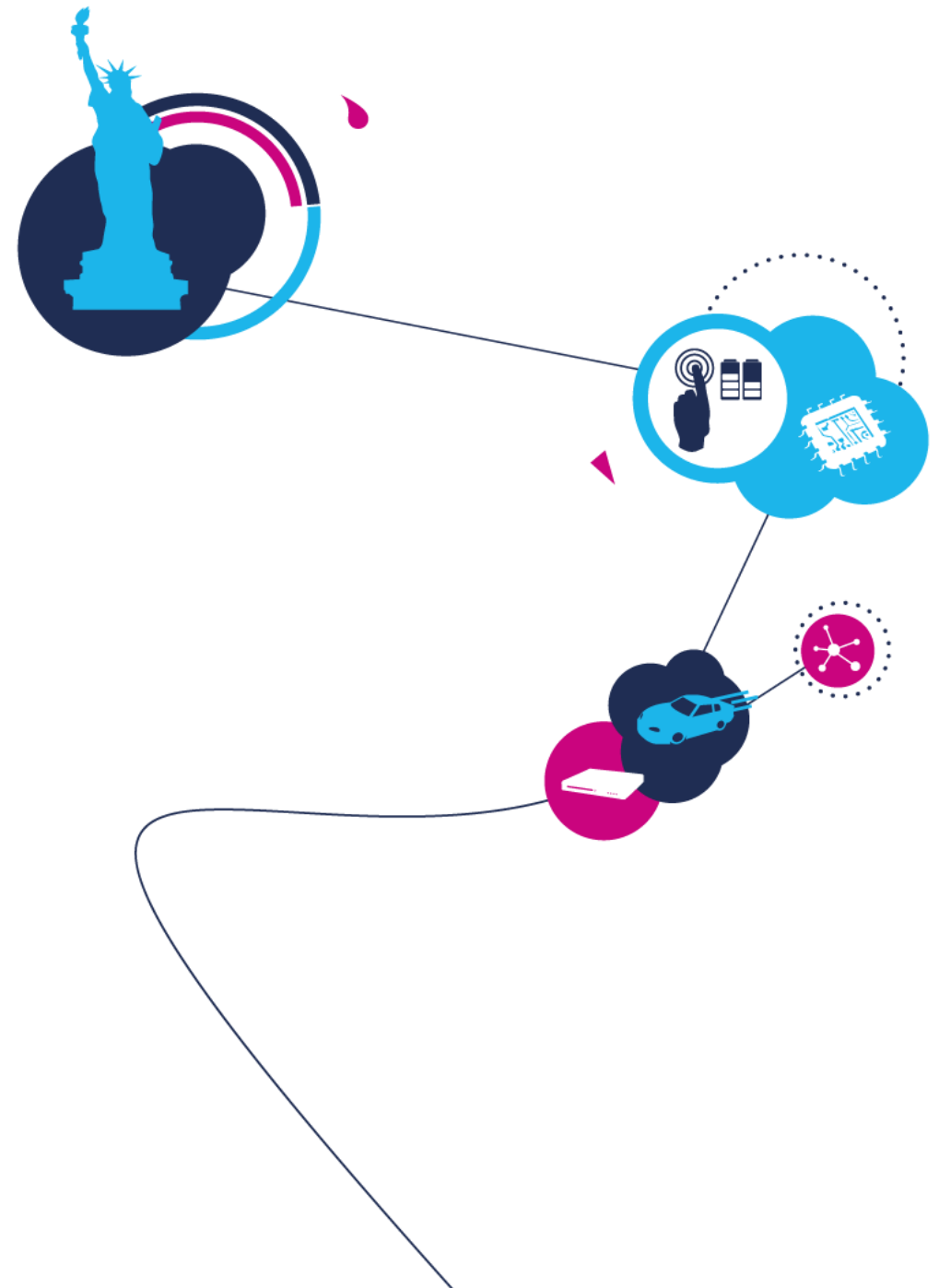


Market Trends and ST Growth Drivers

Georges Penalver

Corporate Strategy Officer



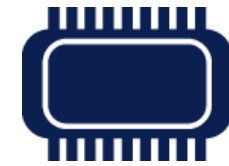
Key Industry Trends



Smart energy usage



Humanization of Technology



Embedded intelligence



Underlying trends and challenges

- Increasing demand for energy
- Increasing use of renewable energy sources
- Evolution in environmental regulation

