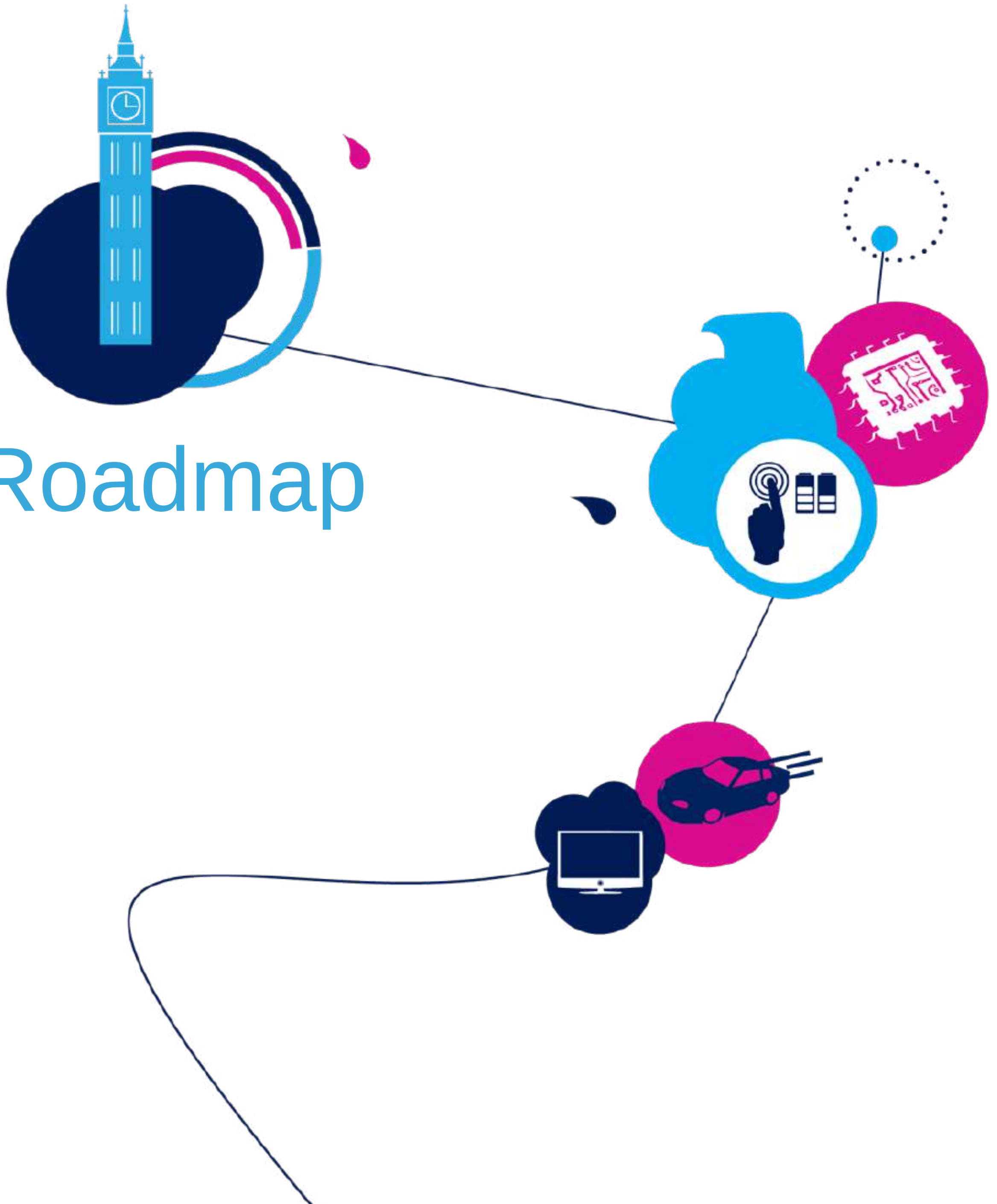
Business and Financial Roadmap



Georges Penalver

Executive Vice President
Corporate Strategy Officer

life.augmented

Agenda

- ST Strategy
- Financials
- Market and Growth Drivers
- Conclusion

life.augmented

Agenda

- ST Strategy
- Financials
- Market and Growth Drivers
- Conclusion

life.augmented

Who We Are

- A global semiconductor leader
- The largest European semiconductor company
- 2012 revenues of **$8.49B**(1)
- Approximately **48,000** employees worldwide(1)
- Approximately **11,500**(1) people working in R&D
- **12** manufacturing sites
- Listed on New York Stock Exchange, Euronext Paris and Borsa Italiana, Milano

life.augmented

(1) As of December 31, 2012, including ST-Ericsson, a 50:50 joint venture with Ericsson

ST’s vision

OUR STRATEGY

Leadership in Sense & Power, Automotive Products and Embedded Processing Solutions

OUR 5 GROWTH DRIVERS

MEMS and Sensors

Smart Power

Automotive

Microcontrollers

Application Processors & Digital Consumer

life.augmented

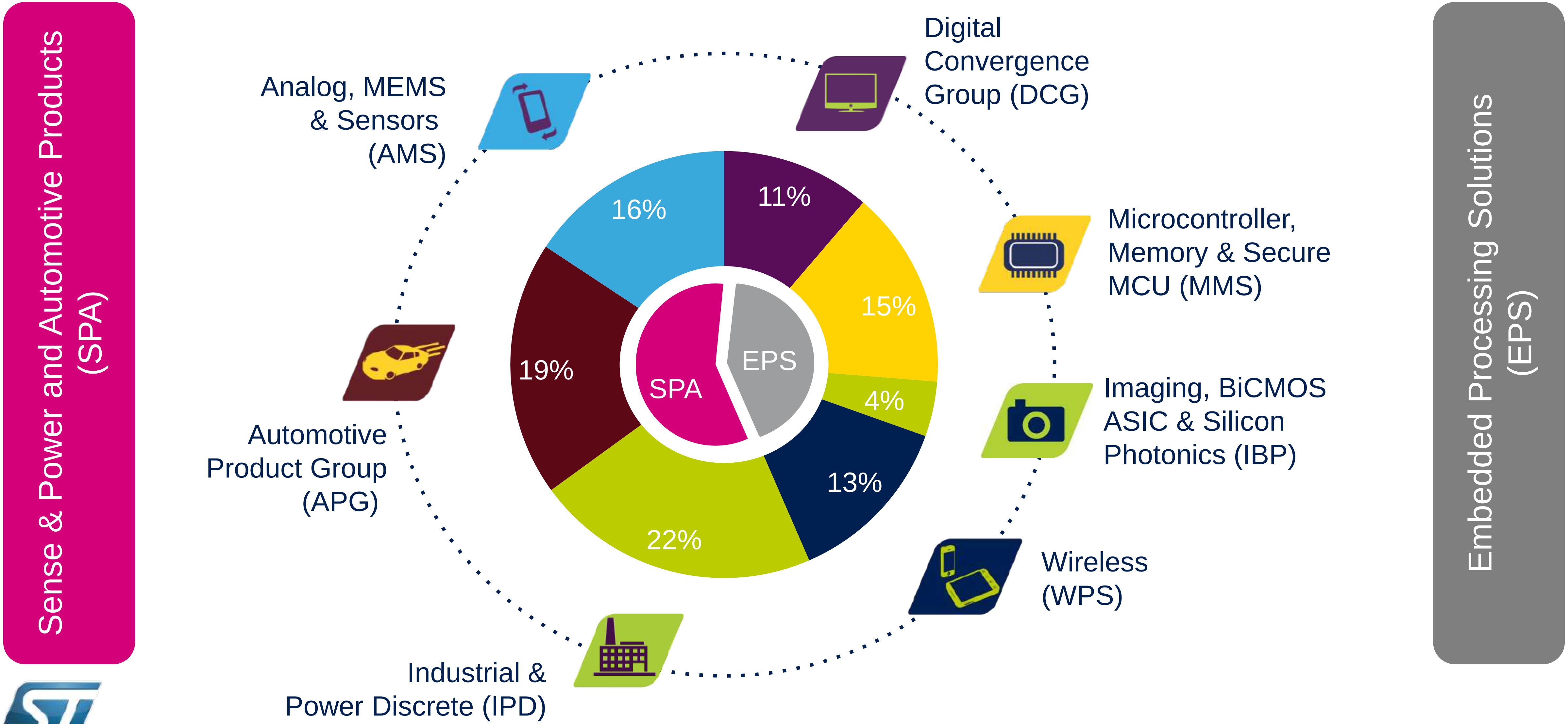
Product Segments

life.augmented

- Sense & Power and Automotive Products (SPA)
  - Analog, MEMS & Sensors (AMS)
  - Automotive Product Group (APG)
  - Industrial & Power Discrete (IPD)
- Embedded Processing Solutions (EPS)
  - Digital Convergence Group (DCG)
  - Imaging, BiCMOS ASIC & Silicon Photonics (IBP)
  - Microcontroller, Memory & Secure MCU (MMS)
  - Wireless (WPS)
- ST-Ericsson*
  - 50:50 JV with Ericsson
  - Wireless (WPS)

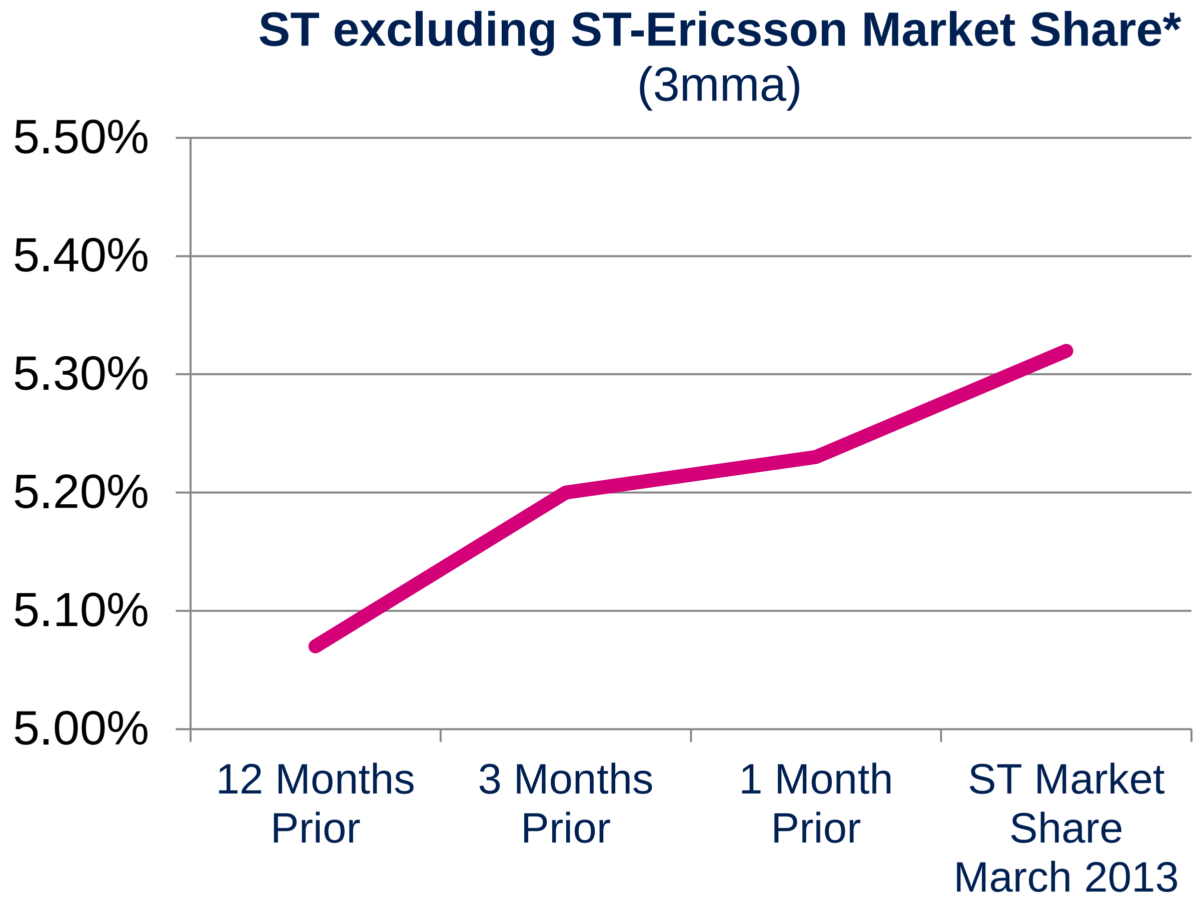
*Exit to be completed by 3Q 2013

1Q13 Revenues by Product Groups



life.augmented

ST Market Share Gains



Market share gains driven by:

- Innovation / new products
- Mass market efforts
- New major customer focus
- Manufacturing / flexibility
- Product quality

*WSTS – March 2013, SAM including Image Sensor Market, ST

ST-Ericsson Split Up

STMicroelectronics

Existing ST-Ericsson products* and related business as well as certain assembly and test facilities

- About 950 employees
- Main sites: France and Italy
- ST financially responsible from March 2, 2013

Ericsson

Design, development and sales of the LTE multimode thin modem products

- About 1,800 employees and contractors
- Main sites: Sweden, Germany, India and China
- Ericsson financially responsible from March 2, 2013

ST-Ericsson

Starting the close down of the remaining parts of the JV

- About 1,600 employees and contractors
- Includes about 200 employees and contractors in connectivity business which is for sale
- Joint financial responsibility from March 2, 2013

Formal transfer of the parts of ST-Ericsson to the parents expected to be completed during 3Q13, subject to regulatory approvals

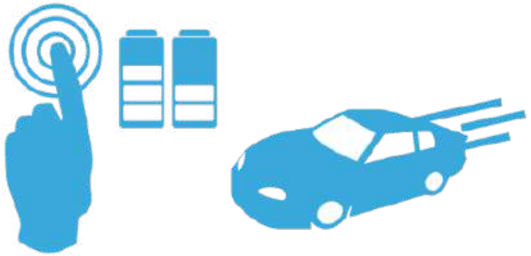
life.augmented

*Other than LTE multimode thin modem

Agenda

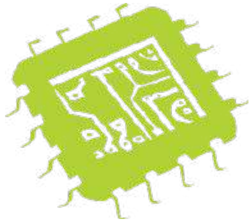
Two-product Segments Organization

Sense & Power and Automotive Products



Two Financially Sustainable Blocks

Embedded Processing Solutions



Starting 2Q13 reported financials for each product segment:

Revenues

Operating Income

Free Cash Flow*

life.augmented

*Non-US GAAP measure

ST Financial Model*

Targeting 10% or more operating margin

Net operating expenses average quarterly rate in the range of $600 million to $650 million**

life.augmented

*Based on an average effective exchange rate of 1.30 Euro/dollar

**By the beginning of 2014; excluding restructuring charges

Three-axis Plan to Achieve Financial Model

life.augmented

Revenue Expansion

Key growth drivers
Innovation
Market share gains

Gross Margin Expansion

Improved product mix
Manufacturing optimization

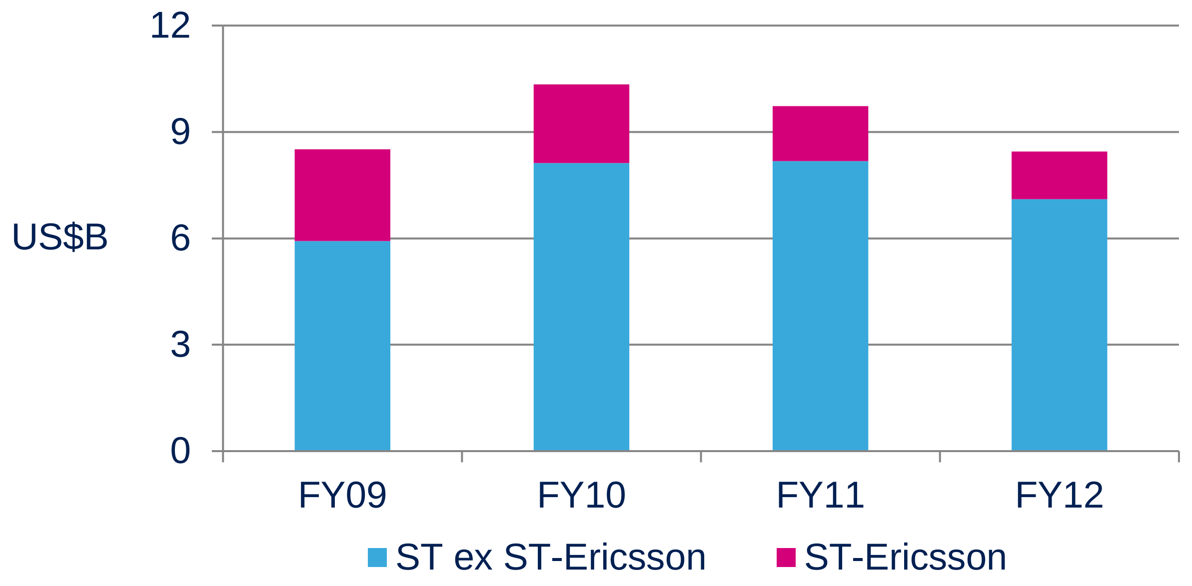
Opex Reduction

Opex optimization plan

Strengthening ST's Net Financial Position

ST Revenue Dynamics

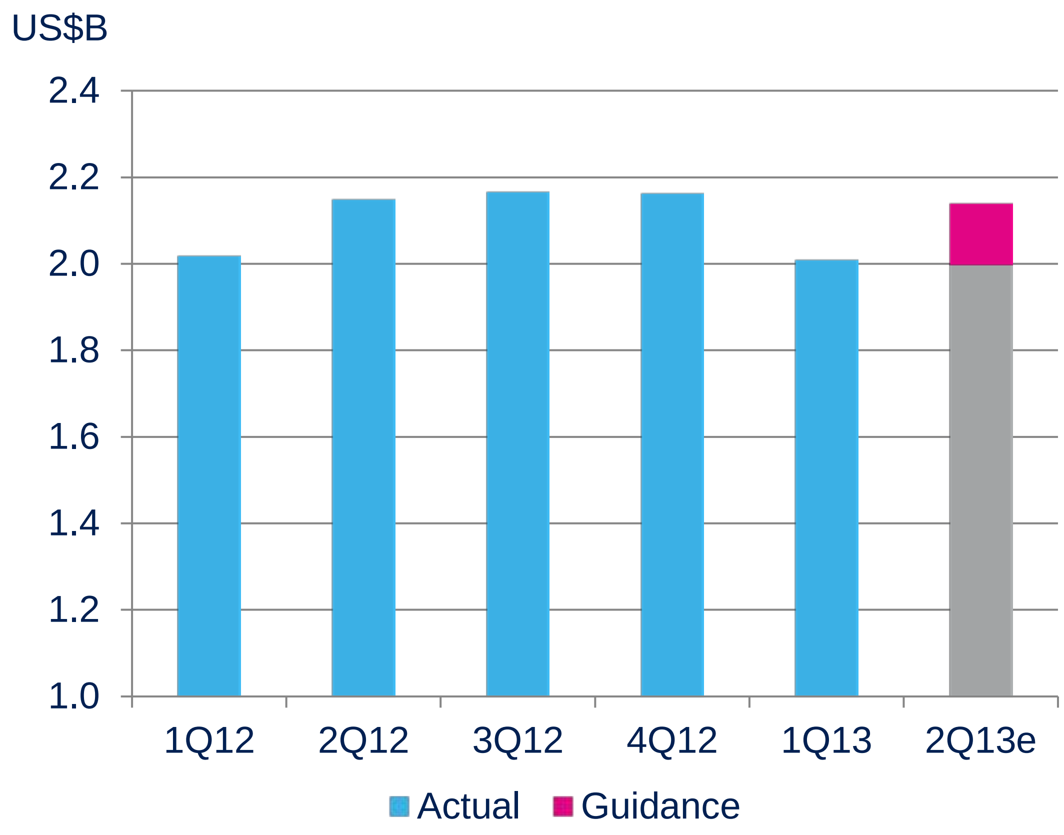
- Semiconductor market expected to improve in 2013
- ST, excluding ST-Ericsson, expects to outperform our serviceable available market (SAM) in 2013
  - Outperformance driven by: **sales organization, mass market and new products**



Highest contributors to 2013 revenue performance

- Imaging
- Microcontrollers
- Analog & MEMS
- Power Discrete

ST Quarterly Revenues

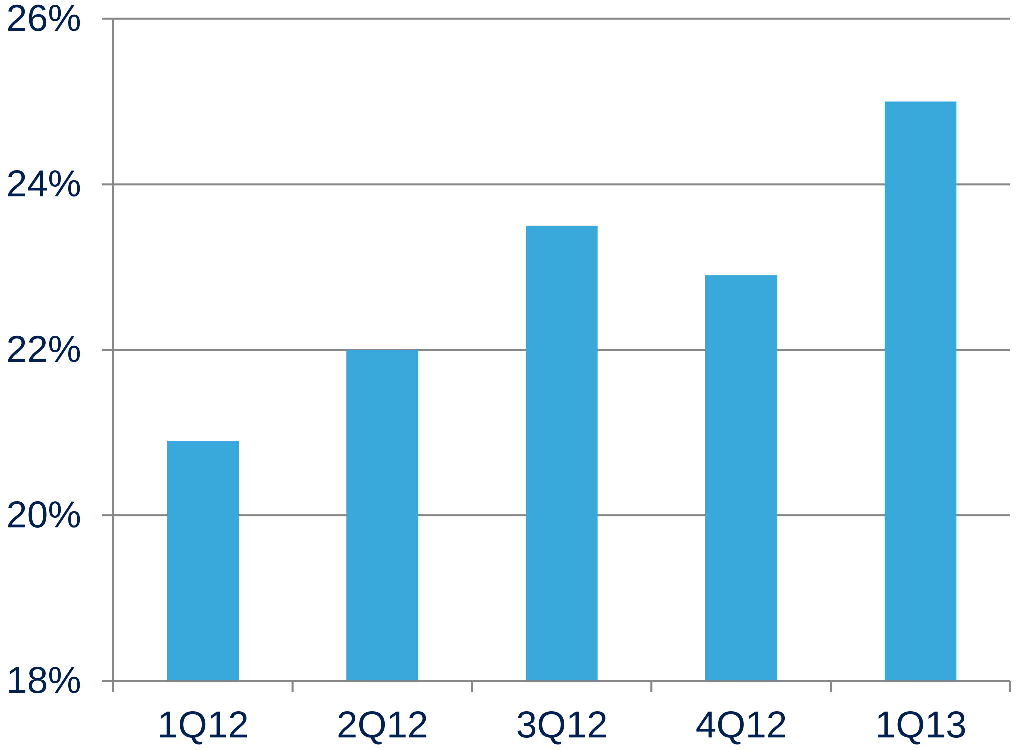


1Q13 Revenues = $2.01B
-0.4% vs 1Q12

- 1Q13 Revenues excluding Wireless Product Line:
  - Up 1.3% y-o-y
  - Down 3.4% q-o-q, better than seasonal
  - Wireless Product Line down 26% q-o-q
- 2Q13 Revenue Guidance:
  - Up about 3% q-o-q (+/- 3.5 percentage points)
  - Up about 7% q-o-q at mid-point excluding Wireless Product Line

Addressing the Mass Market

Distribution (as % of total revenues)



New Sales & Marketing Organization

- Global account responsibility
- Continued focus on new major accounts
- Increased geographical customer and distribution branch coverage

