

We improve everybody's life



Inclusion in
DJSI
World and Europe



15.7%
of our revenues
invested in R&D



588
new patents
filed in 2019



Mobile World Congress, Barcelona, Spain

Sustainable Profit

Product group revenues

US\$3.6 billion	Automotive and Discrete
US\$3.3 billion	Analog, MEMS and Sensors
US\$2.6 billion	Microcontrollers and Digital ICs

2019 financial results

38.7%
gross
margin

US\$9.56
billion
net revenues

12.6%
operating
margin

Innovation & Profits

OUR AMBITION
2025 GOAL
2019

Sustain profitable growth, with clear and focused leadership objectives in the four end markets we address.

>20%
of revenues generated by
new product lines

15.9%

Our results in 2019 were in line with the full year expectations: net revenues of US\$9.56 billion, with a gross margin of 38.7% and an operating margin of 12.6%.

We achieved strong growth of around US\$1 billion in the second half of the year compared to the first half, driven by a stronger than expected contribution from engaged customer programs and new products.

Our free cash flow for the year was US\$497 million, including capital expenditure of US\$1.17 billion, and our net financial position was US\$672 million. Net income was US\$1.03 billion, translating into US\$1.14 diluted earnings per share.

Sales to OEMs represented 70% of total 2019 revenues, while Distribution represented 30%.
[103-2](#) | [103-3](#) |

Product group revenues

Automotive and Discrete Group (ADG) revenues were US\$3.6 billion in 2019, an increase of 1.4% compared to 2018.

Revenues from our Automotive Product sub-Group were substantially flat, reflecting two opposing dynamics: growth in car digitalization applications with ADAS products and microcontrollers, and a decline in legacy products.

Revenues for the Power Discrete sub-Group increased, mainly driven by Silicon Carbide products, power MOSFET and IGBT, and partially offset by non-power Discrete.

Driven by personal electronics applications, 2019 revenues grew 4.6% for our Analog, MEMS and Sensors (AMS) Group compared to 2018, reaching US\$3.3 billion. The increase was partially offset by lower sales in Industrial and hard-disk drives.

Microcontrollers and Digital IC Group (MDG) revenues were US\$2.6 billion in 2019, a decrease of 10.3%. This is mainly due to an inventory correction at our distributors, which affected general purpose microcontrollers during the first half of the year. MDG restarted year-on-year growth during the second half of 2019.

The full details of our financial results are available in our Form 20-F and IFRS annual reports, which can be found on our website (see investors.st.com).

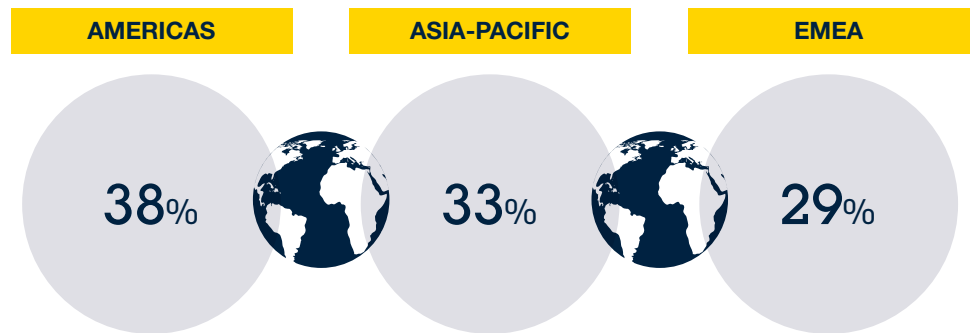


Lorenzo Grandi

President, Finance, Infrastructure and Services, and Chief Financial Officer

In 2019, in a declining semiconductor market, ST was able to show significant resilience in its financial results, testifying to the solid strategy and the superior technology and product portfolio of the Company. The investor community acknowledged this capability of the Company to navigate in difficult waters with a significant share appreciation during the year: around +94% compared to the +60% of the SOX index. Our commitment to sustainability is embedded in our financial strategy, helping us not only to manage risks but to create short-term as well as long-term opportunities."

