieved through a combination of revenue growth, gross margin improvement and management of net expenses.

#### **Extra-financial performance**

ST views recognition of extrafinancial performance through Socially Responsible Investment rating agencies and analysts' evaluations as an opportunity to better understand our performance, benchmark against our peers and identify areas for further improvement.

Investors request qualitative and quantitative information from ST on a wide range of topics, some of which may not currently be a business priority. Implementing a successful Sustainability strategy involves making choices about which issues are most material to the business and ensuring we remain focused on these areas. However, we do carefully consider any new topic raised to ensure they are not key risks or opportunities we have yet to identify.

The Sustainability report is designed to communicate comprehensive business information to our stakeholders. We report 129 indicators, explain our management approach and document many local projects and initiatives to demonstrate our sites' commitment to sustainability. This is complemented by our sustainability webpages that provide detailed descriptions of our policies and actions on a more regular basis.

We continue to maintain a strong position in major sustainability indices, and have improved our standing in some of them. We set up a task force to look at how to strengthen our Sustainability program, and after two years of non-inclusion in the Dow Jones Sustainability Index we have been included once again in the DJSI STOXX Europe in 2013. We also improved our OEKOM rating from B to B+ and continue to be ranked in the FTSE4GOOD and VIGEO indices.

#### **Speed and Agility program**

Following the 2012 Employee Engagement survey, in 2013 ST launched Speed and Agility, an efficiency program, identified as a business priority by our President and CEO.

The aim of the program is to simplify processes that are perceived as being time-consuming, complex or causing potential business delays. ST identified five key processes to be streamlined, including purchasing, supply chain and

In 2014, more than 15 workshops are planned for local managers from job grade 19 and above, to ensure the successful implementation of the five newly streamlined processes.

(For more information on this program, see page 16).



#### Interview with

#### Carlo Ferro

Chief Financial Officer - Executive Vice President Finance, Legal, Infrastructure and Services

#### In the frame of ST's new strategy, please describe the Company's financial model?

"Our financial model confirms our aim of sustainable arowth and targets about 10% operating margin starting mid-2015. On  $\alpha$ 

quarterly basis, our financial model is based on \$2.15 to \$2.25 billion of revenues, 36% to 38% gross margin and \$600 to \$650 million of net operating expenses. Exiting 2013, our expenses have been totally consistent with our financial model as well as our growth and innovation strategy, as we have been re-investing about 30% of our revenues in Research & Development and Capital Expenditure. Indeed, ST's financial objectives are based on growing revenues and accelerating product innovation. This aims at creating value for all stakeholders."

#### How does ST's financial model impact employees in the various geographies in which

"Our financial model targets a sustainable return through growth and innovation. We target to outperform our served markets, leveraging on the unique set of employee's competences and ST's Intellectual Properties which fit the fast growing applications in the semiconductor market such as the «Internet of things» or automotive. This means developing competences across our 45,000 employees and nurturing know-how in the 35 countries where

#### How did ST deploy its financial model in 2013?

"First, we redefined ST's strategy on a focused product portfolio, selected based on the value to our customer, the contribution to augment

the life experience of the final consumer, the growth opportunity for our employees and the return for our shareholders

Second, as a part of this transformation in 2013, we exited the business of ICs for wireless platforms. The closure of our JV with Ericsson was fast and relatively smooth in respect to both its social and financial consequences. Indeed, the impact on jobs and the cost of the exit have been much lower than originally anticipated. In fact, about 1,000 former ST-Ericsson personnel are now contributing to the acceleration of growth in ST's core businesses. The closure also saw the transfer of about 1,800 people to Ericsson to continue the development of ST-Ericsson's most innovative platform and a number of deals with third parties offered the opportunity to continue certain activities with a new owner: good for ST, good for the buyer, good for the employees and good for the territories involved

Overall, when disruption occurs, which is often the case in today's world, it is possible to find  $\boldsymbol{\alpha}$ win-win solution that includes financially wise actions and continues the development of key competences and their contribution to the local eco-systems.

#### ST key figures / EC1

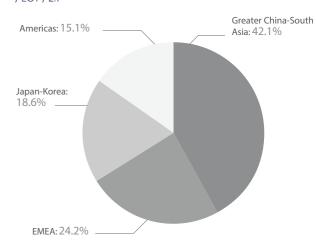
	2009	2010	2011	2012	2013
Net revenues (US\$m)	8,510	10,346	9,735	8,493	8,082
Gross profit (US\$m)	2,626	4,015	3,574	2,783	2,614
Gross profit as a percentage of sales (%)	30.90	38.80	36.70	32.80	32.30
Net earnings (US\$m)	(1,131)	830	650	(1,158)	(500)
Earnings per share (diluted) (US\$)	(1.29)	0.92	0.72	(1.31)	(0.56)
Market share versus TAM (%) (Total Available Market)	3.76	3.47	3.21	2.87	2.60

#### Operating income and cash flow / EC1

	2009	2010	2011	2012	2013
Operating income	(1,023)	476	46	(2,081)	(465)
Net operating cash flow	227*	972	(278)	34	(179)

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

#### Net revenues by location of order shipment\*



(\*) Net revenues by location of order shipment are classified by location with customer demand. For example, products ordered by U.S.-based classified as Greater China-South Asia revenues. Furthermore, the comparison among the different periods may be affected by shifts in shipment from one location to another, as requested by our customers

#### ST inclusion in the main sustainability indices

	DJSI (USA)	Ethibel Sustainability Index (Belgium)	ECPI (Italy)		FTSE ECPI Index series (Italy) (United-Kingdom)		Euronext Vigeo (France)			Total				
	DJSI Europe Stoxx	ESI Excellence Europe	ECPI EMU Ethical Equity	ECPI Euro Ethical Equity	ECPI Global Developed ESG Best in Class Equity	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	Euronext Vigeo Eurozone 120	Euronext Vigeo Benelux 20	13
2013	х	Х	х	х	х	х	х	х	х	х	х	х	х	



# Our People

### Our management approach

- ST Human Resources Policy describes our approach to managing the basic rights, health, safety, well-being and development of everyone that works for ST
- 23 of our sites, including all our manufacturing sites, are OHSAS 18001 certified
- ST Environmental Health and Safety Decalogue sets out commitments related to Health and Safety
- ST has been committed to the Electronic Industry Citizenship Coalition (EICC) Code of Conduct since 2005

For more information, see www.st.com/our-people





### Key results



Average major non-conformances by EICC audit was brought down from

3.5 to 1.4



ST recordable cases rate decreased by 24%

2013 vs. 2012



of ST employees
went through
a formal
performance
appraisal process

Former ST-Ericsson employees mainly from the sites of Agrate,

Catania, Grenoble, Le Mans, Prague, Rabat and Rennes joined ST

# Recruitment, Learning and Development

ST People strategy contributes to ST's sustainable business success by anticipating and developing people engagement and organizational performance. We create the conditions for all ST employees to contribute to the company business, to innovate and continuously improve the way we lead through empowerment, teamwork, learning and development. This also implies agility in addressing requirements in terms of staffing, competencies and performance.

#### 2013 highlights

#### **Employee recruitment**

2013 was a particularly challenging year in terms of recruitment. We successfully integrated approximately 1,000 former ST-Ericsson employees into our critical business and R&D activities. We also took the difficult decision to close our Bristol, Ottawa and Toronto offices, and to deploy partial redundancy plans in some other sites, including our Geneva headquarters. ST exceeded minimum legal requirements to support employees affected by these plans, for their next career moves. Overall, at end 2013 we had increased ST headcount by over 600 people compared to end 2012.

#### **Learning and Development**

We continued the deployment of the key programs in place:

- Technical Staff community (463 members): as part of our innovation and R&D development strategy, we launched an intranet site dedicated to networking and knowledge sharing. The successful pilot in Italy will enable worldwide deployment to our top technical experts in 2014. All ST employees can access the profiles of Technical Staff, their patents, publications and lectures, enabling talent identification or collaboration offers. This fosters cross-fertilization and innovation to strengthen ST's technological competitive advantage.
- Development boosters have been successfully deployed for 214 of our key talents worldwide, notably in France, India, Italy, Japan, Korea, Malaysia, Singapore and the Philippines. These company-wide programs target our high-potential exempt employees and aim at accelerating their development, retaining and engaging them. These booster programs include training,

workshops, networking and top management exposure. Mentoring is also an integral part of this program, as it offers mentees support during critical stages of their career development, and an independent view when required. On their side, mentors are recognized as positive role models, for their personal and professional achievements.

Thanks to these initiatives, we have built a committed community of mentors, whose contribution we are counting on for future people development initiatives.

• Business development is one of our top Learning and Development priorities. In 2013 several workshops were carried out, one per sales region, focusing on either key accounts for business growth, on how to capture new markets or on the related necessary skills. A specific workshop to support the strategic mass market initiative was launched in Europe. Other new courses such as pricing strategy and marketing communication were successfully deployed to some of our Product Groups, aiming to enable marketers to improve margin and capture new opportunities.

**92%** of ST employees went through a formal performance appraisal process

#### **Performance management**

In 2013, 92% of our employees went through a formal performance assessment with their management, covering their job accountabilities, priorities for the year, competency and expected behavior.

- Internal mobility: increase the percentage of open positions for exempts filled by internal candidates to reach a minimum of 40% in 2013 and 50% in 2015.
- Ensure that more than 50% of employees have a development plan, linked to their annual
- Development: ensure that more than 95% of ST exempts have their potential assessed every two years through 'People Review' process\*.
- Increase by 5% ST's Technical Staff community recognized through Technical Advisory
- Increase employee retention: percentage of direct employees with more than two years
- Learning: ensure that more than 60% of employees follow at least 8 hours training yearly\*.

(\*) Objective discontinued in 2014



in August in the wake of the closure of the ST-Ericsson joint venture. Smart Power, MEMS and Sensors and Digital Consumer. They also strengthen marketing and customer support in the EMEA region and various support functions across ST. These employees bring support of our senior managers.

We also invited all ST exempts to participate in a survey on the performance appraisal process. More than 75% of people who answered the survey are satisfied with the performance appraisal process and consider that it fulfils its purpose concerning the assessment of the previous year's results, setting new objectives and job accountabilities as well as short-term performance and its improvement. And more than 80% feel their managers care about the performance management process and deploy it seriously.

We were able to identify, from ratings and answers to open questions, a number of short- and medium-term opportunities for improvement, some of which have already been addressed and implemented. For example, increased awareness and communication on the role of managers to give high-quality feedback and improve employee development and performance.

#### Internal mobility

To maintain a dynamic workforce and create employee development opportunities, we recently revised our internal mobility standard operating procedure which facilitates transfers, encourages job rotation and reinforces the requirement to offer positions internally.

#### Looking forward to 2014

Workforce management will now be supported by quarterly monitoring, evaluating staffing needs and appropriate training plans by country and by organization. Our objective is that each ST organization is aligned with the execution of the quarterly workforce plan.

To develop management empowerment and agility, we are also simplifying the job requisition process.





Manoj Kumar Senior Group Manager, ST Central Labs, Greater Noida (India)

quite afraid to take it up when told first, even if I was keen. I believe it is a very serious job that must be done with utmost care or not done at all. Various discussions on the concepts involving other mentors, managers of mentees and meetings with the mentee convinced me about the usefulness of this program. It requires the mentor to carefully analyze the information shared by the mentee and his vision and to suggest the right alternative(s) without being intrusive or getting too involved. It also changes the mentor during the process as the organization places a tremendous amount of responsibility in his/her hands. This provides a sense of privilege to both mentor and mentee. It also reminds the mentors of their own learning process with or without the benefice of a mentor. Finally, it provides a mentor a live example, allowing him/ her to continue to engage, understand

and analyze the mentee's possible

"The concept of mentoring at senior

level is new in ST Greater Noida. I was

Employees with a formal individual development plan (%) / LA12

	2009	2010	2011	2012	2013
Exempts	51.5	69.4	44.5	26.5	21.7
Others	-	-	19.0	17.3	15.5

#### Internal mobility for exempt positions (%)

	2009	2010	2011	2012	2013
% of jobs advertised internally	17.92	40.54	36.75	34.86	33.17
% of jobs filled internally	-	-	22.95	25.88	39.71

evolution.

# Employee Engagement

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

In 2013 we did not run an employee survey, but completed the action plan from our previous survey, which included communicating our new strategy, differentiating and aligning rewards, developing managers, simplifying our processes and running more improvement workshops with key organizations.

#### Tailored workshops

Four organizations were chosen to run the workshops: two Product Groups, a Sales & Marketing region and a support group. Each group organized several half day workshops for two or three of their teams across a range of sites. The workshops which gathered exempt employees at middle management level, focused on areas rated as in need of improvement in previous surveys. Top management launched the sessions, which were mediated by Learning and

Development team members. The outcomes were shared at organization and HR management level.

#### **Speed & Agility**

Based on our last engagement survey, the CEO and the senior management team decided to simplify some key processes in order to improve business effectiveness and re-engage our employees. This initiative is based on the following principles applied to senior management and each organization or site manager:

- Transparency and visibility;
- Empowerment and trust;
- Simplification and predictability;
- Speed and accountability.

(For more information on this program, see page 13).

#### **Revised survey questionnaire**

A dedicated taskforce was created to analyze and improve our employee survey questionnaire which is now more succinct and includes collective parameters to measure ST organizations' agility and quality, i.e. their capacity to anticipate and then lead change. Another set of new questions was designed to measure goal alignment, how effectively each organization aligns its objectives to those of the company and how it

collaborates with other organizations to meet common goals.

#### **Sharing information**

Our top management increased their level of communication with their teams by holding regular management meetings, round tables in small groups and site hall meetings organized by our Executive and Corporate Vice Presidents. In some cases, top management calls were recorded and made available to everyone on the company intranet. On an operational level, managers continue to cascade company information and strategy through their organizations on a monthly or quarterly basis.

#### **Local initiatives**

Sites are very active in organizing events all year round which favor employee's sense of belonging and motivation. Several events are detailed on our pages "Employees Health and Wellbeing" (pages 24-25) and "Community Involvement" (pages 58-59).

#### Looking forward to 2014

Our objective remains to deploy action plans aimed at leveraging employee engagement at local and corporate level. The next employee survey, which will include the new questionnaire, will be conducted at the end of 2014.





#### Claude Morant

Rousset site & Operations director 2011 - April 2014 (France) Crolles Operations Director - since May 2014 (France)

"Employee Engagement is a key factor of quality productivity on a site. In Rousset, we favor both the sense of belonging and the fulfilment of people at work. Every year we run an "Applications week", an event which gives employees a unique opportunity to discover the latest applications of products designed, developed and manufactured in Rousset. In 2013 we counted more than 1000 visitors during the 22 hours of demo sessions organized for all shifts (day and night). There were seven stands representing all site Divisions, the characterization analysis laboratory and the electrical test. 114 demonstrators animated the events. "Applications week" is a fantastic occasion for exchanges and interactions between all categories of employees. They can better understand their implication and contribution in the product life cycle and are reminded of the innovation and high-level of quality our end-customers

This year we also improved social wellbeing and interpersonal relationships via monthly events during the "Marseille-Provence 2013, European Capital of Culture" On site the artistic talents of our employees were revealed through varied artistic workshops, exhibitions and contests (painting, music, literature, photo, sculpture, handicrafts, fashion), and we offered them conferences on art and a music festival. ST Rousset also partnered with local initiatives, reinforcing our regional visibility and our link with local communities.



### **Focus**

#### STAR recognition

The yearly company recognition process, defined in the "Corporate Recognition Procedure" (SOP) recognizes outstanding achievements of individuals and teams throughout the company.

For individuals: ABCD "Above and Beyond the Course of Duty" awards recognize people selected by their own organization.

For teams: any team or workgroup fitting the criteria can apply through their organization contact and compete to win an award across six categories aligned with the company's annual priorities.

The nominations are assessed by a jury composed of experts in the relevant category. Winners receive gold, silver or bronze awards. The CEO selects one of the six gold winners to receive the "CEO award".

There are also special mentions for shop floor teams.

On a yearly basis ST holds a corporate recognition ceremony where prizes and certificates are handed out to individuals and teams. In addition, sites also hold local ceremonies to celebrate awards granted to their employees.



#### Communication meetings

	2011	2012	2013
Number of employees who attended meetings with Executive Vice Presidents / Corporate Vice Presidents*	28,343	36,474	38,688

(\*) Can include more than one attendance per employee over the year.



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



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



• 50% of action plans should be implemented on an annual basis\*.

• Increase ST employee engagement relative to the benchmark.

(\*) Objective discontinued in 2014

# Labor and Human Rights

#### The context and our commitment

ST is committed to respecting our workers' rights and continuously improving labor conditions in all our operations. As a large international company, our business relies on a large workforce and our commitment to them is key for our success. We also aim to increase our customers' trust and confidence, so that we remain a partner of choice for all our stakeholders.

As a signatory of the UN Global Compact we strive to progressively integrate all relevant guidelines relating to human and labor rights into our management system such as the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises and ISO 26000.

#### Average major non-conformances in EICC audits was brought down from 3.5 to 1.4

ST is an active member of the Electronics Industry Citizenship Coalition (EICC) which promotes social, environmental and economic responsibility in the electronics industry supply-chain through multi-stakeholder engagement and standards setting. The latest revision of

the EICC Code of Conduct focuses on human trafficking, supplier management and conflict minerals. As ST uses the EICC Code of Conduct to set out the core principles to be followed by our sites and suppliers, we are dedicated to their implementation throughout our operations.

#### 2013 main actions

#### **Working hours**

The management of working hours is a recognized challenge in the electronics industry and is consequently one of our main focus areas when it comes to ensuring implementation of our code of conduct. In 2013, we put in place an automatic tracking tool in our priority manufacturing sites which provides us with reliable evidence of real hours worked in order to improve compliance in this area.

#### **Training**

Our HR and Sustainable Excellence community is a key enabler of good labor practices at our sites. In 2013 we trained

 Worker-Management Communication - addressing work relations, communication and employee rights;

• The EICC Auditor course - providing advanced skills relating to the implementation of the EICC Code, specifically its Labor section which covers working hours, forced labor, child labor, humane treatment and grievance procedures.

### Collaboration with the academic

Throughout 2013 ST worked on a project with KEDGE Business School<sup>1</sup> in which six Chinese students analyzed the issue of human rights in the electronics sector. The students have provided a summary of human rights best practices that will be used to inspire future actions.

#### **Looking forward to 2014**

Our priorities for 2014 will be to reinforce the management of Corrective Action Plans in our audit programs to ensure a sustainable result, and the reinforcement of training for the Human Resources community.

1. Formerly Euromed Management

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

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

• Ensure 100% of ST Asian and Back-end sites are audited every two years versus the EICC Code of Conduct.

• Ensure that our audited sites have 0 major non-conformance on the labor and health and safety section.

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

• Ensure that all ST organizations deploy the HR Policy through their top page and monitor their compliance.

(\*) Objective discontinued in 2014



KEDGE

#### Xi Xin

"The project specifically addressed the importance of integrating human rights into companies such as STMicroelectronics and how to do it right. The project was organized jointly by the school and ST. Our group of six students worked nearly six months on it. We found that human rights are not only  $\alpha$ significant subject but also become a key performance indicator for corporations all over the world. We also checked and analyzed ST's status and gave our own recommendations. ST actually has some sound human resource policies in terms of human rights, and fully implementing and improving these policies will be the future work for ST. The project was very interesting for all the group members. It gave us another perspective to understand and interpret businesses of nowadays."

#### EICC Audit program results - Major non-conformances

	2011	2012	2013
Number of audits	2	4	5
Working hours	2	4	4
Occupational injury and illness	-	3	1
Wages and benefits	1	1	1
Emergency preparedness	-	2	-
Freely chosen employment	1	-	-
Supplier responsibility	-	1	-
Child labor avoidance	-	1	-
Non-discrimination	1	-	-
Hazardous substances	-	1	1
Machine safeguarding	1	-	-
Occupational safety	1	-	-
Protection of identity	-	1	-
Fair business, advertising and competition	-	-	-
Food, sanitation and housing	-	-	-
Corrective action process	-	-	-
Responsibility and accountability	-	-	-
Legal and customer requirements	-	-	-
Air emissions	-	-	-
Business integrity	-	-	-
Freedom of association	-	-	-
EICC Code awareness	-	-	-
Total	7	14	7
Average major NC/audit	3.5	3.5	1.4



# Employee Safety



#### 2013 highlights

2013 was a year of focus and improvement for ST in terms of safety. ST remains amongst the best-in-class in our industry demonstrating a continual decrease in our recordable case rate, for both on-site domestic and industrial recordable cases, for several years.