What ST brings

- Solutions to reduce fuel consumption and emissions in cars
- Efficient power conversion, smart metering and battery charging for the Smart Grid
- Digital power management for data center and internet infrastructure
- Motor control for improved factory automation, power management and industrial internet
- Solutions for Lighting systems (LED, smart lighting, etc)
- Energy-friendly solutions for goods and appliances



Humanization of Technology

Underlying trends and challenges

- Explosion of mobile internet and “Big data”
- Wellness aspiration - Quantified self
- Aging population and associated living, and health care challenges
- Professional IoT to drive efficiency in vertical sectors

What ST brings

- Rich portfolio of motion, optical, environmental and acoustic sensors
- Ultra low power connectivity to connect everything to the network
- Range of ultra low power microcontrollers for every application
- Advanced touchscreen solutions with hovering
- Solutions for active safety and assisted driving in cars
- Immersive and interactive solutions for home entertainment



Underlying trends and challenges

- The Smart World (smart cities, homes, buildings, cars,)
- Exponential data traffic growth from mobile, social networks & video
- Securing individual and professional data, including transactions

What ST brings

- Solutions for embedded processing from the smallest to the largest “augmented things”
- Broad range of microcontrollers, supported by a large ecosystem
- Security solutions
- High performance and low consumption data processing technologies (FD-SOI)



Our Strategic Growth Drivers

6



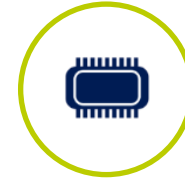
MEMS and
Sensors



Smart Power



Automotive



Microcontrollers



Digital
Consumer
& ASICs

Leading Positions

#1 MEMS &
Micro-actuators

#1 Industrial Analog ASSP
#1 High voltage Power
MOSFET
#1 Thyristors & Triacs

#1 Automotive Analog
application specific
#1 in Safety
#1 in China

#2 32-bit MCU
#2 GP and Secure MCU
#1 EEPROM

#2 Set-top box

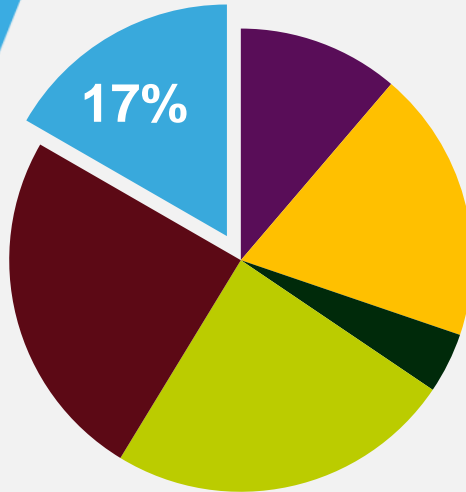


AMS – Analog, MEMS & Sensors

Contribution to ST revenues 1Q2014



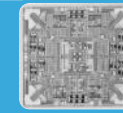
AMS



Portfolio

MOTION MEMS

Accelerometers
Compass
Gyroscopes



ACOUSTIC MEMS

Microphones



ENVIRONMENTAL SENSORS

Humidity / Chemical
Pressure / Temperature
Infrared / Gas Flow
Light / Proximity



Sensor Hub & Sensor Fusion

MICRO-ACTUATORS

Electrostatic: Mirrors for
Portable Projector
Thermal / Piezoelectric: InkJet
Drug Dispensing



TOUCH SENSORS

Touch Screen
Active Pen



ANALOG

OpAmps, Comparators
Low-power electronics
Bluetooth Low Energy
Advanced Audio Solutions



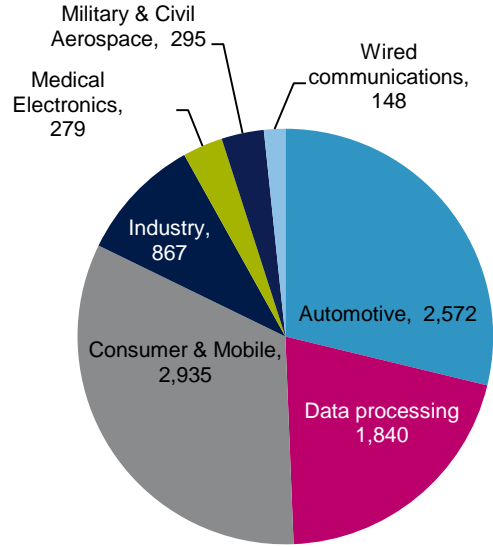
#1 in MEMS for Consumer and Mobile
#1 in MEMS & Micro-actuators