Key marketing initiatives delivering results

- Revenues from distribution
  - Up 18.7% y-o-y
  - Up 3.5% q-o-q

Top Distributors*

Arrow
Avnet
Future
Tomen
Wintech
Yosun

*Listed alphabetically

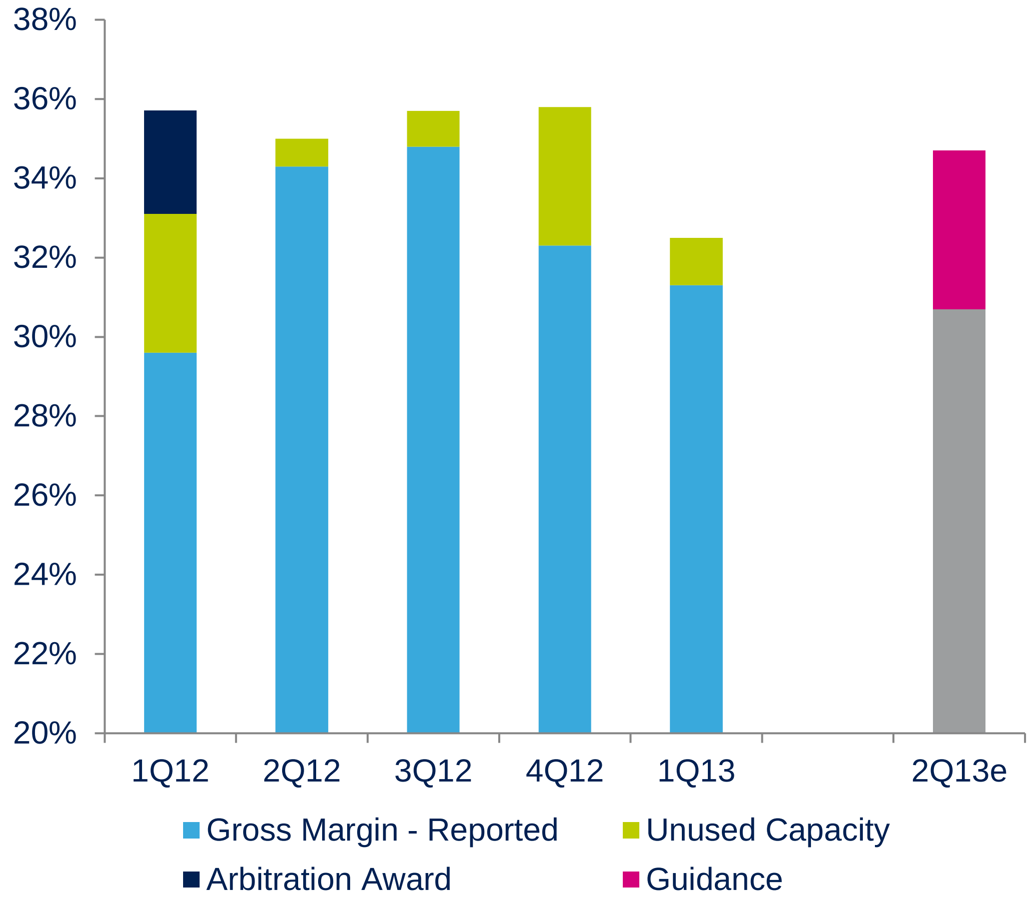
Financial Performance

In US$M, except EPS	1Q12	2Q12	3Q12	4Q12	1Q13	FY11	FY12
Net Revenues	2,017	2,148	2,166	2,162	2,009	9,735	8,493
Gross Margin	29.6%	34.3%	34.8%	32.3%	31.3%	36.7%	32.8%
Operating Income (Loss) before impairment, restructuring & one-time items*	(280)	(151)	(79)	(142)	(180)	121	(652)
Operating Margin before impairment, restructuring & one-time items attributable to ST*	(6.5%)	(1.3%)	0.3%	(3.3%)	(5.3%)	6%	(6.5%)
Net Income – Reported	(176)	(75)	(478)	(428)	(171)	650	(1,158)
EPS Diluted	(0.20)	(0.08)	(0.54)	(0.48)	(0.19)	0.72	(1.31)
Adjusted EPS Diluted*	(0.14)	(0.05)	(0.03)	(0.11)	(0.13)	0.41	(0.33)
Free Cash Flow*	98	(129)	(80)	145	(65)	(288)	33
Net Financial Position, adjusted for 50% investment in ST-Ericsson*	1,267	1,153	1,064	1,192	1,096	1,167	1,192
Effective Exchange Rate €/$	1.33	1.32	1.29	1.30	1.31	1.37	1.31

life.augmented

*See appendix

Gross Margin Evolution



- 1Q13 gross margin down 100 basis points q-o-q, mainly driven by no revenues from licensing and usual beginning of the year price pressure. On a y-o-y basis gross margin was up 170 basis points.
- 2Q13 expected q-o-q improvement driven by increased volumes, reduced unused capacity charges and improved manufacturing efficiencies as fab utilization rates are expected to be ~85%

life.augmented

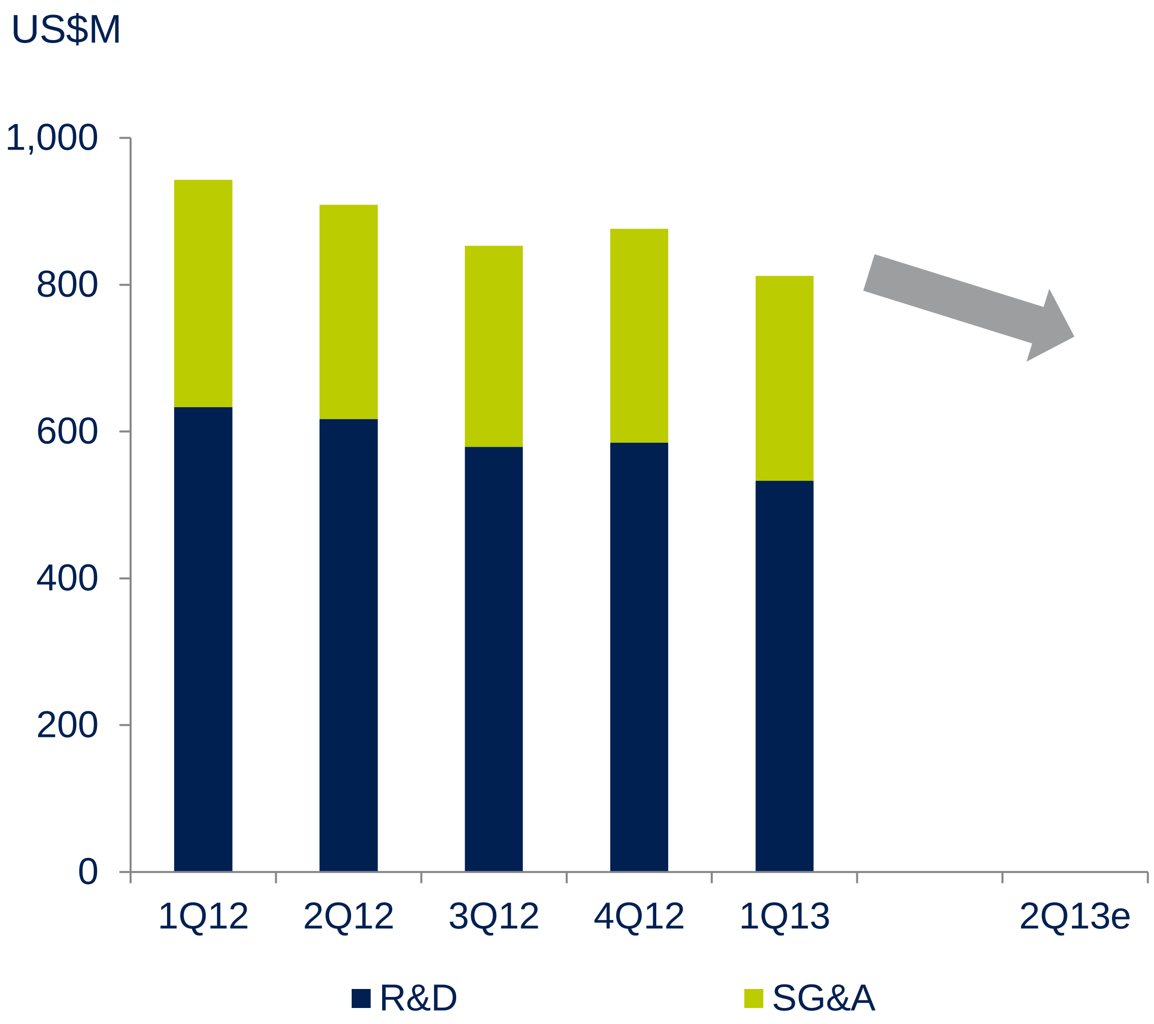
Gross Margin Expansion

Key drivers for gross margin expansion

- Product mix evolution toward higher margin products
- ST-Ericsson business decrease; currently significantly dilutive to ST consolidated gross margin
- Manufacturing optimization towards utilization rate of about 90% and loading stability.

life.augmented

ST Operating Expenses Evolution

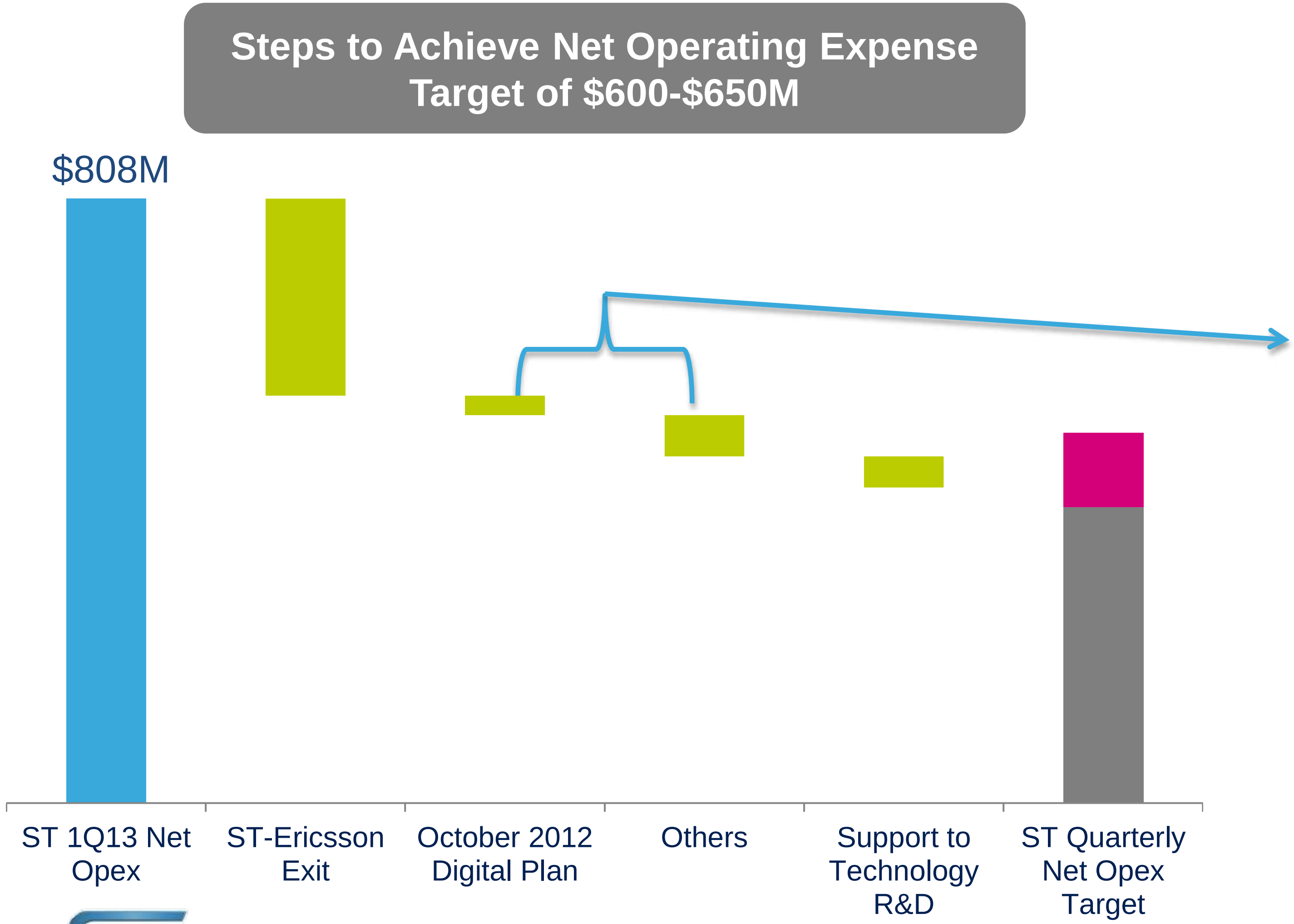


Resizing ST's Cost Base

Significantly reducing operating costs
Combined 1Q13 SG&A and R&D:
- Down $131M y-o-y
- Down $64M q-o-q

Announcement to exit ST-Ericsson
A significant step towards our quarterly net operating expenses goal of $600-$650M

Reaching our Quarterly Expense Target

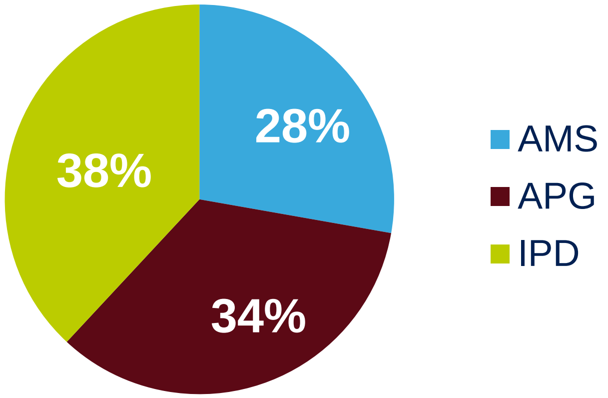


All ST organizations will contribute to achieve a $35M quarterly expense reduction target, especially Embedded Processing Solutions and Staff and Support Functions

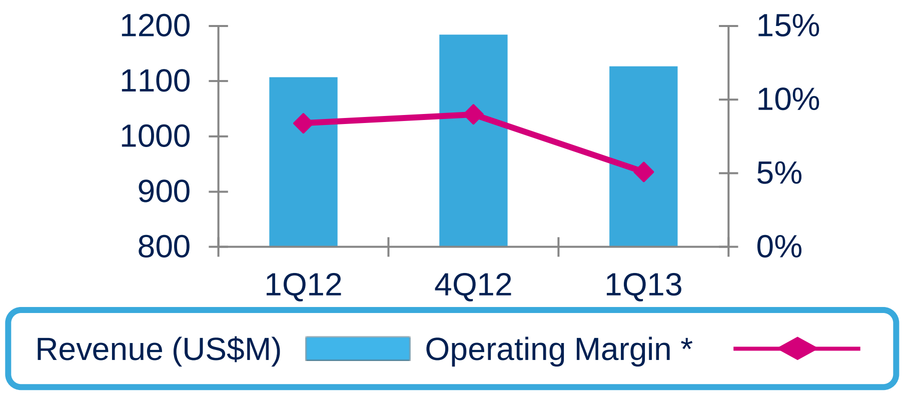
life.augmented

Sense & Power and Automotive

1Q13 Revenues: $1,127M



1Q13 Operating Margin: 5.1%



Revenue Growth Drivers: 2013 - 15

- High volume motion MEMS & Sensors, touch screen controllers, Op Amps and Microphones
- Expansion of LV MOSFET and IGBT
- Growth in power management for portable equipment
- 32-bit microcontrollers for Automotive
- New products in Smart Power and e-Flash

Operating Margin Mid-term Target: 10-15%

- Improve product mix and time to market
- Manufacturing flexibility / efficiency
- Mass market efforts

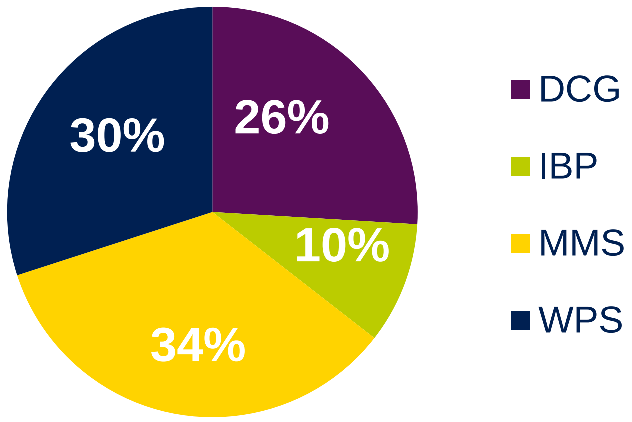
1Q14 Net Operating Expense Target

- About 50% of target $600-$650M range

* Operating margin before impairment, restructuring charges. Unused capacity charges are reported in the Group “Others”

Embedded Processing Solutions

1Q13 Revenues: $867M



1Q13 Operating Losses: $210M

Revenue Growth Drivers: 2013 - 15

- Rapid growth in 32-bit general purpose & secure MCUs
- Major turnaround in Imaging
- ASICs for networking
- Gain share in home gateway and connected clients
- Deploy 40nm Set-Top-Box families in emerging countries

Operating Margin Mid-term Target: 5-10%

- Improve product mix and time to market
- Exit of ST-Ericsson
- ST-Ericsson competencies to be redeployed
- Customer / application diversification

1Q14 Net Operating Expense Target

- About 50% of target $600-$650M range

life.augmented

* Operating Income (loss) before impairment, restructuring charges. Unused capacity charges are reported in the Group “Others”

Net Financial Position*

End of period (US$M)	Mar. 30, 2013	Dec. 31, 2012	Mar. 31, 2012
Available Cash and Marketable Securities	1,906	2,489	2,213
Restricted Cash	4	4	7
Total Liquidity	**1,910**	**2,493**	**2,220**
Total Financial Debt	**(897)**	**(1,301)**	**(1,442)**
Net Financial Position	**1,013**	**1,192**	**778**
ST-Ericsson Net Debt to Ericsson	**83**	**-**	**489**
ST Net Financial Position	**1,096**	**1,192**	**1,267**

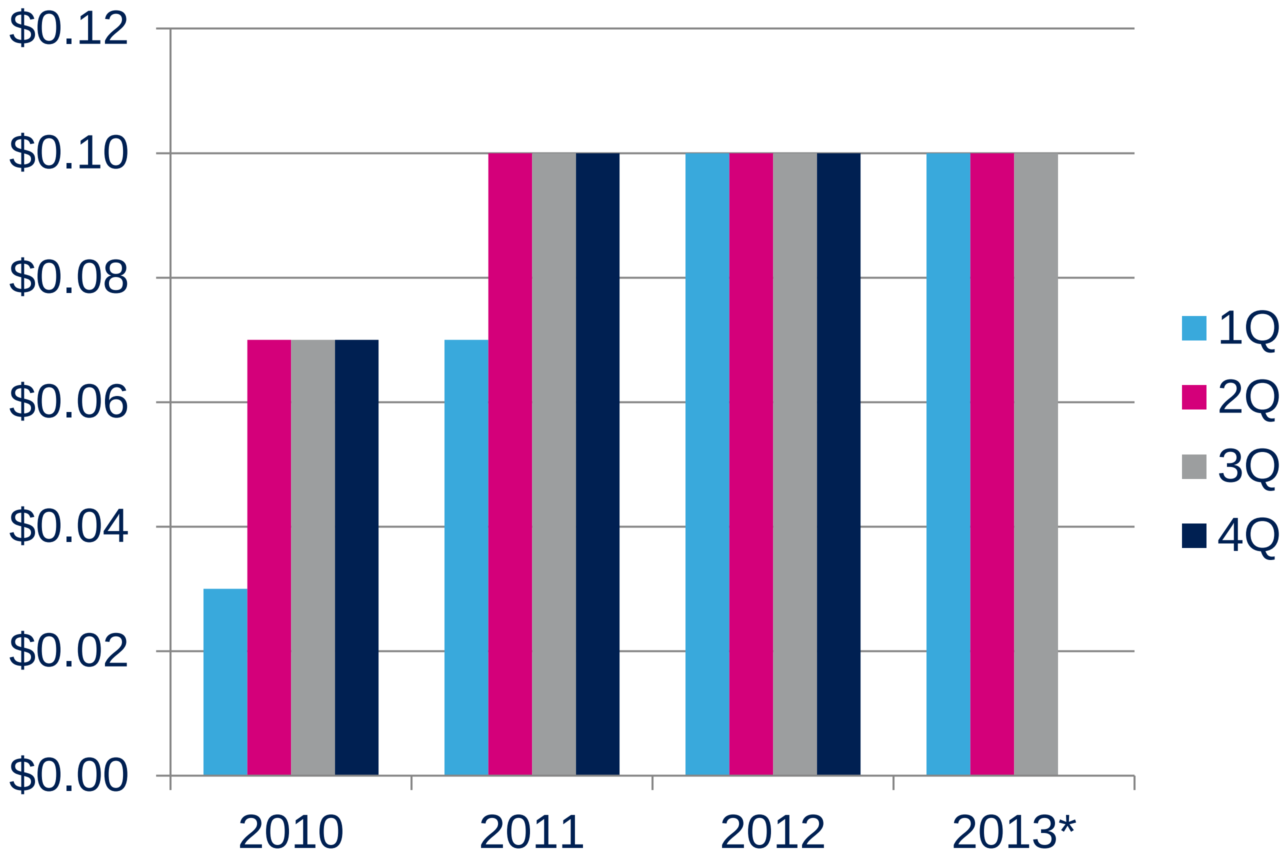
Maintain Strong Financial Position

- In 1Q13, ST:
  - Repaid $455M at maturity of outstanding 2013 Senior bonds
  - Funded $83M under the ST-Ericsson parent facility
  - Funded capex of $111M
  - Signed new €350M European Investment Bank loan
- In first half of 2013, ST's capex expected to be about $300M
  - Significantly below 10% of revenues

* See appendix

Dividend Evolution

- Quarterly dividend distribution to be decided semi-annually instead of annually
  - US$0.10 in 2Q and 3Q of 2013, per common share, to be paid in June and September of 2013, respectively.
  - 4Q 2013 and 1Q 2014 dividends will be decided at a Shareholders' Meeting to be held during the fourth quarter of 2013.