Net revenues by region of origin



Looking forward

In order to address our new products ramp-up, customer demand in 2020 and ongoing strategic initiatives, we plan our capital investment in 2020 to be in the range of US\$1.0 billion to US\$1.2 billion.

This investment includes additional capacity for some of our existing technologies and investments to develop the product mix for our 200mm fabs, support for our R&D activities and maintenance of manufacturing operations. It also includes spending for three strategic initiatives:

- investment in the new Agrate (Italy) 300mm fab to support BCD (Bipolar, CMOS, DMOS), IGBT and other power technologies
- R&D for Gallium Nitride power technologies and production ramp up for Gallium Nitride for radio frequency devices
- investments for Silicon Carbide. These include substrate activities, following our acquisition of Norstel

**Investing in
3 strategic
initiatives:
the Agrate 300mm
fab, GaN and SiC**

Extra-financial reporting

Each year, socially responsible investment rating agencies, analysts and investors evaluate our corporate behavior and performance based on a wide range of environmental, social and governance (ESG) topics.

In 2019, we were included in the Dow Jones Sustainability Indices World and Europe for the second year in a row. With our best score of 83 points out of 100, ST was ranked fourth among global semiconductor companies invited to participate in the indices. This achievement acknowledges our longstanding commitment to conducting our business responsibly and recognizes our performance in many areas, ranging from business ethics, innovation, and quality, to environment and labor practices.

We were also included in the Bloomberg Gender Equality Index and maintained a strong presence in other major sustainability indices, such as FTSE4Good, Ethibel, and Euronext Vigeo (see ST inclusion in the main sustainability indices in 2019 on [page 33](#)).

Participating in these evaluations gives us an opportunity to assess our performance within a wider context, benchmark ourselves against our peers, measure our progress, and identify areas for further improvement.



Manjit Jus

Head of ESG Ratings RobecoSAM

MEMBER OF

**Dow Jones
Sustainability Indices**



In collaboration with

We congratulate STMicroelectronics for being included in the DJSI World and Europe. The SAM Corporate Sustainability Assessment has again raised the bar in identifying those companies best-positioned to address future sustainability challenges and opportunities. This year – which marks the 20th anniversary of the DJSI – record corporate interest in the SAM CSA reflects the enduring relevance of the DJSI for measuring and advancing ESG practices.”

Innovation



ST Technoday and Innovation Night, Fondation Louis Vuitton, Paris, France

Innovation & Profits

OUR AMBITION

Sustain profitable growth, with clear and focused leadership objectives in the four end markets we address.

2025 GOAL

>20%
of revenues generated by
new product lines

2019

15.9%

Acquisition of SiC wafer manufacturer Norstel AB

Innovation is the fuel that drives our sustainability and our growth. As a technology and innovation-driven company, we invested US\$1.50 billion in research and development (R&D) in 2019, representing 15.7% of our net revenues. [I 103-1 I](#)

Leading edge technology

ST is one of the few semiconductor companies mastering many different manufacturing technologies, including FD-SOI (Fully Depleted Silicon-On-Insulator), CMOS (Complementary Metal Oxide Semiconductor), differentiated Imaging technologies, PCM (embedded non-volatile phase-change memory), RF-SOI (RF Silicon-On-Insulator), Bi-CMOS, BCD (Bipolar, CMOS, DMOS), Silicon Carbide (SiC), Gallium Nitride (GaN), VIPower, MEMS and actuator technologies.

Our technology is found everywhere microelectronics makes a positive contribution to people's lives. It allows our customers to make end-products more intelligent, more energy efficient, more connected, safer and more secure, and contributes to resolving the challenges faced by society.

In 2019, we acquired the Swedish SiC wafer manufacturer Norstel AB to strengthen our internal SiC ecosystem, from materials expertise and process engineering to SiC-based MOSFET and diode design and manufacturing. We have also begun building up our GaN-on-Silicon production capacity to serve the worldwide 5G infrastructure buildout.

