We are creators and makers of technology

One of the world’s largest semiconductor companies

46,000 employees of which 8,100 in R&D

$10.2 B revenues in 2020

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
Global presence

- Research & Development
- Main Sales & Marketing
- Front-End
- Back-End
ST stands for

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

Our vision
Our value proposition

For our **shareholders**
- Return value in line with our objective
- Sustainable and profitable growth

For our **customers**
- Provide differentiating enablers
- Independent, reliable & secure supply chain

For all **stakeholders**
- Committed to sustainability
- Our values: Integrity – People – Excellence
Our technology starts with you

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

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

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

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

**Smart Mobility**
Helping car manufacturers make driving safer, greener and more connected for everyone

**Power & Energy**
Enabling industries to increase energy efficiency everywhere and the use of renewable energy

**Internet of Things & 5G**
Supporting the proliferation of smart, connected IoT devices with products, solutions & ecosystems
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 $500B+ every year.

Electric vehicles from 9% in 2019 to over 20% in 2025.

ICEs in over 90% of new vehicles produced 2020-2025.

Sources: 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

Over 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** over **$10 billion** in 2021
- **Over 90 million** new 5G IoT connections in 2026

Sources: 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**
### ST product portfolio enabling strategic trends

<table>
<thead>
<tr>
<th>Dedicated Automotive ICs</th>
<th>Discrete &amp; Power Transistors</th>
<th>Analog, Industrial &amp; Power Conversion ICs</th>
<th>GP, Connected MCU, MPU Secure MCU, EEPROM</th>
<th>MEMS &amp; Optical sensing solutions</th>
<th>ASICs based on ST proprietary technologies</th>
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</thead>
<tbody>
<tr>
<td>SPC5</td>
<td>STPOWER</td>
<td>STSPIN</td>
<td>STM32</td>
<td>iNEMO</td>
<td>RF-SOI</td>
</tr>
<tr>
<td>Stellar</td>
<td>SIC</td>
<td>VIPerPlus</td>
<td>STSECURE</td>
<td>FlightSense</td>
<td>FD-SOI</td>
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<tr>
<td>ADAS</td>
<td>IGBT</td>
<td></td>
<td>ST25</td>
<td></td>
<td>BICMOS</td>
</tr>
</tbody>
</table>

- **Smart Mobility**
- **Power & Energy**
- **Internet of Things & 5G**
### 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 & 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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* registered and/or unregistered trademarks of STMicroelectronics International NV or its affiliates in the EU and/or elsewhere
### Discrete & power transistors

#### Diodes, rectifiers, thyristors (SCR), AC switches
- 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

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

#### Key power technologies & packages for:
**Car electrification, power management, motor control**
- 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
- LED drivers & lighting ICs
- Intelligent Power Switches
- Battery management ICs
- Voltage reference
- eFuses
- Wireless power ICs
- PoE 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
- Reset and Supervisors
- Audio ICs
- Switches
- 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

- 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

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## General purpose MCU & MPU, secure solutions & NFC

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

### General purpose 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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ASICs based on ST proprietary technologies

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

<table>
<thead>
<tr>
<th>Digital ASICs</th>
<th>Analog &amp; RF ASICs</th>
</tr>
</thead>
<tbody>
<tr>
<td>System-on-Chip designs in CMOS and FD-SOI technologies with eNVM option, as well as FinFET (through foundry)</td>
<td>Unique expertise in RF and analog design using advanced technologies, such as RFSOI, BiCMOS and millimeter wave</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MEMS and imaging ASICs</th>
<th>Power ASICs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proprietary micromachining process, deep expertise in MEMS integration</td>
<td>A broad portfolio of differentiated technologies including BCD, VIPower*, SiC, GaN and power MOSFET</td>
</tr>
<tr>
<td>Custom imaging solutions and premium foundry services</td>
<td></td>
</tr>
</tbody>
</table>

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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, customers, and partners

~8,100 people working in R&D and product design

~15% of revenues invested in R&D

143 active R&D partnerships

~18,000 patents
557 new filings in 2020

Open innovation with startups in 15 Proof of Concept centers
Our commitment to quality

Our quality vision

Elevate ST to the highest level of quality as an asset for our customers

How do we achieve this?

- Sustainable culture of quality excellence
- Customer focus
- Result-driven improvement programs

Our quality mission

Ensure ST products meet the highest quality and reliability requirements of customers in the markets we address.
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%
- EMEA: 18%
- Asia Pacific: 11%

% by region of origin

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

% 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%
- Automotive & Discrete Group (ADG) - 32%
- Analog, MEMS & Sensors Group (AMS) - 38%
- 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**
- Americas: 69%
- EMEA: 19%
- Asia Pacific: 12%

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

Manufacturing ~ 65%
Research & Development ~ 18%
Marketing & Sales, Divisional Functions, Administration & General services ~ 17%

As of December 31, 2020

Italy ~ 10,800
France ~ 10,800
Mediterranean ~ 4,400
Americas ~ 750
Asia ~ 18,300
Others ~ 1,000
Sustainability
A long-standing public commitment to sustainability

Environmental policy

1st Environmental Decalogue

OHSAS 18001 certification

ST Code of Conduct Principles of Sustainable Excellence

Health Plan

5th Environment, Health & Safety Decalogue

ISO 50001 energy management

20th Sustainability Report

Commitment to be Carbon Neutral by 2027

ST’s creation

Business conduct & ethics policy

1st Environmental report ISO 14001, EMAS

ST Code of Conduct Principles of Sustainable Excellence

Health Plan

20th Sustainability Report

Commitment to be Carbon Neutral by 2027

1st Environmental report ISO 14001, EMAS

ST Code of Conduct Principles of Sustainable Excellence

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20th Sustainability Report

Commitment to be Carbon Neutral by 2027
Our sustainability strategy

Putting people first

Augmenting everybody’s life

Protecting the environment

Acting together

Living our values
Our sustainability strategy

LIVING OUR VALUES
Governance, Ethics & Compliance, Risk Management

PUTTING PEOPLE FIRST
- Health & Safety
- Labor & Human Rights
- Talent Attraction & Engagement
- Diversity & Inclusion

AUGMENTING EVERYBODY’S LIFE
- Sustainable Financial Performance
- Innovation
- Sustainable Technology
- Customer Satisfaction

PROTECTING THE ENVIRONMENT
- Energy & Climate Change
- Water
- Waste
- Chemicals

ACTING TOGETHER
- Responsible Supply Chain
- Community & Education

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

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

Sustainable Company

We generate long-term value for all stakeholders
• Embedding risk management
• Monitoring and developing the extended supply chain
• Promoting STEM in all our eco-systems
• Monitoring & transparently reporting our progress
Main steps in our value chain

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

2. 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.

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

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

5. 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.

6. 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.

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$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, S001 and IATF certifications
  - 100% of manufacturing sites covered by RBA audits
  - 98% 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)
  - 88% 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
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
We will be carbon neutral by our 40th anniversary

Milestones

• Compliance with the 1.5°C scenario by 2025 – recognized by SBTi
• Carbon neutral by 2027
• Sourcing 100% renewable energy by 2027
• Collaborative programs and partnerships for carbon neutrality throughout our ecosystems
2021 Sustainability report
2020 performance

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