Company presentation

October 2021
We are creators and makers of technology

• One of the world’s largest semiconductor companies
• 2020 revenues of $10.2 B
• 46,000 employees of which 8,100 in R&D
• Over 80 Sales & marketing offices serving over 100,000 customers across the globe
• 11 Manufacturing sites
• Signatory of the United Nations Global Compact (UNGC), Member of the Responsible Business Alliance (RBA)

As of December 31, 2020
Claude Dardanne
Microcontrollers & Digital ICs Group

Jean-Marc Chery
President & Chief Executive Officer

Marco Monti
Automotive & Discrete Group

Marco Cassis
Sales, Marketing, Communications & Strategy Development

Orio Bellezza
Technology, Manufacturing & Quality

Lorenzo Grandi
Finance, Infrastructure & Services CFO

Rajita D’Souza
Human Resources & Corporate Social Responsibility

Steve Rose
Legal Counsel

Eric Aussedat
Imaging Sub-Group

Stefano Cantù
Smart Power Solutions Macro-Division

Matteo Lo Presti
Analog Sub-Group

Michael Anfang
EMEA Region

Fabio Gualandris
Back-End Manufacturing & Technology

Giuseppe Notarnicola
Treasury

Paul Cihak
Americas Region

Joël Hartmann
Digital Front-End Manufacturing & Technology

Paul Cihak
Americas Region

Jerome Roux
Asia Pacific Region

Michael Hummel
Analog & Power FE Manufacturing & Technology

Nicolas Yackowlew
Product Quality & Reliability

Claudia Levo
Integrated Marketing & Communications

Alberto Della Chiesa
Supply Chain

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Supply Chain

* acting
Our vision

ST stands for

*life.augmented*

Everywhere microelectronics make a positive contribution to people’s lives,
ST is there
Our value proposition

For our **shareholders**

- Return value in line with our sustainable, profitable growth objective
- Sustainable and profitable growth

For our **customers**

- Provide differentiating enablers
- Independent, reliable & secure supply chain

For all other **stakeholders**

- Committed to sustainability
- Our values: Integrity – People – Excellence
At ST we create technology that starts with You

Our employees
Our customers
Our partners
Where you find us

Making **driving** safer, greener and more connected

Making **homes & cities** smarter, for better living, higher security, and to get more from available resources

Enabling the evolution of **industry** towards smarter, safer and more efficient factories and workplaces

Making everyday **things** smarter, connected and more aware of their surroundings
Trends and markets
Our strategy stems from key long-term enablers

**Smart Mobility**

ST provides innovative solutions to help our customers make driving **safer, greener and more connected** for everyone.

**Power & Energy**

ST technology and solutions enable customers to increase **energy efficiency** everywhere and support the use of renewable energy sources.

**Internet of Things & 5G**

ST provides **sensors, embedded processing solutions, connectivity, security and power management**, as well as **tools and ecosystems** to make development fast and easy for our customers.
ST provides innovative solutions to help our customers make driving safer, greener and more connected for everyone.

Increase safety for road users & driver comfort and convenience

Affordable, desirable electric vehicles

Cleaner, greener Internal Combustion Engines (ICE)

Road crashes carry a high human toll and cost > $500 Billion every year

Electric vehicles* from 9% in 2019 to >20% in 2025 of global car production

ICEs in > 90% of new vehicles produced 2020-2025

Sources: [www.asirt.org](http://www.asirt.org), Strategy Analytics
* Excluding Mild Hybrid EV
ST technology and solutions enable customers to increase energy efficiency everywhere & support the use of renewable energy sources

- Rising demand for and usage of electrical energy
- Decrease carbon emissions to reduce global warming impact
- Increase use of renewable energy

> 30% global electricity demand increase from 2020 to 2030

45% CO₂ emission reduction from 2010 to 2030 to limit warming to 1.5°C

Electrical energy from renewal sources from ~10% in 2020 to ~20% in 2030

Sources: IEA, IPCC, BP
ST provides sensors, embedded processing, connectivity, security and power management, as well tools and ecosystems

Cloud connected and data-enabled services

Digital security for all data

5G accelerating the connection of objects to the IoT

Two billion industrial IoT & utility connected devices by 2022

IoT security services market > $10 billion in 2021

> 90 million new 5G IoT connections in 2026

Source: ABI
Our strategy
We address four end markets

Automotive

Industrial

Personal electronics

Communications equipment, computers & peripherals
Our strategic objectives

**Automotive**
- Lead in car electrification
- Lead in car digitalization

**Industrial**
- Lead in embedded processing
- Accelerate growth in analog & sensors
- Expand in power & energy management
- Accelerate growth with industrial OEMs