Technical expertise

Around 7,800 ST employees work in R&D, and design. This includes 696 technical staff members recognized for their advanced expertise, who play a key role in cross-functional knowledge sharing.

This community drives our most advanced innovation, developing new technology and fostering R&D partnerships with prestigious universities and partners worldwide.



Marco Cassis

President – Sales, Marketing, Communications and Strategy Development

As a player in complex value chains across the markets we operate in, we understand the importance of innovation and collaboration at all levels to find and bring to market the next technology disruptions. Cooperation and partnerships with global OEMs, SMEs, startups and research labs are part of our DNA. We invest heavily in these efforts to achieve our business ambitions – from open innovation in fundamental technologies, to the creation of multi-party ecosystems supporting end-product developers.”

~7,800
employees dedicated
to R&D and
product design

Our human expertise and innovative products are widely recognized by institutions, customers and media worldwide. Examples include:

- awards for numerous staff members, such as:
 - Joël Hartmann, Executive Vice President of Digital & Smart Power Technology and Digital Front-End Manufacturing, who was recognized by SEMI⁽¹⁾ for his work in the field of low power technology, in particular FD-SOI
 - Laurent Malier, Technology & Design Platforms General Manager, who was accepted into the prestigious National Academy of Technologies of France
 - Andreia Cathelin, one of our technology R&D staff fellows, who has been awarded an honorary doctorate (doctor honoris causa) from the Faculty of Engineering of the prestigious University of Lund in Sweden (promotion 2020)
- awards for our products, such as:
 - an innovation award from Schneider Electric in recognition of our highly secure products (STSAFE, TPM2.0, e-SIM) which enable Schneider to provide secure connectivity for Industry 4.0 applications
 - a ‘Best Innovation’ award from Elecfans, a popular electronics industry portal in China, for our STSPIN32F0 motor control system-in-package device
 - ‘Innovator of the Year’ award from German trade magazine ‘Design & Elektronik’ in three categories: development kits; analog and power management; and power supply subsystems

138
active R&D
partnerships

Open innovation

Recognizing the importance of partnerships in the innovation process, we have established a worldwide network of strategic alliances. These include product development with key customers, technology development with other semiconductor manufacturers and development alliances with suppliers of major equipment and software design tools. [I 103-2 I](#)

These industrial partnerships are complemented by a wide range of research programs conducted with leading universities and research institutes around the world.

Overall, we were involved in 138 active R&D partnerships in 2019. [I 103-3 I](#)

Research partnerships SDG 9.5

	2016	2017	2018	2019
Contracts with higher education institutions or research labs	228	234	160	138



Important Project of Common European Interest

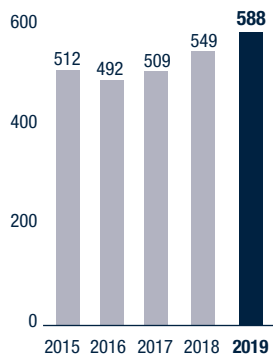
A key R&D partnership is the Important Project of Common European Interest (IPCEI) for microelectronics, which gathers the most important European players in microelectronics to cooperate and innovate to serve the IoT, space, smart driving, and security markets.

In 2019, technical teams from ST France and Italy, along with their external partners, achieved notable R&D breakthroughs in embedded memories and power technologies, which are particularly important for efficient power management systems.

At the same time, we have focused on sharing progress and disseminating knowledge throughout Europe, participating in numerous forums, conferences and cooperative projects.

One of the projects, Nano2022, is a five-year French public-private strategic support program, targeting not only R&D and innovation, but also First Industrial Deployment. It was officially launched on our Crolles site (France) in March 2019 by the French Minister of the Economy and Finance, Bruno Le Maire.

