Company presentation

July 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
ST stands for

life.augmented

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

Enabling the evolution of **industry** towards smarter, safer and more efficient factories and 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
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
Internet of things & 5G

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
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

Dedicated Automotive ICs
- SPC5
- Stellar
- ADAS

Discrete & Power Transistors
- STPOWER
- SIC
- IGBT

Analog, Industrial & Power Conversion ICs
- STSPIN
- VIPerPlus

GP, Connected MCU, MPU Secure MCU, EEPROM
- STM32
- STSECURE

MEMS & Optical sensing solutions
- iNEMO
- Flight Sense

ASICs based on ST proprietary technologies
- RF-SOI
- FD-SOI
- BICMOS

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 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

* registered and/or unregistered trademarks of STMicroelectronics International NV or its affiliates in the EU and/or elsewhere
Discrete & power transistors

**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**
- 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

**Thyristors (SCR)**

**AC switches**

**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**
- Key power technologies & packages for:
  - Car electrification
  - Power management
  - Motor control

* registered and/or unregistered trademarks of STMicroelectronics International NV or its affiliates in the EU and/or elsewhere
# 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

## 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

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

## 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

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

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

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>System-on-Chip designs in CMOS and FD-SOI technologies with eNVM option, as well as FinFET (through foundry)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analog &amp; RF ASICS</td>
<td>Unique expertise in RF and analog design using advanced technologies, such as RFSoI, BiCMOS and millimeter wave</td>
</tr>
<tr>
<td>MEMS and imaging ASICS</td>
<td>Proprietary micromachining process, deep expertise in MEMS integration Custom imaging solutions and premium foundry services</td>
</tr>
<tr>
<td>Power ASICS</td>
<td>A broad portfolio of differentiated technologies including BCD, VIPower*, SiC, GaN and power MOSFET</td>
</tr>
</tbody>
</table>

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Manufacturing and R&D
We offer quality, flexibility and supply security

France (Crolles, Rousset, Tours)  Italy (Agrate, Catania)

Morocco (Bouskoura)  Malta (Kirkop)

China (Shenzhen)  Philippines (Calamba)

Malaysia (Muar)  Singapore
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
Quality as a key business enabler

Our Quality Vision

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

Our Quality Mission

Ensure ST products meet the highest quality and reliability requirements of customers in the markets we address

How do we achieve this

Sustainable culture of quality excellence

Customer focus

Result-driven improvement programs
We are partners with our customers worldwide

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

Top 10

Globally Managed Accounts

Distribution & Mass Market

Top 10 Customers* 2020

Apple  Intel-Mobileye
Bosch  Nintendo
Continental  Samsung
HP  Seagate
Huawei  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
Q2 2021 Revenues

% by product group
- Microcontrollers & Digital ICs Group (MDG): 30%
- Automotive & Discrete Group (ADG): 36%
- Analog, MEMS & Sensors Group (AMS): 34%
- Others: 0.2%

% by shipment location
- Americas: 66%
- EMEA: 21%
- Asia Pacific: 13%

% by region of origin
- Americas: 37%
- EMEA: 27%
- Asia Pacific: 36%

% by customer type
- Top 10 OEMs: 42%
- Distribution: 36%
- Other OEMs: 22%
- Others: 0.2%
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 27%
- Distribution 24%
2020 revenues
shipment location and region of origin

<table>
<thead>
<tr>
<th>Shipment location</th>
<th>Region of origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>Americas</td>
</tr>
<tr>
<td>69%</td>
<td>42%</td>
</tr>
<tr>
<td>12%</td>
<td>34%</td>
</tr>
<tr>
<td>EMEA</td>
<td>EMEA</td>
</tr>
<tr>
<td>19%</td>
<td>24%</td>
</tr>
</tbody>
</table>
Our people
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
Others ~1,000
Asia ~18,300
Sustainability
Our sustainability strategy

Based on 2020 materiality exercise
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
Main steps in our value chain

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

Intelectual
- ~8,100 employees in R&D
- US$1.6 billion R&D investments
- 143 R&D partnerships

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

Natural
- 2,626 GWh of energy consumed
- 40% of renewable energy
- ~25 million m³ of water withdrawn
- ~3,900 chemicals used

Social and relationship
- ST values and Code of Conduct
- US$2.1 million cash donated by ST to local communities
- >114,000 hours donated to local communities

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.

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 the etching of 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.

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$174 million taxes paid
- US$168 million cash dividend

Intelectual
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/OHSAS 18001 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)
- 66% 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 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

![Graph showing Carbon Emissions and Renewable Energy](image)
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