MEMS & Sensors Market

MEMS/Actuator Market 2013



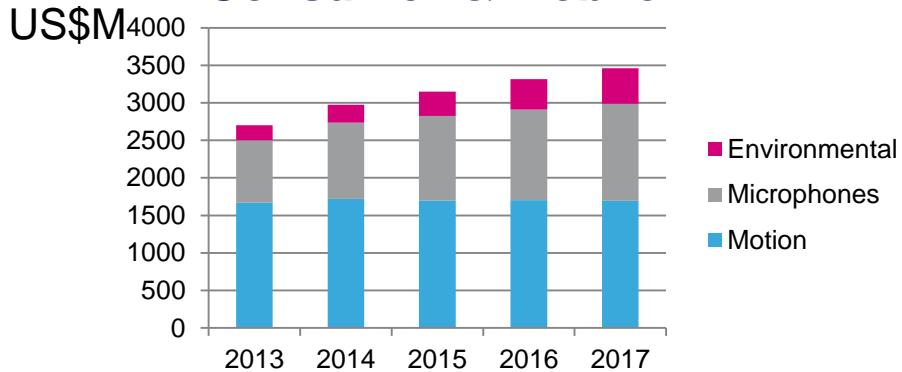
ST Number 1

ST shipping now

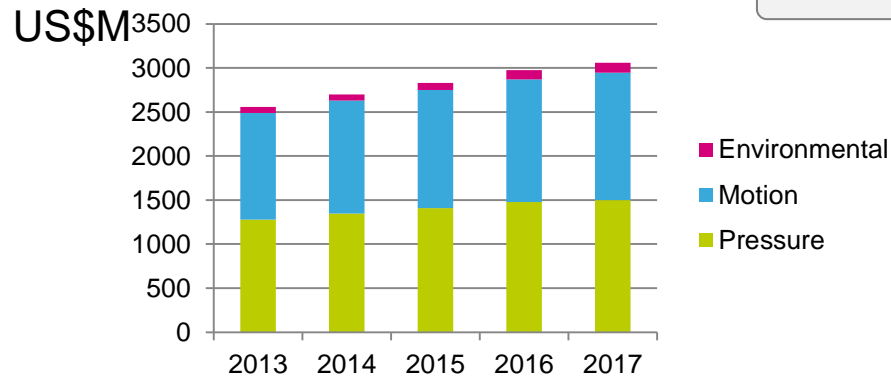
Key Trends

- Increasing content in current key applications
- Sensor Fusion
- A new wave of connected things - IoT and Wearables

Consumer & Mobile



Automotive MEMS





MEMS & Sensors Growth Drivers

Consolidating in Motion MEMS

- Opportunity in mobile MEMS remains
- Proliferation in wearable devices and IoT markets
 - New ultra-low power smart 6-axis family
 - Gyroscope for Optical Image Stabilisation

Growing MEMS Microphones

- Fast growing - multiple microphones in devices
 - Large growth opportunity building on first successes
 - Range of top and bottom, analog and digital microphones

Growing Environmental Sensors

- Mobile, wearable and IoT devices becoming environmental hubs
 - Deploying - Temperature, Pressure, Humidity, UV sensors

Growing in Automotive

- New solutions based on existing technologies developed for consumer and mobile
 - In production with motion MEMS today
 - Ongoing qualification of pressure and other sensors at multiple automotive players



Opportunities in Analog

Grow Touchscreen Controllers

- Touchscreen is the dominant technology in smartphones
- Mastering advanced touchscreen technology
 - Started shipments to major mobile manufacturers
 - Started production of high-performance touch screen controllers with hovering function