ST new patents filed SDG 9.5



In addition, a new multi-project wafer program has been launched, which aims to increase the use of 28nm FD-SOI technology in academic laboratories, SMEs and startups, expanding the impact of IPCEI in Europe. ST has also been involved in 12 ECSEL⁽²⁾ collaboration projects connected to the microelectronics IPCEI since its initiation in 2018.

Artificial intelligence partnerships

In the field of Artificial Intelligence (AI), we are engaged in several partnerships with renowned universities such as the MIT Computer Science & Artificial Intelligence Lab in the US, research laboratories such as CEA-LIST⁽³⁾ in France, and competency centers such as the 3AI⁽⁴⁾ Côte d'Azur and the MIAI⁽⁵⁾ Grenoble Alpes, two of four of the Interdisciplinary Institutes of Artificial Intelligence created by the French government in 2019 (see Focus). [I 102-12 I](#)

ST partner program

Launched in 2018, the ST partner program (see www.st.com/partner-program) continues to grow, reaching 250 member partners in 2019. This program aims to enhance the ecosystem around our broad portfolio of products, helping our customers reduce development effort and accelerate time to market. Members of the program provide a wide range of products and services, covering areas such as software and hardware development tools; embedded software, components and modules; and training and engineering services.

Innovation for all

Since 2016, we have introduced new spaces and methodologies to enhance our capabilities in creative thinking and innovation.

Employee intrapreneurs have access to 'Makers Labs' to explore their ideas and prototype applications using ST products, and 'Crea-Labs' to propose new tools and processes that can help us work better.

The Opus Fab Lab, at our Agrate site (Italy), for example, is dedicated to the development of prototypes, demonstration objects, or even new solutions to improve workflows. It is the latest in a series of four similar labs we have created since 2016.

We also support startups through open innovation contests and by hosting them at our sites. [I 103-2 I](#)

Contributing to the Sustainable Development Goals

Our commitments and programs as described above contribute to:

SDG target 9.5 – Enhance scientific research, upgrade the technological capabilities of industrial sectors, and increase private research and development spending.

⁽¹⁾ SEMI is the global industry association serving the product design and manufacturing chain for the electronic industry.

⁽²⁾ Electronic Component and Systems for European Leadership.

⁽³⁾ Laboratory for Integration of Systems and Technology of 'Commissariat à l'énergie atomique et aux énergies alternatives', a French public government-funded research organization.

⁽⁴⁾ Interdisciplinary Institute for Artificial Intelligence.

⁽⁵⁾ Multidisciplinary Institute in Artificial Intelligence.

FOCUS

Developing our AI competencies

Since 2012, we have been developing our AI competencies by embedding them in ST solutions and applying them to augment intelligence in our internal processes.

Leveraging the industry-leading position of our STM32 family of microcontrollers, we have added advanced AI features in the associated STM32CubeMX ecosystem used by product developers, so that developers can now convert pretrained neural networks into C-code that can run on STM32 microcontrollers.

We are also building our internal pool of AI expertise, applying AI to our internal processes such as default analysis and tracking, predictive maintenance, and new fields of marketing.

External partnerships and open innovation are key for growth in this field. In addition to R&D collaboration, ST partners closely with the most-used neural network training tools providers, such as Google TensorFlow and others, to ensure they are available to customers for our STM32 portfolio. Several recognized ST experts are also engaged in high-level AI advisory groups organized by the EU Commission and the Italian Ministry of Economic Development.

Artificial Intelligence @ ST



Quality



Employees, ST Rousset, France



Quality is a priority in ST. Our vision is to elevate ST to the highest level of quality, making it an asset for our customers. We are continually adapting to ensure we have the necessary infrastructure and organization in place so that our products meet the highest quality and reliability requirements of customers in the markets we serve.

We organize Product Quality & Reliability at a corporate level but also embed it in ST organizations. It is led by a team comprising quality directors from every area of our business operations: front-end and back-end manufacturing, product groups, sales regions and corporate organizations.