*2Q13 and 3Q13 dividend as submitted to the 2013 Annual General Meeting

Agenda

ST Strategy

Financials

Market and Growth Drivers

Conclusion

Key Industry Trends

Smart energy usage

Embedded intelligence

Our Growth Drivers

MEMS and Sensors

Smart Power

Automotive

Microcontrollers

Application Processors and Digital Consumer

Targeting areas where ST leads or will lead

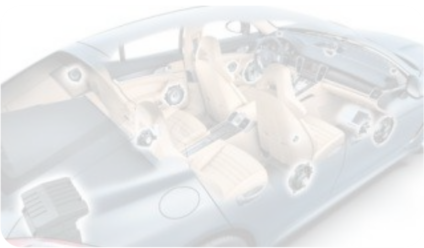
life.augmented

Growth Driver: MEMS and Sensors

MEMS and Sensors

ST #1 MEMS Player in 2012

Application Processors and Digital Consumer



Targeting areas where ST leads or will lead

Source: Yole Developpement, April 2013

MEMS Sensors in Portable Devices

Target Markets

- Mobile & Consumer
  - HUBS
    - Motion
    - Environmental
    - Acoustic
  - Expanding use of sensors
  - Finger Tip revolution
  - Personal projection

$5.6B TAM in 2016
CAGR 2013-16: +18%

ST Strengths

- #1 in revenue for MEMS for mobile and consumer
- Enlarging product portfolio to cover existing and new applications with a complete portfolio for motion, environmental, audio and touchscreen controllers
- Internal dual-source manufacturing on 200mm
- Wide and flexible technology portfolio
- ST's iNEMO family: unrivalled ability to integrate sensors with ARM-based MCU

life.augmented

Source: IHS iSuppli, January 2013

MEMS Sensors: Expanding to New Markets

Target Markets

- Automotive
  - Addressing a new market for Assisted guidance, Personal safety & Comfort
- Emerging new markets
  - Fitness & Wearable
  - Internet of Things

>$23B TAM in 2016
CAGR 2013-16: +10%
Automotive Sensor TAM

ST Strengths

- #1 in revenue for accelerometers and gyroscopes in 2012 for all markets
- Entering production for Automotive MEMS now; internal manufacturing key for automotive customers
- Numerous flagship product wins in fitness and wearable
  - ST MEMS complimented by ST's Ultra-Low Power RF and Ultra-Low Power MCUs
  - As smartphones dissolve into devices around the body ST captures opportunities
- Providing smallest Smart Systems to enable Internet of Things

Source: Strategy Analytics, January 2013

Sensing: Imaging

Target Markets

- Camera phones
- DSC
- Automotive, gaming, medical
- Proximity detection

$26B TAM in 2016
CAGR 2013-16: +17%

ST Strengths

- Unique, comprehensive and flexible Imaging solutions offering
- Product portfolio repositioned to serve new applications including Automotive, Digital Still Camera, Gaming and Medical in addition to Wireless
- Global, state-of-the-art IP portfolio and technologies:
  - Image processing algorithms & FD-SOI for ISP, high performance pixel, FSI and BSI Imager processes, FlightSense™ for sensors, camera modules
- Design, manufacturing and packaging verticalization

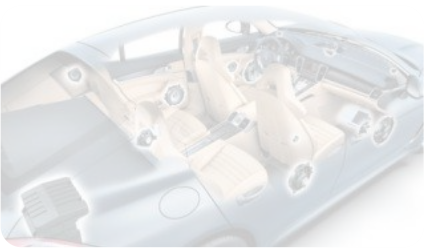
Source: ST

Growth Driver: Smart Power

MEMS and Sensors

Smart Power

ST #2 Industrial Electronics in 2012


Targeting areas where ST leads or will lead

Source: IHS iSuppli, May 2013

Smart Environments

Target Markets

- Renewable energy generation
- Smart metering
- Power conversion

$6B TAM in 2016
CAGR 2013-16: +14.2%
Smart Grid TAM

ST Strengths

- >80% market share in Smart Metering powerline modem
- Complete solution for smart energy management
- Mdmesh II Plus: leading position in superjunction transistors
- Leading technologies for Smart Grid
  - STarGrid™ platform for Power Line Communication
  - High voltage power discrete and Smart Power for energy management

life.augmented

Source: IHS iSuppli, Semicast, ST

Power Management for Portable

Target Markets

- Mobile
- Tablet
- Handheld consumer

$9B TAM in 2016
CAGR 2013-16: +7.4%

New growth driven by Power Management portfolio and competencies from ST-Ericsson

ST Strengths

- Leading positions in select target markets
  - >75% market share of AMOLED display ICs
- Complete application know-how and broad IP portfolio
- New business model: power management competencies from ST-Ericsson will address all portable platforms
- Entering Smart RF Antenna tuners

Source: IHS iSuppli, Semicast, ST

Power Management in Automation

Target Markets

- Factory automation
- Home and building automation
- Industrial motor drives

$8B TAM in 2016
CAGR 2013-16: +7.5%

ST Strengths

- #2 in revenue in Industrial Electronics
  - Motion control ICs, electrostatic discharge (ESD) protection, IGBT/MOSFET, etc.
- Leading 9th generation BCD technology for Smart Power
  - New platforms with Micro-stepping and multi-motor drivers
- Silicon Carbide (SiC) already in mass production

life.augmented

Source: IHS iSuppli, Semicast, ST

Growth Driver: Automotive

MEMS and Sensors

Smart Power

Automotive

ST #3 Automotive Player in 2012

Targeting areas where ST leads or will lead

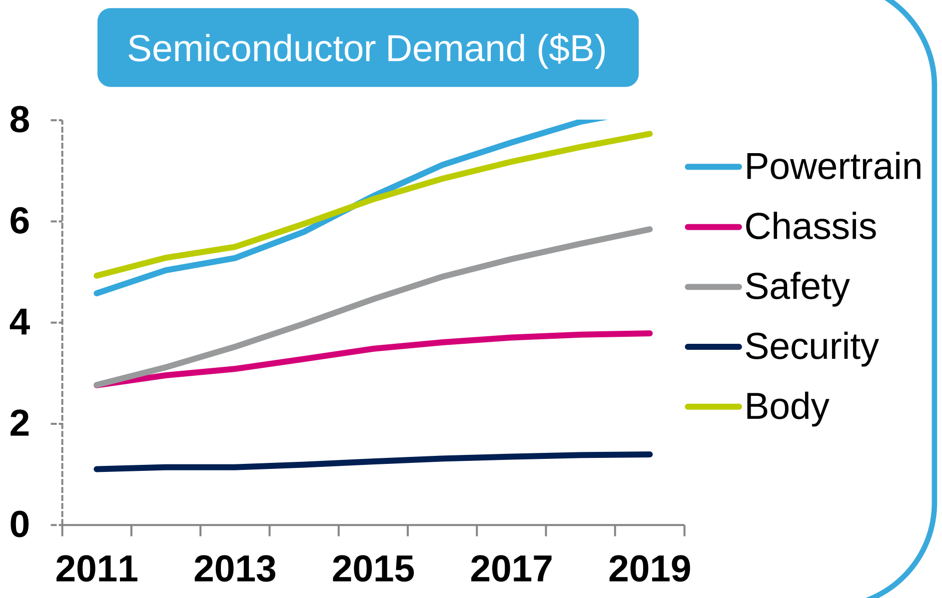
Source: IHS iSuppli, April 2013

life.augmented

Car Efficiency & Safety

Target Markets

- Engine control
- Braking, steering
- Airbag
- Active safety systems



ST Strengths

- #1 in revenue in Smart Power, ASIC and Active Safety
- 32-bit MCU portfolio growing fast
  - $2.4B in design-wins collected; 60 new part numbers already available
- Cooperation agreements with leading OEMs: Audi and Hyundai Autron
- Fully controlled automotive-qualified supply chain
- New intelligent switches: 7th generation of VIPower family deliver improvements for reliability and precision

Source: Strategy Analytics; IHS iSuppli, April 2013

Car Infotainment

Target Markets

- Audio
- Positioning and telematics
- Tuners for terrestrial & satellite

>$3.5B TAM in 2012
CAGR 2012-17: +8%

ST Strengths

- #2 in revenue in car infotainment
- #1 in revenue in Audio Power Amplifiers
  - >45% market share; 6 new products to be launched in 2013 to address the fast growing market of Digital Audio Amplifiers
- First to market: Multi-constellation autonomous receiver covering GPS/USA, GALILEO/EU and GLONASS/Russia. COMPASS support to be introduced in 2013 to address the Chinese high volume market

Source: Strategy Analytics; IHS iSuppli, April 2013

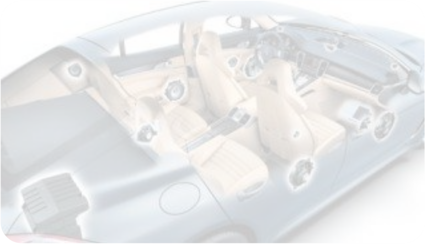
Growth Driver: Microcontrollers

MEMS
Senso

ST #4 Microcontrollers Player in 2012*

Microcontrollers

Application Processors and Digital Consumer




Targeting areas where ST leads or will lead

*Excluding Automotive: IHS iSuppli, March 2013; WSTS, February 2013

General Purpose Microcontrollers

Target Markets

- General purpose MCUs
- Everywhere intelligence is needed!
  - Consumer
  - Appliances
  - Industrial
  - Healthcare

$7B TAM in 2015
CAGR 2012-15: >3%
WW TAM GP MCUs (excl. automotive)

ST Strengths

- #6 by revenue in General Purpose MCUs in 2012 from #10 in 2007
- ST mass market customer base driving revenue growth
- Advanced e-NVM technology platform
- ARM Cortex M 32-bit architecture
- >400 part numbers addressing all market requirements

life.augmented

Source: IHS iSuppli March 2013; WSTS, February 2013

Secure Microcontrollers

Target Markets

→ Mobility, Contactless and Turnkey solutions

- Personal security
  - Banking, ID
  - Pay TV, Transport
- Embedded Security
  - NFC & Mobile payment
  - Secure authentication

$3B TAM in 2015
CAGR 2012-15: >4%
WW TAM Secure MCUs

ST Strengths

- #3 by revenue in Secure MCU in 2012 from #5 in 2007
- #1 by revenue in secure element in 2012
- Strong portfolio driven by:
  - Full NFC solution including Secure Element and Contactless transceiver
  - Advanced contactless platform
  - 40nm embedded non-volatile Flash technology

life.augmented

Source: WSTS 2013

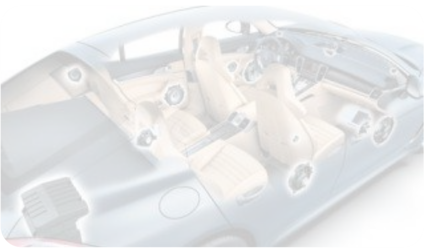
Growth Driver: AP and Digital Consumer

MEMS and Sensors

Smart P

ST #2 Set-Top-Box Player in 2012*

Application Processors and Digital Consumer



Targeting areas where ST leads or will lead

life.augmented

Source: ABI Research, April 2013

Growth from the Smart Home

Target Markets

- Home Gateway – next wave in Set-Top-Box
- High growth in connected clients
- High-end multi-screen environments

Internet Enabled Clients
CAGR 2012-15: 18.5%

ST Strengths

- #2 in set top box worldwide, #1 outside US
- Expanding in cable and rapidly growing connected clients markets
- High performance application processor “Orly”; key design wins in 32/28nm
- Diversified solutions including:
  - New Class 2 – 40nm product family addressing legacy STB
  - Alicante – 28nm DOCSIS 3.0, addressing data and headless gateway
  - Orly – multimedia headed gateway, with best-in-class performance and integration

Source: ABI Research, April 2013, IHS Screen Digest, January 2013, ST

Growth from Digital ASICs

Target Markets

- ASICs for Networking driven by dramatic increase in Internet traffic
- Expanding ASICs in new markets such as gaming
- Exploiting FD-SOI technology

Market Trends

- Internet and Video Traffic
  - X2 every 18 months
  - Emerging Countries
- Smart Home and Gateways
  - Multiple Services
  - Developed Countries
- Growth Opportunity
  - Multiscreen Environment
  - Network Infastructure

ST Strengths

- Expanding share in ASICs through FD-SOI technology in consumer and communications infrastructure
- World-class IP portfolio
- Strong customer relationships in key applications such as Networking

life.augmented

Agenda

Why ST will Win

Focused go-to-market with leading positions

Complete system / application knowledge and integration capabilities

Industry leading silicon process and packaging technologies

World-class manufacturing & supply chain

People

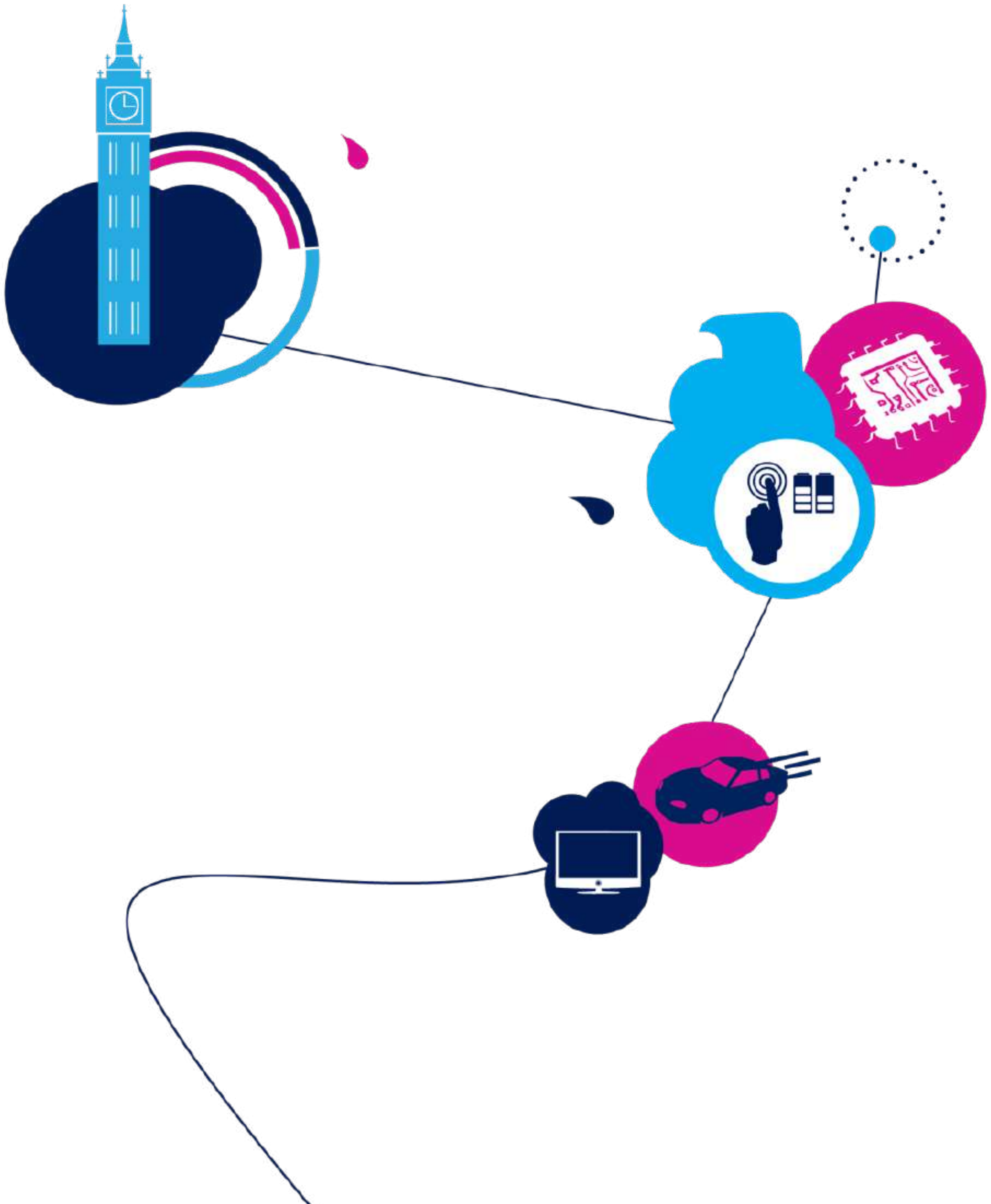
Thank You

life.augmented

Technology R&D and Manufacturing

Jean-Marc Chery

Executive Vice President
Chief Manufacturing & Technology Officer
General Manager, Digital Sector



life.augmented

Agenda

- Introduction
- Technology – Embedded Processing Solutions
- Technology – Sense & Power and Automotive
- Manufacturing
- Conclusion

life.augmented

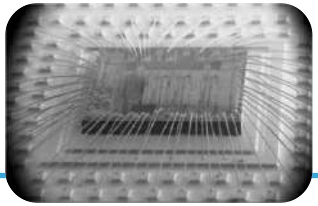
Agenda

- Introduction
- Technology – Embedded Processing Solutions
- Technology – Sense & Power and Automotive
- Manufacturing
- Conclusion

life.augmented

The Right Model for Our Industry

Advanced Technology R&D & Innovation



Application-targeted process & package development

Optimized in-house manufacturing processes

Collaborative Technology R&D
ISDA, Foundry Partners

Flexible manufacturing
Foundry Partners
OSAT partners

Figures of Merit

- Time to market
- Simplicity
- Design Legacy
- Scalability
- Cost, Quality
- Supply security

ISDA: International Semiconductor Development Alliance
OSAT: Outsourced Assembly and Test

Technology Portfolio Enabling Business

Sense & Power and Automotive Products

- Analog, MEMS & Sensors
- Automotive Products Group
- Industrial & Power Discrete

Process

- MEMS
- Advanced CMOS FD-SOI
- Analog Mixed Signal/RF
- eNVM
- Power & Discrete
- CMOS Image Sensor
- BCD
- BiCMOS

Packaging

Embedded Processing Solutions

- Digital Convergence Group
- Microcontrollers, Memory & Security
- Imaging, BiCMOS ASIC & Silicon Photonics

Agenda

life.augmented

EPS - Technology Roadmap

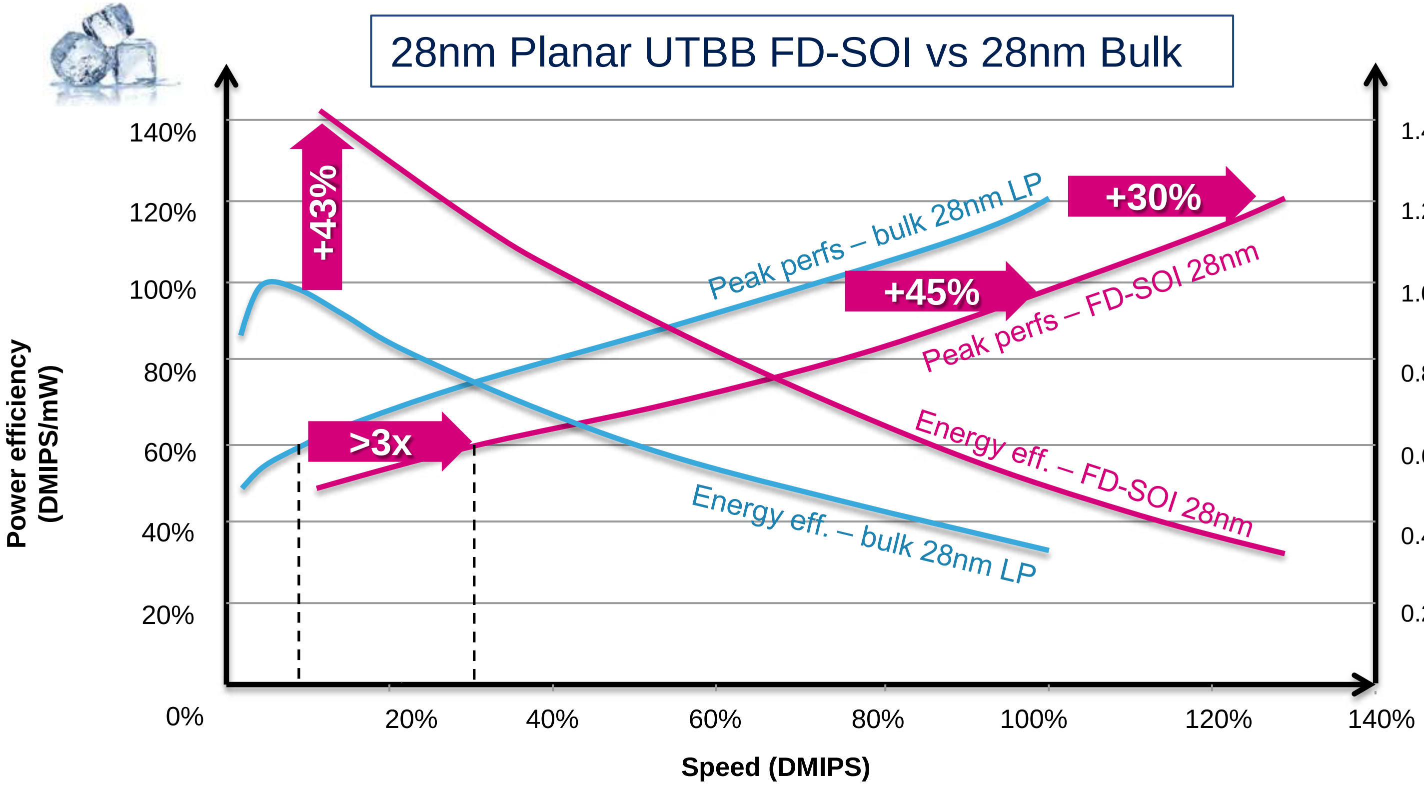
Prototyping start	2013	2014/15	2016/17
CMOS Digital (including RF)	**28nm UTBB FD-SOI**	**14nm UTBB FD-SOI**	**10nm UTBB FD-SOI**

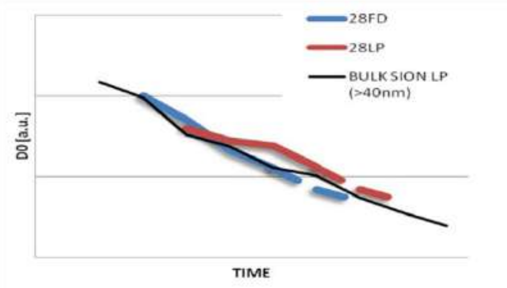
FD-SOI: Fully Depleted Silicon On Isolator
UTBB: Ultra Thin Body and BOX (Buried Oxide)

- Convergence to FinFET expected at 7nm
- FinFET know-how being developed in the framework of the ISDA Alliance