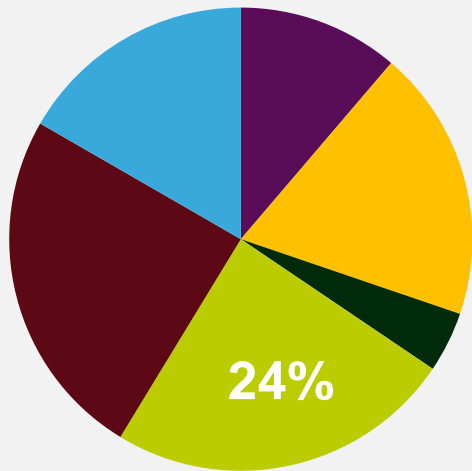
Broad deployment of Analog

- Our customers need a wide range of general purpose analog products to complete product design in a broad range of applications
- Opportunities to design-in alongside ST's leading microcontrollers
 - Low-power connectivity
 - High-end audio solutions
 - Distribution and online channel programs to increase market reach



IPD – Industrial & Power Discrete

Contribution to ST revenues
1Q2014



IPD

Portfolio

Diodes & Rectifiers

Power Transistors & Modules

Power Management ICs

Lighting ICs

Thyristors & AC Switches

EMI Filtering, Signal Conditioning

Protection Devices

Industrial Analog ASSP

#1 High voltage Power MOSFET

#1 Industrial Analog ASSP

#1 Thyristors & Triacs



Automation - Motion Control

12



Home & Building Automation

Home & Small Appliances

Factory Automation

Motion Control ICs and Power Discretes

- Efficiency improvement due to new IGBT technology is the key driver for the new generation of equipment
- Large opportunities for air conditioning in Greater China
 - IGBT at 600 V and 1200 V with various current ratings
 - Ultrafast and Silicon Carbide (SiC) Rectifiers
 - Dedicated and standard Motor Control ICs
 - Smart Gate Drivers & new GapDRIVE™ products



Energy & Power Management for Portable



Smartphones and Tablets

Gaming Consoles

Wearable

Internet of Things

Energy Management

- Strong market demand due to battery power saving and improved antenna signal reception
 - Power Management ICs
 - RF Antenna Tuners
 - Common Mode Filter (ECMF)
 - High Speed Protection devices

AMOLED

- Usage of AMOLED Display is extending rapidly from Korea to Greater China and Taiwan due to screen brightness and image quality improvement
 - Introducing the first family of Power Management ICs combining Energy Management and AMOLED drivers



Power Conversion - Digital Power & LED Lighting

14



LED Lighting

Switched-mode Power Supply
for Telecom & Consumer

Adapters

Uninterruptible Power Supply

LED Lighting

- LED Lighting estimated to grow by 35% per year for the next 5 years
 - STLUX Digital Power Controllers ICs
 - AC-DC & DC-DC LED Lighting Converter ICs
 - Power Factor Correctors (PFCs) ICs
 - Power MOSFET, Diodes
 - LED By-Pass Protections

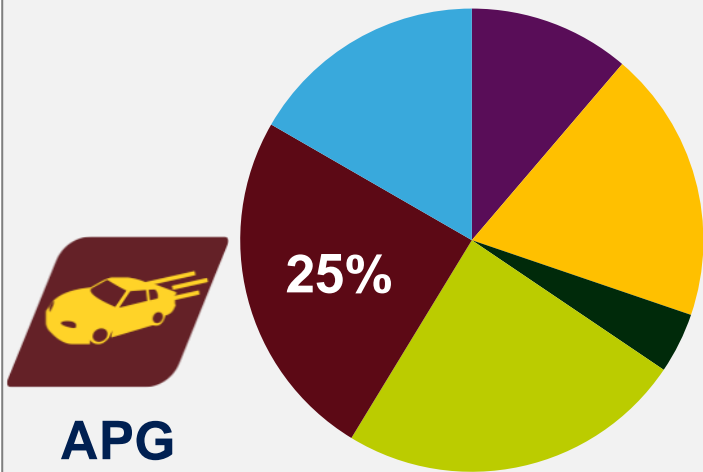
Digital Power

- Programmability in Digital Power allows higher efficiency and offers significant growth potential
 - STNRG Digital Power Controllers ICs
 - HV Super-Junction and LV advanced Trench MOSFET, IGBT
 - Flat Package Ultrafast & Silicon Carbide Devices
 - Field effect rectifier Diodes