In 2019, our corporate quality organization was reinforced and extended to include new functions, either not previously present or previously positioned elsewhere within the Company. The intention is to cover and efficiently drive the full spectrum of quality topics. These functions include:

- program management and strategic office
- innovation and development
- reliability
- operations and compliance
- materials and supplier quality management
- culture and communication

A new working model with a cross-organizational Quality Steering Committee was also set up to drive our three-year quality strategy. [I 103-2 I](#)



2019 OBJECTIVES

Reduce customer complaints per million units by 6% compared with 2018.

Status



Comments

2% decrease in customer complaints in 2019. See Quality table. Objective discontinued.

Focusing on our customers



FOCUS

Offering the best level of quality to our customers

As part of our efforts to rethink our way of working in 2019, we streamlined our quality and reliability approach to customers by providing a framework for:

- regular strategic meetings (internal and external)
- reinforced tracking of customer KPIs and scorecards

This approach helps us to build a closer relationship with our customers, creating an environment for optimized exchange. As a result, we can better respond to their needs and expectations and, through regular monitoring of performance and expectations, adjust and sustain our quality performance.

Our approach

Our quality approach is based on our Quality Management System (QMS), as documented in our Quality Manual. The manual details how we implement the processes to guarantee that our products meet or exceed the highest standards and customer requirements. [I 103-2 I](#)

ST adheres to internationally recognized quality management standards. We received our first companywide ISO TS 16949 certification in 2003 and this has been renewed every three years since then. Since 2018, ST has been certified IATF 16949:2016 and ISO 9001:2015, demonstrating our robust quality governance, effective QMS and quality compliance across the company. [I 103-3 I](#)

From quality booster to quality roadmap

To step up our quality performance, incident prevention and enable us to better respond to customer expectations, we initiated a specific internal booster program at the end of 2017 to challenge and improve our quality practices.

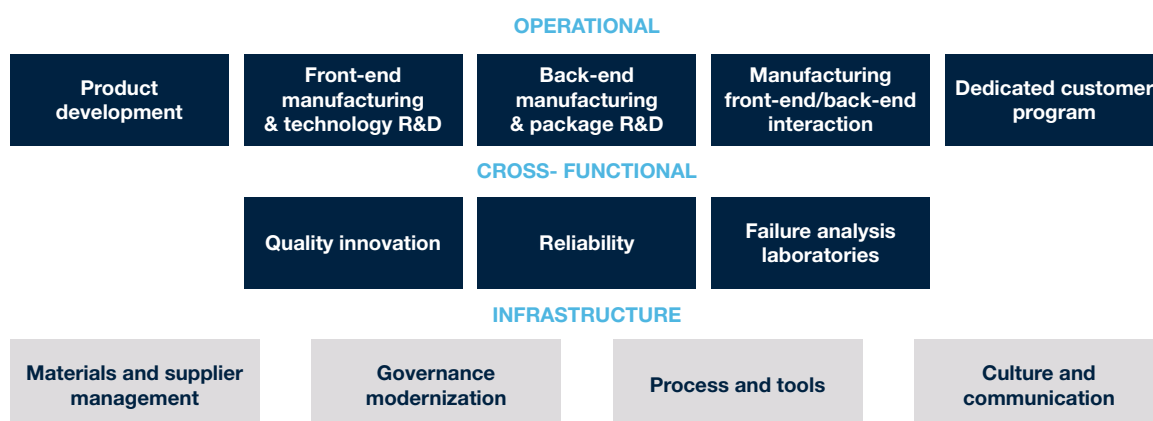
Having completed most of the initiatives in our booster program, during the second half of 2019 we transitioned to a more standard way of working. We built a three-year roadmap, maintaining the same holistic approach, with cross-functional working groups, strong governance with top management commitment, and a robust program management infrastructure with monitoring and KPIs.

Our three-year roadmap is based on a global program organized in three areas (operational, cross-functional and infrastructure) and 12 work packages.