A key driver of this progress was ST's commitment to the new corporate program announced in our 2012 Sustainability report which promoted actions on five key pillars.

- 24% in ST recordable
- o/ cases rate o in ST severity rate

#### **Deployment of new safety KPIs**

We deployed a new safety KPI matrix for 8 key areas, with quarterly reporting. This enabled us to get a deeper insight into specific weaknesses and best practices, and to further improve existing programs and practices, such as unsafe acts and conditions detection, field inspections by management, incident root causes analysis, job hazard analysis, safety goals in MBO (Management by Objectives), trainings, communication and audits. This also contributes to improve recordable cases and other incidents root cause analysis.

#### Reinforcement of training

We conducted 260,000 hours of EHS training, with an emphasis on the manufacturing population. This means an average of 6.4 training hours per employee (exceeding our target of four hours). Training included:

- E-learning for managers, with a focus on leadership attitude (involvement and commitment);
- Basic EHS training for new and nonmanufacturing populations;
- Evacuation drills for all employees (we reached 89% coverage);
- First-aid training:
- Fire training with use of extinguishers;
- Training on specific risks such as chemicals, lock-out tag-out, electrical and fork-lift truck.

We also held two safety seminars for general managers of manufacturing sites in Asia and Europe, with cascade to their direct reports on manufacturing sites.

In addition, we created a workspace dedicated to EHS training on the company intranet.

#### **Strengthen sites EHS resources**

We strengthened our 'on the ground commitment' to safety by encouraging management at our sites to increase the number of people in charge of EHS. We aim to have a dedicated EHS representative at large sites and an HR person taking responsibility for EHS at smaller sites.

#### Reinforcement of safety communication

At corporate level we have disseminated safety communications through a newsletters and poster campaign

with features such as sharing of best practices and awards.

At group level we have strongly encouraged sites and group directors to include safety in their meetings and Operation Reviews.

#### Improvement of EHS audits, visits and processes

The number of field inspections, visits and audits increased by 55% compared to 2012, resulting in increased quality of detection and reporting of hazards, unsafe acts and conditions and nearmisses. Adopting a proactive approach and building a strong health and safety culture helps reduce all types of incidents, including the more serious

Once again we met our target for maintaining our annual OHSAS 18001 certifications with renewal confirmed for 23 sites.

Note: since Q4 2013, our EHS remit has been extended to cover four former ST-Ericsson sites as well as the former ST-Ericsson employees taken on in existing ST sites.

#### Looking forward to 2014

In 2014 we aim to build on our 2013 results and further optimize performance against our KPIs. A dedicated work group was launched in February 2014 to identify the key focus areas for each of our sites.



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



• Ensure ST employees have an average of four hours of training and awareness per year on environment, health and safety (EHS) topics.



ST's poster collection communicates our safety culture in an eye-catching and memorable way with slogans such as "Don't learn safety by accident", "See it, report it, correct it", "Think safe, work safe, be safe" and "Your safety doesn't depend on... LUCK! It depends on... YOU!"

### ( ) Focus

#### Who wants to be a millionaire?

All our sites compete to be safety millionaires. This year's winners are

At the end of 2013 Kirkop had achieved an incredible 22 million hours

their last recordable case in April 2011.

safety culture which is embedded throughout the sites.

Cedric Labartino

"It is a satisfaction for me, and the team,

that the training courses we developed

needs and motivation, and the impact

to obtain this very good achievement

were well deployed. I had a lot of

training can have for developing

strenathening safety culture.

or adapt their training plans.

skills and awareness of people and

We discussed our vision, their site risk

This focus and collaboration enabled

consequently to exceed our training

enriching. Interfacing with sites EHS, HR

or training managers is key. It facilitates

and promotes cross fertilization. We

can capture and share best practices

whether from manufacturing sites or

others, later proposing and deploying

us to reinforce the sites' plans and

I found all our exchanges very

common actions or modules.

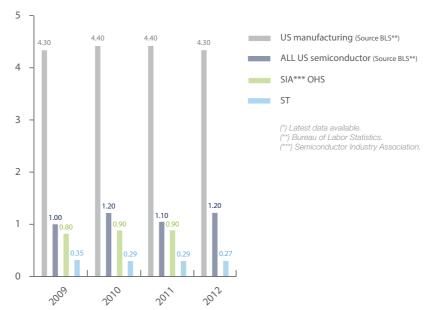
and job hazard analysis matrix to define

contacts with the sites, explained the

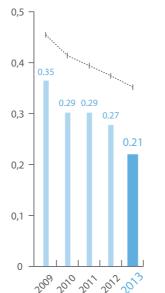
Safety Manager,

Crolles (France)

#### Recordable cases rate benchmarks\* LA7 / \$\square\$ 9.1

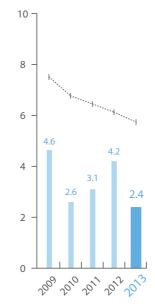


#### Recordable cases rate (%) / LA7 / \$\square\$9.1

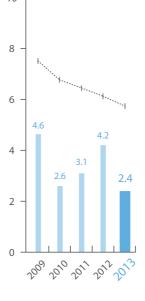


EHS Decalogue target:
-10% per year 2002-2010 and -5% from 2011

Recordable cases rate



Severity rate (%) / LA7 / \$\square\$ 9.3



EHS Decalogue target:
-10% per year 2002-2010 and -5% from 2011

Severity rate

More performance indicators are available on pages 67 to 71

# Employee Health and Well-being

We are committed to ensuring the wellbeing of our employees both during, and outside of work, through promoting a work-life balance, high-quality working conditions, access to healthcare and providing of a wide range of personal services at ST locations.

#### 2013 highlights

At corporate level, we continue to take care of the health and well-being of all our employees whatever their location or

Our Health Plan provides our employees with a very high-level of medical care. In addition to regular medical checkups, we offer many other specific examinations, including blood analyzes, audiometric tests, ophthalmologic exams, cancer prevention screening and vaccinations.

In 2013, more than 58,000 medical examinations were conducted worldwide, including more than 12,000 screening tests. We target prevention by encouraging employees to take part in local promotional campaigns to quit smoking, participate in sport and eat healthily.

Where regulations ensure that a very high-level of medical care is handled outside ST, specific attention is put on ergonomics and recommendations given by our medical experts.

Our sites also run regular local events and campaigns throughout the year.

#### Two sites with comprehensive programs:

In Ang Mo Kio (Singapore), the site Health Plan, now in its seventh year,

- Free medical treatment and medicine;
- An in-house doctor's clinic;
- 24 hour support from company nurses;
- A sponsored comprehensive health screening conducted monthly;
- Free annual Executive Health Screening for senior managers;
- Benefits to employees towards their medical, dental or optical expenses;
- A hospital and surgical insurance scheme for employees;
- Workmen's compensation insurance for employees injured, either inside or outside of work.

The site also organizes events throughout the year to encourage employees to adopt a healthier and more active lifestyle.

More than **58,000** medical examinations conducted worldwide

In Calamba (the Philippines), the Comprehensive Health and Employees' Wellness Services (CHEWS) has been developed to improve employee health

and well-being to enable employees to increase their productivity and contribute to achieving company goals. Wellness programs are developed around three service pillars and are managed by a team of expert healthcare professionals:

Patient care - an array of healthcare services managed by a team of expert inhouse medical professionals who provide holistic patient and employee care.



Occupational health - a mandatory service that assures the company's compliance with statutory and international social and labor laws.

Wellness - a menu of first-class services that aims to promote and maintain a high degree of physical, mental and social well-being of employees to help balance work-life harmony.

CHEWS received an internal STAR Bronze award in ST's Annual Recognition awards in 2012.





#### Eva Kulhankova

HR Manager Eastern Europe & Middle East Prague (Czech Republic)

"The health program is specific for each country. In Poland, Russia and Turkey where the public health system is not offering good health care, ST is covering employees with health insurance scheme. In Hungary and Czech Republic we focus on regular prevention health check-ups that include also specific tests linked to the employee position like ophthalmologic exams, physiotherapeutic screening. One of the prevention program organized in Prague is regular sport exercises focused on problems with the spine and first aid hands on training. I got several feedbacks on how the health program helped employees' health.



### **Focus**

#### Concierges

On site-services or concierges are an example of locally led initiatives where sites identify and provide a range of practical employee services and amenities. In 2013, the typical services offered included: canteen facilities, vending machines, ATM services, post and courier services, tickets and coupons, access to sporting activities such as team sports, dancing and yoga as well as access to showers. Some sites also offer counselling and hot lines, lectures, electric bicycles, laundry,

Workplace Health

& Wellness

car wash and repairs, convenience shops and even a roof top club house.

Our sites in China, France, Germany, India, Italy, Malta, Singapore, Switzerland, the Philippines and UK provide the most advanced services. Our network of Sustainable Excellence Coordinators help to globally disseminate new concierge service ideas which are then adapted locally by sites.

#### Health Plan - Medical examinations

Exam type	2009	2010*	2011	2012	2013
Medical examinations	50,295	69,180	70,480	60,216	43,411
Check up with a physician	20,687	32,472	35,689	34,604	19,645
Blood analyses (including biomonitoring tests**)	12,287	17,344	15,954	11,986	10,987
Chest X rays	7,205	9,763	8,881	5,624	5,782
Colorectal cancer immuocult test	851	523	966	310	277
Electrocardiograms	5,257	5,728	5,497	4,682	4,427
Mammography	1,138	1,080	1,094	1,026	760
Pap smear tests	2,084	1,691	1,586	1,572	1,198
Prostate cancer screening	786	579	813	412	335
Screening test	11,923	10,958	13,097	8,837	12,438
Immunization	4,347	3,505	3,019	2,234	2,153
Total services provided	66,565	83,643	86,596	71,287	58,002

(\*) 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 operations



• Promote employees' health and well-being through local initiatives and campaigns.



• Expand and promote the well-being services offered to employees at ST sites to facilitate



• Ensure 100% of employees have benefited from the health plan by the end of 2013.





# Global Diversity and Equal Opportunity

is to address the difficulties faced by

ST remains committed to ensuring equal opportunities at all levels of the company and avoiding any discrimination based on gender, age, race and disability, striving to go above and beyond national legal requirements. We are sensitive to local culture and customs and always take these into account when developing diversity and equality strategies.

#### 2013 highlights

Gender diversity remains a challenge for our sector. On International Women's day, ST was recognized by Vigeo, a sustainability ratings agency, for our leading approach to the prevention of gender discrimination and the promotion of diversity.

Globally, we now employ almost 600 disabled people, representing 1.30% of our workforce in 2013 (against 1.28% in 2012).

#### Age diversity

Our commitment to young people is managed through our multiple partnerships with R&D and academic institutions (see page 60).

Many of our sites have specific plans in place to manage employees reaching the end of their career. The programs include mentoring and knowledge transfer, which allows ST to take advantage of

employees' professional and personal experience, and optional part-time contracts to ease the transition into

In France, there is also a mobility program where employees reaching the end of their career can benefit from a one-year outplacement in a local SME, allowing them to share their extensive experience and knowledge within small and medium sized local businesses.

ST France put in place a 'barometer' to measure the satisfaction rate of our employees with disabilities

#### **Disability and equality programs** in France

In France, the disability program continues with multiple actions aimed at easing working conditions and also integrating disabled people with other employees. The handicap agreement, renewed for the period 2013-2015. represents a solid framework for our actions in this domain and sets out our long-term engagement plans.

For example, our ST Rousset (France) site launched the 'successful integration of disabled workers' program. Its aim

disabled employees at work. We have put in place a 'barometer' to measure the satisfaction rate of our employees with disabilities to identify where we could improve their life at work. A package of leaflets with operational information and advice was prepared by the HR department for all managers on site, to help them envisage the integration of a disabled person in their team. In manufacturing, such integration has proved a success, and the participating teams are ready to welcome and support more colleagues with difficulties.

An increasing number of administrative, courier, mailing, minutes-taking in official meetings and printing activities are now sub-contracted to local Institutions and services of 'help through work' (ESATs) that employ people with disabilities.



Chieko Kamiya HR & Administration Tokyo, Japan

"I'm Chieko Kamiya and I work in Human Resources in Japan. Here in Tokyo, a huge number of people commute by train and bus, which I cannot do because I have a disability from rheumatoid arthritis. The company provides a parking space for me so that I can commute with my own car, and I really appreciate this special treatment. ST also enables me to participate in archery training on weekdays. Thanks to such support, I won the bronze medal in the 2013 Para Archery World Championships. I was very happy to show it to ST colleagues! I would really like to express my appreciation to ST."

Photo by courtesy of the ALBERGA/WORLD ARCHERY



• Ensure that hiring ratio of women to men is equivalent to the average gender ratio of graduates in partner schools and universities\*.



• Ensure gender equality at higher level of job grade by increasing the women to men ratio by 4% • Increase the proportion of women in leadership positions worldwide from 9.8% to 15% by 2015\*.



• Ensure that all sites have a seniority plan to maintain employability in the second part of people's careers (% of population covered).



• Ensure that all ST sites have disability plans to continue to increase the percentage of disabled employees in ST (% of population covered).





# ( ) Focus

#### ST Women's Network

Our ST Agrate (Italy) and Grenoble (France) sites organized live events to promote our global ST Women's Network launched on Women's Day. During these events, women on site could exchange directly with our CEO and women in key management positions.

The Network's objective is to help each ST department create a culture that enables women to realize their career potential,

#### **FCEM visits our Rousset site**

In April, the FCEM (World Association of Women Entrepreneurs), held their 61st committee in Marseille for four days. The committee addresses how women can positively influence the global market. ST Rousset site was one of two companies the committee visited providing ST with an opportunity to share its knowledge of the semiconductor market and the industry challenges women face.

#### **Women's programs in India**

In India, several women's programs were implemented in 2013:

• Enhanced motherhood facilitation leave: after consultation with managers and site support services, maternity leave was extended by two weeks to fourteen weeks for a smoother return to work

- Sick leave for child medicare: the sick leave policy was amended to accommodate the additional challenges women face during early motherhood. Mothers now have the right to use ten days of their sick leave per vear when their child is sick, up until the child's third birthday.
- Check-up camp: a special talk and check-up camp was organized for women to discuss a wide range of health issues.
- Photo essay "The Amazing Spirit": a limited edition photo-essay was created with the support of the site photo club "Aperture" with the aim of capturing the essence of the women of ST India".

Moreover, further to the December 2012 rape and fatal assault case in the country that generated widespread national and international coverage, special safety awareness workshops on self-defense were organized. A tailored

program on women safety was run with a facilitator. It aimed to make women feel more empowered and able to protect themselves. Specific workshops for the daughters and wives of our employees were also organized to complete this initiative.

#### Harmony at BHQ (Singapore)

ST teams are spread worldwide and promoting cross cultural awareness is a strong component of the way we work. At Ang Mo Kio BHQ, we support the Orange Ribbons Celebrations in July. This is a signature movement adopted by the city state in 2008 to promote racial and religious harmony. Over the past two years, we have rallied staff and their families to participate in the campaign. In July, about 70 staff members attended the local event with their families and friends to support the national movement on racial harmony.

#### Women in management / LA13

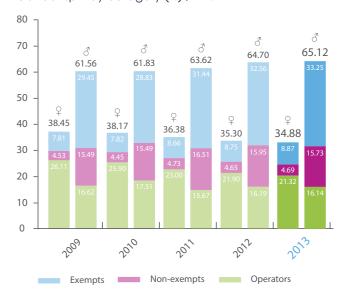
	2009	2010	2011*	2012	2013
Women in experienced management (%) (job grades 15 and above)	-	-	13.77	13.77	14.02
Women in senior management (%) (job grades 17 and above)	8.90	9.91	9.56	9.79	10.04
Women in executive management (%) (job grades 19 and above)	7.60	9.71	9.80	8.78	9.50
Women on the Supervisory Board	-	-	-	1	2

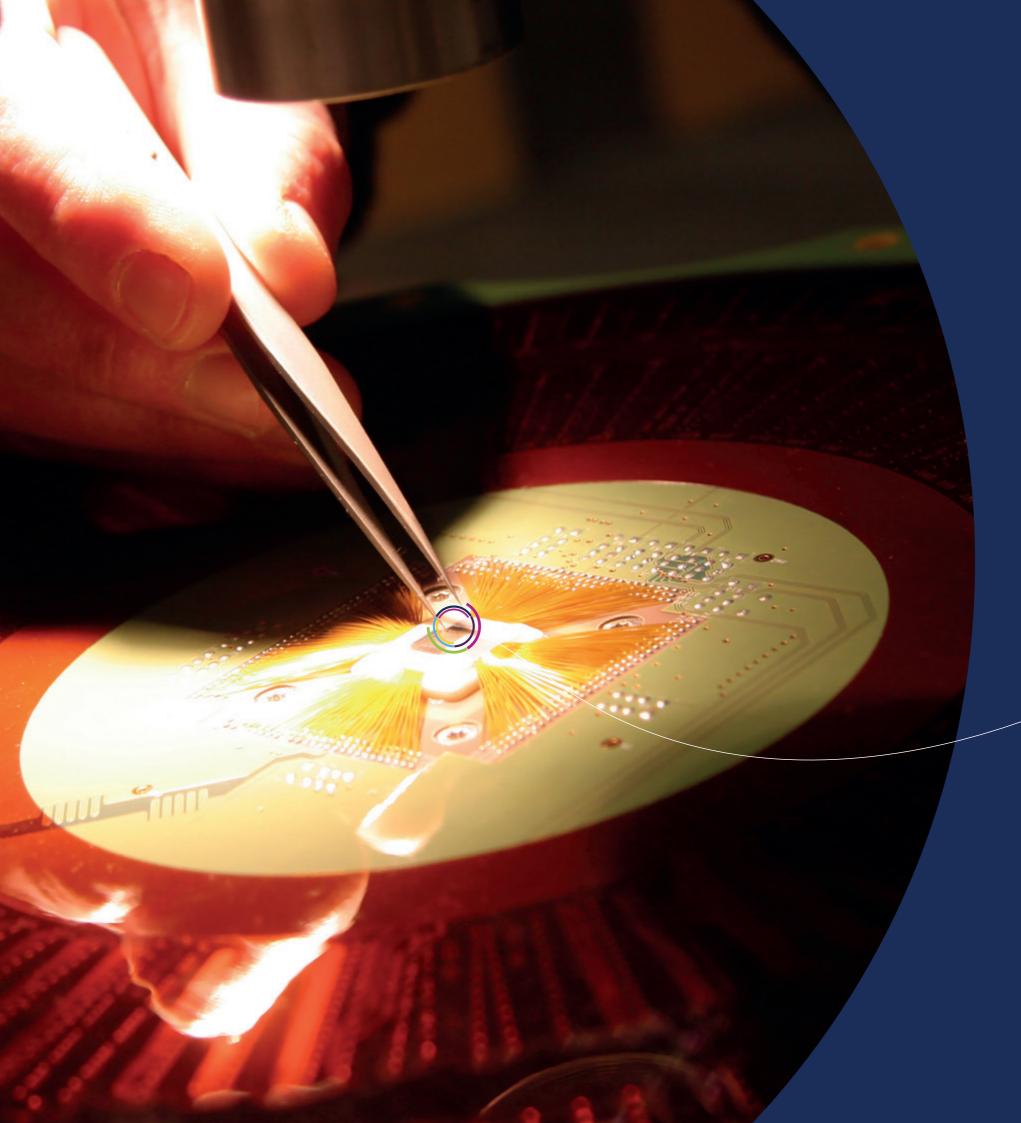
(\*) Figures changed following data review

#### Disabled employees / LA13

		2009	2010	2011	2012	2013
	Disabled people employed as % of total workforce	0.95	1.01	1.05	1.28	1.32
	Budget spent on disability programs (US\$k)	3,489	2,321	3,567	3,597	1,746

#### Gender split by category (%) / LA13





# Our Products

### Our management approach

- ST is certified company-wide to ISO 9001 and ISO/TS 16949
- ST Quality Strategy sets out commitments related to customer satisfaction and products
- ST aligns its chemical management system with the IECQ QC 080000 HSPM standard
- ST Environmental Health and Safety Decalogue sets out commitments related to Sustainable Technology

For more information, see www.st.com/our-products



## Key results









# Customer Satisfaction





ST is committed to ensuring its products meet customer expectations in all respects at every step of the product life cycle from conception to delivery and post-sales.