**Personal electronics**
- Lead in selected high-volume smartphone applications with differentiated products or custom solutions
- Leverage broad portfolio to address high-volume applications

**Communications Equipment, Computers & Peripherals**
- Address selected high-volume applications with differentiated products or custom solutions
- Address selected applications in cellular and satellite communication infrastructure
- Leverage broad portfolio to address high-volume applications
Products and technologies
Differentiated technologies are our foundation

**MEMS**
for sensors & Micro-actuators

**FD-SOI CMOS**
FinFET through Foundry

**Analog & RF CMOS**

**eNVM CMOS**

**Smart Power: BCD**
(Bipolar - CMOS - Power DMOS)

**Discrete, Power MOSFET, IGBT**
**Silicon Carbide, Gallium Nitride**

**Vertical Intelligent Power**

**Optical sensing solutions**

**Packaging technologies**
Leadframe – Laminate – Sensor module – Wafer level
Our products and solutions enable customer innovation

- Dedicated Automotive ICs
- Analog, Industrial & Power Conversion ICs
- Discrete & Power Transistors
- MEMS & Optical sensing solutions
- GP MCU & MPU, Secure MCUs, EEPROM
- ASICs based on ST proprietary technologies
Analog, Industrial & Power Conversion ICs
Dedicated Automotive ICs
Discrete & Power Transistors
Memetics & Optical sensing solutions
GP, Connected MCU, MPU Secure MCU, EEPROM
ASICs based on ST proprietary technologies

<table>
<thead>
<tr>
<th>Smart Mobility</th>
<th>Power &amp; Energy</th>
<th>Internet of Things &amp; 5G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedicated Automotive ICs</td>
<td>Discrete &amp; Power Transistors</td>
<td>Analog, Industrial &amp; Power Conversion ICs</td>
</tr>
<tr>
<td>STPOWER</td>
<td>STSPIN</td>
<td>STM32</td>
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<tr>
<td>Stellar</td>
<td>VIPerPlus</td>
<td>Flight Sense</td>
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<tr>
<td>ADAS</td>
<td>SIC</td>
<td>RF-SOI</td>
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<tr>
<td>IGBT</td>
<td>STSECURE</td>
<td>FD-SOI</td>
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<td>ST25</td>
<td>BICMOS</td>
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</table>
# Dedicated automotive ICs

## Automotive MCUs
- Scalable single- and multi-core MCU solutions
- Targeting cost-sensitive to highly-advanced applications
- Comprehensive development ecosystem

## ADAS solutions
- CMOS image sensors
- Image signal processors
- Radar transceivers
- V2X communication solutions

## Infotainment and telematics
- Makes the driving experience more fun and comfortable
- Outstanding audio fidelity and positioning accuracy in every condition
- Secure smartphone mirroring
- Safe vehicle connectivity with wide set of peripherals

## Automotive Analog & Power
- Compliance with rigorous automotive requirements
- Design-ins at automotive suppliers and car makers
- Wide portfolio of analog, power and digital products
- VIPower* HSDs, LSDs & H-bridges and LED drivers
- Complete system kit solutions

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Discrete & power transistors

### Key power technologies & packages for:

- **Car electrification**
- **Power management**
- **Motor control**

### Diodes
- Silicon carbide (SiC) & high- and low-voltage silicon diodes
- Ultra-fast & bridge rectifiers
- Power Schottky diodes & field-effect rectifiers
- Thyristors (SCR) & Triacs
- ACS* AC switches

### Rectifiers
- Ultra-fast & bridge rectifiers

### Thyristors (SCR)
- Power Schottky diodes & field-effect rectifiers
- Thyristors (SCR) & Triacs
- ACS* AC switches

### AC switches
- ACS* AC switches
- ESD protection
- EOS & lightning surge protection
- Current limiters
- IPAD* Integrated EMI and ESD protection devices
- Integrated passive devices
- Smart antenna tuning

### Transient Voltage Suppressors (TVS)
- ESD protection
- EOS & lightning surge protection
- Current limiters
- IPAD* Integrated EMI and ESD protection devices
- Integrated passive devices
- Smart antenna tuning

### Integrated EMI filtering and protection ICs
- ESD protection
- EOS & lightning surge protection
- Current limiters
- IPAD* Integrated EMI and ESD protection devices
- Integrated passive devices
- Smart antenna tuning