The goal is to generate long-term structural improvements and prevent incidents occurring by focusing on three strategic domains of quality and reliability:

- streamlining customer focus
- innovation in development, detection and prevention
- modernization and digitalization

Quality strategic program



82%

of employees said they understand how quality fits into their job

Quality as a business enabler

Quality is an important business enabler of ST's strategic objectives.

We maintain our efforts towards making quality visible throughout the Company to employees at all levels, through our quality communities, campaigns, and annual Quality Week events.

Our commitment to fostering a culture of quality was confirmed by our 2019 employee engagement survey. 82% of employees said they clearly understand how quality expectations fit into their job requirements (nine points above the global industry norm⁽¹⁾), while 79% said day-to-day decisions in their team clearly show that quality is a priority throughout our business.

We have identified and aligned key performance indicators (KPIs) that make our goals clearer for all, while at the same time guaranteeing the robustness of our processes and programs. [I 103-3 I](#)

Quality performance

Our customer quality returns increased slightly compared to 2018, due to an isolated issue with a specific technology that has now been resolved.

Our overall quality performance improved significantly in 2019. With a 70% reduction of severe quality incidents compared to our 2016 baseline, we are on target to achieve our 2025 goal.

⁽¹⁾ CultureIQ manufacturing industrial equipment/instruments norm.

Quality

	2015	2016	2017	2018	2019
Customer complaints	103	85	71	67 ⁽¹⁾	71
Cycle time to process failure analysis	91	99	96	87	98
Customer quality returns	71	71	29	25	75

Baseline 100 in 2013.

⁽¹⁾ Data updated due to new complaints received after the closure of the previous reporting period.



Nicolas Yackowlew

Executive Vice President, Product Quality & Reliability

We are constantly striving to satisfy our customers by responding to their expectations for the best quality performance of our products.

For us, quality is more than basic compliance with industry standards. It's also the focus that enables us to achieve breakthroughs and innovation in our ways of working, methods, processes and tools, ensuring we are always able to offer the best level of quality to our customers."

Sustainable Technology



Roborace car, Electronica Munich, Germany

Sustainable Technology

OUR AMBITION
2025 GOAL
2019

Design and manufacture products that have the greatest positive impact on the planet and society.

x3

% revenues generated by responsible products*

* vs 2016

x1.5

62%

of new products are responsible products

Sustainable Technology, our product stewardship program, is about improving our social and environmental footprint at every stage of the product lifecycle, from raw material extraction to end of life. Since the start of the program in 2011, we have been designing, identifying and promoting innovative responsible products that deliver environmental and social benefits such as reducing energy consumption, saving resources, protecting the environment, and improving people's quality of life. [I 103-1 I](#)

Identifying innovative responsible products

Our Sustainable Technology program is based on three main axes:

- **Product compliance** covers legislation and the requirements of our customers and other stakeholders regarding EHS, and the social and ethical impacts of our products (see ECOPACK® products on [page 33](#), and Conflict minerals inquiry results on [page 78](#)).
- **Eco-design** takes into consideration the environmental impact of the device during its whole lifecycle, such as power-efficient and low-carbon responsible products (see Focus on [page 32](#)).
- **Responsible applications** bring sustainable benefits for human welfare or the environment, such as planet-friendly and human-welfare responsible products (see quote on [page 32](#)). [I 103-2 I](#)

We systematically apply these Sustainable Technology programs during the product development process to identify responsible products that provide clear social or environmental benefits to society.

The product R&D teams record and track responsible indicators in our Project Management System (PMS). This enables them to evaluate the products, awarding one, two or three stars to indicate their value to society and their level of innovation. To support the teams, we deployed across all ST sites an e-learning program specific to the semiconductor industry, called 'Fundamentals of product stewardship'. [I 103-3 I](#)

The percentage of new products that are classified as responsible increased from 50% in 2018 to 62% in 2019.

In line with our 2025 goal, we have established indicators that estimate the revenues derived from our responsible products. In 2018, we estimated they contributed to 13% of ST revenues. In 2019, we improved this score, reaching 15.5% of our revenues.