#### **Customer satisfaction survey**

In 2013, ST conducted a customer satisfaction survey to analyze the perception and expectations of more than 200 of our customers. Compared with the results of our 2011 survey the overall level of customer satisfaction increased by 2.5 points and the extent to which customers are planning to increase their business with ST improved by 8 points. The highest satisfaction scores were obtained in business relations and product offering.

Following the results of the survey and customer feedback, we promoted improvement programs in the following

- Project management for product development:
- Product quality support effectiveness;
- Supply-chain flexibility and visibility;
- Post-sales support.

#### Quality strategy

Providing high quality products is key to acquiring new customers as well as new business from existing customers. Over the last two years we redesigned our quality governance and strategy in line with the new ST strategy. We have made significant progress including:

• Development of a comprehensive and integrated quality strategy covering all ST business processes;

- Reinforced approach to problem
- Development of a structured approach to change management;
- Synchronization of Front-end and Backend manufacturing to streamline the production process and further improve
- Review of the processes for introducing new products in order to enhance quality and time-to-market.

We know that we must constantly find ways to improve our product quality and we believe we have the strategy and tools to keep moving on the right path. More information on our quality strategy and roadmap is described in our Quality Handbook available at: www.st.com/ quality-handbook

> The overall level of customer satisfaction increased by 2.5 points

#### **Customers and sustainability**

ST welcomes an open dialogue with our customers. In 2013 customer requirements<sup>1</sup> related to sustainability continued to increase with particular focus on social and ethical issues (requests increased by 65%). Read our dedicated focus on page 31 for more information

#### **Supply-chain governance**

In 2013, we made good progress in reinforcing our supply-chain governance. We continued to deploy common repository and new tools and KPIs to optimize our forecasts and better align our inventory model with our customers and market needs. We have also optimized our production flow by working on interconnections between organizations and on people roles and responsibilities.

For 2014, our priority programs are aligned with the feedback we received in our customer satisfaction survey but also with our Speed and Agility program aimed at simplifying time-consuming and complex processes<sup>2</sup>:

- Demand management to plan our supply-chain more accurately;
- Visibility improvement on early accurate deliveries dates for our customers;
- Daily/weekly planning process in our materials management and the capacity adjustment for our Front-end and Back-end manufacturing activities to better react to changes in demand and supply;
- Optimization of organization and process flow across all the actors of the supply-chain.

For more information on our approach to customer satisfaction, see www.st.com/ customer-satisfaction

1. Customer specified demands formally stated. It may be a questionnaire, contract, letter of intent, letter of agreement, or other form or contractual commitmen For more information on ST Speed and Agility program,



• Just in time on committed date at 92%.



• Just in time on requested date at 78%.



Reduce customer complaints per million units by 5% by Q4 2013 compared with a 2011







Carlos Peralta Quintero

"IUSA's Vision is to establish a sustainable growth: therefore, we seek to work with Technology companies sharing the same values. STMicroelectronics shares the same principles and our relation of over five years has resulted in high quality e-Metering products.

Looking forward, the investment in renewable energy sources is a trend that will happen sooner than later and IUSA wants to be a pioneer of this technology in Mexico. As one of the leaders in this market and someone who shares the same values, ST is the right partner for us to develop innovative products.

#### **Focus**

### Growing interest of our customers for sustainability

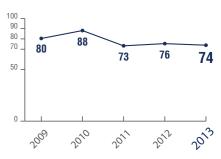
The number of sustainabilityrelated customer requirements<sup>1</sup> that ST receives is increasing year by year. Top topics include compliance with EHS legislation<sup>2</sup>, management of hazardous substances<sup>3</sup>, conflict minerals due diligence<sup>4</sup> and sustainability commitment (code of conduct, programs, performance). This is due to an increase in sustainability related legislation and also to growing focus on the sustainability practices of B2C companies by the media and NGOs.

In order to enhance the levels of customer satisfaction and streamline our response to customer requests we are using shared tools and following best practice guidelines from the Electronics Industry Citizenship

Coalition (EICC) including:

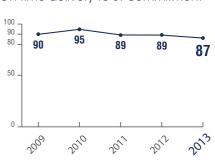
- The EICC's due-diligence tool for conflict minerals;
- The EICC-ON self-assessment questionnaires to disclose the risk assessment of our sites;
- EICC third party site audits, to share with multiple customers and avoid duplication of efforts;
- Launching specific programs to tackle the root cause of our most demanding issues such as working hours<sup>5</sup>.

#### On time delivery to customer request



---- % of delivery in line with customer request

#### On time delivery to ST commitment



--- % of delivery in line with ST commitment

<sup>1.</sup> Customer specified demands formally stated, it letter of agreement, or other form or contractual

<sup>2.</sup> For more information, read the Environmental section pages 40 to 53

<sup>3.</sup> For more information, read page 34 4. For more information, read pages 38-39

<sup>5.</sup> For more information, read pages 20-21

# Innovation Management



Innovation is the critical link that converts our portfolio of IP and inventions, into products and ultimately into business opportunities and revenues. A significant proportion of the goods and services that will be available in the market in ten years' time have not yet been developed or even conceived, but microelectronics is bound to be a key enabling technology underlying most of them.

#### New innovation opportunities

ST's approach to innovation is shifting to focus on the synergies between technology, product and application<sup>1</sup> innovations. Our new internal structure reflects this and now consists of two segments: Embedded Process Solutions (EPS) and Sense & Power and Automotive (SP&A), with manufacturing, technology R&D and products groups working closely together in both segments. The Nano 2017 R&D program<sup>2</sup> launched in 2013 and led by ST is also gathering many public and private players to follow the same objective.

#### **Investment in new ventures**

As part of our commitment to fostering an environment that generates new ideas, ST has its own investment fund which supports start-ups aiming to understand in advance emerging markets for which semiconductor is key, such as healthcare, cleantech or smart infrastructures. In 2013, this fund invested in three companies.

#### **Internal Fellows community**

ST recognized long ago that technological excellence is key to maintaining a leadingedge and attractive product portfolio. An internal Fellowship program is in place to recognize the most technically talented and experienced members of the company and to make them ambassadors to promote technical excellence and the spread of knowledge throughout the company. (For more information on our human resources programs for technical experts, see

#### **Involvement in ecosystems and** partnerships

ST is participating in the most prominent international standardization organizations covering among others communication protocols, multimedia processing, security, wireless charging.

# patents filed in 2013

We are also sponsoring many graduate and post-graduate research projects with some of the most advanced universities and research organizations around the world in fields such as sensing networks, embedded system, smart power and automation.

And in 2013, ST participated in a number of collaborative innovation initiatives including:

#### SOI), with CEA-Leti, IBM and Soitec, one of the world's most important applied research breakthroughs in transistor and electronic technology. The 2013 objective was to leverage FD-SOI technology to bring a breakthrough in a number of applications. This has been achieved by demonstrating the unique power efficiency of the technology for ultra-

low energy applications as well as for

network infrastructure. The exceptional

reliability also demonstrated, can be a

game changer in applications such as

automotive.

• Fully Depleted Silicon on Insulator (FD-

- Developing a technology that allows processing and manipulation of light signals on silicon, with Luxtera Inc., bringing a dramatic increase in processing speed and an outstanding reduction of power consumption.
- Many application innovations rely on the enablement and strength of an ecosystem. To foster such innovation, ST is part of a collaborative industry project, ARM mbed™ which delivers free tools and fundamental opensource hardware and software building blocks for the rapid development of innovative ARM-based devices, ST contributes with its STM32 Nucleo open development platform.

#### IP licensing out and sourcing

Certain internally-developed technologies carry value in excess of what can be extracted from product revenues alone, in which case ST sometimes seeks to realize this value by licensing out a portion of our Intellectual Property which can generate third party business.

We also leverage external knowledge and technologies from private, public and academic worlds in order to enhance the efficiency of our innovation processes. (Read more on pages 60 to 63).

1. Application innovation refers to finding new ways of using our customers' final products or supporting our custor

to create new products based on our technology solutions

2. For more information on Nano 2017 program, see

3. For more information on awards received in 2013,

### • Increase efficiency of product development: reduce average age of development projects to

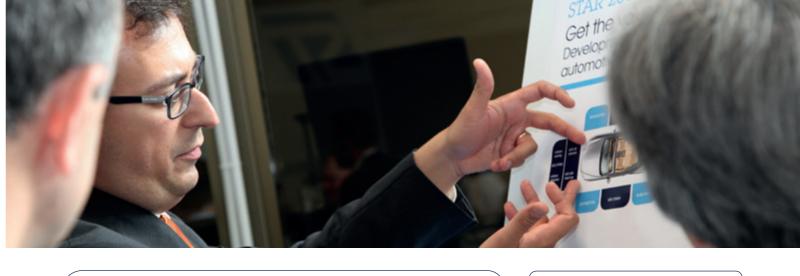
• Increase efficiency of product development: increase proportion of projects less than 1 year old to 33%.

• Increase R&D partnerships: reach 20% of R&D spending incurred via partnerships or external

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

(\*) Objective discontinued in 2014

15 months



#### **Focus**

### Examples of technology, product and application innovations

#### **Technology innovation**

• ST's pioneering FD-SOI is a state-of-the-art CMOS technology which brings multiple benefits including power efficiency, outstanding flexibility, reliability and simpler manufacturing processes. ST has gained important design awards for this technology<sup>3</sup>.

#### **Product innovation**

- ST developed a set-top-box solution, using the new video compression format, High Efficiency Video Coding (HEVC), to display 4k "UltraHD" video content
- ST's STLUX385A digital power controller optimizes LED efficiency at any dimming level and minimizes power use of street lighting when idle.

 ST has developed innovative Time of Flight solution (FlightSense) for distance metering and proximity sensors enabling a large range of new applications in mobile phones and Internet of Things (object and movement detection, fast automatic camera focus).

#### **Application innovation**

 ST participated in the development of a solution for energy harvesting from electromagnetic, thermoelectric and piezo (mechanical strain) sources. One example of a final application is a watch powered by the energy generated from the temperature difference between skin and ambient air.

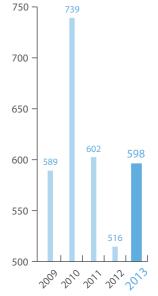




## Dr. Handel H. Jones

"STMicroelectronics has demonstrated vision, courage and innovation in developina FD-SOI as a mainstream option for advanced CMOS roadmap. The breadth of applications addressed by FD-SOI is extensive, and in addition to low power and high performance digital designs, there is a wide range of mixed signal and high frequency designs that can be competitively addressed. STMicroelectronics is in an excellent position to take advantage of the global adoption of FD-SOI and leverage its advantages in product innovation in markets like network infrastructure, consumer or Internet of Things.

#### ST patents filed



#### Innovation activity

	2010	2011	2012	2013
Median age of immature projects (months)	15	15	18	15
% of Immature projects* younger than 1 year	32	35	28	39
% of projects* maturing within year	28	33	30	41

(\*) immature project: product development project, defined in accordance with IFRS criteria, measured in asset value, not vet at Maturity 30 at the end of the year

# Sustainable Technology



ST is committed to reducing the environmental impact of its products and continually improving their performance to enhance the quality of life of end-users. In 2013, we changed the name of our 'Product Stewardship program' to the 'Sustainable Technology program'. This reflects ST's approach to product

responsibility which goes beyond our efforts to reduce the environmental impacts of our products. It focuses on the positive role we can play, in respect of the major societal and environmental issues facing our world today, by providing innovative technology solutions.

Our Sustainable Technology program consists of three underlying programs:

- Product compliance
- STAR Responsible Products
- Eco-design

# Product compliance

Complying with applicable legislation and the requirements of our customers and other stakeholders regarding EHS and the social and ethical impacts of our products is a fundamental component of our Sustainable Technology program. We annually review our EHS regulated substances list against applicable regulations and agreed customer requirements. Internally we have developed strategic programs to ensure we remain compliant with applicable requirements.

#### **ECOPACK®**

All ST products are classified according to the voluntary ECOPACK® program, which responds to all applicable requirements such as REACH, RoHS and ELV<sup>1</sup> including the development of new solutions that eliminate RoHS chemical compounds from our products and manufacturing lines, when feasible.

The three ECOPACK® grades are: • ECOPACK® 1: compliant with the

- Restriction of Hazardous Substances (RoHS) directive and 'lead free'2;
- ECOPACK® 2: ECOPACK® 1 + free of brominated, chlorinated and antimonyoxide flame retardants;
- ECOPACK® 3: ECOPACK® 2 + free of halogens with no RoHS exemptions.

This is a new advanced grade which we announced in 2013. First orders for ECOPACK® 3 arrived at the end of 2013 and will appear in our 2014 reporting

These grades are communicated to our customers, although in some cases customers may still request non-ECOPACK® products for technical reasons.

#### **Materials declaration**

In order 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 using the IPC 1752<sup>3</sup> standard. Customers can access our latest product information on the ST website.

#### **Conflict-free minerals**

ST is committed to complying with legislation and aligning with customer requirements relating to conflict minerals. For more information see the Conflict-free Minerals section on pages 38-39.

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

The HSPM objective is to enhance companies' processes to identify, control, quantify and report the amounts of hazardous and toxic substances in the products they manufacture or supply. ST already has a strong chemical management system covering the purchase and manufacturing processes and involving Facilities and EHS organizations (see pages 48-49). We have made good progress in our ongoing efforts to align our hazardous substance management systems with the IECQ4 QC 080000 HSPM standard. Our designers are required to check whether any of the substances they need for a product are hazardous and, if so, to define a replacement plan, if relevant. Our purchase organization has also reinforced its requirements to ensure suppliers are in line with the HSPM standard.

# **SUSTAINABLE**

# STAR Responsible Products

Our STAR Responsible Products program, launched in 2011, identifies, tracks and communicates new innovative products which address the social and environmental challenges of the world today. For example, our 'social responsible products' include those which have safety applications or which provide health benefits to end-users while our 'environmental responsible products' include those which preserve environmental resources and those which contribute to renewable energy generation1

#### responsible products launched in 2013

A product is awarded 1, 2 or 3 STARS defined as 'incremental', 'significant' and 'breakthrough'2 according to its level of innovation. For social products the rating is applied based on qualitative evaluation and for environmental/energy savings products it is based on quantitative assessment.

This program enables us to both focus attention on trends that are key to our business such as smart energy usage, which is defined as a key growth driver for the company, as well as fostering an internal culture where sustainability is embedded in our core business.

1. For detailed description of ST Responsible products

Innovation level is defined by comparing the product to market standards and ST previous generation

#### ST Sustainable Technology program







Responsible Products



LCA / Eco-design

### **Focus**

### MEMS brochure promotes Sustainable Technology

ST leads the consumer and mobile MEMS (micro-electromechanical system) market and offers one of the industry's widest portfolios of MEMS motion sensors, including accelerometers, gyroscopes, digital compasses and inertial modules.

Recognizing increasing market expectations around the provision of environmental and social product information, the Motion MEMS division agreed to pilot ST's new Sustainable Technology tools and was the first to publish a product family brochure with

information on:

- Compliance with ECOPACK®
- Reduction of carbon and water footprints:
- STAR rating of its responsible products.

Disclosing product carbon footprint data is now industry common practice. However, ST has gone beyond this by publishing our product water footprints and by communicating about its socially responsible products.



<sup>1</sup> FLV End-of-Life of Vehicle FLI Directive

<sup>2.</sup> With adapted reliability for soldering at higher temperature, as some exemptions are necessary, mainly for the automotive market with regard to RoHS Directive

<sup>3.</sup> For more information on IPC, see www.ipc.org/ 4. IECQ = International Electro-technical Commission Quality

# **Eco-Design**



ST is committed to designing its products by taking into consideration the environmental impact of the device during its whole life-cycle (raw materials, transportation, manufacturing, usage, end-of-life) and proposing more environmentally-friendly products.

As a usual practice in microelectronics, miniaturization, integration of more functionality in the same chip and power consumption reduction are commonly integrated in the device development process. These practices have been at the heart of our company for a longtime. However, with the Eco-design program, we aim to systematically track these practices and increase the awareness about green design.

Our experts have developed an ecodesign tool that enables designers to evaluate the environmental footprint of products in the design phase and which is based on the Life-Cycle Assessment (LCA) experience. The in-house Corporate Environment team earned a Gold ST Annual Recognition (STAR1) award in the People and Sustainability category for the activity related to LCA and Eco-design.

Our methodology to perform both full LCAs on assembled devices and a quick calculation of a product's carbon and water footprint was reviewed by a third party (Quantis International) in 2013 and the robustness of the approach has been assessed and confirmed.

The diagram on the right reports the environmental impacts for the different LCA phases resulting from a full LCA study performed in 2013 for a MEMS

product according to the ISO 14044

Our new eco-design objective is now taking into account the substantial range of products we are developing and their complexity. The revised strategy has been integrated within the new EHS Decalogue<sup>2</sup>.

In 2013, a major step was taken with the integration of eco-design and responsible product check-lists in our product database tool. As a result, when working on new products, design teams are now systematically encouraged to think about environmental and social criteria, as well as enhancing their products compared to the previous version.

We are working on the integration of all elements of our Sustainable Technology program within our IT systems to improve the robustness and reliability of both processes and results.

We are committed to making this Sustainable Technology program an integral part of communications. In 2013 we issued a pilot product communication brochure<sup>3</sup> which details how the products are positioned according to our Sustainable Technology program.

#### Web interactive environmental footprint of a MEMS\*

Select the environmental indicator











Photochemical

Results



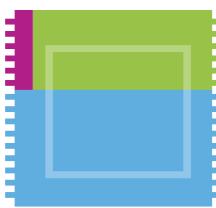
Total impact 147g CO<sub>2</sub>-eq.

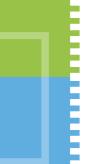


5 life cycle stages

ST production site

Click on the square to discover the footprint of each life cycle stage





End-of-life

(\*) See more on www.st.com/mems-footprint

# Looking forward to 2014





#### Paolo Epigrafi Corporate EHS Engineer, Agrate (Italy)

"The Sustainable Technology program provides a far-sighted vision to link sustainability to products.

In the scope of this program, ST has pioneered over many years the adoption and adaptation of Life-Cycle Assessment (LCA) to our complex product design and manufacturing processes.

And as an LCA practitioner, I have seen the significant contribution of LCA to the definition and piloting of Eco-design within our Sustainable Technology program.

The collaboration with Product Groups is now key to integrate Eco-design and Responsible Products processes in the company."

Our priorities include:

- Integration of eco-design and responsible products throughout company procedures and IT systems;
- Training of key actors in Product Groups to support the deployment of Sustainable Technology;

 Increased communication surrounding Sustainable Technology in order to create awareness throughout the company.

#### Responsible Products category and STAR classification criteria\* / EN6 / EN26

2013	Social	Environmental general	Energy Saving	Total Resp.
*	16	11	266	293
**	9	0	119	128
***	5	1	36	42
Total products	30	12	421	463

(\*) For more information on STAR classification criteria see www.st.com/responsible-products

Products that provide new social solutions and improve end-user quality of life (e.g. all health related products, safety applications, water management/social solutions for developing countries...).

#### **ENERGY SAVING**

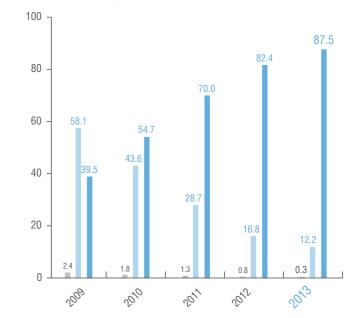
Products that reduce energy consumption and/or enable

customer applications to reduce their energy consumption and/or provide new environmental solutions (e.g. smart grids, start/stop systems...).