### Other
- Gallium Nitride (GaN) on silicon power and RF transistors
- LDMOS & DMOS RF power transistors
- Silicon-Carbide MOSFETs
- High- and low-voltage silicon power MOSFETs (STripFET, Planar & MDmesh*)
- IGBTs
- Power bipolar transistors
- ACEPACK* power modules
- SLLIMM* intelligent power modules

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Analog, industrial & power conversion ICs

**Power management**
- AC/DC & DC/DC converters
- Analog & digital controllers
- Linear voltage regulators
- Voltage reference
- eFuses
- LED drivers & lighting ICs
- Intelligent Power Switches
- Battery management ICs
- Wireless power solutions
- Power-over-Ethernet ICs
- Photovoltaic ICs
- Rad-Hard products

**Motor control**
- Brushed DC motor drivers
- Brushless DC motor drivers
- Stepper motor drivers
- MOSFET & IGBT gate drivers
- Galvanic isolation ICs
- GaN drives

**Analog products & Specific ICs**
- Operational amplifiers
- Comparators
- Current sensing amplifiers
- Filtering & signal conditioning
- Interfaces & transceivers
- Audio ICs
- Switches
- Reset and Supervisors
- Rad-Hard products
- Medical ICs
- Smart Metering ICs

**Connectivity solutions**
- Bluetooth® Low Energy ICs
- Sub-1 GHz transceivers
- Sigfox-compatible devices
- LoRaWAN® technology
- Short-range RF transceivers
- Powerline communication ICs
- IO-Link
MEMS & optical sensing solutions

**Motion sensors**
- Accelerometers
- e-compasses
- Gyroscopes
- iNEMO* inertial modules
- T-Plus: Motion MEMS with embedded temperature sensor

**Environmental sensors**
- Pressure sensors
- Temperature sensors
- Humidity sensors
- MEMS microphones

**Micro actuators**
- Actuators for printheads
- Micro mirrors & drivers
- Piezoelectric actuators
- Electrostatic actuators
- Electromagnetic actuators
- Thermal actuators

**Optical sensing solutions**
- FlightSense* ToF proximity & ranging modules
- 3D FlightSense* ToF sensors
- Global shutter CMOS image sensors
- Ambient light sensors
- Custom optical solutions

* registered and/or unregistered trademarks of STMicroelectronics International NV or its affiliates in the EU and/or elsewhere
## General purpose MCU & MPU, secure solutions & NFC

### GP 32-bit MCUs & MPUs
- STM32® 32-bit general-purpose microcontrollers (MCUs) and microprocessors (MPUs)
- 1000+ compatible devices
- Arm® Cortex® Cores
- Maximum integration
- Extensive ecosystem

### GP 8-bit MCUs
- 8-bit general purpose microcontrollers (MCUs)
- Dedicated series for mainstream, ultra-low-power and automotive
- Rich ecosystem

### Secure Solutions
- Secure MCUs
- eSIM, eSE, NFC for mobile
- eSIM, eSE and TPM for industrial, IoT and automotive
- Secure payment solutions
- Authentication and Brand protection solutions

### NFC & Memory
- NFC / RFID Tags
- Dynamic NFC Tags
- NFC / RFID Readers
- UHF Readers
- High-performance & high-endurance EEPROM

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ST offers strategic independence and product differentiation to ASIC customers through three key enablers:

- Advanced manufacturing technology platforms
- Worldwide design resources and advanced IP
- ST’s Independent Device Manufacturer supply chain

### Digital ASICs
- System-on-Chip designs in CMOS and FD-SOI technologies with eNVM option, as well as FinFET (through foundry)

### Analog & RF ASICs
- Unique expertise in RF and analog design using advanced technologies, such as RFSOI, BiCMOS and millimeter wave

### MEMS and imaging ASICs
- Proprietary micromachining process, deep expertise in MEMS integration
- Custom imaging solutions and premium foundry services

### Power ASICs
- A broad portfolio of differentiated technologies including BCD, ViPower*, SiC, GaN and power MOSFET

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Manufacturing and R&D
We offer quality, flexibility and supply security
We are drivers of your innovation

Advanced R&D centers around the world for close collaboration with operations and customers

- ~18,000 patents & 557 new filings in 2020
- ~15% of revenues invested in R&D
- ~8,100 people working in R&D and product design
<table>
<thead>
<tr>
<th>Our Quality Vision</th>
<th>Our Quality Mission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elevate ST to the highest level of quality as an asset for our customers</td>
<td>Ensure ST products meet the highest quality and reliability requirements of customers in the markets we address</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How do we achieve this</th>
<th>Sustainable culture of quality excellence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Customer focus</td>
</tr>
<tr>
<td></td>
<td>Result-driven improvement programs</td>
</tr>
</tbody>
</table>
Customers & sales
We are partners with our customers worldwide

