We are creators and makers of technology

One of the world’s largest semiconductor companies

Over 50,000 employees of which 9,000+ in R&D

$16.1 billion revenues in 2022

Over 80 sales & marketing offices serving over 200,000 customers across the globe

14 main manufacturing sites

Signatory of the United Nations Global Compact (UNGC)
Member of the Responsible Business Alliance (RBA)

As of December 31, 2022
Our vision

ST stands for

**life.augmented**

Everywhere microelectronics makes a positive contribution to people’s lives, ST is there.
Our value proposition for all stakeholders

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
Trends and markets
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 & Connectivity
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 sales** from ~10 million in 2021 to ~30 million in 2025.
- **ICEs in over 80% of new vehicles produced 2021-2025.**

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**

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
- Cellular accelerating the connection of objects to the IoT

More than **20 Billion** IoT connected devices per year by 2025

IoT security services market over **$12 billion** by 2025

**Four billion** cellular IoT connections by 2025

Source: ABI, Ericsson, GSMA
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**
- Lead in **Power & Energy Management**
- Lead in **Sensors**
- Accelerate in **Analog**

**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
- Leverage **broad portfolio** to address high-volume applications
Products and technologies
Differentiated technologies are our foundation

<table>
<thead>
<tr>
<th>MEMS</th>
<th>Smart Power: BCD (Bipolar - CMOS - Power DMOS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>for sensors &amp; micro-actuators</td>
<td></td>
</tr>
<tr>
<td>FD-SOI CMOS</td>
<td>Discrete, Power MOSFET, IGBT</td>
</tr>
<tr>
<td>FinFET through Foundry</td>
<td>Silicon Carbide, Gallium Nitride</td>
</tr>
<tr>
<td>Analog &amp; RF CMOS</td>
<td>Vertical Intelligent Power</td>
</tr>
<tr>
<td>eNVM CMOS</td>
<td>Optical sensing solutions</td>
</tr>
</tbody>
</table>

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

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

- **Dedicated Automotive ICs**
  - SPC5
  - Stellar
  - ADAS

- **Discrete & Power Transistors**
  - STPOWER
  - STSPIN
  - VIPerPlus
  - IGBT

- **Analog, Industrial & Power Conversion ICs**
  - ST32
  - STSECURE

- **GP, Connected MCU, MPU Secure MCU, EEPROM**
  - iNEMO
  - FlightSense

- **MEMS & Optical sensing solutions**
  - RF-SOI
  - FD-SOI
  - Bi-CMOS

- **ASICs based on ST proprietary technologies**

---

**Smart Mobility**

**Power & Energy**

**Internet of Things & Connectivity**

---

*life augmented*
Dedicated automotive ICs

Automotive MCUs
- Scalable single- and multicore 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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## 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

### 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

### 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

<table>
<thead>
<tr>
<th>Motion sensors</th>
<th>Environmental sensors</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Accelerometers</td>
<td>• Pressure sensors</td>
</tr>
<tr>
<td>• e-compasses</td>
<td>• Temperature sensors</td>
</tr>
<tr>
<td>• Gyroscopes</td>
<td>• Humidity sensors</td>
</tr>
<tr>
<td>• iNEMO* inertial modules</td>
<td>• MEMS microphones</td>
</tr>
<tr>
<td>• T-Plus: Motion MEMS with embedded temperature sensor</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Micro actuators</th>
<th>Optical sensing solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Actuators for printheads</td>
<td>• FlightSense* ToF proximity &amp; ranging modules</td>
</tr>
<tr>
<td>• Micro mirrors &amp; drivers</td>
<td>• 3D FlightSense* ToF sensors</td>
</tr>
<tr>
<td>• Piezoelectric actuators</td>
<td>• Global shutter CMOS image sensors</td>
</tr>
<tr>
<td>• Electrostatic actuators</td>
<td>• Ambient light sensors</td>
</tr>
<tr>
<td>• Electromagnetic actuators</td>
<td>• Custom optical solutions</td>
</tr>
<tr>
<td>• Thermal actuators</td>
<td></td>
</tr>
</tbody>
</table>

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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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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 GHz wireless 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
Advanced R&D centers around the world for close collaboration with operations, customers, and partners

- 9,000+ people working in R&D and product design
- ~12% of revenues invested in R&D in 2022
- ~200 active R&D partnerships
- ~19,500 active and pending patents
- ~600 new filings in 2022

Open innovation with startups in 15 Proof of Concept centers
70 startups engaged in our programs in 2022
Recognized as a top global innovator

STMicroelectronics recognized as Top 100 Global Innovator 2022

STMicroelectronics recognized as one of the Top 100 Global Innovators 2023 by Clarivate
Customers & sales
We are partners with our customers worldwide

Over 80 sales offices in 35 countries
We serve more than 200,000 customers

Top 10

Globally Managed Accounts

Distribution & Mass Market

Top 10 Customers* 2022

Apple
Bosch
Continental
HP
Huawei

Mobileye
Samsung
SpaceX
Tesla
Vitesco

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 2023 Revenues

% by product group
- Microcontrollers & Digital ICs Group (MDG) 33%
- Automotive & Discrete Group (ADG) 45%
- Analog, MEMS & Sensors Group (AMS) 22%
- Others 0.1%

% by shipment location
- Americas 55%
- EMEA 29%
- Asia Pacific 16%

% by region of origin
- Americas 34%
- Asia Pacific 34%
- EMEA 32%

% by customer type
- Distribution 36%
- Top 10 OEMs 39%
- Other OEMs 25%
FY 2022 Revenues