Pierluigi Gardella

Healthcare Business Unit Manager, AMG Analog, Agrate (Italy)

Everywhere microelectronics make a positive contribution to people's lives, ST is there! And nowhere is this more important than our Healthcare Business Unit. Over the years, our experts have developed trusted relationships with our customers, an important aspect of working with medical companies, to develop innovative healthcare technology. Examples include a device for new cardiac rhythm management that enables smaller pacemakers with longer battery life.

The Healthcare Business Unit is also developing integrated circuits for ultrasound imaging systems. For example, thanks to our pulser devices, the ultrasound scanner will ultimately replace the stethoscope in the day-to-day practice of medicine, becoming a diagnostic imaging tool accessible to anyone."



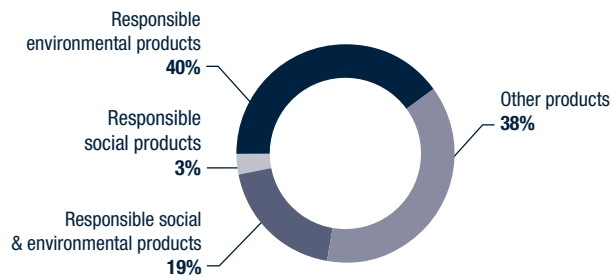
Promoting innovative responsible products

Since 2018, we have used our Sustainable Technology label to promote products in our recent portfolio that bring the most benefits to people or the environment.

Products are labelled following the results of our analysis process, which is managed at various steps of the product lifecycle. The label is applied to the most innovative responsible products, typically those awarded two or three stars.

In 2019, we published our first list of Sustainable Technology products on our website, available at www.st.com/responsible-products.

ST new products in 2019 | 417-1 |



STAR classification for new products in 2019 (%) | 417-1 |

	Social products ⁽¹⁾	Environmental products ⁽²⁾
★ Incremental improvement to existing offer	15	41
★★ Significant improvement to existing offer	12	28
★★★ New or dramatic improvement to existing offer	8	26

⁽¹⁾ Provides new social solutions that improve end-user quality of life (education, medical, health, safety, security of personal information or social solution for developing countries).

⁽²⁾ Power-efficient or low-carbon products (resulting from Eco-design assessment) or products included in end-user applications that contribute to saving energy or resources, environmental preservation (water, chemicals, emissions) or generating renewable energy.

Power-efficient responsible products



FOCUS

Silicon Carbide at the heart of new energy conversion systems

Energy conversion is critical in many applications powered by electricity, including power supplies, electrical vehicles and renewable energy devices.

We are constantly exploring more efficient, more compact and lighter solutions to ensure the optimal use of energy in these applications. As a major innovator and supplier of power semiconductor devices, we have been investing in wide bandgap materials such as Silicon Carbide (SiC) and Gallium Nitride (GaN), used to create components such as diodes and transistors. The widespread introduction of these materials has opened up opportunities for ST to gain market share in a wide variety of power applications.

The use of such components leads to improved designs that use less material and deliver greater energy efficiency. This enables designers to make a technological leap in energy conversion across a wide range of applications, notably electric vehicle chargers and renewable energy production equipment.

ST's expertise, combined with our mass production capacity for these components, puts us in a strong position in the energy conversion systems market.

Business indicators

This section includes indicators and GRI Standard disclosures.

ST key figures | 102-7 | 201-1 |

	2015	2016	2017	2018	2019
Net revenues (US\$m)	6,897	6,973	8,347	9,664	9,556
Gross profit (US\$m)	2,332	2,459	3,272	3,861	3,696
Gross profit as a percentage of sales (%)	33.8%	35.3%	39.2%	40.0%	38.7%
Net earnings (US\$m)	104	165	802	1,287	1,032
Diluted earnings per share (US\$)	0.12	0.19	0.89	1.41	1.14
Market share versus TAM (%) (Total Available Market)	2.06%	2.06%	2.02%	2.06%	2.32%

Net revenues by location of order shipment⁽¹⁾ (%)

| 102-6 | 102-7 | 201-1 |

	2015	2016	2017	2018	2019
Americas	16	15	13	13	14
Asia Pacific	58	58	61	61	62
EMEA	26	27	26	26	24

⁽¹⁾ 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 Asia Pacific affiliates are classified as Asia Pacific 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.