Best in Class Technology at 28nm

- Superior technology at 28nm delivering what customers want
- ST products based on FD-SOI have competitive advantage
- Winning ASIC business thanks to performance/power and simpler process than alternative
- Yield Learning Equivalent to Traditional Bulk Process





life.augmented

Continuing Technology Superiority at 14nm

Performance @ same Vdd

28nm FD-SOI

+30%

14nm FD-SOI

+15%

14nm FD-SOI + FBB

Power @ same High speed

28nm FD-SOI

-50%

14nm FD-SOI

-10%

14nm FD-SOI + RBB

Area scaling

28nm FD-SOI

-40%

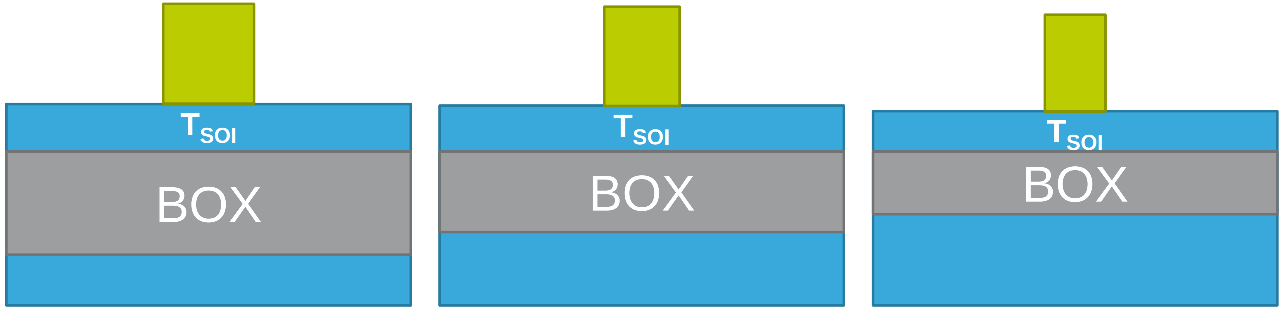
14nm FD-SOI

FBB: Forward Body Bias

RBB: Reverse Body Bias

Planar UTBB FD-SOI

Scalability obtained by reduction of T_{SOI} & T_{BOX}



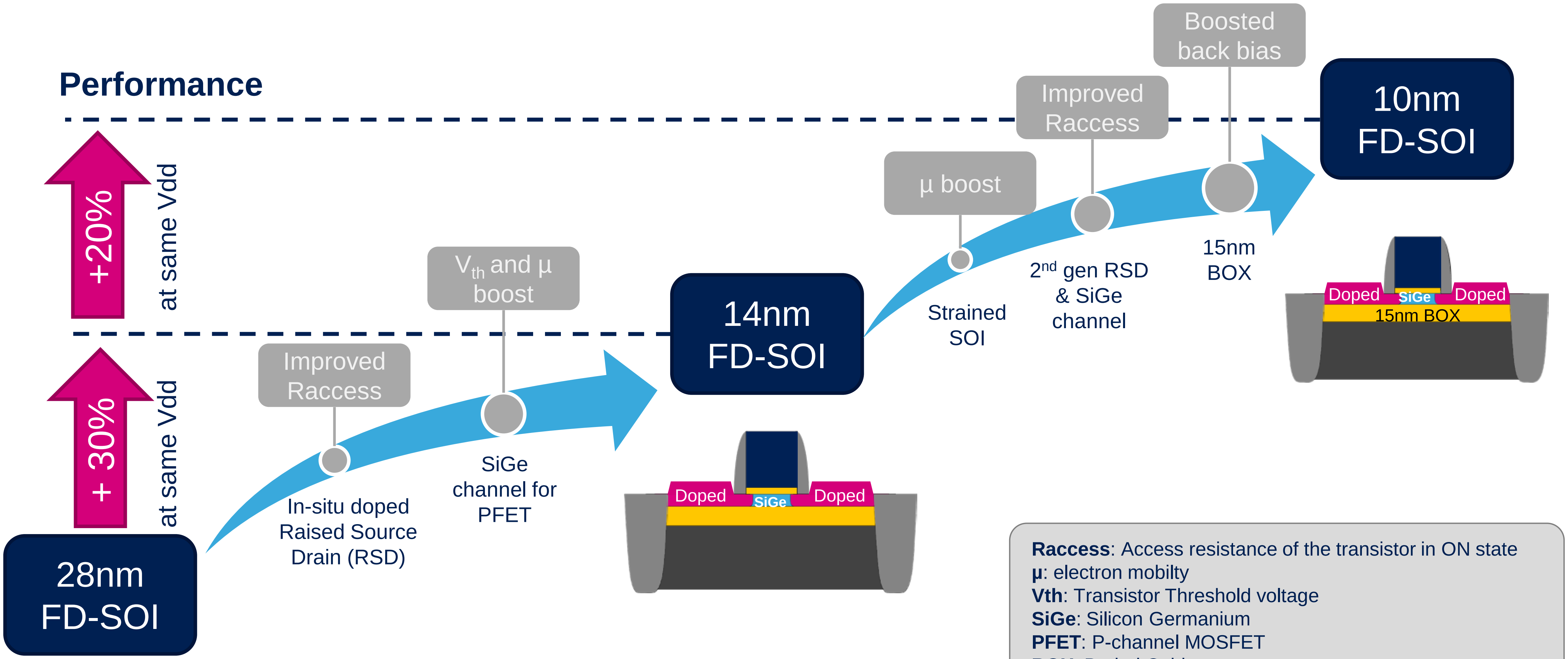
Node	28nm	14nm	10nm
T_{SOI} (nm)	7.5	6.5	6
T_{BOX} (nm)	25	20	15

- Electrostatic control improved by Thinning T_{BOX}
- Scalability down to 10nm node
- Devices already processed with 3.5nm SOI film

life.augmented

Planar UTBB FD-SOI Scalability

Boosters Roadmap



Raccess: Access resistance of the transistor in ON state
µ: electron mobilty
Vth: Transistor Threshold voltage
SiGe: Silicon Germanium
PFET: P-channel MOSFET
BOX: Buried Oxide

life.augmented

EPS - Technology Roadmap

Prototyping start

2013

2014/15

2016/17

CMOS Digital (including RF)

28nm UTBB FD-SOI

14nm UTBB FD-SOI

10nm UTBB FD-SOI

CMOS Imaging
BiCMOS & Photonics

1.4µP BSI / 1.1µP BSI
Photonics 25Gbps

0.9µP BSI
BiCMOS 55nm

Advanced architecture
Photonics 40Gbps

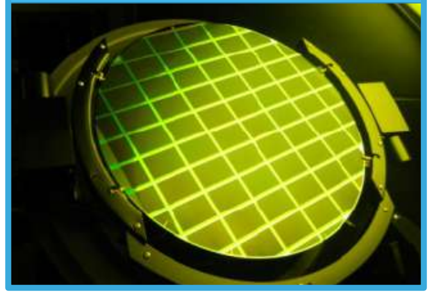
Collaborative R&D through agreement with UMC

BSI: Backside Illumination

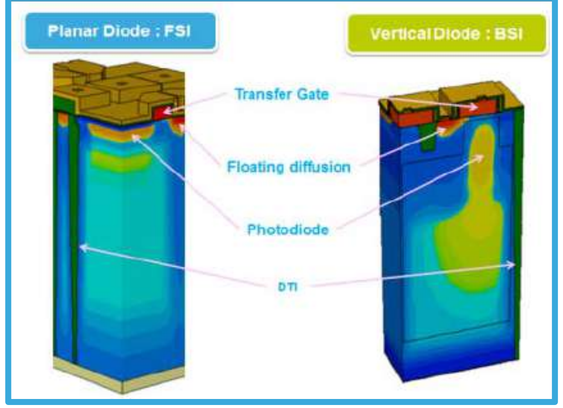
life.augmented

Image Sensors Differentiating Factors

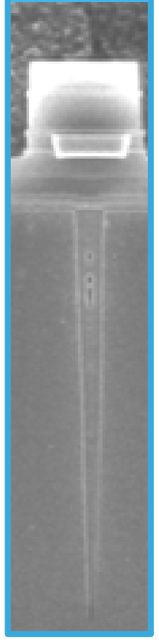
Stitching



Optical Simulations

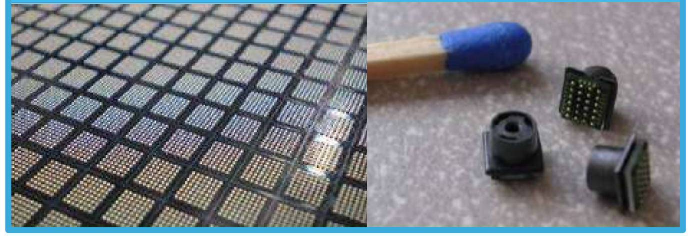


DTI



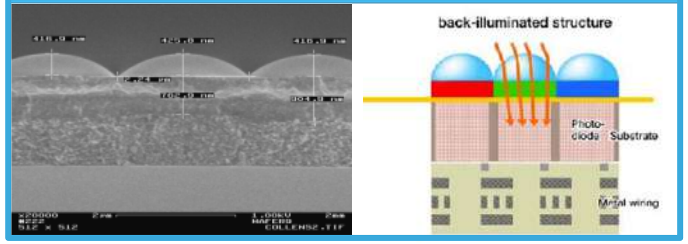
DTI:
Deep Trench
Isolation

TSV - WLP

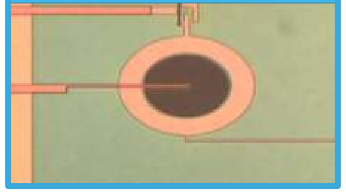


TSV: Though Silicon Via
WLP: Wafer-Level Package

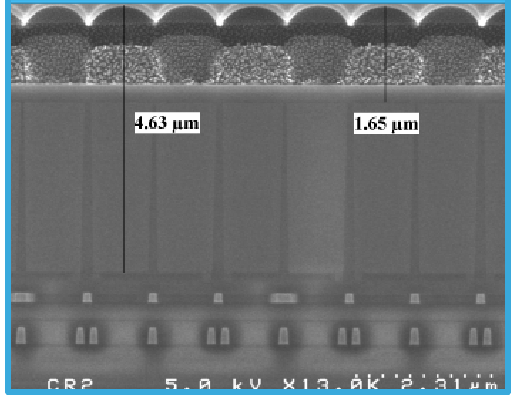
Colorisation / micro-lens



SPAD



BSI



BSI: Backside Illumination

High Speed IOs

Optimized Design Solution

life.augmented

EPS - Technology Roadmap

Prototyping start	2013	2014/15	2016/17
CMOS Digital (including RF)	**28nm UTBB FD-SOI**	**14nm UTBB FD-SOI**	**10nm UTBB FD-SOI**
CMOS Imaging BiCMOS & Photonics	1.4µP BSI / 1.1µP BSI Photonics 25Gbps	0.9µP BSI BiCMOS 55nm	Advanced architecture Photonics 40Gbps
CMOS eNVM* (Automotive MCU) CMOS eNVM* (GP/secure MCU)	55nm NOR 80nm NOR / 90nm PCM	40nm NOR 40nm NOR	28nm PCM

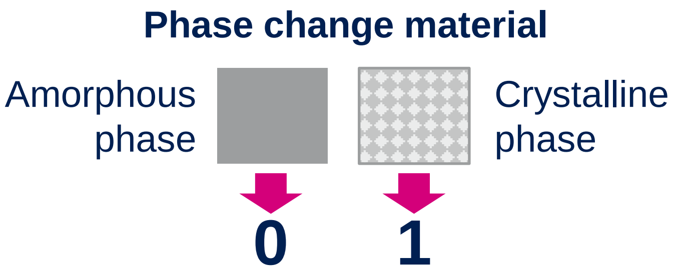
* Logic with embedded memories

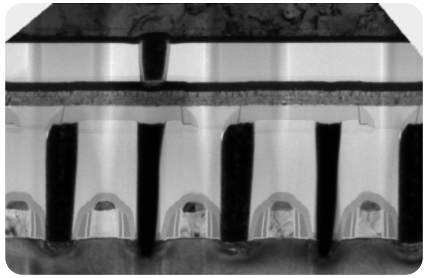
eNVM: embedded Non Volatile Memory
PCM: Phase Change Memories

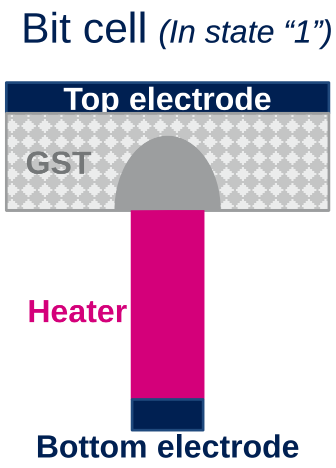
life.augmented

Non-Volatile Memory Differentiators

Phase Change Memory (PCM) Technology



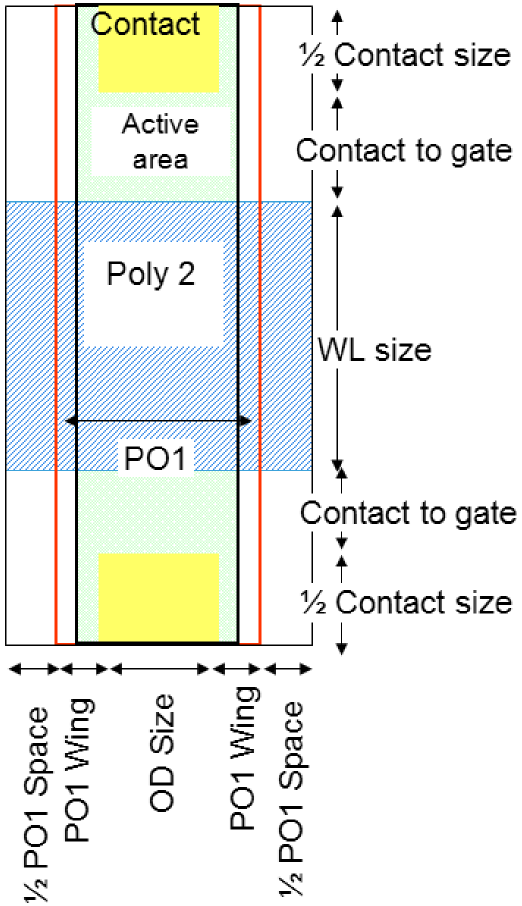


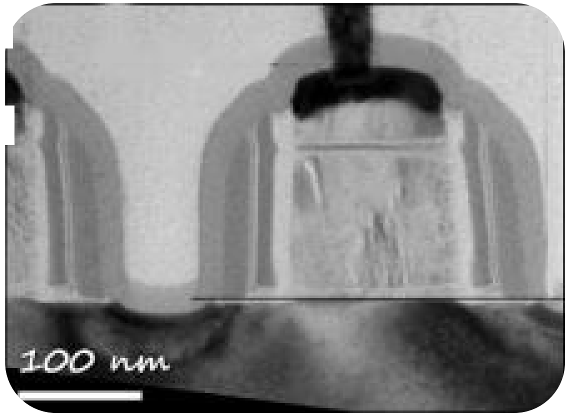


- Breakthrough for process cost saving and improved performance
- Power consumption fitting RF requirements
- Most mature solution among novel memory concepts
- Qualification for the 90nm node

GST: GeSbTe, Germanium-Antimony-Tellurium alloy

NOR 40nm e-Flash





life.augmented

EPS - Technology Roadmap

Prototyping start	2013	2014/15	2016/17
CMOS Digital (including RF)	**28nm UTBB FD-SOI**	**14nm UTBB FD-SOI**	**10nm UTBB FD-SOI**
CMOS Imaging BiCMOS & Photonics	1.4µP BSI / 1.1µP BSI Photonics 25Gbps	0.9µP BSI BiCMOS 55nm	Advanced architecture Photonics 40Gbps
CMOS eNVM* (Automotive MCU) CMOS eNVM* (GP/secure MCU)	55nm NOR 80nm NOR / 90nm PCM	40nm NOR 40nm NOR	28nm PCM

*Logic with embedded memories

Cooperative R&D through agreement with Foundry

FD-SOI: Fully Depleted Silicon On Isolator
UTBB: Ultra Thin Body and BOX (Buried Oxide)

BSI: Backside Illumination
eNVM: embedded Non Volatile Memory
PCM: Phase Change Memories

life.augmented

Agenda

life.augmented

SPA - Technology Roadmap

Prototyping start	2013	2014/15	2016/17
BIPOLAR CMOS DMOS 0-100V	• 160nm/110nm	• 90nm (200/300mm)	• 65nm (300mm)
BIPOLAR CMOS DMOS >100V	• 320nm OL/160nmSOI		
MEMS	• Motion (6 axis, AMR,Geophone) • Actuators	• Environmental (Hr,Temp) • Audio (Hperf Micro) • Actuators	
Power	• 0.35µm • Oxide Filled Trench • Silicon Carbide (SIC)	• 0.2µm • Oxide Filled Trench Gen2 • Gallium Nitride (GaN)	
Discrete	• HV Scr Triacs 1500V • GaN Pschottky 600 V • EnFilm Gen1	• HV Scr Triacs 2000V • GaN Pschottky1200V • EnFilm Gen2	• HV Scr Triacs 2500V • EnFilm Gen3

life.augmented

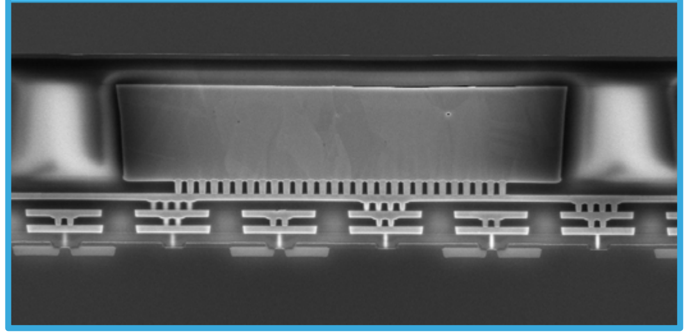
Smart Power: Leading with BCD9S

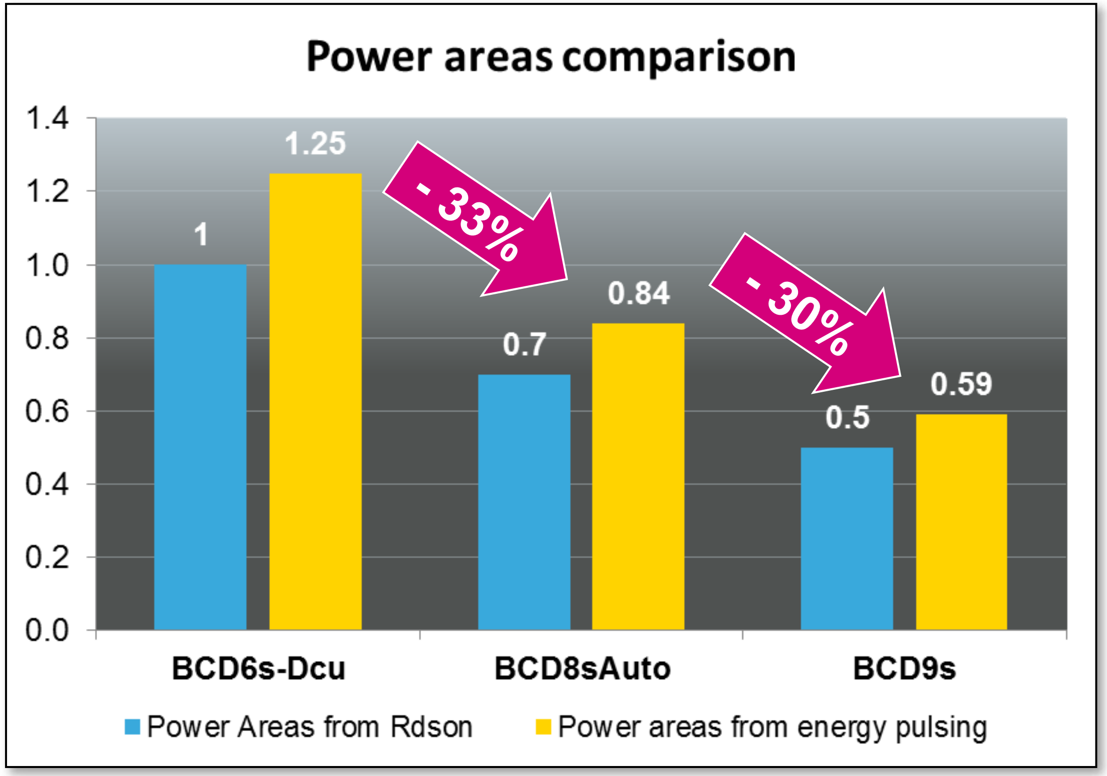
BCD9S

- 1.8V CMOS / 5V Analog
- 8V to 100V
- 130Kgates/mm2

0.11 µm BCD

Full Cu Metallization
Thick (10um) Cu Power Metal





Tier-1 automotive customer award for next generation braking system

life.augmented

All Technologies for MEMS

Silicon Technologies

- Moore's Law: Miniaturization
- More than Moore: Functionalities
- 3D Structure: i.e. MEMS
- Through-Silicon Vias

+

New Materials

- Getters
- Polymers
- Shape Memory Alloy
- Piezoelectric (PZT)
- SiC & GaN
- Graphene

+

Package

- Wafer Level Packaging (Stacked Multi Dice)
- New interconnections (Bondless, Sintering, Cu on Cu)
- Smart System In Package (SiP)

Technology and manufacturing for full spectrum of MEMS

MOTION MEMS

Accelerometers
Compass
Gyroscopes
Brain

MICRO-ACTUATORS

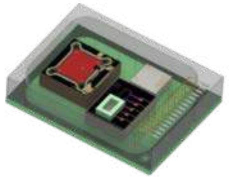
Electrostatic
Piezoelectric
Thermal

ACOUSTIC MEMS

Microphones
Loudspeakers

ENVIRONMENTAL MEMS

Pressure
Temperature
Humidity
Chemical
Infrared



life.augmented

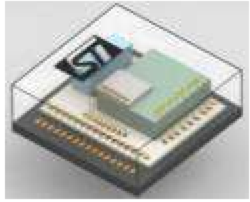
Packaging Technology R&D

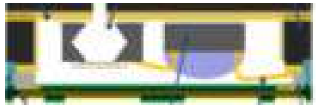
Applicative | **Advanced**

Sense

MEMS & microphones (LGAs)

Optical modules and Imagers towards BSI





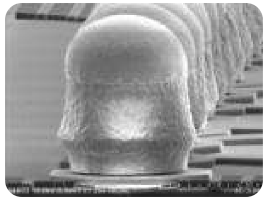
Power & BCD

High dissipation, miniaturized packages (PSSO, QFNs)

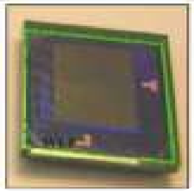
Digital with advanced CMOS

Integration and miniaturization based on BGAs.