% by product group

- Automotive & Discrete Group (ADG): 37%
- Microcontrollers & Digital ICs Group (MDG): 32%
- Analog, MEMS & Sensors Group (AMS): 31%
- Others: 0.1%

% by shipment location

- Americas: 63%
- EMEA: 23%
- Asia Pacific: 14%

% by region of origin

- Americas: 41%
- Asia Pacific: 30%
- EMEA: 29%

% by customer type

- Top 10 OEMs: 43%
- Other OEMs: 24%
- Distribution: 33%
Our commitment to quality
Quality is embedded in our culture

Our quality culture is driven by a commitment to continuously improve, a prevention mindset & our STRIVE for Excellence values

- Strength
- Teamwork
- Resilience
- Innovation
- Value
- Expertise

Find out more at www.st.com/quality
Quality is a key business enabler for ST

Our quality vision

Elevate ST quality to the highest levels, positioning it as a valuable asset for our customers

Our quality mission

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

Our quality strategy

- Deploy a mindset and culture of quality
- Focus on quality performance at our customers
- Innovate for advanced quality and reliability
- Drive structured result-driven improvement programs
An annual status of the ST Quality organization, infrastructure and initiatives that demonstrate our commitment to continually strive for excellence.
Our people
Our technology starts with our people

As of December 31, 2022

<table>
<thead>
<tr>
<th>Region</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>~12,000</td>
</tr>
<tr>
<td>Mediterranean</td>
<td>~5,600</td>
</tr>
<tr>
<td>Americas</td>
<td>~800</td>
</tr>
<tr>
<td>France</td>
<td>~12,000</td>
</tr>
<tr>
<td>Others</td>
<td>~1,100</td>
</tr>
<tr>
<td>Asia</td>
<td>~20,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>~59,100</td>
</tr>
</tbody>
</table>

- Manufacturing: ~65.5%
- Research & Development: ~17.5%
- Marketing & Sales, Divisional Functions, Administration & General services: ~17%
Sustainability has been engraved in our business model and culture for 30 years

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>Creation of ST. Business conduct &amp; ethics policy</td>
</tr>
<tr>
<td>1993</td>
<td>First environmental policy</td>
</tr>
<tr>
<td>1995</td>
<td>First environmental decalogue</td>
</tr>
<tr>
<td>1997</td>
<td>First environmental report, ISO 14001, EMAS</td>
</tr>
<tr>
<td>2000</td>
<td>Signatory of the UNGC 10 principles</td>
</tr>
<tr>
<td>2001</td>
<td>Creation of ST Foundation</td>
</tr>
<tr>
<td>2002</td>
<td>Establishment of a reforestation program</td>
</tr>
<tr>
<td>2007</td>
<td>Conflict Minerals program</td>
</tr>
<tr>
<td>2011</td>
<td>Sustainable Technology program</td>
</tr>
<tr>
<td>2012</td>
<td>ISO 50001 energy management</td>
</tr>
<tr>
<td>2014</td>
<td>5th Environment, Health &amp; Safety Decalogue</td>
</tr>
<tr>
<td>2016</td>
<td>ISO 22301 Business Continuity 1st certification</td>
</tr>
<tr>
<td>2019</td>
<td>2025 CO₂ goal achieved</td>
</tr>
<tr>
<td>2020</td>
<td>Commitment to be Carbon Neutral by 2027*</td>
</tr>
<tr>
<td>2021</td>
<td>New Sustainability Charter published</td>
</tr>
<tr>
<td>2023</td>
<td>26th annual Sustainability report</td>
</tr>
</tbody>
</table>

*on scope 1 & 2 and partially scope 3
Our approach to sustainability

Sustainable technology
- Designing responsible products and technologies
- Managing the lifecycle of our products in sustainable way
- Responsible minerals sourcing
- Eco-design devices - power-efficient & low-carbon

We create technology for a sustainable world

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

We prioritize people

Sustainable company
- Committing to carbon neutrality*
- Leading environmental management system
- Reducing water usage & addressing local scarcity risks
- Reducing waste & promoting a circular economy
- Embedding risk management
- Monitoring and developing the extended supply chain
- Promoting STEM in all our eco-systems
- Monitoring & transparently reporting our progress

We protect the planet

We generate long-term value for all stakeholders

*on scope 1 & 2 and partially scope 3

We create technology for a sustainable world

We prioritize people

We protect the planet

We generate long-term value for all stakeholders
Our business model
Management of our impact

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.

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.

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.

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.
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

Social & Environmental programs (RBA code of conduct, Water, Waste, Energy & Climate Change, Chemicals)

Product compliance (Material Declaration & ECOPACK*)

Eco-design devices (power-efficient & low-carbon)

Raw materials

Product development

Manufacturing

End of life

Usage

Responsible applications (planet-friendly & human-welfare)

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Milestones

- Compliance with the 1.5°C scenario by 2025 – recognized by SBTi
- Carbon neutral on scope 1 & 2 and partially scope 3 by 2027
- Sourcing 100% renewable energy by 2027
- Collaborative programs and partnerships for carbon neutrality throughout our ecosystems

In 2022

- 62% renewable energy
- 45 projects saving an additional 24GWh of energy
Sustainability reporting
26th 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)
  EU taxonomy
• Content and data verified by a 3rd party

Read ST’s 2023 sustainability report: sustainabilityreports.st.com
Our technology starts with You

Find out more at www.st.com