#### **ENVIRONMENTAL**

Products that save resources and increase environmental preservation (water, chemicals, emissions etc.) or renewable energy generation.

#### ECOPACK® program (% of ECOPACK® products in kunits\*)



• ECOPACK®3 (no RoHS exemption and halogen free): 25% of new packages implemented in ECOPACK®3 by the end of 2015.

• ECOPACK® 2 (RoHS compliant with exemptions +

• ECOPACK® 2 (RoHS compliant with exemptions +

in ECOPACK® 2 by the end of 2014.

in financial value by the end of 2015\*.

halogen authorized): 90% of new packages implemented

halogen authorized): 95% of products in ECOPACK® 2

• Ensure 100% of new ST products are eco-designed by 2015\*.



• STAR-rated Responsible Products impact on New Products (24 month window) Silicon line >= 30%\*.



• Integrate line item for environmentally/socially responsible characteristics in product brochures/flyers across 12 products.



• Create a dedicated communication plan in 2013 for responsible products including towards customers, investors, employees and other stakeholders.

(\*) Objectives discontinued in 2014

Non ECOPACK®

ECOPACK® 1

Compliant with the Restriction of Hazardous Substances (RoHS) directive and lead free\*\*

ECOPACK® 1 + free of brominated and chlorinated flame retardants

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

(\*\*) With adapted reliability for soldering at higher temperature, as some exemptions are necessary mainly for the automotive market with regard to RoHS regulation.



More performance indicators are available on pages 67 to 71

<sup>1.</sup> For more information on our STAR program, see page 35 2. For our revised EHS commitments for 2014-2020, see the 5th edition of ST's Decalogue available at www.st.c

decalogue
3. For more information about this brochure, see page 36

# Conflict Minerals

ST is committed to complying with legislation and aligning with customer requirements relating to conflict minerals. We take careful measures in an effort to avoid procuring 3TG (Tantalum, Tungsten, Tin and Gold) metals that are directly or indirectly associated with human rights violations or environmental damage in the Democratic Republic of Congo (DRC) and its neighboring countries (collectively, the "Covered Countries").

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

- Section 1502 of the US Dodd-Frank Act and related Rule 13p-1 under the Securities Exchange Act:
- OECD Due Diligence Guidance for Responsible Supply Chains of Minerals;
- Conflict-Free Sourcing Initiative (CFSI) working groups within the EICC;
- ITRI's Tin Supply Chain Initiative.

#### ST due diligence methodology

As full member of the Electronics Industry Citizenship Coalition (EICC), we employ due diligence methodologies defined by a joint working group comprised of EICC and Global e-Sustainability Initiative (GeSI) representatives. Tools available for participants in the EICC include a template known as the CFSI Reporting Template. This template was developed to facilitate disclosure and communication of information regarding smelters that provide material to a company's supply chain. It includes questions regarding a company's conflict-free policy, engagement with

its direct suppliers, and a listing of the smelters the company and its suppliers use. In addition, the template contains questions about the origin of conflict minerals included in a company's products, as well as supplier due diligence. This template is being used by many companies in their due diligence processes related to conflict minerals.

#### 100% of smelters in ST's tantalum supply chain are CFS validated

In addition, the EICC and GeSI have developed the Conflict Free Smelter (CFS) program, which is a voluntary initiative in which an independent third party audits smelter procurement and processing activities and determines if the smelter has provided sufficient documentation to demonstrate with reasonable confidence that the minerals it processed originated from conflict-free sources.

Our due diligence measures consist of:

- Conducting a supply-chain survey with direct suppliers and subcontractors using the CFSI template;
- Comparing these identified smelters and refiners against the list of facilities which have received a "conflict-free" validation by the CFS program.

Under the Dodd-Frank Act and related U.S. securities laws, manufacturers of certain products must submit a Conflict

**First Conflict Mineral report** 



- Define and deploy systems and processes to provide reasonably reliable evidence which we use to determine whether products are conflict-free and
- maintain the EICC-GeSI Due Diligence Tool update for 100% of our material suppliers, Front-end and Back-end subcontractors
- endeavor to engage all the smelters identified in our supply chain to join the EICC-GeSI Conflict-Free Smelter program.

Minerals report to the US Securities and Exchange Commission (SEC) that includes a description of due diligence measures taken on their 3TG supply chains, unless they have determined that their 3TG did not originate in the Covered Countries, or that their 3TG came from recycled or scrap sources.

In May of 2014, we filed our first Conflict Minerals Report, which is available at http://investors.st.com. In preparing our Report, we also analyzed approximately 19,000 products in order to determine the percentage of ST products in each product category that depend on 3TG.



Heraeus

#### Dr. Markus Neuhauser

"As a precious metals company, responsibility with international supply chains lies at the very heart of our operations - for more than 160 years. Heraeus operates in accordance with the latest "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals". We monitor our suppliers and work closely together with our supply chain partners to receive, produce and deliver conflict-free materials, only. Beyond this day-to-day business we decided to conduct an annual third party audit with focus on conflict-free minerals to learn, enhance and display responsibility. Notwithstanding, sustainable and responsible supply chains are only achieved through a trustworthy and credible partnership such as exists with STMicroelectronics."



#### 2013 progress and further risk mitigation

In 2013, we have formalized and reinforced our management of conflict minerals with specific documentation that describes our due diligence process and defines the associated roles and responsibilities of the different entities within ST.

Last year, all our suppliers and subcontractors responded to our due diligence requests, using the CFSI template. Out of those 162 suppliers and subcontractors, 105 source 3TG, and

provided details of 104 smelters involved in their supply chain. Details on CFS validated smelters are set forth in the table

We initially focused our due diligence efforts on tantalum as 26% of global deposits of this mineral come from Covered Countries<sup>1</sup>. 100% of smelters in our tantalum supply chain have achieved CFS validation. Over the last year the number of our CFS validated gold smelters has increased from 30% to 65%. In 2014, our objective is to continue to increase the percentage of validated smelters for tin and tungsten

by directly contacting certain smelters in order to request their participation in the CFS program, and by encouraging our suppliers and subcontractors to work with CFS validated smelters.

In 2014, we will also fine-tune our analysis of 3TG usage by product category, by working with our suppliers and subcontractors in order to obtain a list of smelters better tailored to our end products.

1. Source: U.S. Department of Interior U.S. Geological Survey, Mineral Commodity Summaries. January 2013

#### Conflict minerals

	2012	2013
Number of materials suppliers and subcontractors involved in the EICC-GeSI Due Diligence survey	168	162
Number of suppliers and subcontractors that are associated with at least one 3TG metal (involved suppliers)	88	105
% (number) of involved suppliers and subcontractors that have completed the EICC-GeSI Due Diligence survey	100% (88)	100% (105)
Number of smelters identified in ST's raw materials supply chain	74	75
Number of smelters identified in ST subcontractors' supply chain	102	98



#### Conflict minerals inquiry results

	% of smelters which are CFS validated		% of smelters which are not CFS validated and have declared recycled or scrap sources		% of smelters which are not CFS validated and have declared sourcing from L1/L2 countries*		% of smelters with undetermined status					
	2011	2012	2013	2011	2012	2013	2011	2012	2013	2011	2012	2013
Tantalum	66	100	100	-	-	0	-	-	0	-	-	0
Gold	-	30	65	-	-	10	-	-	10	-	-	15
Tin	-	-	27**	-	-	6	-	-	55	-	-	12
Tungsten	-	-	7**	-	-	7	-	-	73	-	-	13

(\*) For the purposes of this table, the references to "L1" and "L2" are modeled after the EICC due diligence framework. For clarification for purposes of this Report, neither of the "L1" or the "L2" categories identified by the EICC in its due diligence framework includes the DRC or any of the other Covered Countries. L1 countries are not identified as conflict regions or plausible areas of smugaling or export from these regions of tin/tantalum/tungsten containing minerals, This currently includes Argentina, Australia, Australia, Belgium, Brazil, Chile, China, Colombia, Côte d'Ivoire, and Czech Republic. L2 countries are known or plausible countries for the smuggling, export out of region or transit of tin/tantalum/tungsten containing mineral. This currently includes Kenya,

(\*\*) Number of validated tin and tungsten smelters is lower than validated tantalum and gold smelters. For more information, see www.conflictfreesourcing.org/program-indicators



# The Environment

## Our management approach

- 17 of our sites, including all our manufacturing sites, are ISO 14001 certified
- 15 of our sites, including all our manufacturing sites, are EMAS validated
- Our 6 Front-end manufacturing sites are ISO 50001 certified
- Our 12 manufacturing sites were ISO 14064 certified in 2012
- ST Environmental Health and Safety Decalogue defines our medium to long-term environmental objectives

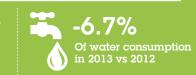
For more information, see www.st.com/the-environment



## Key results







# **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.

#### **GHG performance 2013**

ST had previously defined a carbon roadmap with a CO<sub>2</sub> neutrality target by 2015 which proved to be too ambitious. While we have made continuous progress in our GHG emissions management over the last 15 years, it has become increasingly difficult for us to find additional ways to continually improve our performance and meet our Decalogue targets. We have reviewed our strategy (see information on pages 6-7) to reflect the current challenging economic circumstances we are operating in, and we have now committed to the following targets published in our 5th edition of the Environment Health and Safety (EHS) Decalogue in December 2013:

- Direct emissions (Scope 1)1: reduce PFCs emissions (tons CO<sub>2</sub> per production unit) by 30% in 2020 from 2010 baseline;
- Indirect emissions (Scope 2): decrease CO<sub>a</sub> indirect emissions through our energy management programs<sup>2</sup>;
- Transportation emissions (Scope 3): reduce CO<sub>2</sub> emissions (tons CO<sub>2</sub> per production unit) from transportation



• 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\*.



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

(\*) Objective discontinued in 2014

and logistics for our products, materials and employees<sup>3</sup>;

- Continue to compensate our direct emissions through reforestation programs and/or compensation voluntary projects;
- Treat air emissions in appropriate abatement systems to control risks of pollution before discharging them into the natural environment.

#### Mitigating climate change

More than 90% of our direct emissions result from the use of PFCs in our manufacturing processes. ST has adopted the World Semiconductor Council target to reduce PFCs emissions by 30% in 2020 from the 2010 baseline. This requires significant company investment to purchase additional abatement devices for mature equipment. We require all new processes and tools adopted by our sites to be equipped with similar systems.

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 2013 CDP score: 94/100

In 2012, all our Scope 1 and Scope 2 GHG emissions were audited and verified in accordance to ISO 140644 for all our manufacturing sites. However, due to difficult economic circumstances we did not undertake certification of emissions to this standard in 2013.

#### **Compensation and reforestation**

To offset the remaining emissions, ST has developed a reforestation program in Australia, Italy, Morocco and Texas. In 2013, the 9,000 hectares of trees planted in 2002/03 have sequestrated 221 kTons of CO<sub>2</sub>, compensating around 40% of our annual direct emissions.

At local level, some sites are very active in regional reforestation programs. For example, ST volunteers in Bouskoura (Morocco), Calamba (the Philippines) and Kirkop (Malta) planted 5,500 trees

#### Adapting to climate change

ST has two programs to anticipate and respond to risks associated with climate

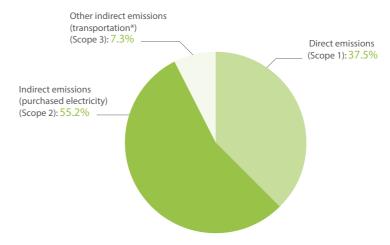
We have developed robust Business Continuity Plans (BCPs) which are implemented by each site to prevent and protect against climate change and natural disasters.

In 2012, we launched a carbon risk assessment with a bottom-up approach to evaluate sites and identify which ones are the most at risk. The method is inspired by "The Water Risk Filter" provided by WWF and adapted for carbon risk. As part of this process we assessed the physical (such as dependence of operations on weather and temperature); regulatory and reputational risks (exposure to media, involvement in compensation measures and initiatives).

In addition, our Enterprise Risk Management (ERM) program systematically, consistently and effectively identifies, evaluates and manages risks across the company, including natural disasters.

# Focus Carbon Disclosure Project

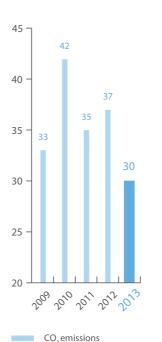
#### Summary of net CO<sub>2</sub> emissions (kTons) EN16 / EN17 / EN18 / EN29 / 3.1 / 3.2 / 3.4



(\*) The transportation emissions value is a global estimate of employees' transportation

#### CO<sub>o</sub> emissions (per unit of production) normalized values / EN16 / 🛄 3.0 Baseline 100 in 1994







#### Jean-Maurice Ramirez Site Environmental Champion, Rousset (France)

#### ST Rousset is considered as a 'green semiconductor plant', why?

"When we built the 8-inch wafer plant in 1997 we integrated the highest environmental standards from ST's EHS Decalogue. These included:

- Installing a mini-environment clean room saving up to 30% energy;
- Equipping our chillers with heat recovery systems for 100% of our needs;
- Installing abatement devices to remove 100% of emissions from PFCs and COV;
- Building a waste water treatment plant to remove all polluting substances."

### What are the most exciting aspects of

"I started working for ST in 1973 and, in 1990, followed my passion and took a job in the newly established environment department. I enjoy the diversity of environmental management and have developed a wide range of expertise in this field. I am closely involved in delivering training and raising awareness amongst the younger generations about environmental protection."

#### What are your main challenges?

"The use of chemicals in semiconductor manufacturing is rapidly evolving and this raises the need for thorough controls to minimize any health and environmental consequences. Another challenge for ST is ensuring we remain globally competitive while investing in improvements to environmental performance."



<sup>1.</sup> Scope 1, 2 and 3 are defined in the GHG Protocol

<sup>2.</sup> See Energy Management pages 46-4

<sup>3.</sup> See Transport and Logistics pages 52-53 4. ISO 14064: Greenhouse Gas Accounting and Verification

# 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 impact on local communities.

#### Water management performance

Once again, we made progress with respect to our water management targets. In 2013, ST achieved its objective of reducing water draw-down (cubic meters per production unit) by 6.7%. We recently revised our water management performance targets and have published these in the 5<sup>th</sup> edition of ST EHS Decalogue (see information on pages 6-7). For 2014-2020, we are now committed to:

- Continuously improve water efficiency at equivalent production level through water saving programs and water recycling projects (cubic meters per production unit);
- Control any risks of pollution before discharging wastewater into the natural
- Assess and evaluate the water stress assessment of all our manufacturing sites considering local constraints.

#### Water strategy and programs

ST's water conservation strategy is based on the 3R - Reduce, Recycle and Re-use approach. We always ensure that water conservation features are included in the design of our facilities, and that our manufacturing processes are



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



· Achieve an overall company recycling rate of 45% by 2015.

constantly upgraded to meet ever 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. In 2013, we reached a water recycling and re-use rate of 43.5%. Two sites have increased their performance through a new irrigation system in Bouskoura (Morocco), and optimization of existing systems in Calamba (the Philippines).

In 2014, we aim to further improve our water management efforts with a particular focus on our large nonmanufacturing sites.



43.5% of water recycled and re-used

Waste water is treated in dedicated treatment plants, either located onsite or developed in collaboration with local authorities to remove polluting substances such as fluoride, which cannot be treated by municipal plants.

Our sites work closely with local stakeholders such as governmental organizations, citizen associations, and suppliers to reduce water extraction and consumption, and to ensure sustainable community development.

#### **Water risk mitigation**

In 2012, ST conducted a water risk assessment at corporate level which identified that 42% of ST sites are located in water stressed areas. These sites have implemented plans to manage their water responsibly. For example, our site located in Malta, where water is scarce, has developed innovative techniques to reach a recycling rate of 65%.

#### Supply-chain water management

We monitor our water-related risks and overall management of water in our supply chain through the following

- Assessing the water management performance of our suppliers and subcontractors as part of our annual Self-Assessment Questionnaire carried out for the EICC:
- Ongoing engagement with stakeholders including industry associations and sustainability initiatives.



Facilities Engineer, Calamba (the Philippines)

"ST has the objective of reaching a 45% water recycling rate. Being in charge of this project gives me satisfaction of seeing the progress achieved, but it is also frustrating when improvement in the recycling percentage is not as rapid as it could be. For me, it is not only meeting the target that is important. but the team effort that is involved and the raising of awareness about the importance of preserving water today, not just in the plant but also in our own households for the benefit of the next generations. We will continue to look for means to conserve water to reach the target and maybe even go beyond."



### **Focus**

#### ST Tours (France) engages stakeholders to save water

To reduce its environmental impact and improve the company's competitiveness, ST Tours (France) developed an ambitious watersaving project, involving several stakeholders. Since 2011, the project has resulted in savings of 10m³ per hour of ultra-pure water, a 15% consumption decrease, equating to US\$ 365k per year.

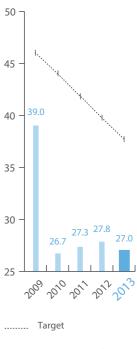


#### Recycled and reused total water / EN10 / \$\square\$2.2

	2009	2010	2011	2012	2013
Total water used (1,000m³)	25,622	27,736	29,113	28,315	30,967
Water recycled and reused rate (%)	36.20	37.29	40.53	42.96	43.54

#### Consumption of water (per unit of production) normalized values / EN8 / 🗀 2.2

Baseline 100 in 1994



Consumption of water

# Energy Management

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

#### **Energy management** performance

In 2013, our energy performance was impacted by production fluctuations; however we still managed to reduce our energy consumption by 3.5%. We revised our 5th EHS Decalogue published in December 2013, including new targets (see information on pages 6-7). We are now committed to:

- Continuously improve energy efficiency at equivalent production level (kWh per production unit) through process and facilities optimization, conservation and building design;
- Adopt, whenever possible, renewable energy sources through energy procurement and/or green energy installations:
- Design and assess all new building and manufacturing sites according to "LEED<sup>TM</sup>" or equivalent standard;
- Integrate energy efficiency performance as a key criteria for design and execution of new facility projects.



• Reduce energy consumption by 5% per unit of production per year\*.



• By 2015, achieve an increase of 15% in the purchase of green energy (baseline 2011).



• By 2015, ensure that 100% of call for tenders from 200 k\$ include criteria on energy efficiency and use of CO<sub>2</sub> emission-free and/or renewable energy regarding facilities and site services.

(\*) Objective discontinued in 2014

#### **Energy sourcing**

When purchasing energy, the environment is a key consideration and we will always select the greenest option given the financial considerations. In 2013, 17.6% of the energy purchased by ST came from renewable sources compared to 7.4% in 2012. This strong increase is thanks to our Italian energy provider providing 30% of our energy contract from renewable sources, combined with the long-standing contribution from our French provider.

Some ST sites have solar panels which generated 2.1 GWh in Catania (Italy) and 50,000 kWh for both our Geneva (Switzerland) and Grenoble (France) sites in 2013.

17.6% of energy purchased coming from renewable sources

#### **Energy consumption, efficiency** and conservation

ST is committed to reducing its energy consumption and carbon footprint from its operations through energy efficiency and conservation programs, as per Scope 2<sup>2</sup>. Before any new major facilities equipment is purchased, it is assessed under the Total Cost of Ownership (TCO) framework which evaluates, amongst other considerations, the energy consumption it will require over a ten year period.

In July 2013, we achieved our challenging goal of ISO 50001 certification for all our six Front-end sites. ISO 500013 was taken as a great opportunity to further enhance ST's energy management program and achieve additional savings. It involves developing tools to systematically measure the energy consumption of each piece of equipment and analyze a site's overall energy use.

ST also carries out regular upgrades of its existing equipment and manufacturing processes with the aim of improving energy efficiency. In 2013, Front-end sites consumed 70.4% of ST's total energy consumption. Energy conservation efforts at these sites during the same year reduced electricity consumption by 7.1% compared to 2012, equivalent to 29 GWh and US\$ 3.2m. Efficiencies were achieved for example, by finding the optimum balance between humidity, temperature and laminar flow velocity in our cleanrooms; and recovering heat from the exhaust instead of using new energy to warm the buildings.