Towards Flip Chip &WLP



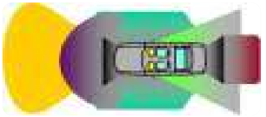
Mastering all Technologies and Manufacturing for Automotive



CMOS Video Cameras for active safety

28nm CMOS video processor for active safety

28nm FD-SOI for the navigation



0.13um BiCMOS RF 24/77GHz Radar for active safety

Crolles: CRO300

PMOS, IGBT, VIPower for Power Actuator

Power™

40nm e-Flash for 32-bit Microprocessor

Agrate: AG8/AGM/R2

SOI technology for battery control

powered by Li-Ion technology

110nm BCD Smart Power for Safety, Engine, Body

Power module for electrification

life.augmented

Priorities for 2013 - Technology

2013

BCD9S technology platform to be ready for production

Power ASIC for Automotive (ABS/ESP) engineering samples delivery demonstrating superior device performances and die area reduction

FD-SOI 14nm technology to be ready for prototyping and IPs validation vehicles for superior performances and low power consumption SoC and ASICs

Embedded Flash 40nm technology for high performance MCUs

Readiness for prototyping and IPs validation vehicles

life.augmented

Agenda

- Introduction
- Technology – Embedded Processing Solutions
- Technology – Sense & Power and Automotive
- Manufacturing
- Conclusion

life.augmented

Manufacturing Model

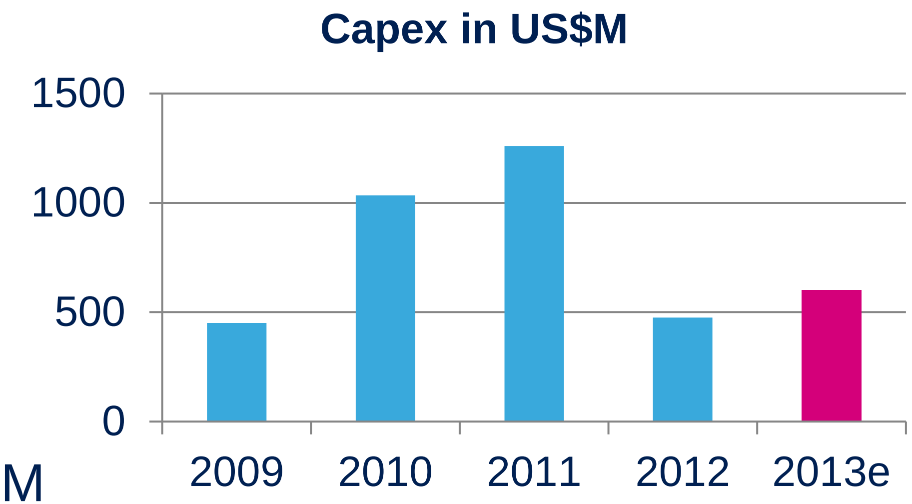
- Manufacturing model unchanged
  - Independent manufacturing
  - Supply flexibility provided by foundries
- Efficient manufacturing tool at about $2.2-$2.3B/quarter run rate
- 6 Front-end sites
  - 20% outsourcing target
- 6 Back-end plants
  - 30% outsourcing target

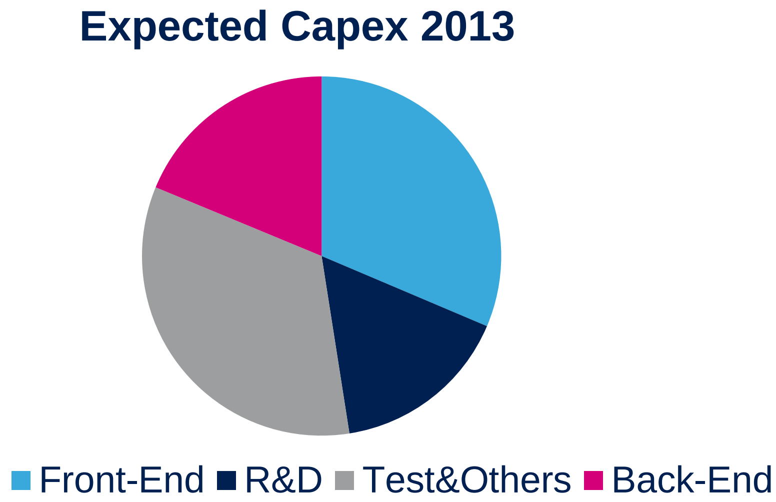
Front-End
Back-End

life.augmented

Manufacturing & Technology R&D CAPEX

- Proven ability to significantly modulate Capex
  - Essentially driven by decisions to add global capacity on top of technology mix evolution
- 2013 Capex expected to be approximately $550-$600M
  - 300mm 14nm FD-SOI capability
  - 300mm Image Sensor BSI capacity
  - MEMS
  - Smart-Power mix change
  - Capacity increase & mix evolution in back-end
  - Copper wire conversion





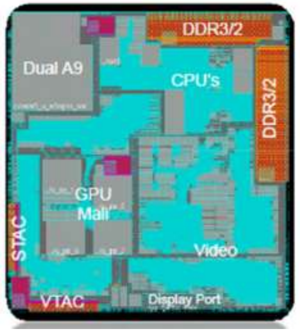
life.augmented

Internal Manufacturing Advantage

We win business thanks to the full control and flexibility in our supply chain

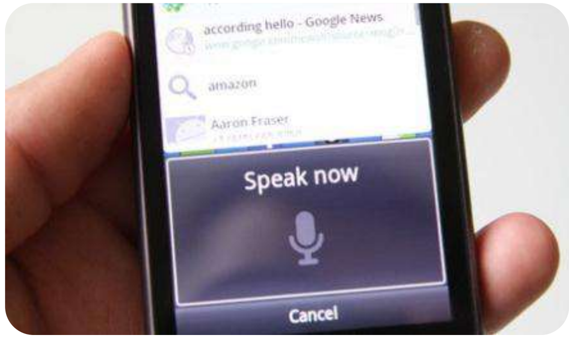
Digital

- Fastest prototyping service
- Fast ramp to volume



MEMS

- Fast ramp to volume
- Control of all the parts



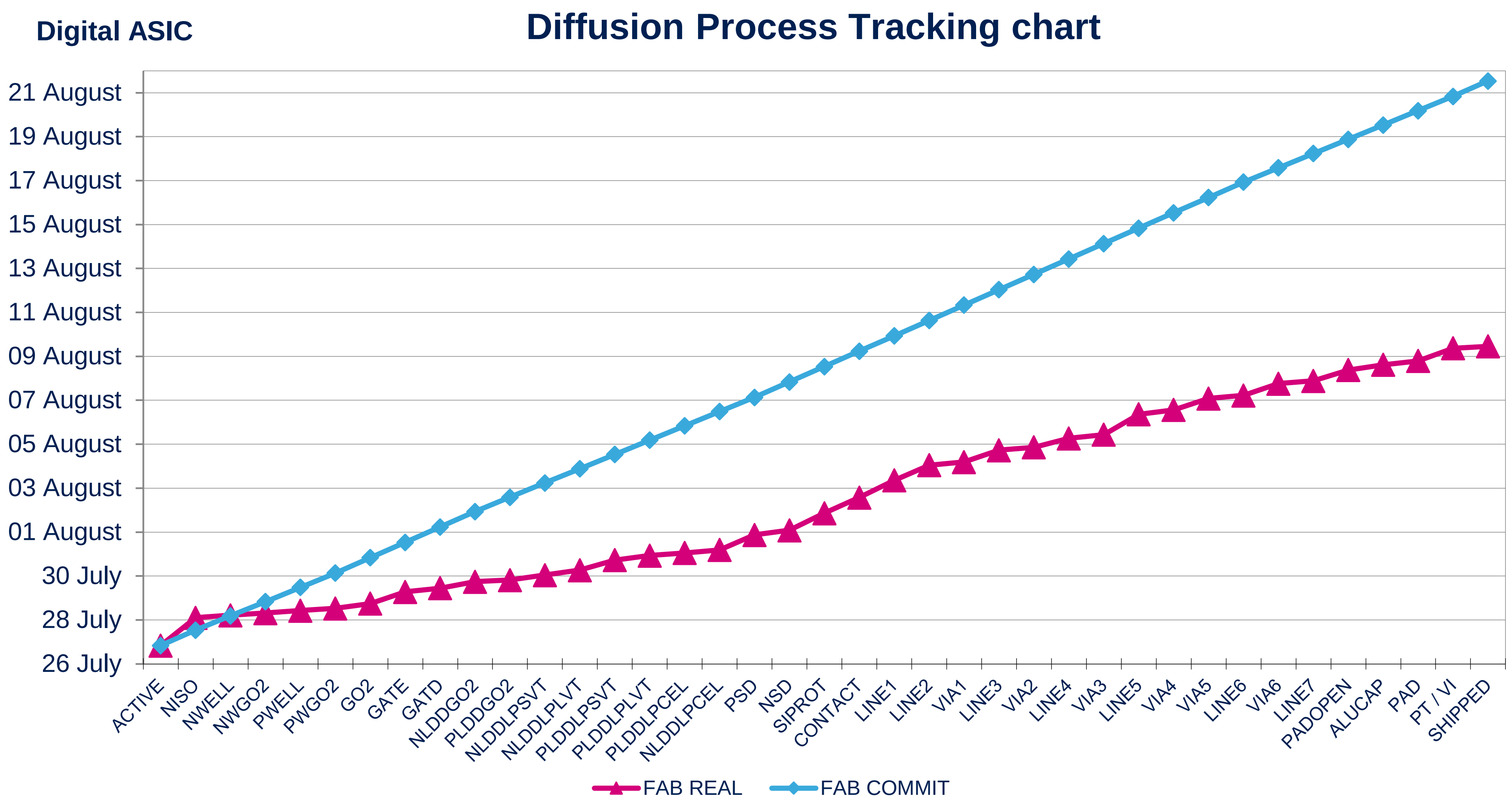
Automotive

- Customer requirement
- Quality & Reliability

life.augmented

Fastest Prototyping for Digital ASIC

Prototype shipped 13 days in advance of committed schedule with 0.37 days per mask layer



Priorities 2013 – Manufacturing

2013

300mm Crolles
- CMOS FD-SOI 28nm Manufacturing ramp-up
- Imaging 1.4µP BSI volume production

eNVM and RF/Analog
- 90nm e-Flash high volume production
- Optimized130nm RF SOI in production ramp-up

Smart Power and Discrete
- BCD mix evolution to 0.16um / thick Cu
- IGBT 650/1200V production ramp-up

MEMS
- 6-Axis combo volume production
- µPhone and Compass production ramp-up

Innovation
Time to volume
Quality Excellence
Lean Manufacturing
Productivity
Cost reduction

life.augmented

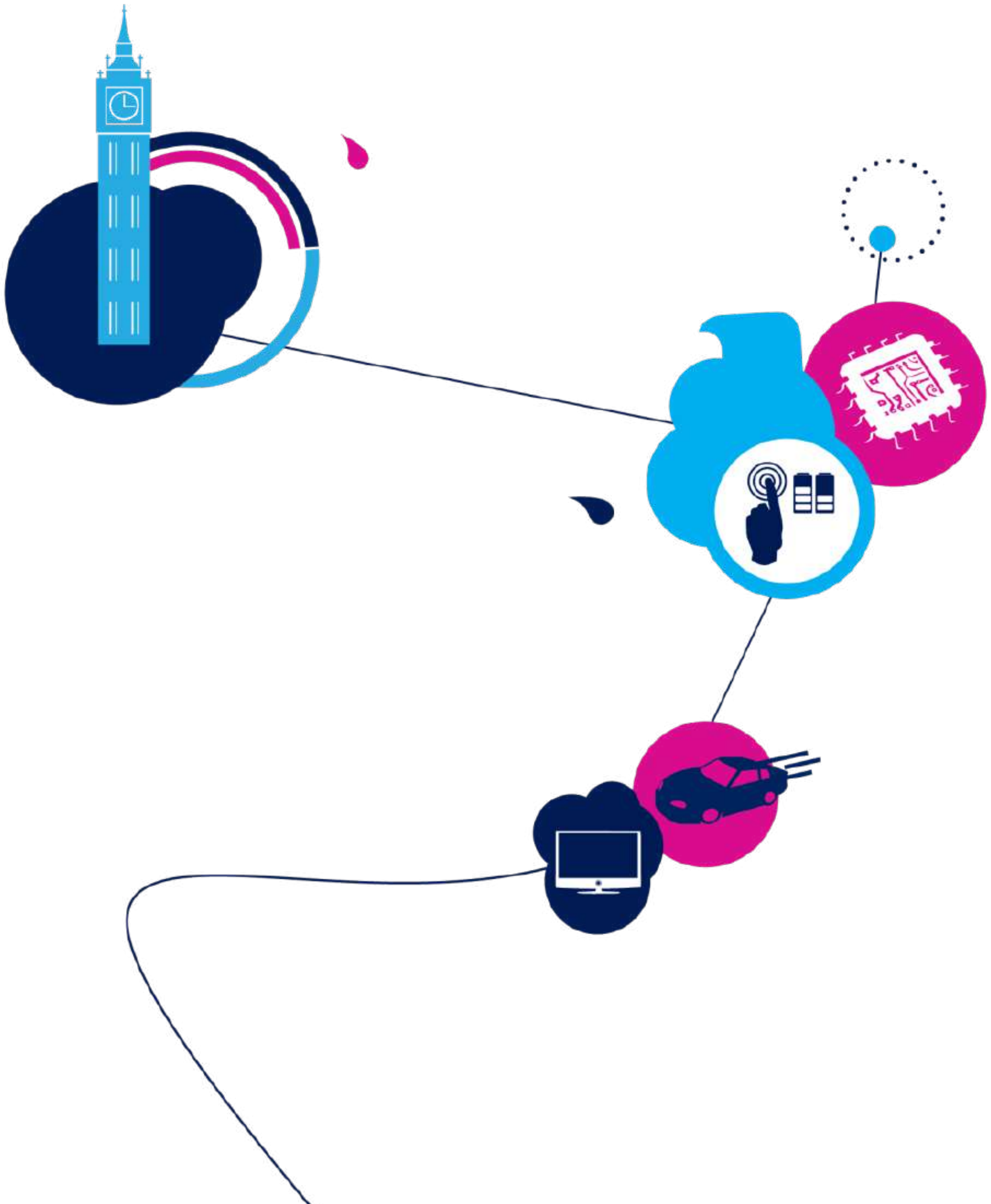
Thank You

life.augmented

Analog,
MEMS & Sensors

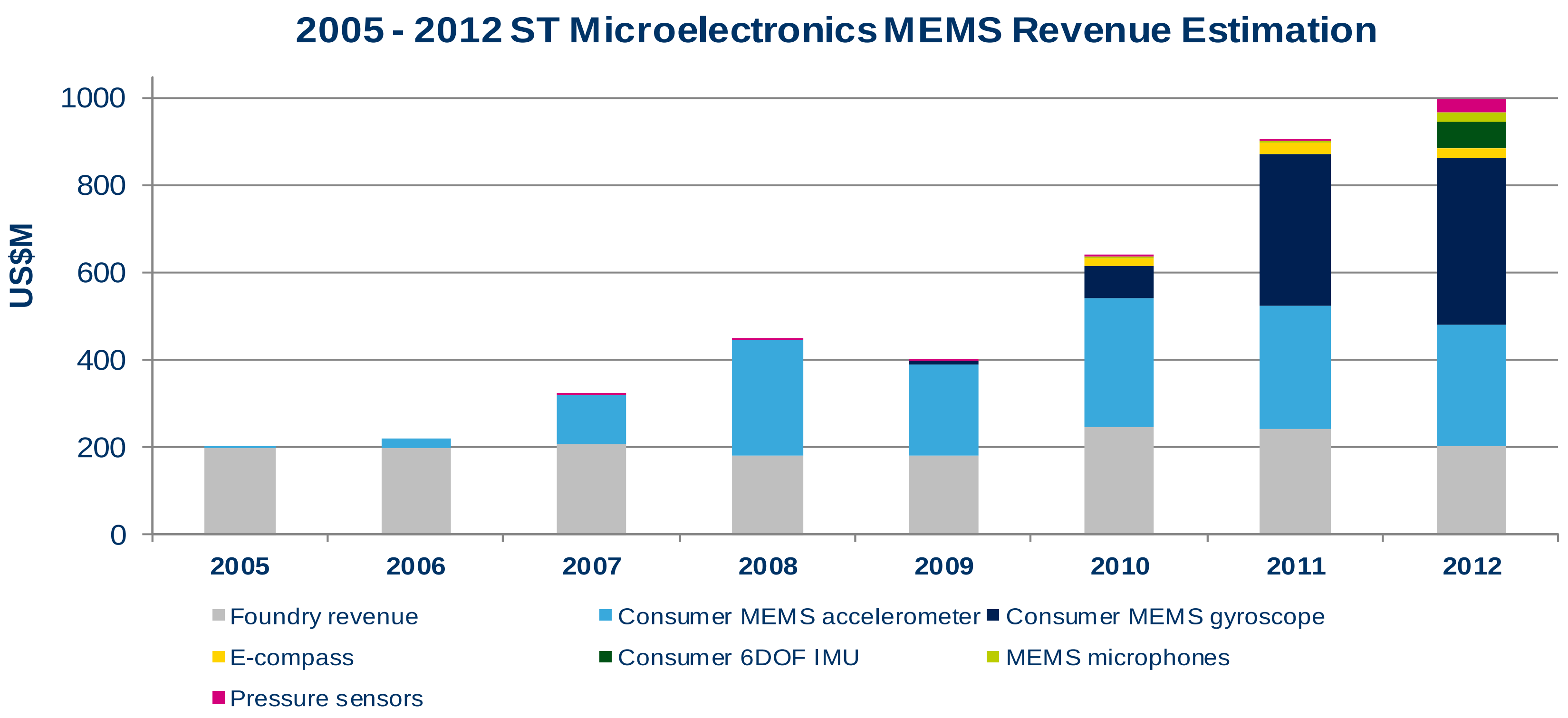
Benedetto Vigna
Executive Vice President,
General Manager, Analog, MEMS & Sensors Group

Marco Cassis
Executive Vice President,
President, Japan-Korea Region



life.augmented

Leading the global MEMS World with a Rainbow of Products

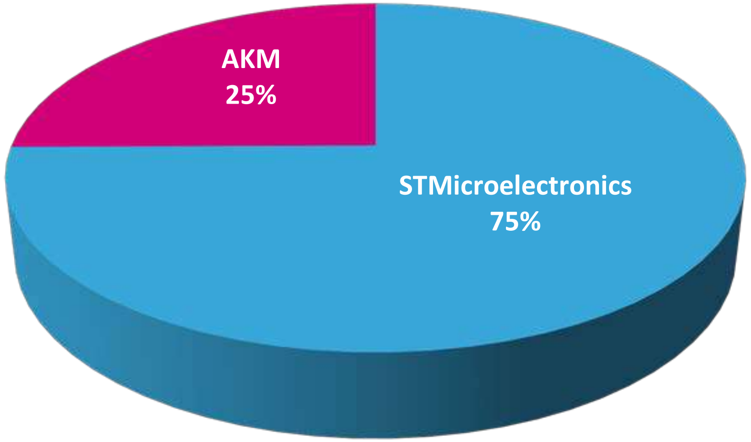


First MEMS company to reach $1,000M!

life.augmented

Source: Yole développement, Feb. 2013

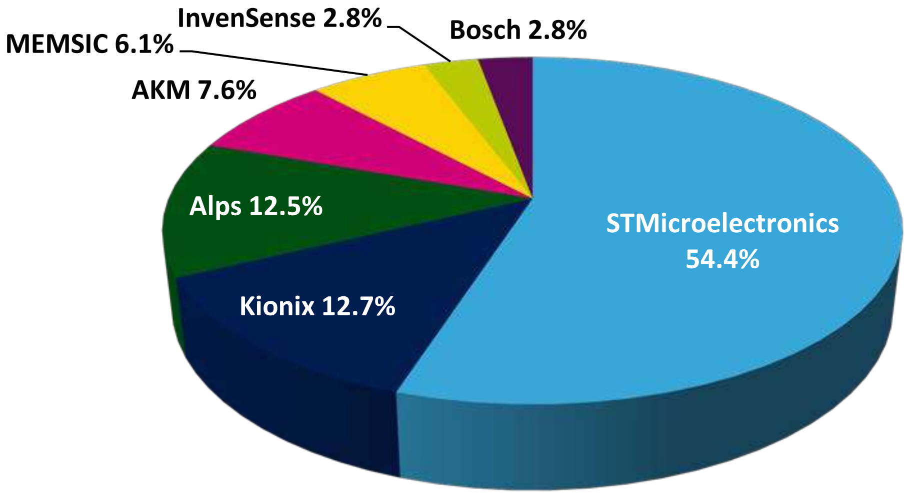
Growing faster than the Competition in all Operating Systems



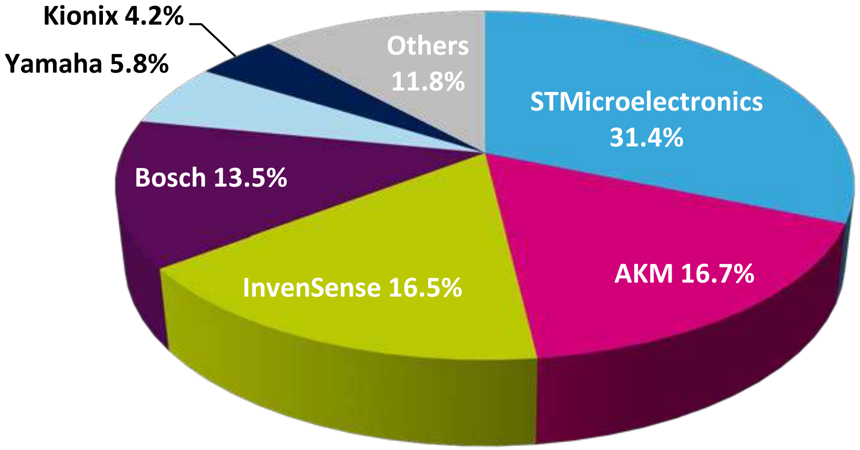
iOS

Motion MEMS for Phones and Tablets

Market: +16.6% YoY
ST: +30% YoY



Windows



Android OS

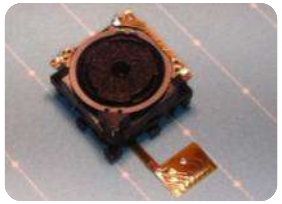
life.augmented

Source: iSuppli (MEMS H2 2012 Special Report)

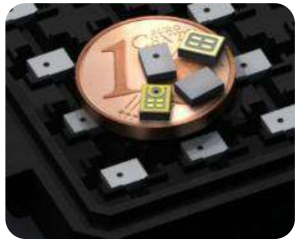
Beyond Motion MEMS

2012

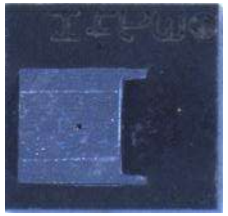
High volume production of Dual Core Gyroscopes for Optical Image Stabilized Camera



High volume production of Digital Microphones for many customers

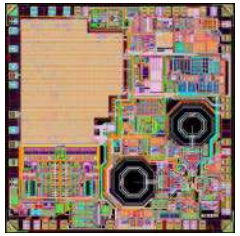


High volume production of Pressure Sensors



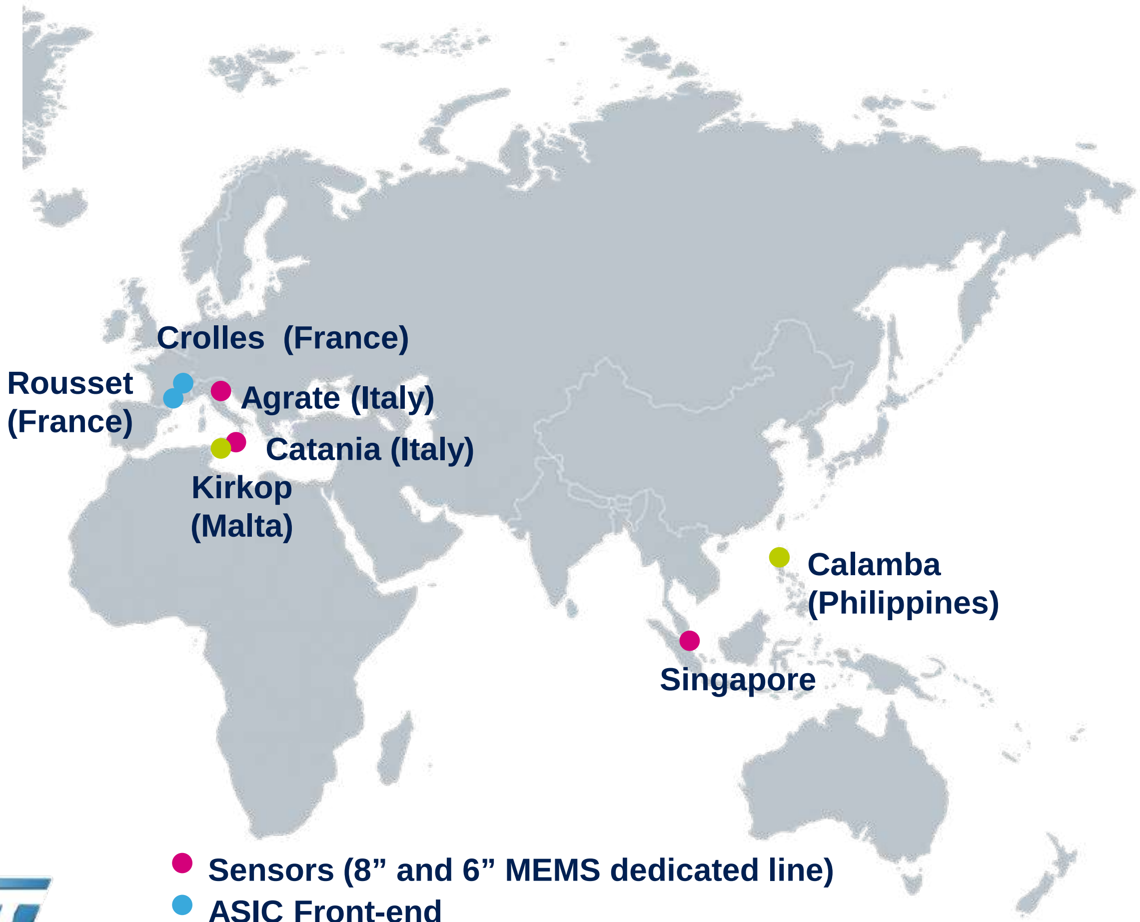
Production Start of Accelerometer for Vehicle Air Bag