Over 80 sales offices in 35 countries
We serve more than 100,000 customers

Top 10 Customers* 2020
- Apple
- Bosch
- Continental
- HP
- Huawei
- Intel-Mobileye
- Nintendo
- Samsung
- Seagate
- Tesla

Unified worldwide account management tailored to each account to provide global coverage and service

Standard process, reporting & follow-up in Sales & Marketing worldwide
Differentiated approach by type of customer

*In alphabetical order
Q3 2021 Revenues

% by product group

- Microcontrollers & Digital ICs Group (MDG): 29%
- Automotive & Discrete Group (ADG): 31%
- Analog, MEMS & Sensors Group (AMS): 40%
- Others: 0.1%

% by shipment location

- Americas: 71%
- Asia Pacific: 18%
- EMEA: 11%

% by region of origin

- Americas: 45%
- Asia Pacific: 32%
- EMEA: 23%

% by customer type

- Distribution: 32%
- Top 10 OEMs: 49%
- Other OEMs: 19%
2020 revenues by product group and customer type

% by product group

- Microcontrollers & Digital ICs Group (MDG): 30%
- Analog, MEMS & Sensors Group (AMS): 38%
- Automotive & Discrete Group (ADG): 32%
- Others: 0.1%

% by customer type

- Top 10 OEMs: 49%
- Other OEMs: 24%
- Distribution: 27%
2020 revenues
shipment location and region of origin

**Shipment location**
- Asia Pacific: 69%
- EMEA: 19%
- Americas: 12%

**Region of origin**
- Asia Pacific: 42%
- Americas: 34%
- EMEA: 24%
Our people
Our technology starts with our people

<table>
<thead>
<tr>
<th>Area</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>~10,800</td>
</tr>
<tr>
<td>France</td>
<td>~10,800</td>
</tr>
<tr>
<td>Mediterranean</td>
<td>~4,400</td>
</tr>
<tr>
<td>Americas</td>
<td>~750</td>
</tr>
<tr>
<td>Asia</td>
<td>~18,300</td>
</tr>
<tr>
<td>Others</td>
<td>~1,000</td>
</tr>
</tbody>
</table>

As of December 31, 2020

<table>
<thead>
<tr>
<th>Function</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>~65%</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>~18%</td>
</tr>
<tr>
<td>Marketing &amp; Sales, Divisional Functions, Administration &amp; General Services</td>
<td>~17%</td>
</tr>
</tbody>
</table>
Sustainability
A long-standing public commitment to sustainability
Our sustainability strategy

LIVING OUR VALUES

PUTTING PEOPLE FIRST

AUGMENTING EVERYBODY’S LIFE

PROTECTING THE ENVIRONMENT

ACTING TOGETHER
Our sustainability strategy

Based on 2020 materiality exercise
Our approach to sustainability

**Sustainable Technology**
- We create technology for a sustainable world
  - Designing responsible products and technologies
  - Managing the lifecycle of our products in sustainable way
  - Responsible minerals sourcing
  - Eco-design devices - power-efficient & low-carbon

**Sustainable Way**
- We prioritize people
  - Ensuring people health, safety, & well-being
  - Role model in labor & human rights
  - Fostering diversity & inclusion
  - Offering great employee experience

**Sustainable Company**
- We protect the planet
  - Committing to carbon neutrality
  - Leading environmental management system
  - Reducing water usage & addressing local scarcity risks
  - Reducing waste & promoting a circular economy

- We generate long-term value for all stakeholders
  - Embedding risk management
  - Monitoring and developing the extended supply chain
  - Promoting STEM* in all our ecosystems
  - Monitoring & transparently reporting our progress

*Science, Technology, Engineering, Mathematics
Main steps in our value chain

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

R&D concept and design
- 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.

Front-end manufacturing
- Manufacturing chips requires around 400 separate stages, starting with a plain wafer, and resulting in several hundreds to thousands of dies.

Electrical wafer sorting
- Dies on the wafer are electrically tested. This step is known as wafer sort or probe.

Back-end manufacturing
- The dies are cut from the silicon wafer before being assembled in a package. The chips are then tested prior to delivery to the customer.

Product use and end of life
- We offer a large portfolio of products suitable for the wide range of applications addressed by our customers.