In 2014, we aim to further improve our energy management efforts with particular focus on our large nonmanufacturing sites by increasing the collection of energy data, as a first step.

- 1. LEED™: Leadership in Energy and Environmental Design
- Scope 2 as defined in the GHG Protocol.
- implementing, maintaining and improving energy management





Luigi Piombi

"As an important Italian energy provider, we are continually looking for ways to help preserve our planet. The energy we produce comes from high-efficiency cogeneration power plants operating in our paper mills. To meet the sustainable energy demands of our customers, such as ST, we have developed a mix of renewable sources (wind, sun, water). 30% of the energy we provide to ST comes from certified renewable sources."





### Air compressor automation in ST Kirkop (Malta)





#### IT Infrastructure Technology Manager, Rousset (France)

"ST started to address the electrical consumption of its datacenters some years ago as the IT requirements of the business grew. I have been in charge of introducing new IT technologies since 2010, and one of the priorities of our IT infrastructure teams has been to reduce the energy consumed by our IT eauipment

Our approach is three-fold:

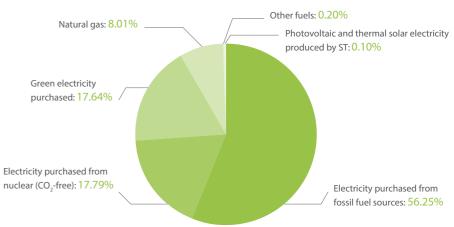
- Use state-of-the-art technology to reduce air conditioning power consumption in new or refurbished datacenters;
- Progressively replace older servers with more modern, energy efficient ones;
- Introduce "server virtualization" techniques enabling us to optimize the usage of each server.

Since 2010 we have seen a 53% reduction of average energy consumed per server in our main datacenter, and in 2013 we reduced this datacenter's total electricity consumption by 13%, further evidence that sustainability initiatives positively impact the company's bottom line.

#### Breakdown of energy consumption (GWh) / EN3 / EN4 / \$\square\$ 3.3

18 2,058 1 166	,,	2,092 183
1 166	153	183
0	3.77	4.54
89 2,224	4 2,197	2,279
19 92.54	4 92.87	91.79
	,	, , ,

#### Direct and indirect energy consumption by primary sources (%) / EN3 / EN4 / C 3.3



#### Consumption of energy (per unit of production) normalized values EN4 / 2.1 Baseline 100 in 1994





More performance indicators are available on pages 67 to 71

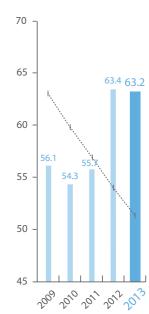
# Alessandro Freguglia Bonding and MEMS Process Engineer,

"Glass frit bonding is used to hermetically seal Micro Electro Mechanical Systems (MEMS) devices. We worked together with our suppliers to find a lead-free glass frit substitute while maintaining the same process conditions. The new material combines improved mechanical characteristics and a higher safety profile. I am very pleased to have been involved in this project, proposing and sponsoring it from the very beginning. Lead-free glass frit will allow ST to compete in new markets ahead of time, with greener devices following standardized processes. I am proud to be

part of the ST Technical Staff community."

Agrate (Italy)

#### Consumption of chemicals (per unit of production) normalized values / EN1 / 2.3 Baseline 100 in 2000



# Chemicals Management

ST is committed to managing and reducing its environmental, health and safety risks, and to achieving compliance with legislation and customer requirements. We proactively review chemicals selection, use and substitution based on the precautionary principle and our relevant specifications and procedures. We also aim for suppliers and subcontractors to be compliant with ST's chemical requirements.

#### **Chemicals management** performance

We are committed to the following targets that were published in our 5<sup>th</sup> EHS Decalogue in December 2013 (see information on pages 6-7):

- Adopt an approach based on precautionary principles when assessing the EHS impacts of new operational processes, chemicals and materials;
- Strive towards continuous control, reduction and elimination of risks and substances of concern in our processes and activities, for an environmentally friendlier, safer and healthier work place;
- Align material management with Hazardous Substances Process Management System Requirements (HSPM standard<sup>1</sup> IECQ 080000) and responsible sources initiatives (GeSI<sup>2</sup>).

#### **Materials of concern** management process

ST uses ISO 140013 and OHSAS 180014 standards as a reference throughout its manufacturing activities and supply-chain in order to protect employees' health and safety and to guarantee compliance with applicable regulations regarding product chemical content and chemicals use.

#### **Precautionary principle and Chemical Risk Assessments**

New chemical products are reviewed against ST's regulated substances specifications and are subject to rigorous Chemical Risk Assessments (CRA), CRA evaluate requirements for: strict engineering control measures; risk mitigation; collective protective measures; personal protective equipment and administrative procedures. Site chemical committees approve all chemicals before they can be

#### **Substances reduction,** replacement and elimination

Reduction of chemicals usage and exposure are achieved through the development of greener manufacturing techniques, process optimization and equipment modification. ST continuously looks for ways to anticipate legislation and find alternatives to hazardous chemicals.

ST is also working with European Chemical Agency (ECHA) and several industry bodies to ensure the alignment of the semiconductor industry sector to REACH<sup>5</sup> regulation. To comply with REACH legislation, ST has developed a substance substitution strategy and detailed roadmap for Front-end and Back-end sites. To date, ST has replaced nine regulated substances (including five SVHC).

#### regulated substances replaced since 2008

One of today's challenges is complying with the regulatory requirements of eliminating or replacing some substances, while ensuring the continuity of our manufacturing activities, which requires maintaining certain hazardous chemicals which we cannot substitute. For substances where replacements are currently unavailable, ST engages with the relevant authorities to explain how we ensure hazardous chemicals are used safely.

#### 1. HSPM: Hazardous Substances program Management 2. GeSI: Global e-Sustainability Initiative

- - Reduce total consumption of chemicals by 5% per year\* (per production unit).

and procedures (through ST EHS regulated substances list).

- Strive towards continuous reduction and elimination of Substances of Very High Concern such as CMR (Carcinogenic, Mutagenic, toxic for Reproduction), bio-accumulative, persistent, ODS (Ozone Depleting Substances) in our processes and products.



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

• Ensure 100% of key suppliers and subcontractors fully commit to ST specifications

(\*) Objective discontinued in 2014

### Focus

### ST's exposure to Substances of Very High Concern (SVHC)

A substance may be proposed as an SVHC if it meets one or more hazardous criteria. Once a substance is added to the SVHC candidate list, ST must comply with certain requirements:

- For those substances present (above a defined threshold) in products ST must communicate the actual concentration and provide information on the safe management of the product endof-life to customers;
- For restricted use substances, ST must adhere to use restrictions in all European manufacturing sites. This may also involve finding a replacement substance;
- When substances are included in Annex XIV of the SVHC list, a mandatory replacement with a defined end date is required, unless an Authorization from European Chemical Agency (ECHA) is granted to ST for specific use. ST uses one substance on the Annex XIV and we are currently working to phase this out by January 1st 2015.

ST uses 20 SVHCs for critical processes. Whilst we comply with all applicable regulation requirements we are looking at alternative substances. To date, ST has completed replacement plans for five regulated substances.

	2009	2010	2011	2012	2013
SVHC	28	44	71	138	151
ST concern	2	5	8	18	20
ST concern Annex XIV			1	1	1
Replaced	2	3	4	5	5

#### ST is PFOS-free!

Perfluorooctyl Sulfonates (PFOS) are persistent and bioaccumulative substances used for photolithography in Front-end semiconductor manufacturing. In 2003, ST began to focus on finding replacements for PFOS, going beyond the current REACH exemptions by completing their elimination from our production processes in Crolles and Rousset (France) sites in 2013.

Our approach comprised of two phases:

- 2003-2006: in non-critical applications where a substitute was available, we managed to replace 90% of affected products before the 2006 phase out date;
- 2007-2013; in ten of our technologies exempted due to the lack of possible substitution at that time, we engaged collaboration with our suppliers to develop PFOS-free substitutes, redesigning our manufacturing processes and making changes to our products.

Consumption of chemicals

Note 2009/2010 changed from 2011

..... Target

<sup>3.</sup> ISO 14001 Environmental Management Systen 4. OHSAS 18001 Occupational Health and Safety

Management System

<sup>.</sup> Reach: Registration Evaluation Authorization and Restriction

( ) Focus

# Waste Management

ST is committed to continuously reducing, re-using, recycling and managing waste streams from manufacturing sites in accordance with ST's Waste Ladder<sup>1</sup>. Waste management includes the treatment, transportation and elimination of waste, and covers all waste streams from operations (hazardous substances, metals, packing, plastics and other non-biodegradable materials), surrounding activities (offices, canteen), and products<sup>2</sup>.

#### **Waste management performance**

In 2013, 91% of waste generated was recycled and re-used, while 4.9% 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 has become increasingly difficult for us to find additional ways to continually improve our performance and meet our Decalogue targets. In order to reflect this, the targets were revised in our 5<sup>th</sup> EHS Decalogue (see information on pages 6-7) which was released in December 2013. We are now committed to:

- Strive to reduce to zero the quantity of hazardous waste in landfill (except where legally required);
- Remain among the best-in-class companies with a reuse and recycle waste rate at 90% or more;
- Remain among the best-in-class companies with landfilled waste rate at 3% or less:
- Strive to minimize our product packing waste generation3.

**Waste strategy** 

ST's EHS Decalogue requires that all sites meet whichever is the most stringent of their national/local EHS regulations or the company EHS Policies and procedures. We established an integrated process for the environmental management of waste covering compliance, monitoring of the quantity of waste produced each year, data collection, reporting and strict controls over the whole process. We also evaluate waste storage, recycling, treatment and disposal by subcontracting and waste transport companies.

In 2014, we plan to reinforce our audit program of disposal companies to ensure our waste is treated and recycled in an appropriate way.

> of waste recycled and re-used

#### **Hazardous waste**

ST pays particular attention to hazardous waste generation and disposal. 79% is recycled or re-used and the remaining waste is safely disposed of by authorized companies.

In accordance with the Basel Convention, 1.3% of ST's hazardous waste was transported from Kirkop (Malta) to France in 2013, in order to recover metal from scrap waste as it could not be done



An area for improvement that we have

identified, and which we will act on in

waste inventory to share best practices

2014, is the creation of a hazardous

among sites.





Valery Hergott

"Every day one million tons of paper are consumed globally. In some parts of the world, the wood industry threatens ecosystems of inestimable value. Riposte Verte and World Wildlife Fund (WWF) evaluated the paper policy of major French companies in 2013. We ranked ST France in first place because it has dedicated objectives in place, as well as robust implementation, low paper consumption, increased recycling rates and the use of Forest Stewardship Council (FSC) recycled paper. We'd like to see ST working towards including other types of office paper (envelopes, notebooks, etc.)."



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



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

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

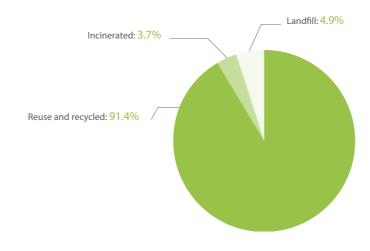


• Reduce landfill waste to less than 2%.



	2009	2010	2011	2012	2013
Total hazardous waste	9,391	11,365	10,415	12,624	11,031
Total waste	33,439	40,775	38,593	37,511	36,091

#### Waste split (Tons) / EN22





#### Siham Firouchane Site Environmental Champion, Bouskoura (Morocco)

"I worked in ST's Quality department for nine years before I moved to the environment team in 2012. Both functions are quite different but complementary. I am pleased to be able to use my extensive experience of building systems to make my own small contribution towards sustaining the needs of future generations. My waste management priorities first involved segregating the waste streams by treatment process and then identifying a reliable partner to increase recycling and waste valorization. This enabled us to recycle or reuse 93% of ST Bouskoura waste in 2013, but we continue to look at further system improvements to exceed ST's EHS Decaloque waste target."

<sup>2.</sup> Product-related waste is detailed in the Sustainable

Technology pages 34-37
3. For more information, read Transport and Logistics on

# Transport & Logistics

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

#### **Product transportation** and logistics

Product transportation represents about 80% of ST transport emissions. In our 5<sup>th</sup> edition of the EHS Decalogue for Scope 31 we have committed to reducing CO<sub>o</sub> emissions (tons CO<sub>o</sub> per production unit) from the transportation and logistics for our products, materials and employees. In order to meet this commitment we are implementing several strategies including transport optimization, consolidated supplies, better route planning, distribution centers, use of efficient transport modes, better demand planning and increased use of intermodal transport based on rail and shipping.

In 2013, our international air traffic volume reduced due to a lower number of delivery locations following our exit from ST-Ericsson as well as from the rationalization of manufacturing in Longgang (China).

We remain focused on ensuring that, wherever possible, road freight and long haul air-freight is used as these two



• Reduce the carbon footprint of ST product transportation by 15% by 2014\*.



 Ensure that all sites have a formalized transportation plan to promote alternative and greener modes of transportation and evaluate the benefits\*.

(\*) Objective discontinued in 2014

operations have the lowest carbon tariffs. We also continued to work on reducing short haul air-freight which has the highest levels of CO<sub>2</sub> emissions. The main factors driving our reduction included changes in the manufacturing and distribution network, customer consolidation actions and shifting some of our shipments to road transport.

#### **Packing optimization** and material

In our 5th EHS Decalogue, we have an objective to minimize our product packing waste generation. In 2013 we continued to make progress in our lean packing program which aims to optimize package design and transportation at all manufacturing sites to decrease logistics costs, air-freight space and CO<sub>2</sub>

Packing materials are aligned with RoHS requirements, and ST EHS regulated substances list. Whilst the majority of ST packing materials are already phthalatefree, ST is in the process of qualifying and converting the remaining materials, anticipating a future regulatory deadline.

#### 25 sites equipped with video conferencing and telepresence rooms in 2013

#### **Employee transportation**

Employee commuting represents nearly 20% of ST transport emissions. Many of ST's sites deploy employee transportation programs with the aim of encouraging employees to use greener modes of transportation than individual cars. In 2013, 58.81% of employees were covered by such plans. Our aim is to expand the coverage of these plans with particular focus on non-manufacturing sites.

Business travel represents less than 1% of ST transport emissions. In 2013, we installed a video-conferencing network to reduce travel, and we will be working in 2014 to further improve the process and quality of data collection for business

1. Scope 3 as defined in the GHG Protocol





#### Jun Koizumi HR Manager, Tokyo (Japan)

"ST Japan has offices in three densely populated areas, Tokyo, Osaka and Nagoya. To encourage employees to use the convenient and punctual public transportation system, we have developed a commuting scheme and provide employees with an allowance to fully cover their travelling expenses which is tax exempt. In some special cases, such as employee having a disability, ST provides parking lots. As public transport is very crowded, we have implemented flexible working time, with core hours between 10am to 3pm, employees are then free to decide when they work their remaining hours. We are proud that nearly 100% of ST Japan employees commute to working using public transportation!"



### **Focus**

#### Lean packing of ST boxes



#### **Focus**

### New video conferencing network

Today's growth in communication technology has revolutionized the way businesses work and keep in touch with employees and customers. In 2013, ST equipped 25 sites with video conferencing and telepresence rooms in order to create a viable alternative to face-to-face meetings. Not only does this avoid a significant amount of carbon emissions but it also saves considerable time and expense.



#### Carbon footprint of ST product transportation

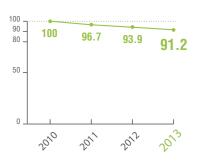
		2010	2011	2012	2013
	Transport component of ST's total ${\rm CO_2}$ emissions (%)	8.1	7.4	6.9	7.3
	CO <sub>2</sub> emissions due to product transportation per year (kTons CO <sub>2</sub> )	110.00	99.42	82.87	84.74

#### Employee transportation plan (%)

	2013
Employees covered by a transportation plan	58.81

Depending on the site size, the needs and the local infrastructure, ST adapts its support. It can be: allowances, company cars, private and public buses, trains, bikes, electrical bikes, car-pooling networks, shuttles, taxi services for employees working late, mass transit reimbursement, hire of mini vans for direct employees, etc.

#### Packing density reduction Baseline of 100 in 2010



Packing volume reduction







# Our community

### Our management approach

- ST deploys the EICC Corporate Responsibility model throughout its supply chain
- 77.3% of suppliers, 100% of Front-end subcontractors and 98.3% of Back-end subcontractors are ISO 14001 certified or EMAS validated
- ST local initiatives' inputs and outcomes are evaluated using the London Benchmarking Group's methodology
- ST promotes the electronic industry's potential in all countries where we operate with many employees, including Corporate and Executive Vice Presidents, members of key industry and international organizations

For more information, see www.st.com/the-community



### Key results







# Sustainability in the Supply Chain

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

#### 2013 highlights

We have made progress in addressing social responsibility throughout our supply chain by ensuring the products we sell are produced in a responsible manner. After being excluded in 2012, we re-joined the Europe Dow Jones Sustainability Index, with an improved score in the Supply Chain section (+6) and continued our improvement path through the EICC framework.

#### **Monitoring conflict minerals data** of our suppliers

ST began to address conflict minerals in its supply chain in 2007, and we have been reporting on our approach to managing this critical issue since 2010 (please see pages 38-39 for more details). During the last year, conflict minerals took greater precedence, involving increasing resources to ensure that we meet the reporting requirements of our customers.

## **EICC** deployment in the supply

We strengthened our supplier EICC monitoring program, by encouraging our key suppliers to join the three-phase

• Phase 1 code of conduct agreement: this involves signing a letter of engagement agreeing to comply with the EICC Code of Conduct. The latest version (V4) of the code of conduct was ratified by 96.7% of material

suppliers, 93.4% of equipment and ICT suppliers, 92.1% of spare parts suppliers, and 100% of subcontractors and foundries. These key procurement segments represent more than 80% of ST purchase volume.

• Phase 2 risk assessment process: in this phase suppliers are required to complete a self-assessment questionnaire (SAQ), and the number of questionnaires completed has increased from 246 in 2012 to 284 in 2013. Analysis of the results has shown some improvements. No suppliers were identified as at risk at a global level, and we have also identified a reduction in the number of issues. This has enabled us to reduce the number of sections at risk by 30%, down to an average of less than one out of a total of 27 sections. We are continuing to improve in this area through regular contact with our suppliers to monitor and ensure implementation of the action plans, and by performing thorough checks on all new suppliers.

## ST score in the DJSI Supply 6 points

• Phase 3 performance control through audits: while we are satisfied that our approach is bringing positive results, conducting numerous audits remains one of our challenges, especially in a period of budget constraints. This is why we have been encouraging our suppliers to commission third party EICC audits, based on risk assessments. In 2013, our performance evaluation includes the recognition of suppliers who have undergone third party audits. With good coverage of our subcontractors (35% of our purchasing volume) at the end of 2013, the next step will be to

# Chain section increased by

focus on foundries.

#### **Encouraging communication on** performance

In 2013, we requested our suppliers publicly communicate their sustainability performance. Suppliers responded by sharing their reports or including evidence on their websites of how they are working towards achieving their sustainability indicators. Some of our suppliers have gone further and taken this opportunity to develop their own Corporate Social Responsibility (CSR) programs.

To optimize resources, we exempt from our audit process the suppliers who now have a standardized process in place and can give us evidence of their performance, which we evaluate also taking into account their certifications and publications.