Production Start of Low Power Sub-GHz Radio

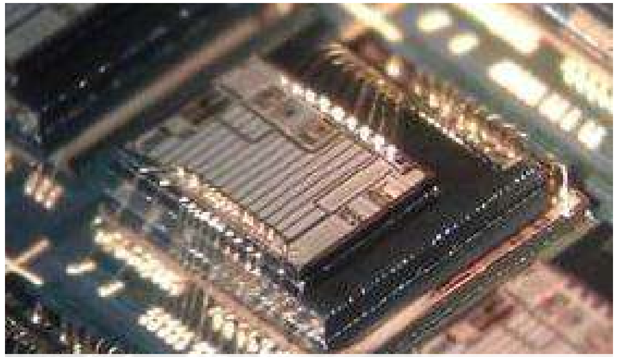


Almost One ST MEMS shipped per Person in the World

Outstanding Global Manufacturing Capability with Dual Sourcing



- Sensors (8” and 6” MEMS dedicated line)
- ASIC Front-end
- Assembly & Testing



Accelerometers, Gyroscopes, Compasses,Microphones and Pressure Sensors

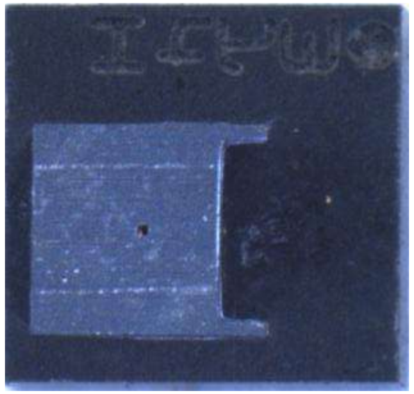
3.3 Billion units of Sensors

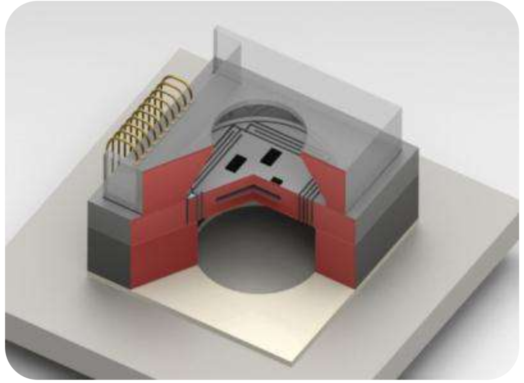
+

3.2 Billion units of Inkjet Printheads

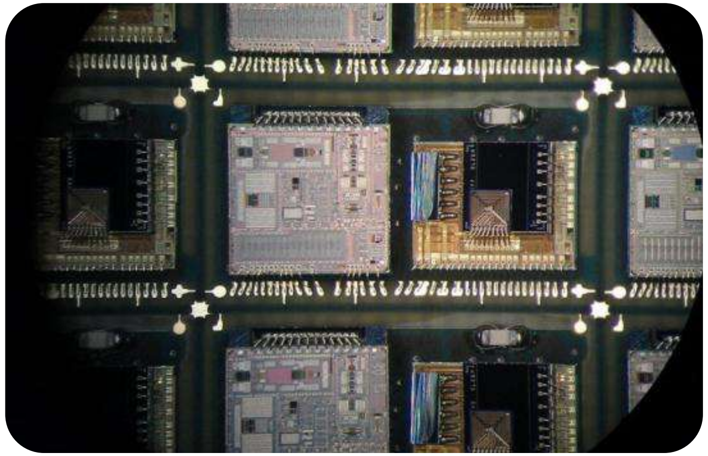
life.augmented

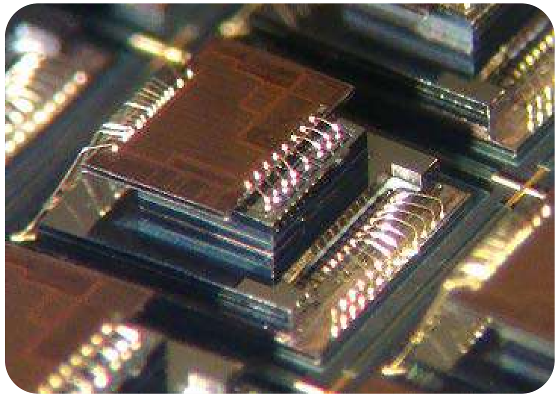
A Wide and Flexible Technology Portfolio





New Sensors: Environmental and Acoustic

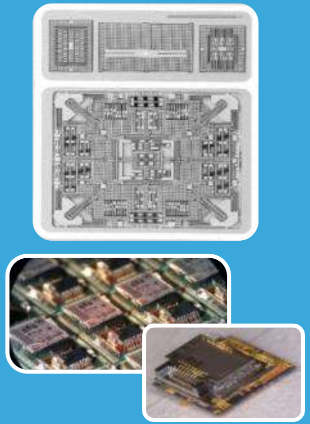




New Systems: Sensors + Brain + RF

life.augmented

The Six Pillars of AMS Growth

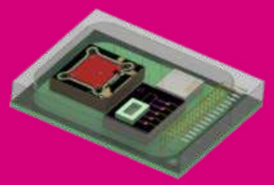


MOTION MEMS

Accelerometers
Compass
Gyroscopes
Brain

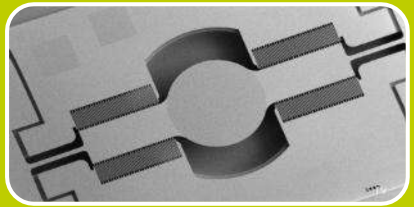
ACOUSTIC MEMS

Microphones
Loudspeakers



ENVIRONMENTAL MEMS

Pressure
Temperature
Humidity
Chemical
Infrared
Gas Flow



MICROACTUATORS

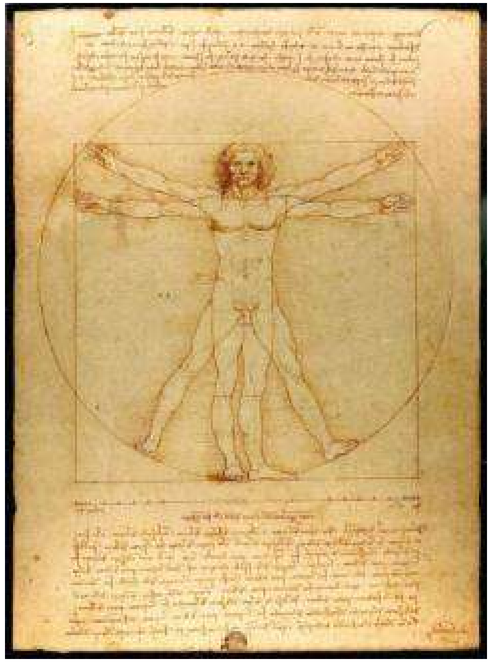
Electrostatic
Piezoelectric
Thermal

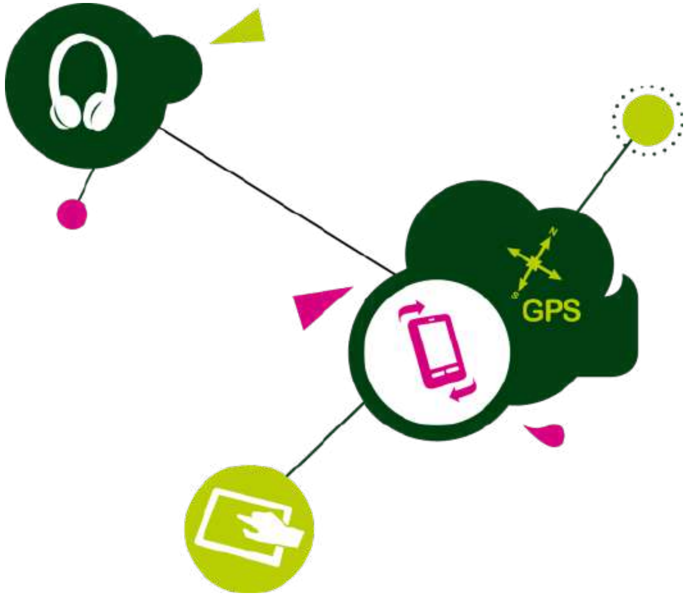
Low Power Brain

Low Power RF

The Market Opportunity for AMS

- *Humanization* of the technology driven by a radical change in User Interface
- Augmented applications with more silicon inside
- Smart(er) Environment
  - Phone
  - Home
  - Car
  - City
  - Grid





life.augmented

Leading the User Interface Revolution

Legacy interfaces for **Industrial** and **Consumer** appliances

Gesture

Voice

Touch/Proximity

More Natural, More Intuitive, More Convenient

The FingerTip Revolution

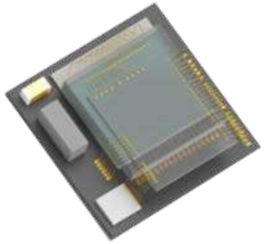
Hovering touch

Touch, anyway, anywhere, anytime

Gloved touch

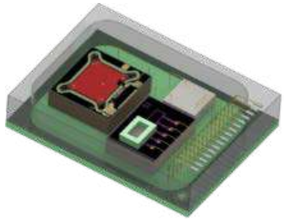
Waterproof touch

The Three Hubs for Augmented Applications



Motion HUB

- Accelerometer
- Gyroscope
- Compass



Environmental HUB

- Pressure
- Temperature
- Humidity

Acoustic HUB

- Microphone-Array
- HP Microphone

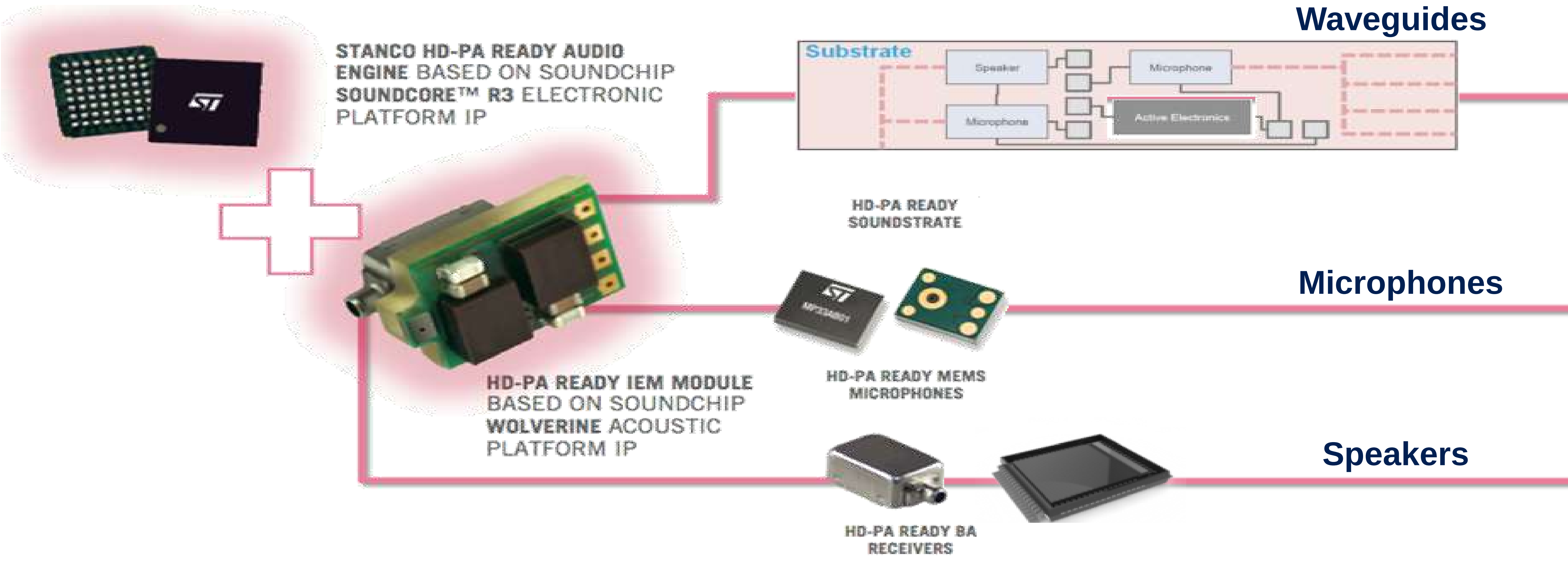
life.augmented

The Emerging Environmental Hub

Humidity, Pressure, and Temperature sensors

Re-engineering the personal barometric station

In-Ear Wearable Acoustic Hub



Fits like a headset, Sounds Clear and Natural: Open up your senses

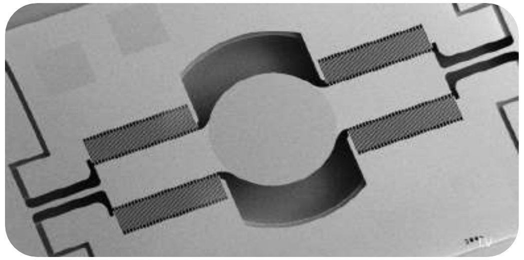
life.augmented

Augmented MEMS Fusion Engine

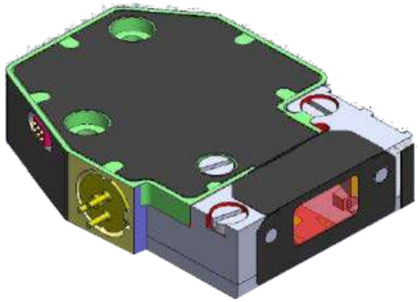
- Indoor Navigation
- 3D voice positioning
- Audio navigational hints
- Geo-localized contents
- Acoustic point-of-interests

Merging 2 Hubs for an Enhanced Navigation Experience… Anywhere

MEMS for Personal Projection

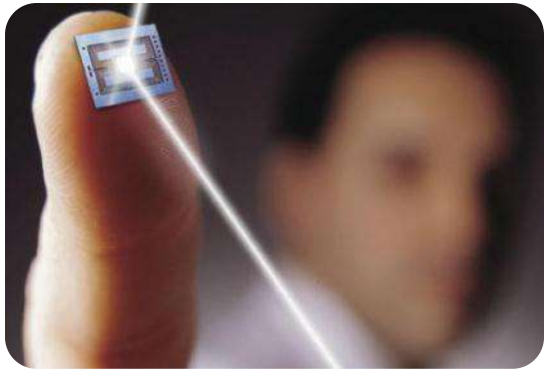


MicroMechanical
Mirrors



Optical Engine
~ 1.5 cm^3

Low Power Electronics



… ST makes Video "naturally augmented" through MEMS actuators and low power electronics

Smart(er) environments

Smart Phone

Smart Home

Smart Car

Smart City

Smart Farm

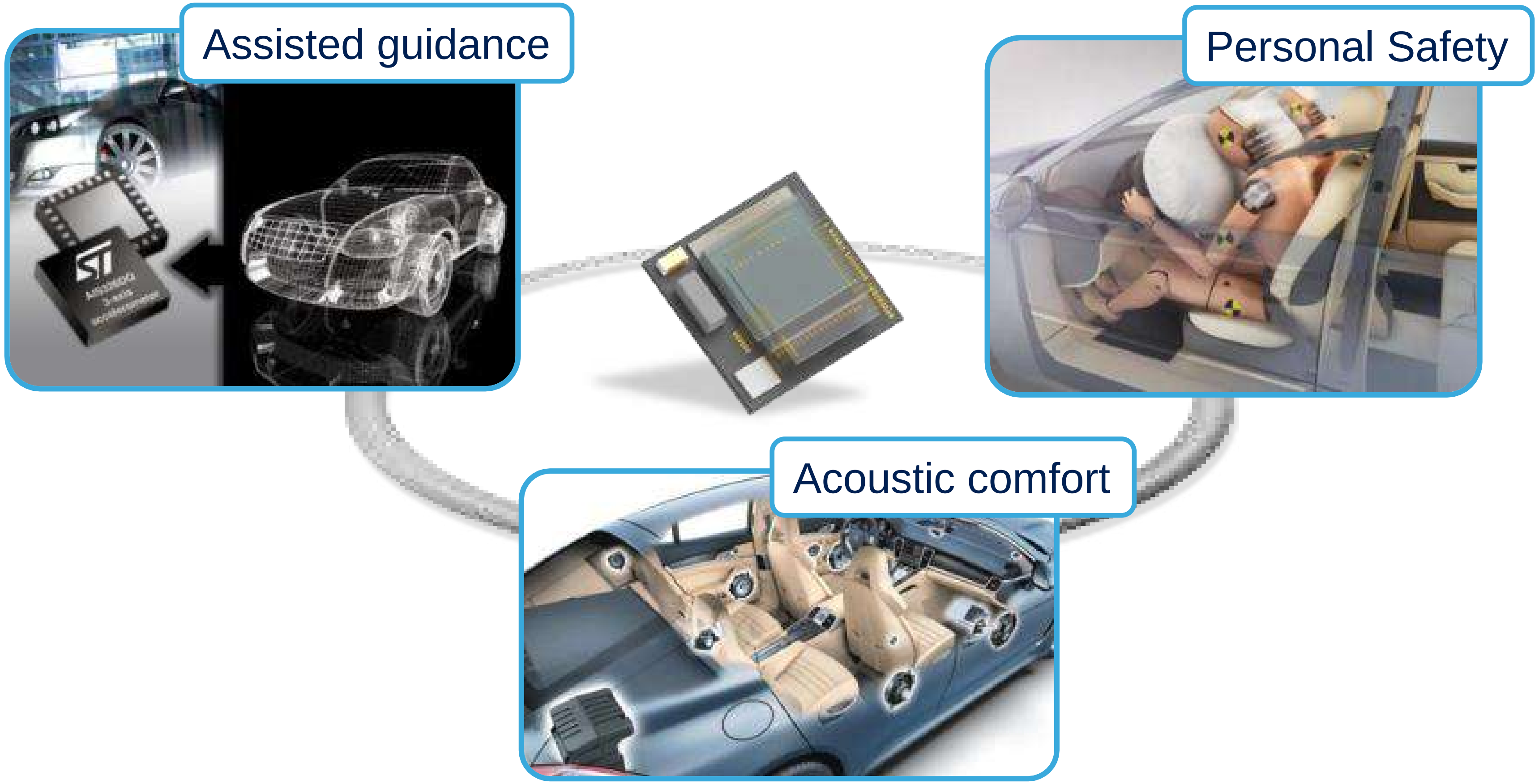
New “silicon-intensive” markets are opening

Envisioning Smart Street Lamps

- Push-to-talk systems
- Voice assisted support
- Noise driven dimmable light
- Automatic camera activation

Automatic WARNING pre-alarm dispatched upon abnormal audio level increase
(i.e. violent crimes or vandalism)

MEMS for the Smart Car



… ST enables a safer, easier, and richer interaction with cars with automotive dedicated sensors

Sensors in Accessories for a Smarter Personal Experience

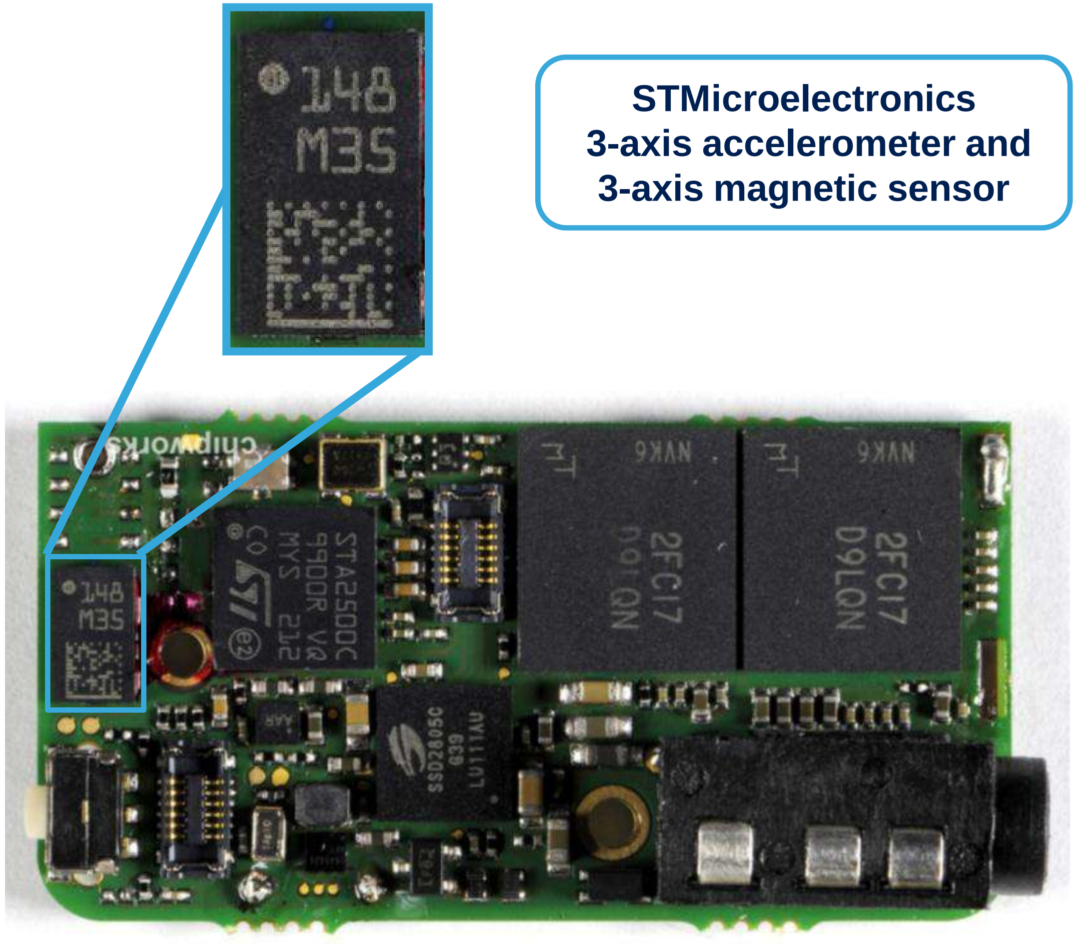
Wireless

Wired

… ST brings Augmented Reality to everyday life
with augmented accessories

Bringing Sensors to Watches

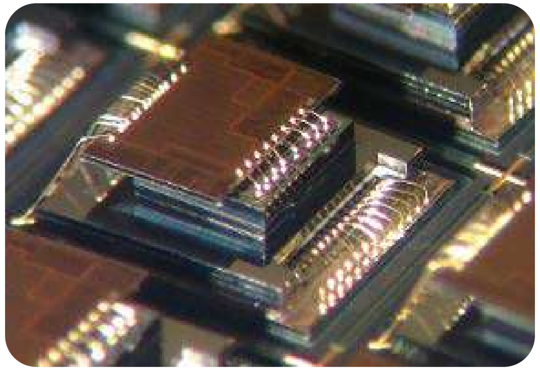
I'm WATCH: http://www.imsmart.com/it



STMicroelectronics
3-axis accelerometer and
3-axis magnetic sensor

Source: Chipworks

Wireless Sensors for Fitness and Wearable



… ST connects RF sensors to enable
new services, new products, new customers

Enabling the Internet of Things

Sensors

Smart Sensors + On-Board Radio

Sensors (MEMS) → Analog (ASSP) → Wireless (RF)