APG – Automotive Product Group

Contribution to ST revenues
1Q14



Portfolio

Infotainment

Telematics & GPS

Car infotainment

Body electronics

Door modules, Anti-theft

Lighting, Wipers, BCM

Safety

Braking
Vehicle steering

Airbag
Active safety

Powertrain

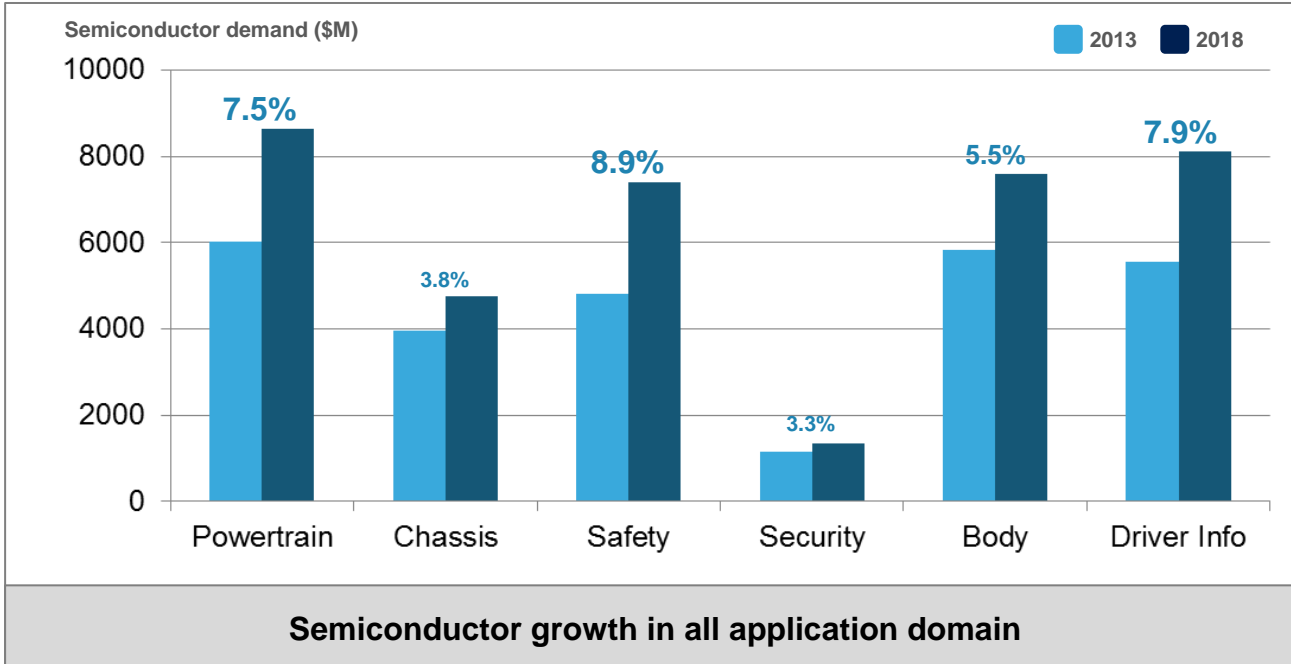
Engine

Transmission

#1 Automotive Analog Application Specific
#1 in Safety
#1 in China

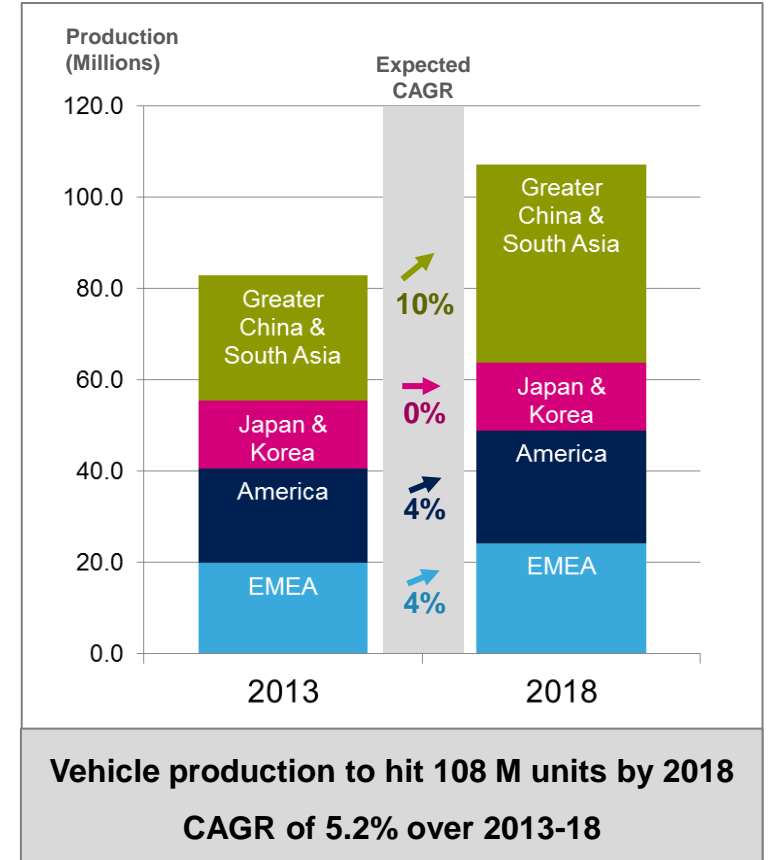


Automotive Market



Expected growth

- Safety is the highest growth, with Active Safety (ADAS) system for mature markets and passive safety for emerging markets
- Powertrain growth opportunity, driven by Vehicle Electrification / Hybridization, Stop-Start and increasing penetration of innovative automatic transmission
- China exhibits highest content growth





Car Efficiency & Safety

Smart Power

- Solid technology roadmap to support the development of new systems
 - Leadership confirmed in the area of smart power with latest **110nm BCD9S** process

Automotive MCU

- Expansion through new product offer, supporting proliferation of MCUs in Automotive systems
 - More than \$2.5B **in design wins** for 32-bit MCU
 - Continued expansion of **32-bit Power Architecture** MCU family, doubling our revenues in this segment

Active safety

- Major market growth expected in active safety, double-digit growth across all regions
- Strong push by certification authority
- Growing Consumer interest