Operating income and cash flow (US\$m) | 201-1 |

	2015	2016	2017	2018	2019
Operating income	109	227	1,005	1,400	1,203
Net operating cash flow	327	316	308	533	497

ST sales by market channel⁽¹⁾ (%) | 102-6 |

	2015	2016	2017	2018	2019
OEM	68	67	66	65	70
Distribution	32	33	34	35	30

⁽¹⁾ Original Equipment Manufacturers (OEM) are the end-customers to which we provide direct marketing application engineering support, while Distribution customers refers to the distributors and representatives that we engage to sell our products around the world.

Dividends paid (US\$m) | 201-1 |

	2015	2016	2017	2018	2019
Dividends	350	251	214	216	214

Taxes (US\$m) | 201-1 |

	2015	2016	2017	2018	2019
Tax expense for the year	75	74	86	95	165

ECOPACK® products (%) | 417-1 |

	2015	2016	2017	2018	2019
Non ECOPACK®	0.3	0.3	0.2	0.2	0.2
ECOPACK® 1: Compliant with the RoHS/ELV directives, second level interconnect lead-free ⁽¹⁾	8.7	7.8	6.7	6.8	6.3
ECOPACK® 2: as ECOPACK® 1, plus free of brominated, chlorinated and antimony oxide flame retardants	83.0	84.0	86.0	85.1	85.2
ECOPACK® 3: as ECOPACK® 2, plus free of halogens with no RoHS exemptions	8.0	7.9	7.1	8.0	8.3

⁽¹⁾ With adapted reliability for soldering at higher temperature, as some exemptions are necessary mainly for the automotive market regarding the RoHS Directive.

ST site certifications

ST is ISO 9001 certified Company-wide

	OHSAS 18001/ISO 45001 Health & Safety	ISO 14001 Environment	EMAS Environment performance disclosure	ISO 50001 Energy	ISO 22301 Business Continuity	IATF 16949
Main manufacturing sites						
Agrate	✓	✓	✓	✓	✓	✓
Ang Mo Kio	✓	✓	✓	✓	✓	✓
Bouskoura	✓	✓	✓	✗	✓	✓
Calamba	✓	✓	✓	✗	✓	✓
Catania	✓	✓	✓	✓	✓	✓
Crolles	✓	✓	✓	✓	✓	✓
Kirkop	✓	✓	✓	✗	✓	✓
Muar	✓	✓	✓	✓ ⁽²⁾	✓	✓
Rousset	✓	✓	✓	✓	✓	✓
Shenzhen	✓	✓	✗	✓	✓	✓
Tours	✓	✓	✓	✓	✓	✓
Other sites						
Castelletto	✓	✓	✓	✗	✓	✓
Geneva	✗	✗	✗	✗	✓	✓
Greater Noida	✓	✗	✗	✗	✓	✓
Grenoble	✓	✓	✓	✗	✓	✓
Le Mans	✗	✗	✗	✓	✗	✓
Loyang	✓	✓	✗	✗	✓	✓
Marcianise	✓	✓	✗	✗	✗	✓
Napoli	✓	✗	✗	✗	✗	✓
Rennes ⁽¹⁾	✓	✓	✗	✗	✓	✗
Toa Payoh	✓	✓	✓	✓	✓	✓
Total	19	17	13	10	18	20

⁽¹⁾ Rennes Space & High-Reliability Products.

⁽²⁾ Audit conducted with positive conclusions in December 2019. Certificate issued in February 2020.

ST inclusion in the main sustainability indices in 2019