Sensors & Radio in Smart System

Sensors (MEMS) → Analog (ASSP) → MCU → Wireless (RF)

RF

Sport & wellness

Healthcare

Building

Logistics

Factory automation

Priorities for 2013 Analog, MEMS & Sensors

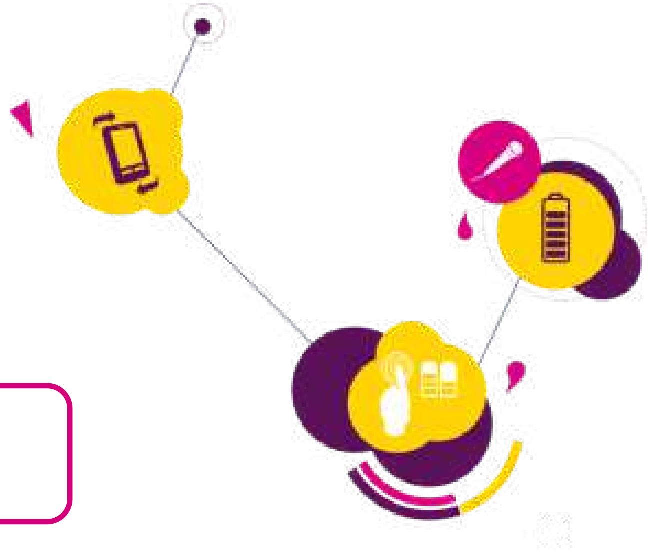
2013

High volume production of ultra-small package Motion MEMS and Sensors - discrete and integrated

High volume production of Touch Screen Controllers with embedded hovering function

Double-digit revenue growth in new mid and high-end Op Amp families

High volume production of high-performance Microphones

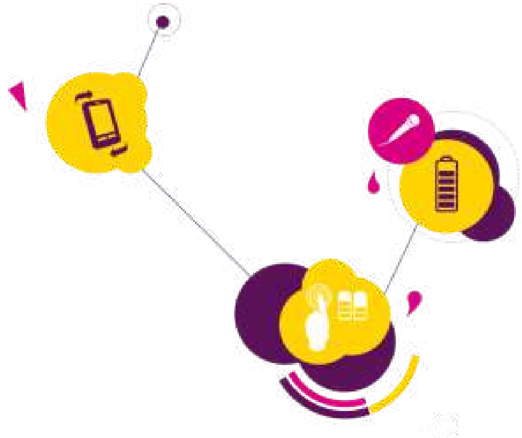


Meeting Our Expense Target Contribution

life.augmented

Summary

- #1 in the global MEMS market and continuing to gain share
- Providing complete sensing solutions, with high levels of integration, signal processing ,and miniaturization:
  - Motion, Environmental, Audio Hubs
  - Touch Screen Controllers
- Continuing to accelerate the pervasion of silicon-based solutions:
  - Opening new markets traditionally based on technologies other than silicon
- Continuing to grow in mobile consumer while expanding presence in new areas for ST:
  - Fitness and Wearable
  - Automotive
  - Healthcare
  - Internet of Things



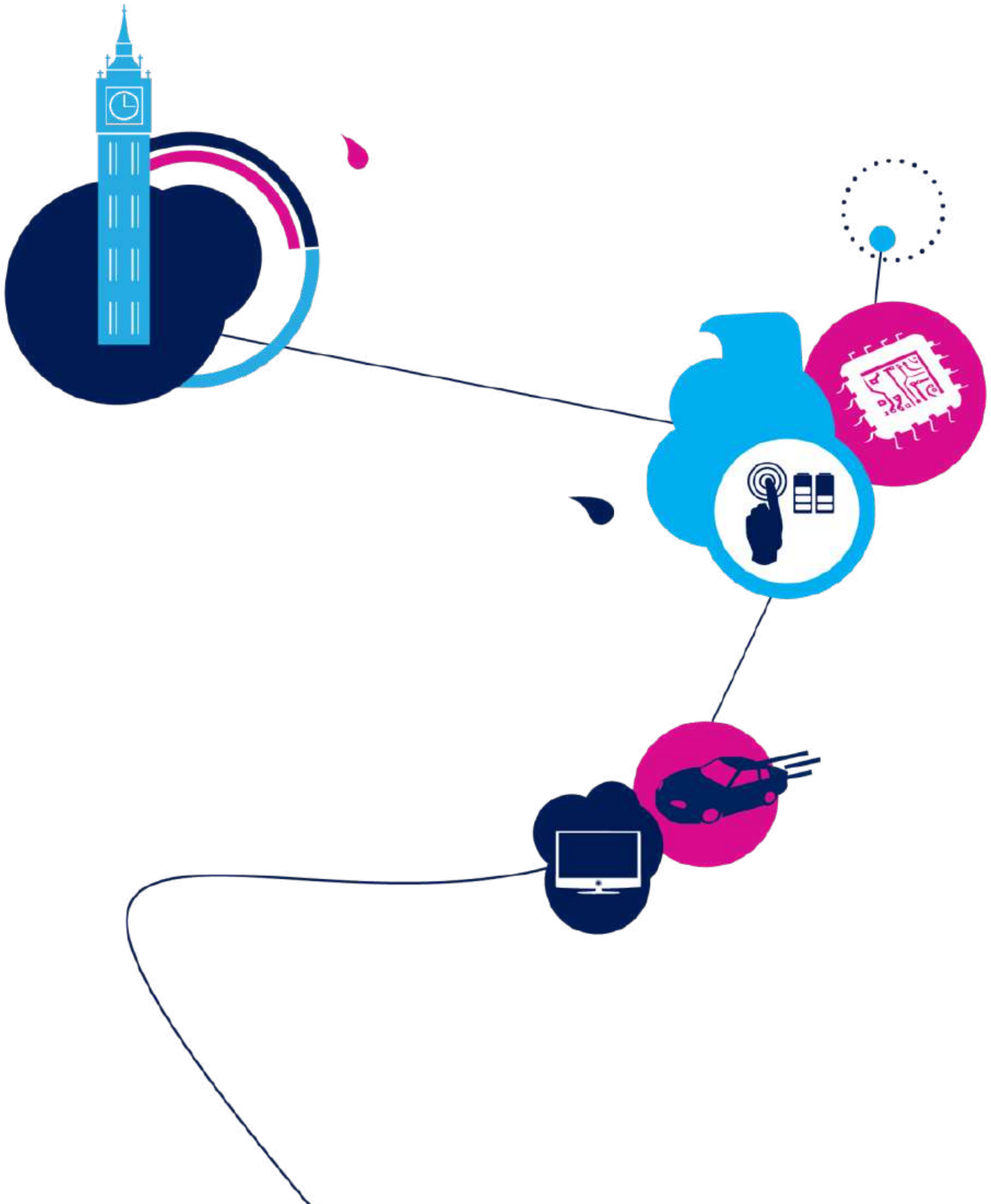
Thank You

life.augmented

Automotive Product Group (APG)

Marco Monti
Executive Vice President,
General Manager, Automotive Product Group

Paul Grimme
Executive Vice President, General Manager,
Sales & Marketing, Europe, Middle East and Africa



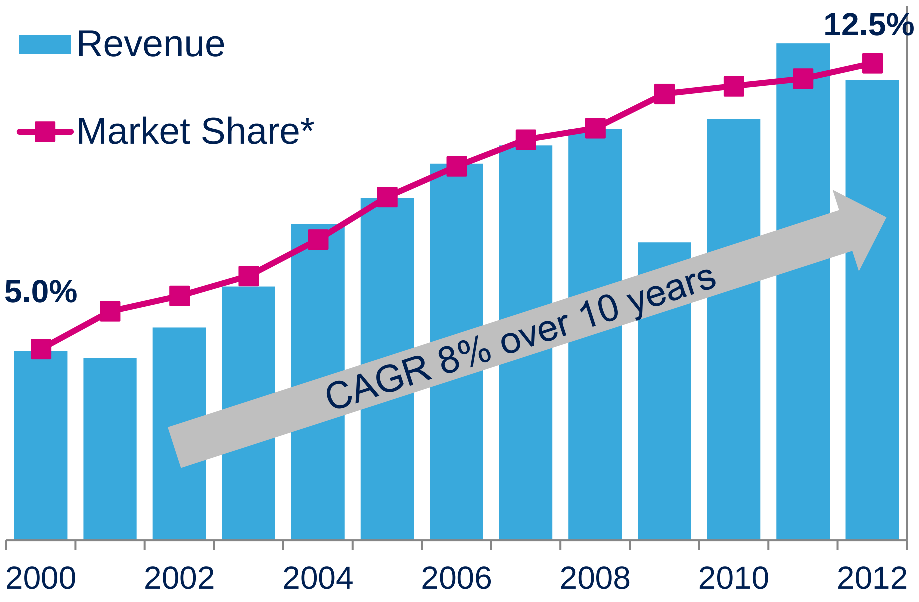
life.augmented

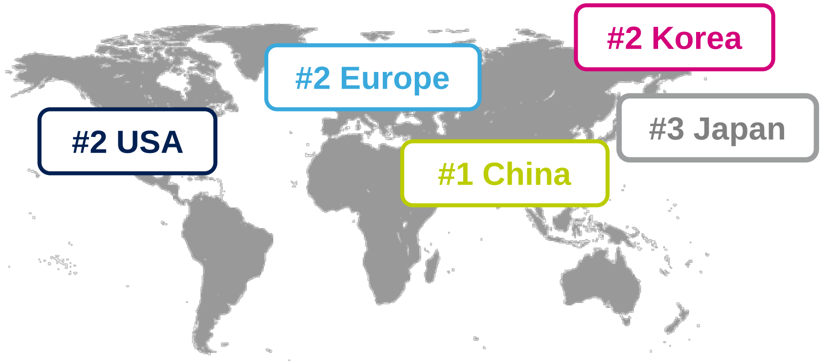
Automotive Product Group Highlights

- Solid position in Automotive
  - #3 worldwide with leading positions in many applications
  - Outperforming market growth
- Opportunities to expand the top line
  - Proliferation of innovative systems in cars
  - Wins achieved in emerging markets
- Complete product portfolio offer
  - High innovation content
  - Existing offer now complemented by new MCUs
- Strong Technology portfolio
  - Thanks to alliances and partnerships, ST's technology R&D portfolio and manufacturing machine

ST Automotive product strategy aiming to consolidate market position, grow more than the market and improve profitability in the coming years

Automotive Product Group at a glance





A leading market position

Total ST**	
3	ST

Smart Power**	
1	ST

Infotainment**	
2	ST

APG SAM**	
2	ST

ASIC**	
1	ST

Active safety***	
1	ST

Broad range product offer

APG

- **Infotainment**
  - Telematics & GPS
  - Car Infotainment
- **Body Electronics**
  - Door Modules, Anti-theft
  - Lighting, Wipers BCM
- **Chassis-Safety**
  - Braking Vehicle Steering
  - Airbag Active safety
- **Power Train**
  - Engine
  - Transmission

*WSTS 2013, **IHS iSuppli, Auto 2013, ***Strategic Analytics, 2013

Covering all different automotive applications

life.augmented

ST in Automotive today

- Gaining market share in a moment of market downturn
- Well balanced geographical sales to absorb market fluctuations
- Market leadership in Smart Power with more than 25% share
- Market Leader in high value high complexity ASIC
- Market leader in fast growing infotainment, positioning & digital broadcasting applications
- Well recognized leader in technology and innovation for Automotive

Global and balanced presence

Solid link with European Market Leaders

Well positioned in USA

Historical presence in Japan and Korea

Growing faster than market in China

Growth path in other emerging countries

life.augmented

Key Priorities

Grow More Than the Market

Improving Profitability

Addressing a $22.4 billion market, APG gaining share

Source: Strategy Analytics, April 2013

life.augmented

Key Priorities

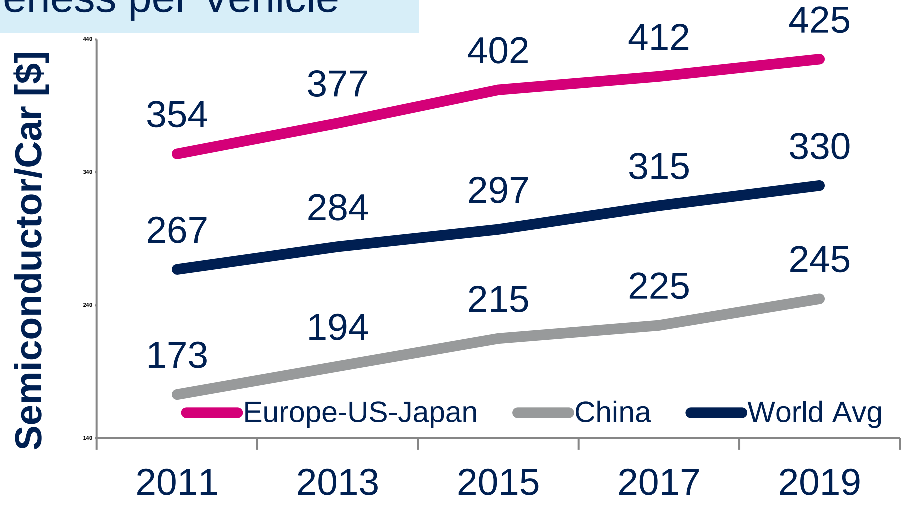
Grow More Than the Market

Addressing a $22.4 billion market, APG gaining share

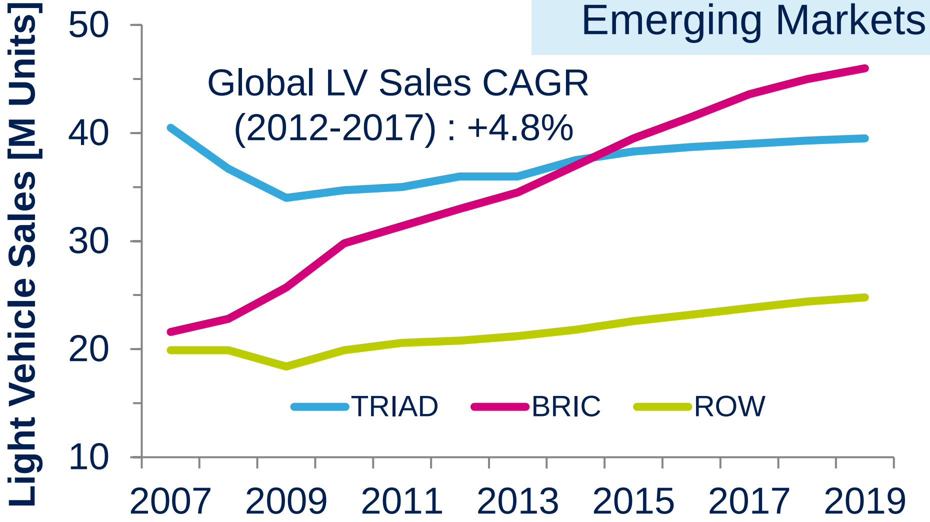
Source: Strategy Analytics, April 2013

APG Market Growth Opportunities

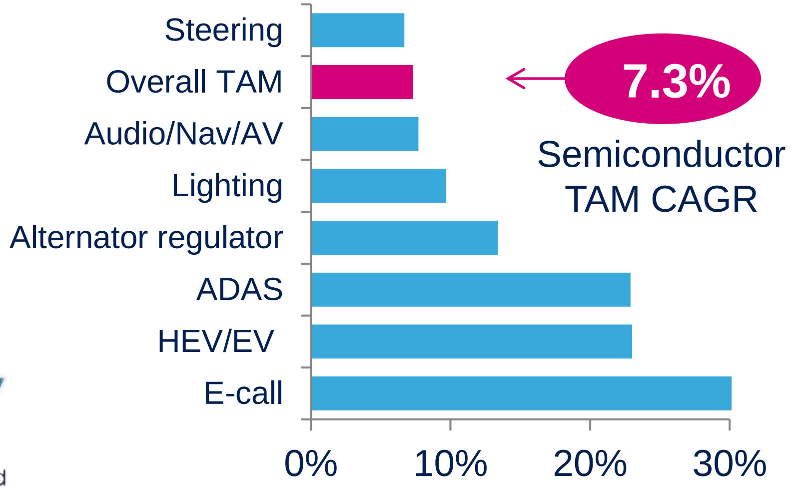
Pervasiveness per Vehicle



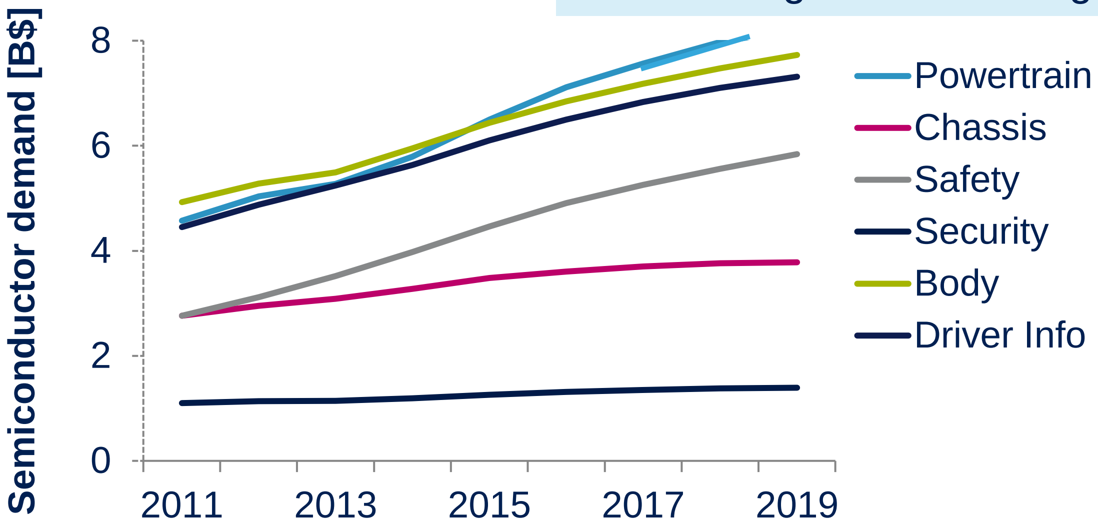
Emerging Markets Opportunity



Emerging Applications



All Segments Growing



Source: Strategy Analytics, IHS iSuppli, Automotive, April 2013

Pervasiveness per Vehicle: Key Opportunities

Powertrain

- **Direct Injection Engine** (~+30% content vs. traditional solutions)
  - CO_2 emission reduction, fuel saving and high-power output
  - 5 new ASICs entering in production in 2013
- **Automatic Gearbox**
  - 2 new ASICs in 2013, traditional and dual clutch transmission
- **Stop Start Engine components** for fuel saving

Safety

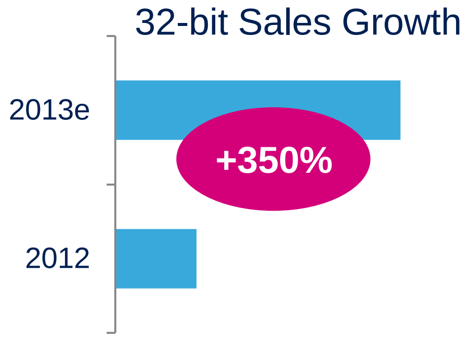
- **Airbag** increased number of channels for more safety
  - New generation of modular multiple channel airbag system, optimized for low to hi-end, entering production in 2013
- **Braking**
  - Electric Parking Brake brand new integrated solutions
  - High-end plug-and-play Vehicle Dynamic Control fully integrated IC solution
- **Steering**
  - Single fully integrated IC for Active Power Steering

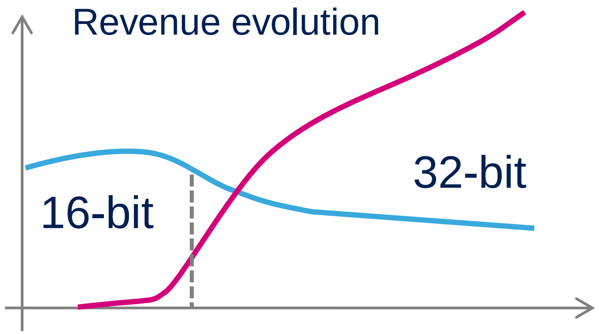
Body

- **Market leadership in Lighting & Door Zone**
  - A new complete product family able to reduce wiring weight thus reducing C02 emissions now available for:
    - Xenon Discharge lamp
    - Interior and Exterior Bulb & LED's
    - Door Zone highly integrated solutions
- **High efficiency motor drivers**
  - More than 100 motors in each car
  - 5 new products in 2013

32-bit microcontroller for Automotive

- **Highest product growth in Automotive**
- **More that $2.4B awarded business secured**
- **Specific solutions for Power Train, Safety, Body, Infotainment**
- **More than 60 part numbers entering in production in 2013**



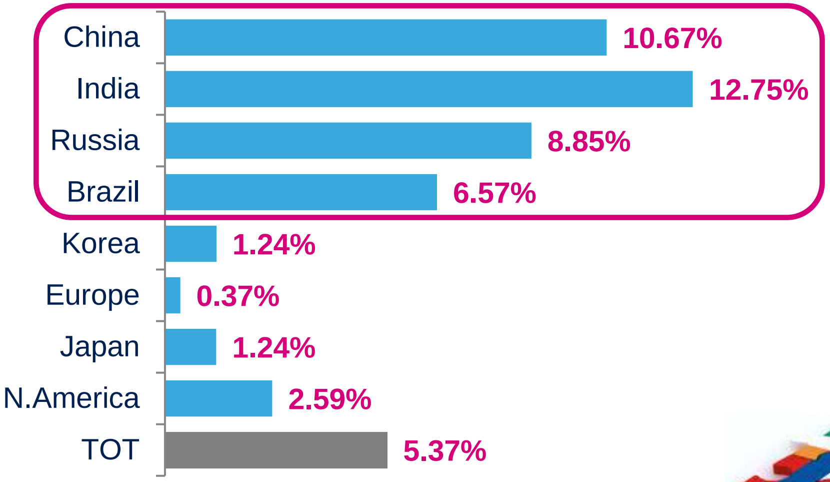


life.augmented

Emerging Market: Key Opportunities

The highest growing market

Vehicle market growth CAGR 12-17



State of the art, cost-optimized standard products, tailored to Mass Market and BRICs

- Low-cost 4-cycle Engine control compliant to the China-6 emission regulation
- 4 to 8 channel fully integrated Airbag IC
- Flexible Alternator regulator for emerging market
- Dedicated family of 32-bit microcontrollers
- Dedicated family of smart actuators for Body applications

Specific products for China

System Solutions

Plug 'n Play full system solutions

- 4-cycle Engine Control
- 1/2-cycle Motorcycle Engine Control
- Entry level ABS
- Entry level Stability Control
- Low to mid-end Airbag
- Entry level Body Control Module
- Entry level positioning and navigation
- Entry level Infotainment