 - Strong offer in **radar & vision**
 - Starting production of 3rd gen “Collision Avoidance processor”, 4th generation in development addressing **autonomous driving**

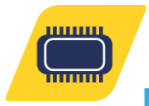


Telematics & GPS

- Further use of the connectivity in the car (GPS, Wi-Fi) to address Vehicle to X applications
 - New generation of industry-leading **multi-constellation** satellite-positioning chip
 - Addressing **Automotive grade Wi-Fi** with a new product family
 - Important design wins already captured in **Telematics**
 - Market leader in Insurance box
 - Growing share in Telematics at OEMs

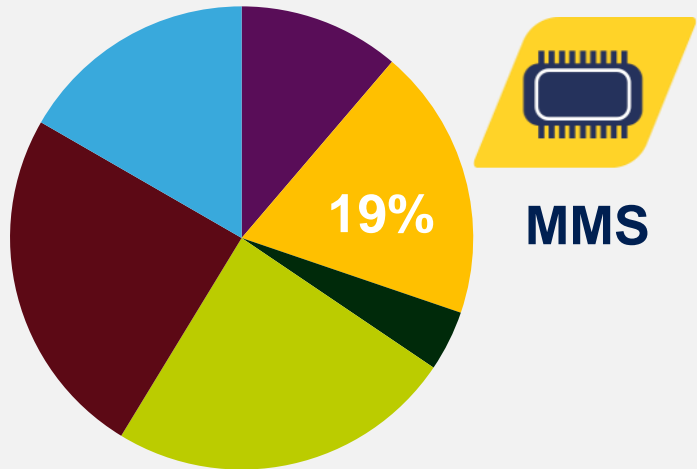
Car Infotainment

- Increased content in the emerging market Infotainment systems, addressing a market of more than 50M modules per year
- Car Infotainment ready to support smartphone resources
 - **Key player in China**, addressing the full system solution: Audio, Tuner, Processor
 - **Gaining momentum in Japan** with several design wins, in both OEM's and after market
 - Ready to support "**CarPlay**" concept

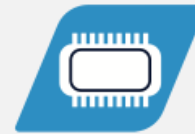


MMS – Microcontroller, Memory & Secure MCU

Contribution to ST revenues
1Q14



Portfolio



General Purpose
Microcontrollers

- General Purpose 8-bit & 32-bit MCUs
- Automotive 8-bit MCUs



Memories

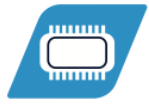
- Serial EEPROM
- RF memories
- Dual-Interface memories