EHS & social KPI's deployed to suppliers

	2012	2013
Number of Front-end materials suppliers engaged in reporting	18	34
Number of Back-end materials suppliers engaged in reporting	45	43
Number of key Back-end subcontractors plants engaged in reporting	24	27

Suppliers facilities SAQs scoring by EICC Code of Conduct main section (%)

	2012	2013
Health and safety	90.2	90.3
Environment	86.8	90.7
Labor and ethics	87.9	87.7

Total number of suppliers and subcontractors' SAQs by level of risk

	2013						
	Low risk	Medium risk	High risk	Average score			
Back-end materials suppliers	58	7	0	89.4%			
Front-end materials suppliers	65	4	0	90.3%			
Back-end subcontractors	27	4	0	89.0%			
Equipments suppliers	13	2	0	88.4%			
Front-end subcontractors	4	0	0	88.2%			
Total	-	-	-	89.1%			

#### **Focus**

### Towards a forced-labor free supply chain

The California Transparency in Supply Chains Act requires companies doing business in California to communicate their efforts to combat human trafficking and forced labor in their own supply chains. Several of our major customers are impacted and we are committed to supporting their efforts to have a forced-labor free supply chain.

As an example of measures that have been taken to mitigate risks related to forced-labor, ST has been consistently working on and making incremental improvements to our foreign and migrant worker recruitment process. We focus particularly on areas that pose a risk to workers, such as management of employees' travel documents and excessive recruitment agency fees that could constitute binding constraints to workers.

In Singapore, where the percentage of foreign workers in direct labor can be higher than 50%, we have put in place a comprehensive human rights due diligence approach to ensure fair hiring practices for migrant workers. This involves raising awareness of applicable company standards, as well as the monitoring and regular audit of our recruitment agents. We are now implementing this approach across our Chinese and Malaysian manufacturing sites.





#### Claude Prédal Global Procurement Organization Purchasing Regional Director, Crolles (France)

"Since 2011, ST has been a member of the Pacte PME Association, which aims to support the growth of innovative French small and medium size enterprises (SMEs) Pacte PME is result oriented and provides tools and support to help its members improve their relationship with SMEs. As ST's representative, I realized that ST's positive impact on French SME was not recognized enough. Therefore, I submitted to a joint committee comprising SMEs, Groups and State representatives our indicators the definition of our action plan and the evidence of the mobilization of all concerned actors to support the Association's objectives. As a result, in September 2013, ST received a "positive assessment" from the Pacte PME. This recognition reflects the commitment taken by our Global Procurement Organization on behalf of ST towards the In 2013, for the first time, I initiated

ST participation to the "Baromètre Pacte PME", a yearly survey, where 334 suppliers rated ST on innovation, contractual relationships, partnership, and support for development. ST scored an average across all companies of 57/100. We achieved the second highest response rate, demonstrating the close relationships we have built with our suppliers. They told us:

- Innovation: they appreciate that ST respects their IP but would benefit from ST financially participating in development and testing;
- Contractual relationship: they appreciate that ST respects contractual commitments but would like the process to be faster and simpler.

Knowing how we are perceived by our suppliers and our areas for improvement, ST Global Procurement Organization will continue to work with all involved stakeholders so that ST becomes a customer of choice for innovative French

• To ensure continuous improvement, implement a supplier survey and define an action plan.

• By the end of 2013, track the business with French SMEs for procurement done in France.

• As an active member of the French "Charte des Relations Fournisseurs Responsables"

(Charter for Responsible suppliers relationships), participate in the steering committee.

• Ensure business ethics: 100% of Global Procurement and Outsourcing buyers to sign the

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

• Ensure none of the suppliers are classified "high risk" based on Self-Assessment

• Ensure 100% of ST major sites deploy the EICC approach to local suppliers\*.

• In 2013, deploy the Green Procurement guidelines in Italy\*.

• Continuously reduce the number of non-conformances arising from SAQs and audits.

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

(\*) Objective discontinued in 2014

Questionnaires (SAQs)

# Community Involvement



#### Our involvement in local communities

The ST Community Involvement program forms a central pillar of our culture with many site-based initiatives and activities providing social, economic and environmental support. Effective engagement has the potential to benefit many stakeholders, including local communities, governments and other areas of civil society. For ST, it is also a strong lever to increase employee engagement.

We have identified six key areas where we seek to make a difference:

- Environmental involvement;
- Economic development;
- Innovation and high technology;
- Social welfare and charity;
- Supporting ST Foundation;
- Young generation and education.

#### For ST, community involvement is also a strong lever to increase employee engagement

We have been using the London Benchmarking Group (LBG) methodology since 2012 to assess the value and impact of our community involvement activities, in cash contributions, estimated employee volunteering time, in-kind donations and associated management costs. In 2012 for the first time, our network of Sustainable Excellence Coordinators identified the activities undertaken across ST sites and have evaluated their inputs. In 2013



Support ST Foundation's initiatives.



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



• Launch a process to identify ST community involvement outputs and



we have moved a step further in evaluating the outcomes for a portion of the activities, to start assessing the impact of our contribution on both the community and on our business.

To help us better track and measure our community activities we created a community involvement workspace on our intranet platform. This workspace, available to all of our sites, provides a library of information and case studies, as well as an opportunity for sites to share ideas and experiences and company tools to record their own program data. It is then consolidated at corporate level.

We are finalizing an ST Community Involvement Charter to formalize community engagement throughout the company, and to provide guidance to sites on the best way to create and manage community programs. This will be rolled out in

ST community involvement contributions in 2013:

- Cash donations US\$ 1,593,908;
- 385 initiatives worldwide;
- Involvement of 40 sites in 23 countries; • 9,943 ST employees volunteered their
- 177,592 hours have been donated during company time;
- 34,495 beneficiaries and 826 organizations impacted. ISO1 | EC1 | EC8

#### ST Foundation

Since its creation in 2001, the ST Foundation has dedicated its efforts to developing, managing and supporting projects that employ the use of

technology to help advance development in less privileged communities around the

The "core focus" of the Foundation is the Digital Unify program. The Foundation establishes computer training centers in collaboration with local partners. ST volunteers are brought in to train local trainers who in turn cascade the Informatics and Computer Basics (ICB) course to the community. Training is offered free of charge to people who want to develop their computer literacy skills to help them increase their employment potential or to enable them to reach higher education goals.

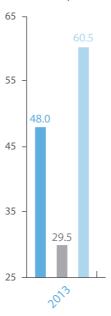
Our Digital Unify program has reached 218,729 people in 22 countries since its inception in 2003. In 2013 alone the Foundation trained 42,257 people, a 49% increase over 2012 and we installed 30 new informatics centers, as well as rolling out the program to China and the Philippines.

### Supporting the victims of the typhoon in the Philippines

On November 8th 2013, the Haiyan typhoon struck the Philippines with devastating consequences. ST launched a global voluntary fundraising campaign, with the company matching the donations raised by employees. Contributions to the victims totaled US\$ 291,500 with the majority of the money going to the International Red Cross organization.

#### Focus

Benefits experienced by direct beneficiaries as the result of ST community involvement activities (%)



Benefits measured for 6% of ST total number of activities and based on a surve

- Experienced a positive change in their behaviour or attitude
- Developed new skills or an increase in their personal effectiveness
- Experienced a direct positive impact on their quality of life



# Mei Zhen Lee

"More than 300 ST employees of Ang Mo Kio (Singapore) collaborated on the Home-Aid 2013 project to enhance the living environment of low-income families. Eight different teams from ST each adopted a family and spent at least one full day sprucing, cleaning and refurbishing their homes. In addition to having their home environment enhanced the families also received replacements for old electrical appliances and essential household

The positive interaction between ST and the families was noteworthy as visiting low-income rental flats in Singapore was a new experience for some ST staff."

## Non-manufacturing site activities





Employees from the Americas region donated US\$ 63,200 to 53 charities, an amount which ST matched. Nearly 170 ST employees throughout Americas Region contributed an estimated 378 paid hours volunteering in their local communities. In Coppell (USA), ST employees helped construct 'Hope Park', a playground in Frisco, Texas for special needs children, built and donated bikes to underprivileged children and made children's blankets for Project Linus.

For the fifth consecutive year ST Budapest (Hungary) was the main sponsor of the autonomous ROBONAUT competition, organized by the Technical University in Budapest. The challenge consists of asking students to replace the original electronic boards of model cars with more intelligent electronics.

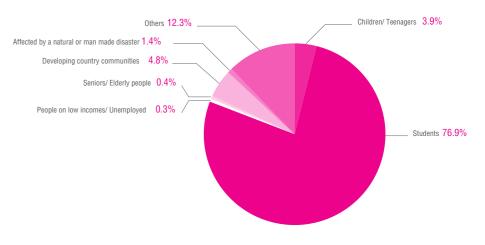
ST provided samples of different products such as discovery kits, Bluetooth modules, MEMS, power stage diodes and LED drivers and technical support.

The iNEMO Design Contest is open to students and young engineers in China and Taiwan to design innovative applications built around ST's award-winning iNEMO smart multisensor technology. Seven ST employees from Taipei (Taiwan) volunteered an estimated 1,456 hours and donated ST iNEMO design boards to 349 students and ten partner organizations.

ST Paris (France) site director coordinates the PLATO project which provides monthly coaching to help develop local small and medium sized businesses. The site also participates in a working group of 10 companies from the Montrouge area to develop and share best practices on managing local suppliers, mobility and disability initiatives.

17 ST volunteers from ST Seoul (Korea) organized two 'Babpur' events in 2013 for 1,800 senior citizens. Babpur is a Korean word used to describe the humble act of cooking and serving meals to those

#### 2013 Direct beneficiary groups repartition (%)



# Partnerships in R&D and Education

We are continually looking for opportunities to strengthen our existing relationships and develop new partnerships in R&D and education. We collaborate with our customers and other semiconductor companies to further product development and applications, and we work closely with R&D and educational organizations to advance our research capabilities. We aim to increase young people's employability by providing them with access to PhDs, apprenticeships and internship experience.

We have a successful cluster model in place and continue to rely on the knowledge and expertise of our regions and sites to develop fruitful partnerships with local R&D and education organizations. In the difficult context we faced in 2013, we slowed down slightly the activity, but the practices in place enabled to maintain the win-win positive impact that strategic alliances create for cross-fertilization and synergistic ways of

#### **Facilitating students'** employability

In 2013 we accommodated more than 500 students globally within 20 ST organizations. Many of our sites organize immersion weeks for secondary level pupils, giving them a taste of "life at work". Thesis days, where students present their research studies to employees, are also well appreciated and enable fruitful exchanges.



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

#### Some of our programs

#### **Europe: Global Enterprise Project**

ST became a sponsor of the European Global Enterprise Project (GEP) in 2011. The program aims to equip 15-18 old students with the proficiencies required to succeed in a global economy. Students are taught soft skills, entrepreneurship and business acumen through a learning-by-doing approach, which requires them to leverage their language, maths, science, creativity and team work skills to achieve results.

GEP ran in 11 European countries in 2013, involving 12,000 students over two years. As part of ST's involvement in the program, 12 of our employees coached GEP mini-company students both in France and Italy and participated in the European Innovation camp and contests.

#### Italy - More innovation through **NeaPolis Innovation**

In Italy, we have a tradition of reaching out to schools and universities, through learning programs designed and delivered by our experts to generate interest in our company and products. Through the NeaPolis Innovation program, in 2013 we deployed courses to five universities, raising students' awareness of ST products and providing them with software, practical development board kits and advanced courses on real time systems and RTOS technology. The initiative has been a huge success, with professors observing an increase in student attendance on courses offered by NeaPolis Innovation.

#### Calamba (the Philippines) - DOST **ADMATEL Partnership.**

Inaugurated in May 2013 by the President of the Philippines, the Advanced Device and Materials Testing Laboratory (ADMATEL) is a program run in partnership with the government Department of Science and Technology. It aims to upgrade local failure analysis

and material testing facilities to provide shorter turn-around times, reduce analysis costs and attract potential investors. ST Calamba's Quality Director, Antonio Villaflor, sits on the Steering Committee set up to oversee the running of ADMATEL as a semiconductor industry advisor.

#### Ang Mo Kio (Singapore): a multitude of initiatives

ST partners with local universities and institutions to support our research and to ensure the availability of longterm local engineering and technical resources. We develop innovative collaborations, help to design courses adapted to industrial needs, provide training leading to national certifications, advise on industrial standards and labor market trends and participate in seminars and workshops. We also donate working tools and equipment, and award book prizes to deserving polytechnics

#### 525 partnerships with universities, colleges and schools

Our internships (24 in Ang Mo Kio in 2013), available to both local and overseas students, offer students a practical work experience in industry.

ST partnered with the National Junior College (NJC) to mentor students on environment projects that help students to understand how environmental issues impact all aspects of life. ST received the Certificate of Sustained Partnership (Bronze Award) for this program.

ST engineers and managers actively participate in career fairs, lively events where they engage with students curious about the real-world industry, thus asserting our role in building local talent and interest in the semiconductor industry.

#### Focus

### France: DynEO - keys to operational excellence

ST is the co-founder of DynEO, a LEAN factory-training facility that helps companies to improve their competitiveness and maximize performance. DynEO aims to further drive lean innovations by drawing on competencies from schools, universities, industry bodies and businesses to build a common industry culture. It also reinforces small and medium companies by giving them access to operational excellence.

DynEO adapts the Lean methodology to the specific

650

600

450



industrial context and provides networking opportunities. Services include customizable training programs, diagnosis and project expertise, and the conception of new innovative models.

The facility's advantageous location close to our Rousset site (France) also aims to maintain and develop the industrial network and its associated services in this

For further information contact: dyneo@ensam.eu





#### Rajeev Kapoor Group Manager CCDS - RET Noida Team Partnerships with the academic community / S01 / EC1 Greater Noida (India)

"We have observed that nowadays University students increasingly feel the need to better align themselves with current industry skills and know-how, thus becoming more valued by and relevant to the industry. This feeling was echoed by Senior Academia, keen to work with us to provide this essential exposure to their students

ST University Committee launched the joint M.Tech summer program in 2013, as a unique collaborative experience for academia and students as well as the ST expert faculty involved. The Committee primarily consists of a consulting Professor and domain experts well networked with academia. Of course the success of the program also relies on the active support from both Human Resources and

We collaborated with two universities (IIIT, Delhi & SNU) to create a program involving classroom teaching and handson experience for a variety of subjects linked to design, testing and multimedia computing. These courses, held in the Greater Noida campus, were ably led by our domain experts.

A few top performing students were then offered a chance to pursue their thesis or an internship at ST India. This partnership thereby literally becoming a 'win-win-

500 478 Partnerships with universities, colleges, schools: teaching programs, internship programs and recruitment\* 400 -

525

200 2010 2017 2017 2013



# Public Affairs and Industry Networking

In today's world it is essential for a leading company such as ST to proactively engage in public and industry affairs with a range of stakeholders such as trade associations, industry groups and standard-setting bodies. This engagement helps us to fulfill our role as a responsible citizen and to ensure our long-term viability in a highly competitive market.

Throughout 2013 ST participated in a number of local, national, European and industry initiatives with the following

- To promote the competitiveness of the semiconductor industry in the countries in which we operate;
- To create and observe good sustainability practices;
- To efficiently manage sustainabilityrelated risks and opportunities.

#### **Involvement in European** programs

Investment in research and innovation is key to promoting the competitiveness of the semiconductor industry as well as to addressing the pressing societal challenges facing our world today such as climate change, an aging population and the move towards a more resourceefficient society.

Therefore, we welcomed the formalization of Horizon 2020, a new European funded program for research and development and its threefold commitment to excellent science, industrial leadership and societal



 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.

challenges<sup>1</sup>. As part of this commitment Horizon 2020 launched a new publicprivate joint undertaking, named "Electronic Components and Systems for Economic Leadership" ('ECSEL'), whose goal is to gather all necessary expertise and financial means in order to keep Europe at the forefront of the global market for electronic components and systems. Managers from ST France and Italy are actively engaged in this new

Another important public-private initiative stemming from Horizon 2020 is the Electronics Leaders Group (the 'ELG'). The ELG's mission is to work on a strategic roadmap defining the specific steps that Europe should take to maintain its leading edge in the design and manufacturing of micro- and nano-electronics. The group comprises 11 CEOs from the leading electronics companies of Europe and includes Carlo Bozotti, President and CEO of ST.

ST is also committed to the creation of good sustainability practices. As such, we contributed to the review of EU legislation which aims to achieve the emission reduction target for fluorinated greenhouse gases<sup>4</sup> as defined for 2030.

#### **Focus on France and Italy**

On a national level, ST has actively participated in the efforts of the French government to increase France's competitiveness in the electronics market. In 2013, President François Hollande announced 34 sector-based initiatives with the aim of creating an "industrial renaissance" in France<sup>2</sup>. ST France contributed to four of those initiatives; cloud computing, supercomputers, cyber-security and nano-electronics. In addition, as part of our involvement in the FIEEC3's mobility working group, ST contributed to transport initiatives relating to

automotive, rail and air transportation. The conclusions will be presented to the French President in June 2014.

#### Carlo Bozotti. ST President and CEO, is part of the **European Electronics Leaders Group**

In Italy, ST has been an active participant in the efforts of the Italian Association for Industrial Research ('AIRI') to promote Key Enabling Technologies - KETs (nanotechnology, micro-nano-electronics, advanced materials, photonics, industrial biotechnology and advanced manufacturing systems) with the aim of improving the global competitive position of the Italian electronic industry. Via our membership of AIRI's Nanotech IT group, ST Italy engages closely with a number of stakeholders including industrial groups, businesses, research centers, universities, public research bodies, associations, science parks, and financial institutions. Our activity in this group covers a wide range of stakeholder concerns including the identification of priority technologies for the Italian industry and the promotion of stakeholder dialogue.

In 2013, ST Crolles and Grenoble played an active role in the creation of a new academic and industrial partnership between Europe and Russia. The Grenoble cluster, a leading center of innovation of which ST has long been a member, signed an agreement with the Muscovite Zelenograd Microelectronic Cluster. This agreement was possible thanks to our long-term partnership with Mikron, a key player in the Zelenograd

The draft regulation is important for ST since it defines our strategy for some fluorinated gases substitution within the ST European perimeter till 2030.

#### Focus on Asia

As an innovator and technology leader, a key part of ST's role as a responsible social citizen lies in sharing our knowledge and experience with our stakeholders in order to address some of the biggest challenges faced by the societies in which we operate. This sharing of information is the main focus of our public affairs and networking activities in Asia, where we actively participate in a number of industry councils, governmentlinked bodies and other associations. The efforts have helped to shape the industry direction and indirectly raise ST's standing and goodwill amongst its stakeholders.

ST's main actors in Public Affairs and Industry Networking in Asia are:

• François Guibert, Executive VP and President, Greater China & South Asia region, who chairs the EU-ASEAN Business Council and the

Board of Advisors for the Singapore Semiconductor Industry Association and is board member of the European Chamber of Commerce in Singapore and the Alliance Française de Singapour:

- Georges Auguste, Executive VP and General Manager, Packaging & Test Manufacturing (PTM), who is board member of the Singapore International Chamber of Commerce;
- Vivek Sharma, Regional VP, India Operations and Director, India Design Center, who is member of the Executive Council of Indian Semiconductor Association, the Indo-Italian Chamber of Commerce, the Indo-France Chamber of Commerce and the European Business Group of India;
- Giuseppe Izzo, Regional VP and General Manager of Taiwan Operations, who chairs the European Chamber of Commerce in Taiwan;

- Virginia Melba Cuyahon, General Manager of PTM Calamba (the Philippines), who is board member of Semiconductor and Electronics Industries of the Philippines, Inc.; and Chairman and President of Light Industry & Science Park II Locators Association Inc.
- 1. For more information on Horizon 2020 priorities, see http:// ec.europa.eu/programmes/horizon2020/en/h2020-sections 2. For more information, see www.redressement-productif.
- 3. The French business association for the electric, electronic
- 4. Fluorinated gases are often used as substitutes for ozone-depleting substances because they do not damage the atmospheric ozone layer. However, F-gases are powerful greenhouse gases, with a global warming effect up to 23,000 times greater than carbon dioxide (CO2), and their emissions





# Eric Jourde

"FIEEC is the French business association in charge of representing and promoting electronic, electrical and digital industries at national, European and international levels. Our objective is to answer society's needs while creating the necessary business friendly conditions for

Our association fully supports the objective of a sustainable economy. We have been addressing environmental issues for a long time, building extensive expertise (RoHS, REACH, WEEE...), and are now focusing on an overall approach by taking into account the social and societal challenges of a sustainable economy. ST is very involved in the FIEEC working groups, bringing valuable support through expertize and best practices. In 2013, STMicroelectronics provided very useful input to the FIEEC "corporate social responsibility guide" which is going to become one of the flagships of our industry. ST also participates at management level with Gérard MATHERON as FIEEC VP and President of ACSIEI. Alliance for electronic components and systems.