Management of our impacts

Suppliers
- We require our suppliers to implement the Responsible Business Alliance (RBA) standards and encourage ISO and OHSAS certifications to address ethics, social, environmental, health and safety risks. We participate in the Responsible Minerals Initiative.

Products
- Through our Sustainable Technology program we design products systematically taking into consideration the environmental impact of the device during its whole life cycle, including raw materials, transportation, manufacturing, usage and end of life.

People
- We ensure the health and safety of our employees through advanced management systems and certification. We implement our Code of Conduct and the RBA standards in all our sites to mitigate our ethics and labor and human rights risks, and carry out regular assessments and audits in all our production sites.

Environment
- We deploy programs to reduce our direct and indirect greenhouse gas emissions from all our operations, including Perfluorinated Compounds (PFCs), which have a very long atmospheric lifetime and high global warming potential. We minimize the environmental, health and safety risks related to the chemicals and materials used in the manufacturing process, by basing the selection, handling, and substitution on the precautionary principles. We are continually reducing our water footprint through reuse and recycling and all our wastewater is treated before being discharged into the environment. We reduce, reuse, recycle or recover as much of our waste as possible, rather than sending it to incineration or landfill.

Resources

Human
- ~46,000 employees
- 103 nationalities
- 34% women, 66% men
- Average age: 40

Financial
- US$14 billion total assets
- US$1.3 billion capital investments
- US$1,099 million net cash
- ~8,100 employees in R&D
- US$1.6 billion R&D investments
- 143 R&D partnerships

Intellectual
- 11 main manufacturing sites in 7 different countries
- ~65% of employees in manufacturing
- ~6,000 suppliers

Manufactured
- 2,626 GWh of energy consumed
- 40% of renewable energy
- ~25 million m³ of water withdrawn
- ~5,900 chemicals used

Natural
- 78% decrease in PFC emissions since 1994 (per unit of production)
- 86% of waste reused, recovered or recycled
- 41% of water recycled or reused

Social and relationship
- >163,000 beneficiaries in local communities
- 340 volunteering initiatives from 35 sites worldwide
- >770,000 people trained on computer basics by ST Foundation since 2003

Value created

Human
- Engaged and skilled people in an inclusive and safe workplace
  - average of 44 hours training per employee
  - 81% of employees recommend ST as a great place to work
  - 0.14 recordable case rate (injuries)

Financial
- Sustainable financial performance
  - US$10.22 billion net revenues
  - US$3.07 billion salaries and benefits
  - US$1,099 million capital investments
  - US$174 million taxes paid
  - US$168 million cash dividend

Intellectual
- Innovative products and solutions
  - ~18,000 active patents
  - 63% of new products classified Sustainable Technology
  - 15% of revenues generated by new product lines

Manufactured
- Responsible and effective business operations
  - >100,000 customers served
  - ISO 9001, 14001, 22301, 50001/ISOHSAS 18001 and IATF certifications
  - 100% of manufacturing sites covered by RBA audits
  - 96% of new suppliers screened on social responsibility criteria

Natural
- Mitigation of the impact of our activities
  - 78% decrease in PFC emissions since 1994 (per unit of production)
  - 86% of waste reused, recovered or recycled
  - 41% of water recycled or reused

Social and relationship
- Knowledge and values shared with all
  - >163,000 beneficiaries in local communities
  - 340 volunteering initiatives from 35 sites worldwide
  - >770,000 people trained on computer basics by ST Foundation since 2003

Unless otherwise stated, all data refer to 2020

Our business model
Our Sustainable Technology program aims to develop responsible products which:
• improve our social and environmental footprint at every stage of the product life
• have the greatest positive impact on the planet and people in the end-application
Commitment to Carbon Neutrality

ST will be Carbon Neutral by 2027

Milestones

- Compliance with the 1.5°C scenario (Paris COP21) by 2025
- Carbon neutral by 2027
- Sourcing 100% renewable energy by 2027
- Collaborative programs and partnerships for carbon neutrality throughout our ecosystems
Sustainability reporting
24th edition

Transparency – Reliability – Comparability

• Economic, environmental and social performance
• Our long-term sustainability ambitions and goals
• Program progress
• Focus on site initiatives
• Stakeholder inclusiveness
• Aligned with international reporting standards and disclosures:
  Global Reporting Initiative (GRI)
  Sustainability Accounting Standards Board (SASB)
  Task Force on Climate-related Financial Disclosures (TCFD)
• Content and data verified by a 3rd party

Read ST’s 2021 sustainability report: sustainabilityreports.st.com/sr21/
Our technology starts with You

Find out more at www.st.com