Secure MCU

- Personal and embedded security
- Secure Hardware platforms & turnkey solutions

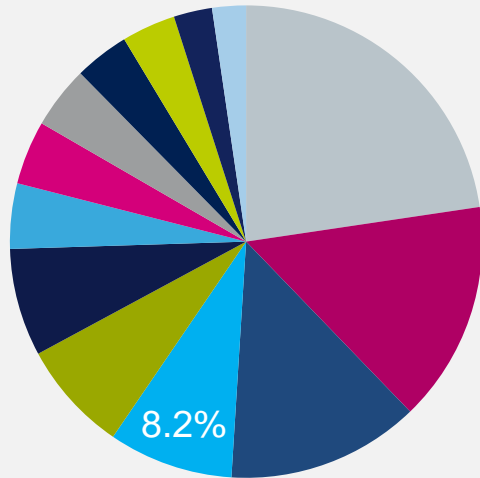
#2 Microcontroller Player (GP + Secure)



Further Expand STM32 MCUs

General Purpose MCUs 2013 Ranking

IHS March 2014, market share in %



Key Market trends

- Major push in Mass Market with >70% of our billing
- Strong demand in wearable
- Wireless phones / tablets with sensor hub and phone accessories



Expand the STM32 product line

- Decisions driven by targeted applications
 - **STM32L0** (Cortex-M0) to reinforce our position in ultra low power 32-bit

Strengthen the ecosystem

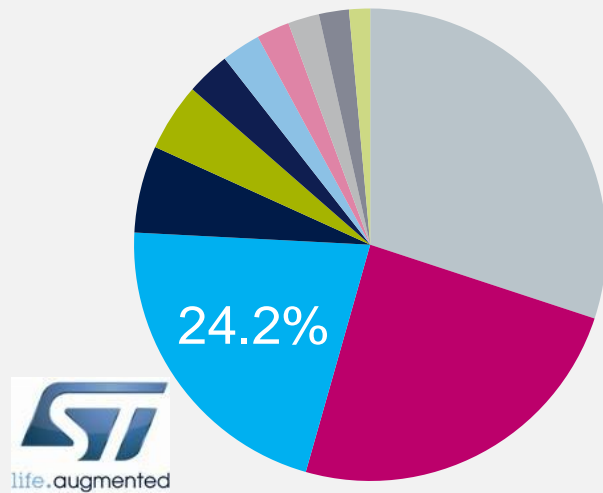
- Extend the concept of “easy to design with”
 - Expansion of **our offer with hardware and software platforms** to make life easier for developers

Differentiation

- Continuing to build on ARM cores, but differentiating through **eNVM** technology and advanced analog and digital IP

Secure MCUs Opportunities

**Secure MCUs
2013 Ranking**
IHS March 2014, market share in %



Key Market trends

- Migration to Contactless
- Migration to Secure mobility

Mobile Security

- Maintain leadership in all kinds of **NFC Secure Elements**, through fully owned, leading-edge technologies and **state of the art security**

Banking & ID

- Ramp up **ST31 Dual Interface** Banking in Asia and Europe
- Support the US Europay, MasterCard and Visa (EMV) migration for banking
- **ST31 Flash** reinforcing our position in ID & Banking

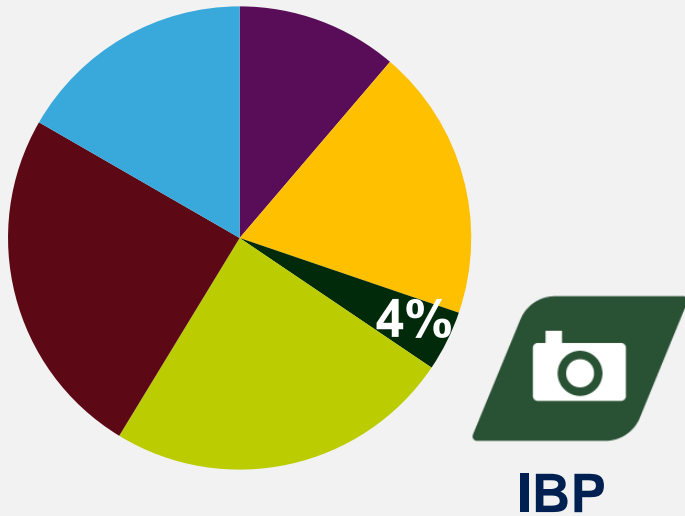
Expand to new value-added applications

- M2M for **Automotive**
- Expand **secure authentication** solutions in consumer electronics and digital world