#### **Focus**

### ENI2 – a two-way bridge between academic knowledge and marketable products

The European Nano-electronics Infrastructure for Innovation ('ENI2'), which was initiated by Gilles Casanova, ST European programs Director, was officially recognized by the European Union in 2013. The principle aim of ENI2 is to optimize the time, efforts and funding spent on R&D efforts in nanotechnology. Its approach is to bring together key actors from across the R&D spectrum, including academies, research institutes, multinationals and SMEs from 15 European countries, with the objective

of creating mid and long-term technology roadmaps for cooperative R&D projects in nano-electronics.

The vision is that ENI2 will accelerate the move of an innovation in one direction from academic laboratory to marketable product - and an efficient feedback flow in the other which will contribute to improving how the results are exploited by academic institutes and universities.



# Awards



Each year our sites receive external recognition for their sustainability practices. Here is an overview for 2013.

#### Our People

#### July, Kirkop (Malta)



The Electronic Industry Citizenship Coalition (EICC) awarded ST Kirkop an EICC facility recognition for their good audit result which demonstrated full compliance to the EICC Code.

#### August, Calamba (the Philippines)

In the Quality Circles Regional Convention, three teams received Gold awards:

- The Fatal Error Reduction team for a project to eliminate the Z-lift motor breakdown on strip test handlers;
- The UDM Savers team for a project to reduce the use of UDM coolant:
- The AeroPhonics team for a project to improve the yield of Aero Products. Aero is a division name, thus AeroProducts (STE Products) are units used for Aero phones application.



#### October, Ang Mo Kio (Singapore)

The Human Resources magazine awarded our site four recognitions at the Benefits Asia Awards 2013:

- Best in Benefits Technology and Administration Processes for organizations with either streamlined or adopted new technologies and platforms to improve their compensation and benefits administration processes.
- Best in Healthcare and Well-being programs for organizations that have gone the extra mile to ensure their employees' health is being taken care of thanks to excellent healthcare benefits and well-being programs.



- Best in Employee Career Development for employers who have rolled out programs to develop their employees' skills, improve their productivity and assist them in establishing and working towards their career goals.
- Best in Employee Benefits Communication for companies which have adopted a clever and effective communication strategy to clearly communicate the compensation and benefits package to all employees at all levels of the organization.

#### December, Muar (Malaysia)

ST Muar's Emergency Response team received an award from the Malaysian Fire and Rescue department (Bomba) in recognition of their high level commitment and skill in handling emergency situations. The team members undertook a series of training sessions dedicated to fire-fighting and rescue skills and were evaluated for their response time.

#### April, United States



At the Annual Creativity in Eletronics Insulator (FD-SOI) technology received consumption and carbon emissions.

#### Our Products



ceremony, our Fully-Depleted Silicon-onan award for its ability to reduce energy



#### June, France



The French "ElectroniqueS" magazine awarded ST an "Electron d'Or" for the ST31 secure microcontroller product family; a new platform for highly-secure smartcard applications in areas such as banking, identification, pay TV and transport.

#### July, Marcianise (Italy)



ST Marcianise received an award from Confindustria Caserta for its process

excellence in smart card design and production.

#### August, Grenoble (France)

During the National Instruments week in Austin, ST Grenoble failure analysts received the Graphical Design System Achievement award in the automated test category for optimization of parametric defect localization on integrated circuits.

#### September, Santa Clara (United States)

During the Cisco's 22<sup>nd</sup> annual supplier appreciation event, ST received a sustainability award for demonstrating transparency and accountability for the environmental and social impacts of their operations and for demonstrating leadership through industry-wide initiatives.

#### October, France

ST received an Innovation Management award from BearingPoint for its Fully-Depleted Silicon-on-Insulator (FD-SOI) technology in the 'Innovation Ecosystem' category.

#### October, Geneva

For the second year in a row ST was ranked among the 100 most innovative companies in the world by Thomson Reuters, which recognizes companies who are leading the charge in terms of innovation as measured by a series of proprietary patent-related metrics.

#### November, United States

ST received recognitions at three levels by the global trade association MEMs Industry Group:

- Company ST was named 'Company Of The Year' for our continuing success in expanding our product line, growing the MEMS business and demonstrating industry leadership.
- People Benedetto Vigna was named 'Executive Of The Year' for his success in driving the expansion of MEMs technology.
- Product We were awarded 'Device Of The Year' for the world's smallest e-Compass, the LSM303C which has applications in all smartphones and innovative context-sensitive devices.

#### The Environment

#### June, Grenoble (France)

ST Grenoble received a prize for its promotion of a one-day fun challenge as part of the third Rhône-Alpes Mobility Challenge. The organizers award prizes to regional and local institutions who demonstrate exemplary behavior in encouraging alternative environmentallyfriendly transportation to the car.

#### June, Shenzhen (China)

ST Shenzhen received an award from the municipal government for being an outstanding company in the Peng Jian Fei program due to its substantial efforts in pollution reduction and energy conservation during 2012.

#### October, Ang Mo Kio (Singapore)

ST Ang Mo Kio received a certificate of Sustained Partnership (a bronze award) from the National Environment Agency for having partnered with National Junior College for over three years as part of the Corporate and School Partnership program under which schools and corporate entities work together on environmental projects.

#### November, Shenzhen (China)

ST Shenzhen received an award from Shenzhen Futian District Council worth US\$ 8,000 (50,000 CNY) for being a model environmental company and for its sustained efforts in five areas including site layout, environmental organization and communications, environmental management systems, pollution control and 'green office' initiatives.

#### December, Calamba (the Philippines)

ST received a Don Emilio Abello Energy Efficiency award for achieving 3.8% energy-savings or 727,041 liters of oil equivalent, estimated value of US\$ 625k (PhP 28.2M) (equivalent to 1,170 tons of CO<sub>2</sub> avoided).



The Community

#### March, Rousset (France)



ST Rousset was recognized by the French Blood Establishment for its outstanding contribution during the last 10 years with an average of 600 donations a year, a record!

#### May, Calamba (the Philippines)

ST Calamba was awarded the Certificate of Appreciation by the Children's Joy Foundation, Inc. for its benevolent support to "feed, clothe, shelter, and send to school three million" disadvantaged or underprivileged children.

#### July, Calamba (the Philippines)

ST Calamba received an award from The Philippine Red Cross for its 14<sup>th</sup> year of service and seven employees received the Blood Galloner award.

#### July, Ang Mo Kio (Singapore)

ST Ang Mo Kio received a Valued Partner of Care Corner Family Services Centre recognition from Care Corner Singapore, a welfare organization, for actively improving the lives of senior citizens and families in Toa Payoh.



# New 2014 Objectives

On a yearly basis, we review with their owners the objectives for each sustainability priority. Some 2013 objectives have been achieved, some will be discontinued because they are no longer meaningful to ST and some have been revised. Please find below the new objectives set for 2014 and beyond.

Our People



RECRUITMENT, LEARNING & DEVELOPMENT Recruitment: Ensure that each ST organization is 100% aligned with the quarterly workforce plan execution

Internal Mobility: Deploy new SOP and monitor internal posting of all the relevant job requisitions

Keep voluntary turnover within 10% worldwide, excluding operators Ensure a worldwide average of 35 hours of learning per employee

Annually increase the overall engagement index

Following engagement surveys, ensure that each Corporate Vice President sponsors action plans to address employees' key expectations

LABOR & HUMAN RIGHTS

**EMPLOYEE ENGAGEMENT** 

Extend EICC Self-Assessment Questionnaire (SAQ) to three Non-Manufacturing sites, in addition to all manufacturing sites

EMPLOYEE SAFETY, HEALTH & WELL-BEING Reduce our Recordable Cases rate to 0.2 or less Reduce our severity rate to 2.3 or less

GLOBAL DIVERSITY
& EQUAL OPPORTUNITIES

In each region, increase by 1% the percentage of women from job grades 15 and above  $\,$ 

Our Products



CUSTOMER SATISFACTION

WATER MANAGEMENT

Delinquency on Requested Date to be at 0.35 week of sales

Continuously improve water efficiency at equivalent production level through water saving programs and water recycling projects (m³ per production unit)

The Environment ENERGY MANAGEMENT



Yearly increase by 10% the quantity of green energy used by the Company

CHEMICALS MANAGEMENT

Strive towards continue
and of substances of a
environmentally friend

Strive towards continuous control, reduction or elimination of risks and of substances of concern in our processes and activities for an environmentally friendlier, safer and healthier working place

Ensure that all sites adopt an approach based on precautionary principles when assessing the EHS impacts of new operational processes, chemicals and materials

TRANSPORT & LOGISTICS

Transportation emissions (Scope  $3^{**}$ ): reduce  $CO_2$  emissions (tons  $CO_2$  per production unit) from transportation and logistics for our products, materials and employees

The Community



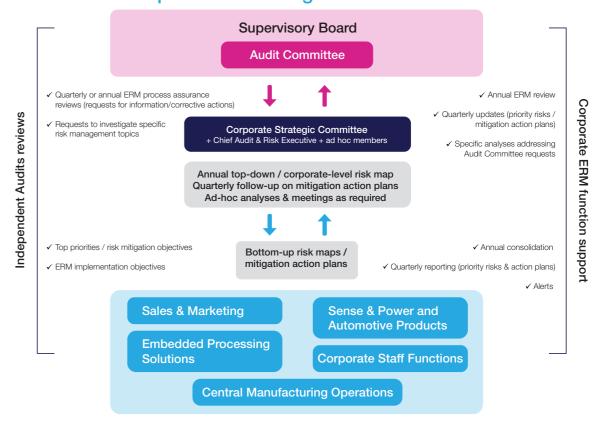
COMMUNITY INVOLVEMENT

Prepare and deploy ST community involvement Charter

#### Additional indicators & GRI statement

#### Company

#### **Enterprise Risk Management Governance**



Indicator	2009	2010	2011	2012	2013		
ST sales by market channel* (%) / EC1 / 2.7							
OEM	84.2	79.1	77.3	77.6	74.4		
Distribution	15.8	20.9	22.7	22.4	25.6		
(*) 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

EMEA	28.4	25.0	23.9	24.7	24.2
Americas	11.9	12.9	13.8	14.7	15.1
Greater China-South Asia	40.6	44.1	44.8	41.9	42.1
Japan-Korea	19.1	18.0	17.5	18.7	18.6
(*) Not revenues by location of arr	lar chiamant a	ro alagaified by	location of ou	otomor invoice	d or

(\*) Net revenues by location of order shipment are classified by location of customer invoiced or reclassified by shipment destination in line with customer demand. For example, products ordered by U.S.-based companies to be invoiced to Greater China- South Asia affiliates are classified as Greater China-South Asia revenues. Furthermore, the comparison among the different periods may be affected by shifts in shipment from one location to another, as requested by our customers.

Taxes (U	3\$m) / EC
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Tax expense for the year	(34)	183	205	79	72		
Dividends paid (US\$m) / EC1							
Dividends	158	212	327	355	346		

#### Our people

illuloutoi	2000	2010	2011	2012	2010		
Headcount evolution by region / LA1							
Americas	1,802	1,701	1,176	1,158	967		
Asia Pacific	20,652	22,355	19,757	19,652	18,910		
Europe	18,337	19,022	18,724	19,346	20,789		
Mediterranean	4,533	4,677	4,348	4,349	4,493		
Japan	195	210	207	208	202		
Total	45,519	47,755	44,212	44,713	45,361		

2009 2010 2011 2012 2013

Indicator	2009	2010	2011	2012	2013			
External hires in manufacturing (%)								
Percentage of jobs filled externally vs overall jobs filled	92	96	90	95	95			
Hires by job type / LA1								
Exempt	538	3,573	2,563	2,721	1,770			
Non-exempts	639	1,884	1,728	1,716	1,586			
Operators	5,984	8,193	5,154	6,833	8,013			
Total	7,161	13,650	9,445	11,270	11,369			
Navasana ana ina di vati ana nama mana (0/)								

Newcomers inc	duction	pro	gram	(%)

Newcomers who participated in a formal induction session					
(e.g. Newcomers Seminar)	72.35	97.23	97.29	97.75	72.00
during their first year of					
employment					

#### Workforce by employment type (% of employees) / LA1

Full time contract	97.88	97.85	97.74	97.43	97.28
Part time contract	2.12	2.15	2.26	2.57	2.72

#### Workforce by contract type (% of employees) / LAI

Remuneration (%)						
Employees below the ST ninimum salary scale in heir job grade	12.0	16.6	12.8	13.9	18.5	

96.56 97.48

#### Benefits, bonus & USA

Unvested Stock Awards (USA) % of eligible (exempt > JG 11) employees receiving unvested stock awards	23	24	21	22	22
Unvested Stock Awards (USA) Number of employees rewarded	3,670	3,790	3,390	3,570	3,920

Indicator	2009	2010	2011	2012	2013
Number of nation	alities in	the hec	idcount	by regio	on*
Europe		68	74	78	76
Americas	29	26	25	25	
Mediterranean		18	16	17	17
Asia Pacific	36	36	36	36	
Japan		N/A	N/A	4	5
(*) Expatriates and assignees are	counted in hos	st country.			

Number of nationalities in corporate staff / LA13

Different nationalities					
represented in the	7	7	7	6	7
corporate staff					

#### Gender breakdown by region (%)

Europe	Male	74	74	75	75	75
Europe	Female	26	26	25	25	25
Americas	Male	79	79	79	78	78
Americas	Female	21	21	21	22	22
Mediterranean	Male	43	42	43	44	44
Weulterranean	Female	56	58	57	56	56
Asia Pacific	Male	53	55	57	58	58
	Female	47	45	43	42	42
	Male	-	-	76	75	76
Japan	Female	-	-	24	25	24

#### Career length and voluntary turnover rate (%) / LA2

new hires (below 2 yrs)	44.87	45.54	52.67	52.08	72.29
employees from 2 to < 5 yrs	13.12	18.07	27.83	24.02	22.67
employees from 5 to < 10 yrs	3.40	5.31	7.82	8.03	9.57
employees from 10 to < 20 yrs	1.86	2.02	1.79	1.72	3.87
employees above 20 yrs	1.21	1.06	0.72	0.68	7.21

Average turnover rate (%) / LA2

		,			
Average turnover rate	11.65	15.16	18.49	15.61	15.93

Average turnover rate by gender, by category and by region in 2013 / LA2

	Exempts		Non-ex	cempts	Operators			
	Female	Male	Female	Male	Female	Male		
Americas	10.14	5.15	4.75	8.31	N/A	N/A		
Asia Pacific	9.04	10.47	10.32	28.54	40.95	83.54		
Europe	1.01	1.32	0.59	0.64	0.31	0.47		
Mediterranean	6.67	5.99	0.91	1.96	1.65	2.53		
Average employee age (years)								

**Average employee age** 34 33 36 **36 37** Promotion ratio female/male by category and by region in 2013 (%) / LA13

	Exempts		Non-ex	cempts	Operators	
	Female	Male	Female	Male	Female	Male
Americas	16	15	4	-	N/A	N/A
Asia Pacific	17	18	10	10	17	13
Europe	16	14	19	14	20	13
Japan	9	13	N/A	N/A	N/A	N/A
Mediterranean	12	14	23	15	11	8

#### Employee performance assessment (%) / LA12

% of employees	78	78	89	93	92
% of exempts	-	89	96	98	98
% of non-exempts	-	-	-	90	91

#### Career development (%)

Employees with a promotion in the year	8.50	15.00	15.87	16.37	14.72
Employees with a job function change in the year	27.37	32.95	25.02	15.47	19.74

Indicator	2009	2010	2011	2012	2013			
Average training hours / LA10								
Exempts	26.0	32.1	31.0	29.0	30.3			
Non-exempts	41.0	43.3	38.0	36.0	41.7			
Operators	94.0	91.1	78.0	70.0	70.4			
Total*	51.0	49.0	50.0	45.9	48.0			

#### (\*) Includes training on equipment and outside training Schooling programs\* (%) / LA11

Exempts	2.76	4.39	5.26	1.74	1.83
Non-exempts	4.69	6.01	7.58	0.95	0.89
Operators	2.75	1.02	7.96	2.31	2.39
(*) 0/ of ampleuses following CT of	upported outo	mal aabaalina	nrograma un ta	tal number of	omplevees

#### Employees survey - Engagement rate

1 / /	0 - 0	-			
Overall participation rate (%)	N/A	86	86	87	N/A
Rational Commitment Index	N/A	0.20	0.20	0.18	N/A
Emotional Commitment Index	N/A	0.40	0.39	0.38	N/A
Discretionary Effort Index	N/A	0.44	0.45	0.45	N/A
Intent to Stay Index	N/A	0.32	0.30	0.25	N/A
-					

#### Formal recognition

Overall recognition budget of all sites (USk\$)	1,644	3,305	3,101	2,782	2,321
Number of people recognized*	38,373	36,697	48,606	33,823	39,629
% of accepted suggestions which were implemented	53.00	54.75	65.20	59.56	50.13

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

#### Unplanned absenteeism (%)

Unplanned absenteeism	2.47	2.67	2.77	2.82	2.93

#### Collective bargaining / LA4

Number of collective agreements signed in the year	59	38	33	45	38
Number of people covered by representatives	21,363	24,021	-	31,962	34,225
% of people covered by representatives	-	50.08	-	72.34	76.00

#### Employees working part-time by gender (%)

Men	15.23	15.04	15.75	18.36	17.29
Women	84.77	84.96	84.25	81.64	82.71

#### Working time and overtime hours

Employees with regular worktime less than 48 hours per weeks (%)	100	100	100	96.30	96.00
Average weekly overtime (hours per employee)	1.97	3.14	3.10	3.61	1.68

#### Average weekly working time in selected countries (hours)

China	ST standard working time	40.00	40.00	40.00	40.00
Overtime		5.00	5.03	11.37	5.71
France	ST standard working time	38.50	35.00	35.00	35.00
rialice	Overtime	0.31	0.26	0.20	0.04
Malu	ST standard working time	40.00	40.00	40.00	40.00
Italy	Overtime	1.15	0.95	0.72	0.15
Malaysia	ST standard working time	48.00	48.00	48.00	48.00
Malaysia	Overtime	10.32	9.39	8.50	8.68
Malta	ST standard working time	40.00	40.00	40.00	40.00
	Overtime	6.00	4.50	5.00	5.90
Morocco	ST standard working time	44.00	44.00	44.00	44.00
Morocco	Overtime	2.62	1.46	1.10	1.76
North	ST standard working time	40.00	40.00	40.00	40.00
America	Overtime	1.51	0.60	0.85	0.05
Cingaporo	ST standard working time	44.00	44.00	44.00	44.00
Singapore	Overtime	5.88	1.53	3.84	3.16
The	ST standard working time	-	-	48.00	48.00
Philippines	Overtime	-	-	6.00	4.34

Indicator	2009	2010	2011	2012	2013
(0/)					

Fair wag	ges (%)
----------	---------

Percentage of employees paid up to 105% of the legal or conventional minimum wage*	13.36	16.65	12.20	11.95	10.83	
(*) Employees paid above 105% are not part of this scope.						

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

Injuries/illness cost	2.90	1.66	2.40	2.94	1.83
Results without action	8.90	8.43	8.90	8.50	9.60
Savings*	6.00	6.77	7.14	5.80	7.80

#### (\*) around 56\$m savings in 10 years.

#### Recordable cases rate - breakdown: industrial /domestic

, = .,					
RC Industrial rate	0.23	0.17	0.19	0.17	0.13
RC Domestic rate	0.12	0.12	0.11	0.10	0.07

#### Breakdown of recordable cases by type of event, accident or exposure (%) / LA7

Fall or slip	28	20	31	25
Struck by or against	37	41	26	40
Overexertion	11	9	7	11
Others	5	5	3	8
Caught in, under or between	6	7	10	5
Contact with chemicals	6	7	13	8
Bodily reaction from slip or motion	7	11	10	3

#### Recordable cases rate by region

Asia Pacific	0.2	0.2	0.2	0.1	0.1
Europe & Mediterranean	0.6	0.5	0.5	0.4	0.3
Americas	0.2	0.1	0	0	0

#### Severity rate by region

Asia Pacific	1.3	0.8	0.5	0.8	0.9
Europe & Mediterranean	7.6	4.9	6.5	7.8	4.1
Americas	0.6	0	0	0	0

#### Fines and total number of non-monetary sanctions in 2013 / so8

 Agrate (incl. Bologna, Colleoni, Lecce and Torino): Incorrect installation of electrical protections against indirect contacts was noticed during an inspection by public authorities, triggering a fine of  $\in$  1,200. The installations were rapidly restored.

#### Our products

Indicator	2009	2010	2011	2012	2013
Quality (baseline 100	in 2004) /	PR5			

Customer complaints	61.5	55.0	70.6	67.0*	60.6*
Cycle time to process failures analysis	65.4	71.1	59.8	65.6**	66.4**
Customer returns	30.8	20.0	58.9	21.7***	20.6

(\*) Q4 low shipments strongly impacted our customer complaints by volume, even if the number of

(\*\*) In 2011, our failures analysis cycle time significantly improved as a result of an efficient task force on

( ) III 2011; our induces a largists cycle tarile significantly improved at a football of a formation 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 2012/19/EU Waste of Electrical and Electronic Equipment (WEEE). Once the requirements are transposed into the local laws of the EU countries where we operate, we will evaluate ST concern against the transposed specific local



#### The environment

Indicator	2009	2010	2011	2012	2013
Environmental inve	estment	S / EN30			
% of total company nvestments	0.40	0.06	0.50	0.85	0.21

#### Summary of net CO<sub>2</sub> emissions (kTons) / EN16 / EN17 / EN18 / EN29 / 🗀 3.1 / 🗀 3.2 / 🗀 3.4

Direct emissions (scope1)	393	551	626	561	554
Direct emissions due to PFCs (FE+BE)	352	519	595	527	514
Direct emissions due to boilers	41	32	31	31	37
Direct emissions due to direct transportation	-	-	-	3	2
Indirect emissions (purchased electricity) (Scope2)	876	907	903	828	815
Other indirect emissions (transportation*)	104	126	116	107	108
Total emissions**	1,373	1,584	1,645	1,497	1,477
Sequestration due to the implementation of reforestation projects***	215	249	277	298	221
Total direct net emissions	178	302	349	263	333
(*) The transportation emissions w	alua ia a alaba				

(\*) The transportation emissions value is a global estimate of employees' transportation and

transportation of goods.

("") Transportation emissions are integrated in the total emissions.

("") 2013 data have been reviewed after performing an assessment of timber volume and carbon sequestration on about 60% of our Australian forest at age 10 (the remaining 40% will be monitored next year but the sequestration has been already recalculated by taking into account the new values).

Even though the measured volumes are high for a 10 year old forest, they are lower in comparison of

Initiatives and changes resulting in a reduction in GHG

(saved kTons $CO_2$ ) / EN18 / $\square$ 3.3							
Related to PFC direct emissions reduction per IPPC guidelines	-	155	0	21	70		
Saving electricity	-	195	0	0	70		
Used green electricity	-	41	61	67	121		
Produced electricity by windfarm	-	8	7	0	0		
Total GHG gas emissions reduction	-	398	68	88	261		

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

Total costs	48	53	52	47	43
Energy savings	87	219	203	169	206
Water savings	15	25	24	22	25
Chemical savings	58	87	69	62	69
Total saving	160	331	296	253	300
Balance (cost savings)	112	278	244	206	257

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

I) We set a baseline using the 1994 model with the assumption that unere are no installation enhancements, except for chemicals for which the baseline is 2000;

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

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

4) the result shows the theoretical benefits due to the installation improvements concerning the savings for energy, water and the use of chemicals.

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

#### Direct and indirect energy consumption by primary sources (%) / EN3 / EN4 / 🕮 3.3

Breakdown of energy sources					
Green electricity purchased	2.63	5.79	8.56	7.38	17.64
Electricity produced by ST's windfarm	1.03	1.09	1.13	0	0
Photovoltaic and thermal solar electricity produced by ST	0.01	0.01	0.09	0.10	0.10
Electricity purchased from nuclear (CO <sub>2</sub> free)	22.15	23.72	23.23	22.13	17.79
Electricity purchased from fossil fuel sources	64.48	61.57	59.53	63.27	56.25
Natural gas	9.70	7.81	7.46	6.96	8.01
Other fuels	0	0	0	0.17	0.20

of e1,200. The installations were fapility restored.
• China non-manufacturing: In November, we were fined USD14,876 due to moving our Beijing site into new offices before receiving the safety authorization certificate. This was due to the fact that we had been unable to obtain an extension of the expiring lease contract prior to moving in.

Indicator	2009	2010	2011	2012	2013

Consumption / absolute values / EN1 / EN3 / EN4 / EN8 / 2.1 / 2.2 / 2.3

Electricity (GWh)	1,986	2,018	2,058	2,041	2,092
Water (1,000m³)	16,346	17,393	17,314	16,151	17,484
Chemicals (tons)	12,451	17,138	17,076	17,792	19,713
Natural gas (GWh)	214	171	166	153	183

### Consumption of electricity / normalized values / EN4 / $\square$ 2.1 Baseline 100 in 1994

	Target	46.3	44.0	41.8	39.7	37.7
	Consumption of electricity	71.0*	48.0	50.4	54.6	50.3
(*) 2009: The figures show the global consumption per unit of production for the whole year affect a decrease of production due to the economic crisis.						

### Consumption of natural gas / normalized values / 2.1 Baseline 100 in 1994

Consumption of natural gas	51.6	29.4	29.7	29.8	32.0
Energy saved* (G\	Nh) / abs	solute valu	es / EN5 /	<b>2</b> .1	

0 129 0 0

#### (\*) Includes electricity and natural gas.

#### Total water discharge / EN21

Water discharge (1000m³)	12,867	14,000	13,650	12,444	13,422
Treated in ST waste water treatment plant (%)	75	73	74	76	78
Treated in external waste water treatment plant* (%)	43	57	55	54	58

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

#### Waste split (tons) / EN22

Total waste	33,439	40,775	38,593	37,511	36,091
Reuse & recycled	29,164	36,113	35,387	34,032	32,975
Incinerated	3,170	3,522	2,134	1,758	1,352
Landfill	1,105	1,140	1,072	1,721	1,764

#### Waste under Basel convention / EN24

Hazardous waste transported (as a % of total hazardous waste)	0.003	0	0	0	1.331
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### Environmental burden / net values / EN16 / EN17 / EN19 / EN20 / EN26 / $\bigcirc$ 4.1 / $\bigcirc$ 4.3 / $\bigcirc$ 4.4

11420 / 64 4.1 / 64 4.0 / 64 4.4								
Emissions to air								
Global warming* (MTCE)	358,167	413,974	429,187	408,202	402,875			
Ozone depletion (Kg R11 Eq)	8	7	0	0	0			
VOCs (Tons)	170	178	192	147	153			
Atmospheric acidification (Kg SO <sub>2</sub> Eq)	55,370	36,581	41,525	34,456	42,181			
Photochemical oxidant creation (Kg ethylene Eq)	35,044	25,292	38,125	27,165	29,501			
Air emission toxicity** (Kg PH <sub>3</sub> Eq)	4,101	4,484	3,075	4,337	2,680			
Emissions to water***								
Eutrophication (Kg P+N)	305,502	396,271	378,339	330,993	326,918			
Aquatic oxygen demand (COD****)	626,835	709,202	667,146	529,623	565,693			
Heavy metals to water (Kg heavy metals)	8,934	9,579	9,796	6,458	6,446			
Aquatic ecotoxicity (Kg Cu Eq)	6,698	5,774	4,032	4,109	4,437			
(#) In all calls a allowed according to a con-	(0110):	4		talanda alamata da atau				

(") Includes direct greenhouse gas (GHG) emissions from our manufacturing plants and indirect emission 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 3ppm, expressed in phosphine equivalent. For Volatile Organic Compounds, Atmospheric Acidification, Photochemical Oxidant Creation and Air Emission Toxicity the Particulate Matter is not covered. ("") Domestic waste water is included. (""") Total Chemical Oxygen Demand (COD).

### Carbon footprint of ST's products per mode of transportation (%)

Air <2000km	10.71
Air >2000km	89.12
Road	0.17
Ocean	0

#### Elimination of substances of very high concern (SVHC)

Total number of action plans* completed since 2008	19
Action plans completed on-time (%) for the elimination and reduction of hazardous substances including Substances of Very High Concern (SVHC)	100
*One substance can be subject to several action plans to be eliminated from different ST n	rocesses

## Deployment of ST substances specification to key supppliers and subcontrators (%)

Response rate from key partners	100	100	100	100	100
Full commitment from key partners to ST substances specification	93.0	91.0	98.5	99.0	99.0

#### Incidents in 2013 / EN23

none

Fines and non monetary sanctions in 2013 / EN28

none

#### The community

THE COMMITMING								
Ladia da a	0000	0040	0044	0040	0040			
Indicator	2009	2010	2011	2012	2013			

Suppliers and subcontractors change from one year to another. The list is updated regularly which changes the reference perimeter.

Suppliers' and subcontractors' environmental and health & safety performance /  $\square 8.3$ 

#### Number of suppliers / subcontractors

Suppliers of materials	108	104	102	94	92
Suppliers of equipment	40	40	40	40	40
Suppliers of spare-parts	N/A	35	38	39	44
Total	148	179	180	173	176
Subcontractors Back-end	65	62	59	51	59
Subcontractors Front-end	10	19	22	19	19

#### ISO 14001 certified / EMAS validated (%)

Suppliers of materials	81.1	81.0	81.2	76.0	90.4
Suppliers of equipment	82.5	83.0	80.0	83.0	78.0
Suppliers of spare-parts	N/A	54.2	47.4	59.0	61.0
Total	81.5	76.2	73.8	81.9	77.3
Subcontractors Back-end	97.0	97.0	98.3	98.0	98.3
Subcontractors Front-end	100	100	95.5	100	100

#### OHSAS validated (%)

Suppliers of materials	41.0	44.0	50.0	48.0	51.0
Suppliers of equipment	10.0	8.0	21.0	18.0	18.0
Suppliers of spare-parts	N/A	20.0	15.8	18.0	18.0
Total	32.6	31.3	36.2	34.3	35.3
Subcontractors Back-end	91.0	87.0	62.1	67.0	64.4
Subcontractors Front-end	80.0	84.0	77.3	77.0	73.0

#### Suppliers' compliance with EICC (target number)

Suppliers of materials	108	104	102	102	92
Suppliers of equipment/ facilities/IT	104	104	87	87	86
Suppliers of spare-parts	N/A	35	35	35	33
Subcontractors Back-End	39	32	32	32	59
Subcontractors Front-End	10	19	22	22	19

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

Suppliers of materials	82.4	89.0	95.2	82.0	96.7
Suppliers of equipment/ facilities/IT	41.4	50.0	99.0	93.2	96.5
Suppliers of spare-parts	N/A	71.0	94.1	86.8	93.9
Subcontractors Back-End	98.5	98.0	97.0	100	100
Subcontractors Front-End	90.0	95.0	95.5	100	100
2012 figures are based on the EICC code of conduct V4 introduced in Q4.					

Indicator	2009	2010	2011	2012	2013
inse 2 - Assessme	nt: FICC	Salf-ass	assmant	auestion	naire

Suppliers of materials	42	76	97	183	209
Suppliers of equipment/ facilities/IT	0	0	0	13	18
Suppliers of spare-parts	N/A	N/A	N/A	N/A	N/A
Subcontractors Back-End	17	20	23	42	49
Subcontractors Front-End	1	3	4	8	6

(\*) The number of SAQs is not the number of suppliers/subcontractors that have filled in SAQs. One supplier or subcontractor has to fill in one company level SAQ and SAQs for all their manufacturing sites that produce materials/equipment/products for ST.

#### Technical ladder\* (%)

completed\*

	WW	Asia Pacific	Europe
ST population recognised through the technical ladder	2.43	1.22	3.21

(\*) The specified 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.

#### Community Involvement - Inputs / SO1/EC1/EC8/EC9

Number of community involvement activities	374	385
Total contribution (evaluated in US\$m)*	8.5	11.0
Number of employees engaged in volunteering	4,515	9,943
Number of hours contributed inside company time	100,972	177,592
(*) Includes cash donations and an evaluation in LIS\$ of staff time, in-kind and	d management	costs

#### Type of contribution breakdown (%)

Cash donations	31	14
Staff time volunteering	57	78
In-kind	4	3
Management costs	8	5

# Indicator 2009 2010 2011 2012 2013 Domains of involvement (%)

Young generation and education	79	75
Environment	3	2
Social welfare and charity	6	6
Innovation and high technology	8	8
Economic development	3	1
ST Foundation	0	5
Other	1	3

#### Motivation for contribution (%)

Community Investment	87	85
Charitable gift	5	10
Commercial initiative	8	5

#### Geographical spread of contribution (%)

Local	80	39
National	19	31
International	1	30
Note: We estimate to have captured 85% of our contribution.		

#### Community Involvement - Outcomes / SO1/ EC1/ EC8/ EC9

Number of beneficiary organizations	826
Number of direct beneficiaries	34,495

#### ST Foundation so1/EC1

Total trainees	26,091	30,285	36,444	28,307	42,257
Total trainees from beginning of program	81,362	111,647	148,136	176,443	218,729



# Statement GRI Application Level Check

GRI hereby states that STMicroelectronics has presented its report "Sustainability report 2013" to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level A.

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/SiteCollectionDocuments/ALC-Methodology.pdf

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 23 June 2014

All Hellade

Ásthildur Hjaltadóttir Director Services Global Reporting Initiative



The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance, waves global reporting, any

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 10 June 2014. GRI explicitly excludes the statement being applied to any later changes to such material.



This is our Communication on Progress in implementing the principles of the United Nations Global Compact and supporting broader UN goals.

We welcome feedback on its contents.



Readers' Guide

ST at a glance and Value chain

Business Ethics & Compliance

Our People

Employee Engagemen

Labor & Human Rights

Our Products

**Customer Satisfaction** 

Innovation Management

Sustainable Technology

**GHG Emissions from Operations** 

Conflict Minerals

Water Management

**Energy Management** 

Waste Management

**Transports & Logistics** 

The Community

Community Involvement

**Additional Indicators** 

Sustainability in the Supply Chain

Partnerships in R&D and Education

Public Affairs & Industry Networking

Chemicals Management

Employee Health & Well-being

**Employee Safety** 

Financial and Extra-Financial Perfo

Recruitment, Learning & Development

Global Diversity & Equal Opportunities

Foreword by Carlo Bozotti

Indicators

The following table shows the correlation between the STMicroelectronics Sustainability Report and the ten

**GRI Indicators** 

2.1; 2.3; 2.4; 2.8; 2.9; 3.1-3.8; 3.10;

3.11; 3.13; 4.9; 4.14-4.16

2.3; 2.5; 2.7; 2.8; 3.6

1.1: 1.2: 4.9: 4.17

3.5; 4.8; 4.9; 4.11; 4.17

2.3; 2.6; 2.10; 4.1-4.3; 4.7; 4.8; 4.9

4.6; 4.9; HR3; HR4; S02; S03; S04

2.7; 2.8; EC1

LA2: LA10: LA11: LA12

4 16: 4 17

LA7; LA8

4.8; 4.12 EC8; HR5; HR6; HR7; S05

LA8

I A13

4.16: 4.17: PR5

EN2; EN5; EN6; EN26; EN27;

PR1: PR3

4.17 HR2: HR7: PR3

4.8; 4.13; EN1; EN2; EN18; EN26

EC2; EN16; EN17; EN18; S01

EC2; EN8, EN10, EN21; EN25; S01

EC2: EC6: EN3: EN4: EN5: EN7

FN1: PR3

EN2; EN22; EN24

EC2; EN4; EN5; EN7; EN16; EN17;

FN29

4.16: 4.17

4.8; 4.9; 4.12 EC6; HR1; HR2; PR3

EC1; EC8; EC9; SO1

S01

4.13 EC9: S05

2.10

2.8; 3.9; 3.12 EC1; EC5; EC7; LA1;

| A2- | A4- | A5- | A7- | A10- | A11-

LA13; EN1; EN3; EN4; EN16; EN17;

EN19: EN20: EN22: EN23: EN26:

EN28: EN30: PR5

Principles of the Global Compact, the Global Reporting Initiative (GRI) elements and the ISO 26000 standard.

**Global Compact Principles** 

GC10

GC6

GC1; GC3; GC4; GC5

GC1

GC1: GC6

GC1: GC7: GC8: GC9

GC1; GC2

GC7; GC8; GC9

GC7; GC8; GC9

GC7: GC8: GC9

GC7; GC8; GC9

GC7; GC8; GC9

GC7; GC8; GC9

GC1; GC3; GC4; GC5; GC6; GC9

ISO 26000 core subjects and issues

6.2

6.6.3

6.3: 6.4

647

6.2.3

6.3.7

6.3.10; 6.4.5

6.4.4: 6.4.6

6.3.7

6.7

6.7.3: 6.7.6

6.6.7

6.5.3: 6.7.4: 6.7.5

6.3.5: 6.6.4

6.5

6.5.3: 6.5.5

6.5.4

6.5.4

653

6.5.3

6.5.3; 6.5.5

6.6: 6.8

6.6.6

6.8.3; 6.8.5; 6.8.6; 6.8.7; 6.8.9

6.8.4

6.6.6

6.2

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#### MODERATE ASSURANCE STATEMENT

External Statement issued by DNV GL - Business Assurance France Financial year ended 31 December 2013

#### Introduction

Det Norske Veritas Germanischer Lloyd Business Assurance France ('DNV GL - Business Assurance') has been commissioned by the management of STMicroelectronics NV ('the Company') to carry out a moderate assurance engagement on the "2013 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.

#### Scope of verification

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 Our People, Our Products, The Environment and The Community related to the period between January 2013 and December 2013, as contained in the 2013 Report.
- Our verification was carried out from March to May 2014. As part of this engagement we visited selected sites on the basis of their contribution which represents 20% of the Group's consolidated environmental and social indicators (a higher level of Assurance would have required a more detailed review): Geneva (Headquarters), Ang Mo Kio (Singapour), Kirkop (Malta), Rousset (France).

#### Verification methodology

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 statements and claims related to the following subjects: Our People, Our Products, The Environment and The Community statements 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 GL - Business Assurance France by the Company:
- Interviewed the Corporate Social Responsibility Team and conducted interviews with an excess of 50 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 Corporate 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

#### Conclusions

It is the opinion of DNV GL - Business Assurance that the 2013 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 Key Performance Indicators as well as parts of the narratives in the Company's "2013 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.

In 2013, STMicroelectronics NV entered in an organizational phase, aimed at putting in relations various departments and programs at a local level within Sustainable Excellence Committee. The deployment of an effective and formalized internal control spread over all sustainability data remains however to finalize. It has to be noticed that the level of transparency of the report is good, in the way which STMicroelectronics NV clearly expressed difficulties met, highlighting the complexity of performance measurement in particular for Community Involvement impacts.

Based on our review, we assessed adherence of the Report to the following principles, on a scale of 'Good', 'Acceptable', 'Need for improvement':

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'.

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 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

In our opinion, the level at which the Report adheres to the principle of stakeholders inclusiveness is 'Good'

#### **Opportunities for improvement**

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 2013.

#### **Competence and independence of DNV GL – Business**

#### **Assurance France**

DNV GL was not involved in the preparation of any statements or data included in the Sustainable Report, DNV GL 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 GL is a leading provider of sustainability services, including the verification of sustainability reports. For more information, please visit our web site (www.dnvgl.fr/certification) or www.st.com.

For DNV GL - Business Assurance France,



Marc-Antoine Horenfeld Project Manager

Setion

Jean-Christophe Carrau Reviewer

Paris, June 24th, 2014

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DNV GL - BUSINESS ASSURANCE FRANCE

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