IBP — Imaging, BiCMOS ASIC & Silicon Photonics

Contribution to ST revenues
1Q14



Portfolio

Imaging

CMOS Image Sensors

Proximity Sensors

Mixed Process

RF/ RF-SOI

Silicon Photonics
& Optical Products



Key Opportunities

23

Imaging

FlightSense™

- Innovative emerging applications - Range finder, gesture recognition, depth map
- Ramp **proximity sensors** based on proprietary **FlightSense** technology

Diversification

- Automotive with safety camera
- Home automation and security
- Medical with Imagery

Mixed Process

RF-SOI

- CMOS solutions solidly gaining market share versus GaAs for mobile Front End
- RF ICs for Mobile and Wi-Fi Front End based on low power RF-SOI technology

Silicon Photonics

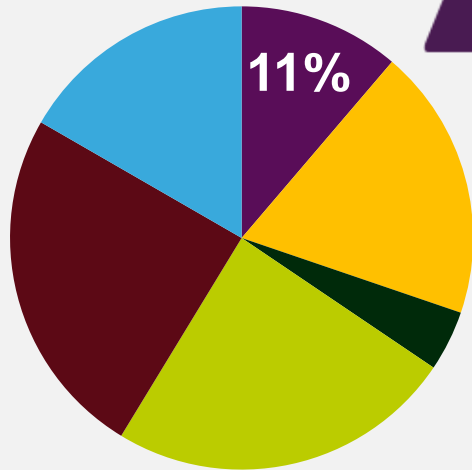
- Continued strong momentum
- 30+ new ASIC projects in BiCMOS and Silicon Photonics





DCG – Digital Convergence Group


Contribution to ST revenues
1Q14





DCG

Stronger Portfolio with Industry Leading Products

BROADCAST STB



CLIENT & SERVER



HOME GATEWAY



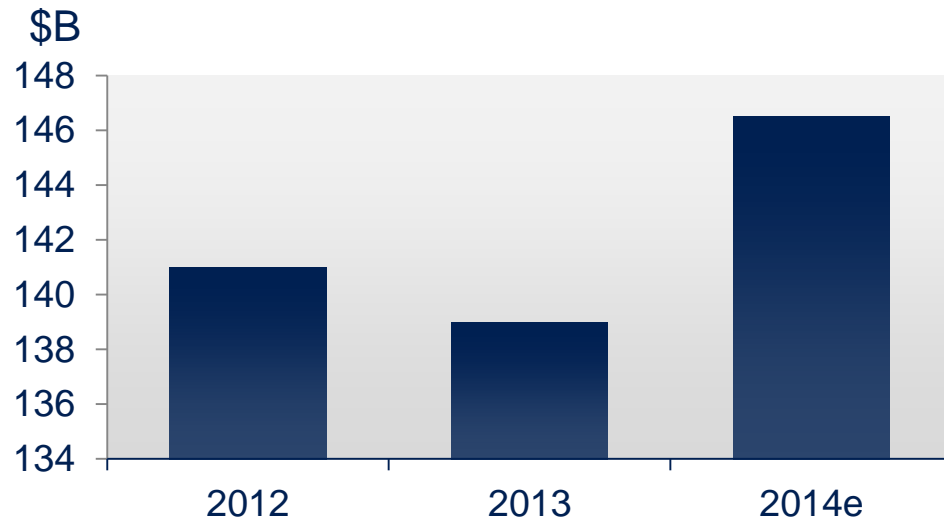
#2 Set-Top-Box Player

Digital ASIC

Networking
Consumer
Legacy

Advanced CMOS
FD-SOI

ST Serviceable Available Market*



~ \$139B
in 2013

Expected
to grow
5.6% in
2014

Key Markets

	CAGR 2013-2016
MEMS & Sensors	6.5%
32-bit MCUs	8%
Automotive	7.3%
Power Management & Industrial	7.2%
HD and UHD Set-Top-Box units	10.4%

- WSTS and IHS market growth expectation; ST SAM includes Image Sensor
- IHS + Strategy Analytics for Automotive