Dedicated team to offer system solutions to mid/small size customers

- Application and software support
- Tools and Reference Designs

Production grade SW library

- Positioning
- Infotainment
- Protocol management

Specific organization to support mid/small customers

life.augmented

Source: Strategy Analytics, April 2013

Key Priorities

Improving Profitability

Addressing a $22.4 billion market, APG gaining share

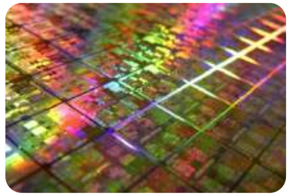
Source: Strategy Analytics, April 2013

Improving Profitability: Smart Power

Smart Power market
CAGR 2012-17: +5.7% (>$4.7B in 2012*)

Technology

- **Continuous innovation**: 110nm in BCD and 350nm in VIPower tailored to automotive applications
- **Intimacy Product /Technology R&Ds** to optimize cost and performance
- **High integration level**
- **Balanced footprint** between R&D intimacy in Europe and low cost asset in Asia



Leadership and IPs

- **System knowledge and IPs** for full application integration with reduction of the system cost
- **Market leader in dedicated high margin ASIC**

Innovation

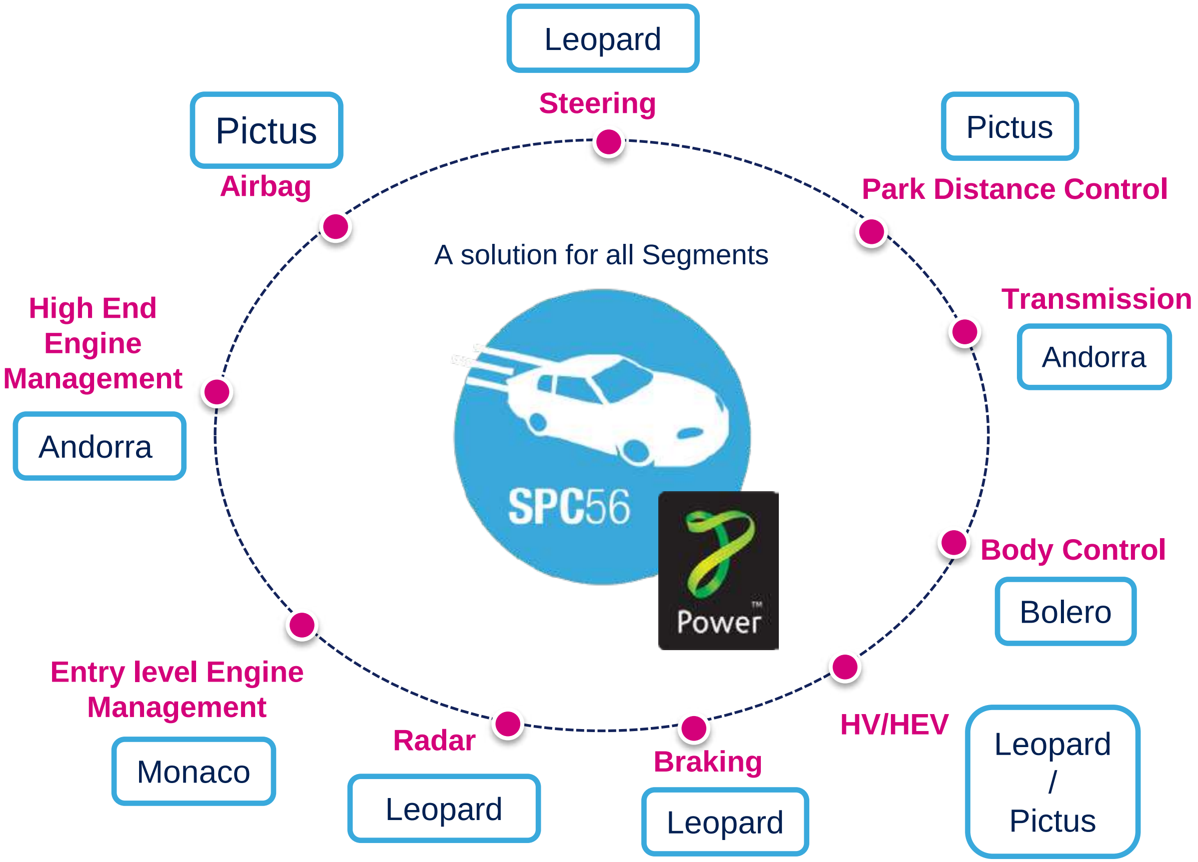
- HEV and EV Battery Management with **silicon Insulated technology**
- **Gasoline Direct Injection** to comply to Euro 6 for CO_2 reduction and fuel saving
- **Automatic and Dual Clutch Transmission**
- **Electrical motors for X by wire support** (Power Steering, Stability Control, Pumps)

*Strategy Analytics, April 2013

Improving Profitability Driver: 32-bit MCUs

32-bit MCUs market
CAGR 2012-17: +9.6% (>$2.7B in 2012*)

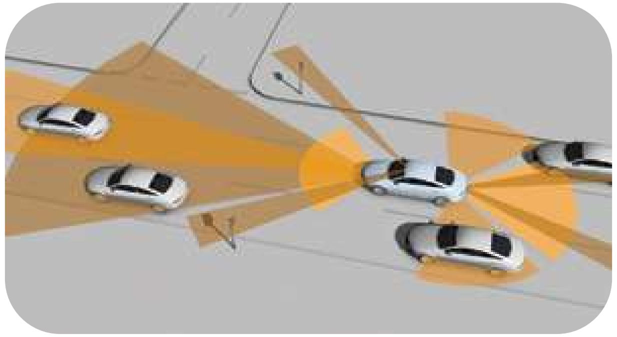
- Proprietary 40nm Embedded Flash process with unique internal 12” 40nm and below capability in Europe and USA
- Target to be among the top players the fastest growing supplier in the 32-bit segment
- 60 new part numbers available to cover all the specific Automotive applications
- Functional Safety: Certified ISO26262 ASILD
- Continued innovation at process level with a breakthrough in non volatile memory with Phase Change Memory approach



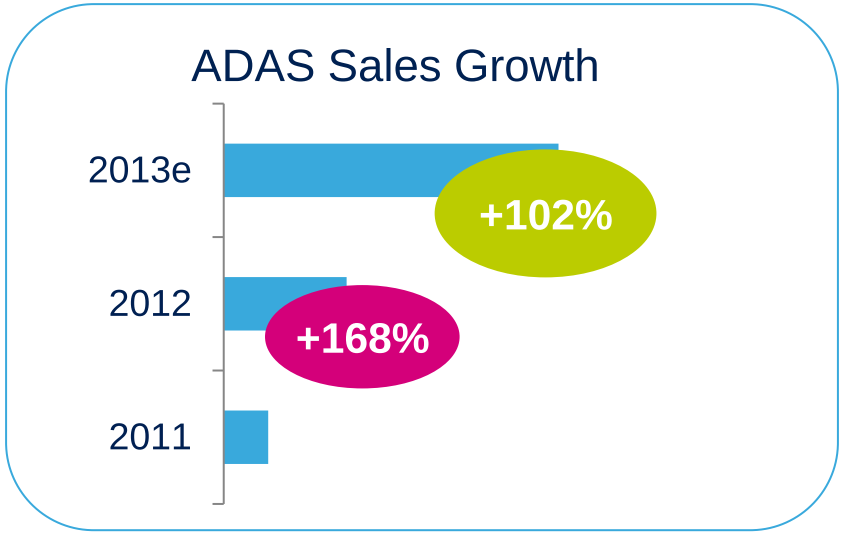
*Strategy Analytics, April 2013, excluding infotainment

Improving Profitability Driver: Active Safety

Active Safety market
CAGR 2012-17: +22.9% (>$1.3B in 2017*)



- Market leader in Vision based solutions with presence in more than 20 car brands** resulting in more than 60% market share**
    - APG business is expected to double every year in the next 3 coming years
    - 3rd generation of Vision entering production in 2013
- Leading edge microwave SiGe BiCMOS technology perfectly fitting Short Range and Long Range Radar Automotive Systems
    - Market leader on 24GHz Radars for active cruise control
    - 77GHz version starting in 2013



*Strategy Analytics, April 2013
**ST data 1Q 2013

Improving Profitability Driver: Infotainment

Phone + Position + User Interface + Sound

Positioning (GPS-Glonass-Galileo-Compass)	Navigation & Audio Controllers	Terrestrial & Satellite Tuners	Digital Audio Amplifier

Infotainment market
CAGR 2012-17: +9.3% (>$3.7 B in 2012*)

Audio

- Long time leader in Audio Power Amplifiers with >45% Market Share**
- 6 new products to be launched in 2013 to address the fast growing market of Digital Audio Amplifiers

Positioning and Telematics

- More than 15 years presence in automotive with leading-edge, proprietary solutions for positioning and telematics
- First on the market with a Multi-constellation autonomous receiver covering GPS/USA, GALILEO/EU and GLONASS/Russia. COMPASS support to be introduced in 2013 to address the Chinese high volume market

Tuners

- More than 20 years presence in Tuners for Automotive applications
- Undisputable leadership in Satellite Receivers thanks to long lasting partnership with SiriusXM
- A new Multi-standard (FM,DAB, HD, DRM) digital receiver to be launched in 2013

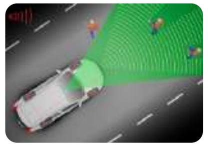
*Strategic Analytics and IHS iSuppli, infotainment
**April 2013

Innovation: A Few Examples

From Active Safety → To Autonomous Car


Blind Spot Detection


Lane Departure Warning


Obstacle Detection


Emergency Braking

$630M
TAM 2013

Radar
CMOS Camera
High precision GPS

Vision Processing
Multiple-core MCU

Sensor Fusion
Functional safety

Auto Steering


Self-adaptive speed control


Traffic Light Detection


Adaptive Braking


2013: Semi-autonomous driving is a standard option in $30K cars

2020: Full-autonomous driving will become a standard equipment

Source: Strategy Analytics, April 2013

life.augmented

Recent Achievements

- First win in Japanese OEM's with 32-bit MCU for chassis
- First win from a major American Car maker with our 32-bit MCU for Powertrain
- Design wins to achieve 40% market share in Power Train in China
- Design win for next generation Braking Platform from a major European Tier-1
- Design win for high volume Lighting BCM from a major Japanese Tier-1
- Design win at a major Tier-1 to further consolidate the dominant position in Door Zone
- Multiple wins with the first-to-market Multi-Constellation receiver to become a market leader in positioning

New Partnerships

Audi

HYUNDAI AUTRON

to address radical innovation and open new growth opportunities

life.augmented

The APG Value Proposition

A strong Automotive commitment

- Broad range system competence
- Wide technology portfolio
- Manufacturing machine committed to Automotive
- Consistent market growth and solid intimacy with key customers at WW level
- Long term commitment to Automotive

- Smart Power
- 32-bit Microcontrollers dedicated to Automotive
- Infotainment and Advanced Safety

A wide application coverage in Automotive

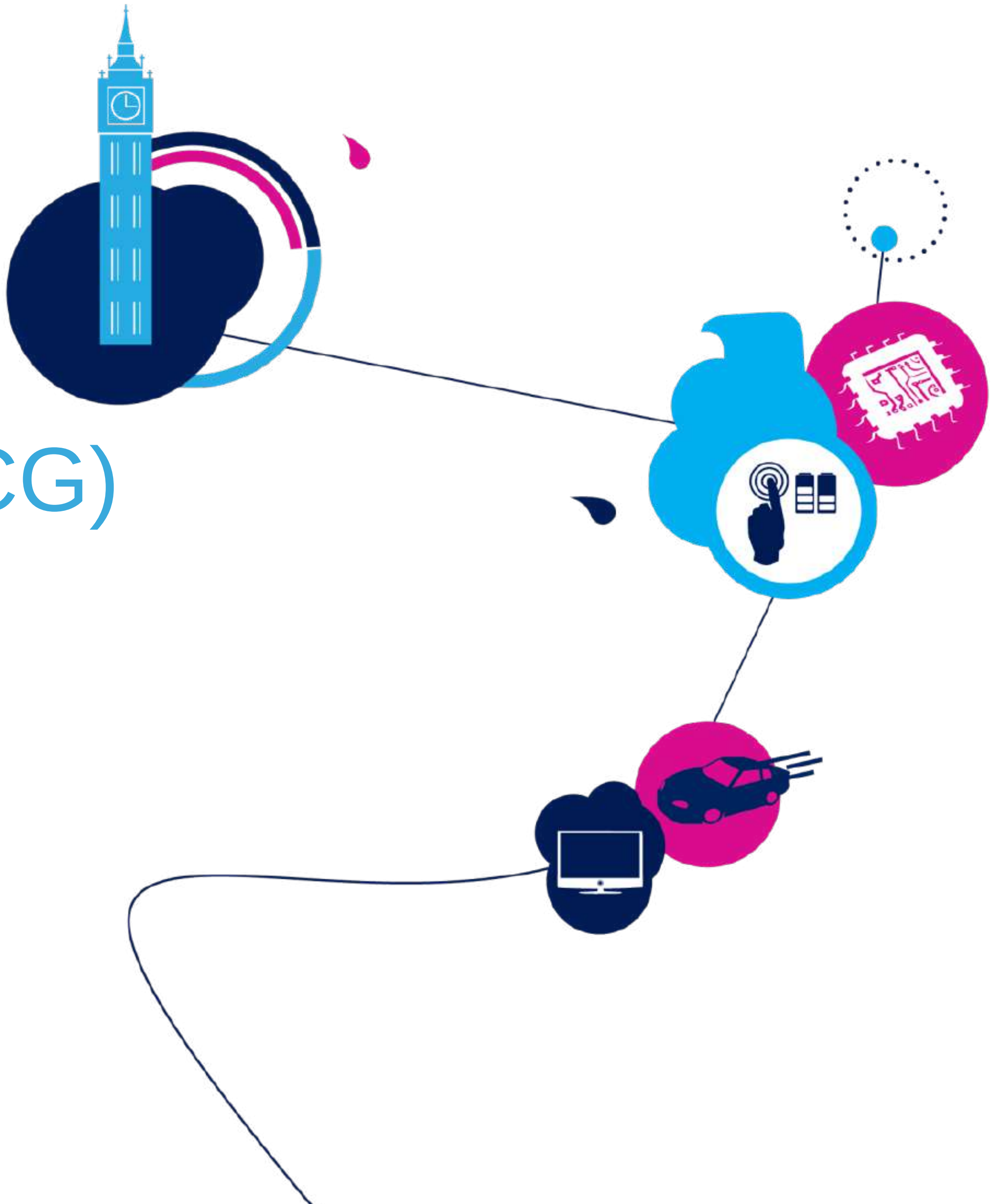
life.augmented

APG Main Growth Drivers & Expectations

- Growth above market
  - Reinforce the Smart Power / Intelligent Power leadership
  - Gain market share in 32-bit microcontrollers with the Power Architecture on top of the $2.4B already designed in
  - Increase the top line leveraging the pervasiveness of semiconductors in the car
  - Maintain the leadership in Body and Infotainment expanding the penetration in the emerging markets
- Focus on margin expansion to increase profitability
  - New 110nm BCD generation
  - 40nm e-FLASH to support our microcontroller growth
  - Expand customer base thanks to a system approach and dedicated support structure
  - Lead high margin advanced safety with strong innovation contents

Thank You

Digital Convergence (DCG)



Gian Luca Bertino
Executive Vice President
General Manager, Digital Convergence Group

Laurent Remont
Group Vice President
General Manager, Unified Platform Division

life.augmented

Digital Convergence

Market Trends

- Internet and Video Traffic
  - x2 every 18 months
  - Emerging countries
- Smart Home and Gateways
  - Multiple services
  - Developed countries
- Growth Opportunity
  - Multiscreen environment
  - Network infrastructure

Focused Portfolio

Unified Platform

Set Top Box
Home Gateway
Smart Home

Digital ASIC

Networking
Gaming
Legacy (eg Printers)

Display Products

Premium Monitors
4K2K

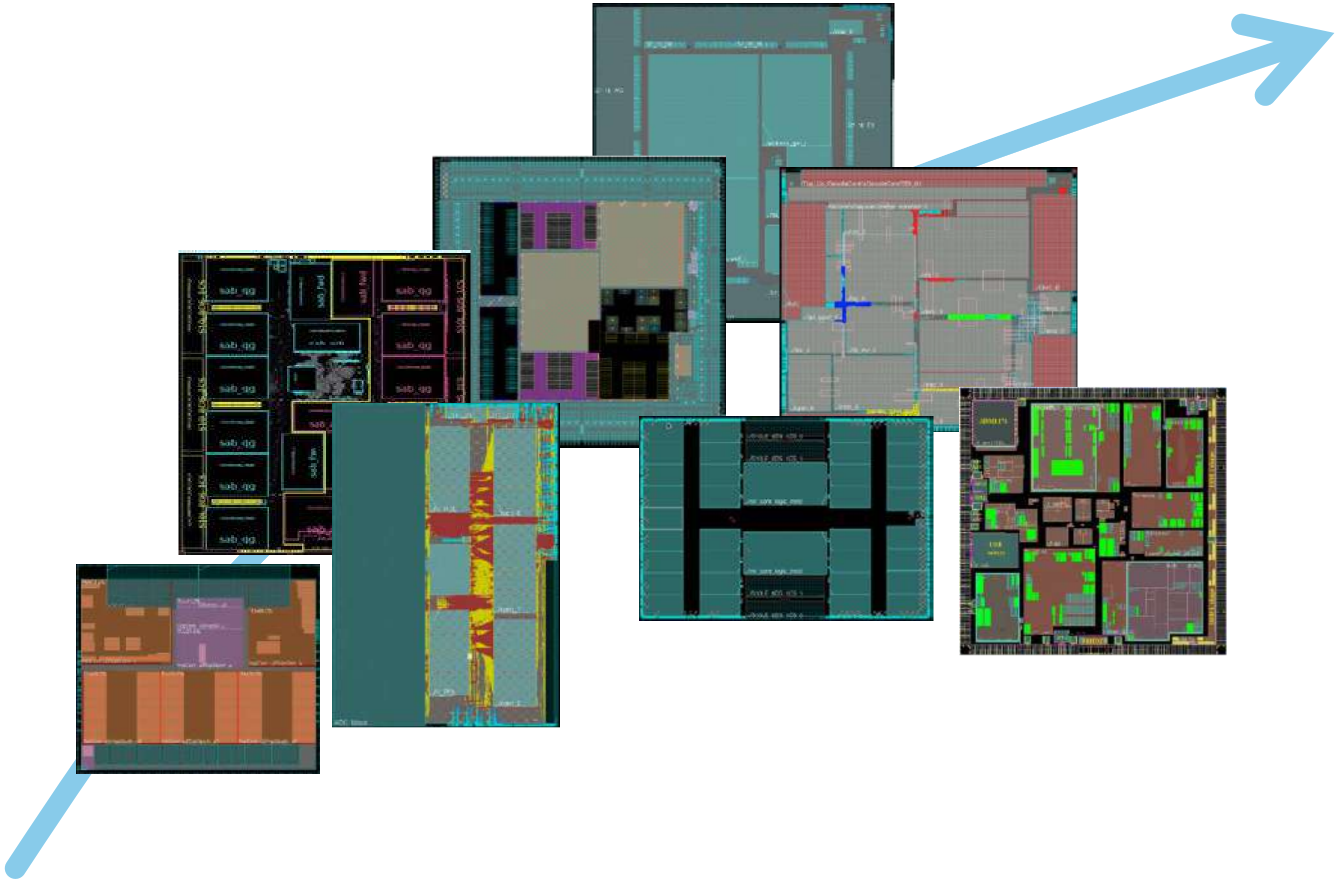
Digital ASIC

> 400 mm^2

200-400 mm^2

50-200 mm^2

Up to 50 mm^2



Best in class
- Technology
- Methodology
- IP blocks

First 2 awards in 28nm FD-SOI

65nm	55nm	40nm	32nm	28nm	28nm FD-SOI
2008	2009	2010	2011	2012	2013

Key Differentiators

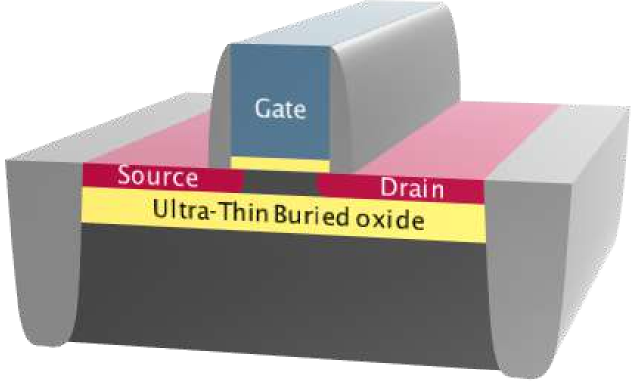
SERDES: Ramping 14Gb/s, sampling 28Gb/s

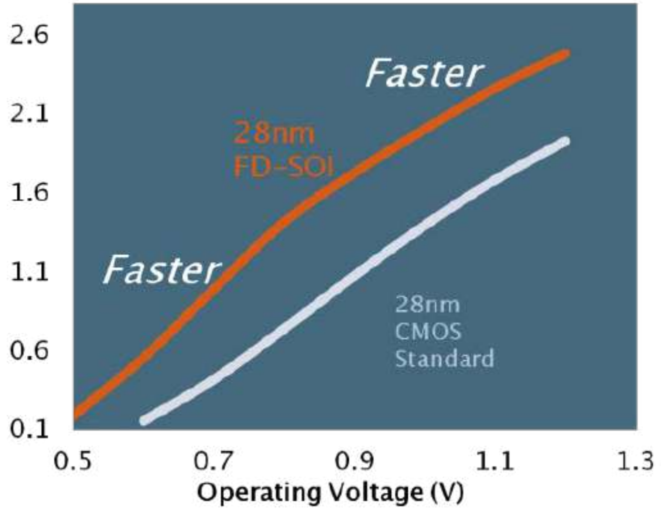
ARM: Leading Partner for 64-bit cores

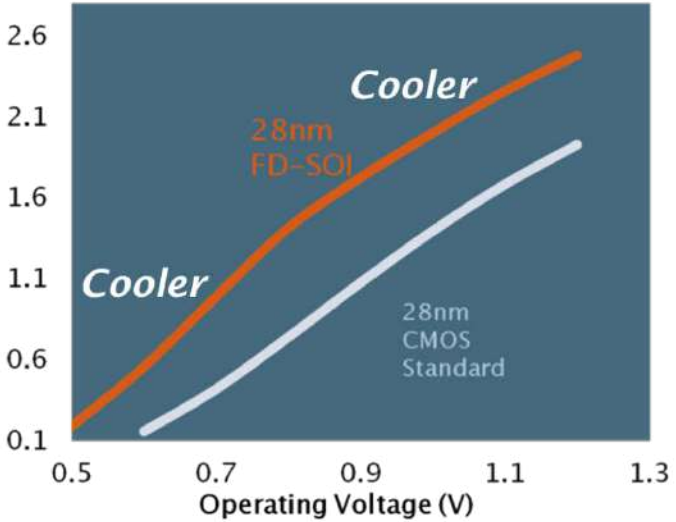
LOW POWER: Advanced design techniques

Mastering SILICON TECHNOLOGY in house

FD-SOI





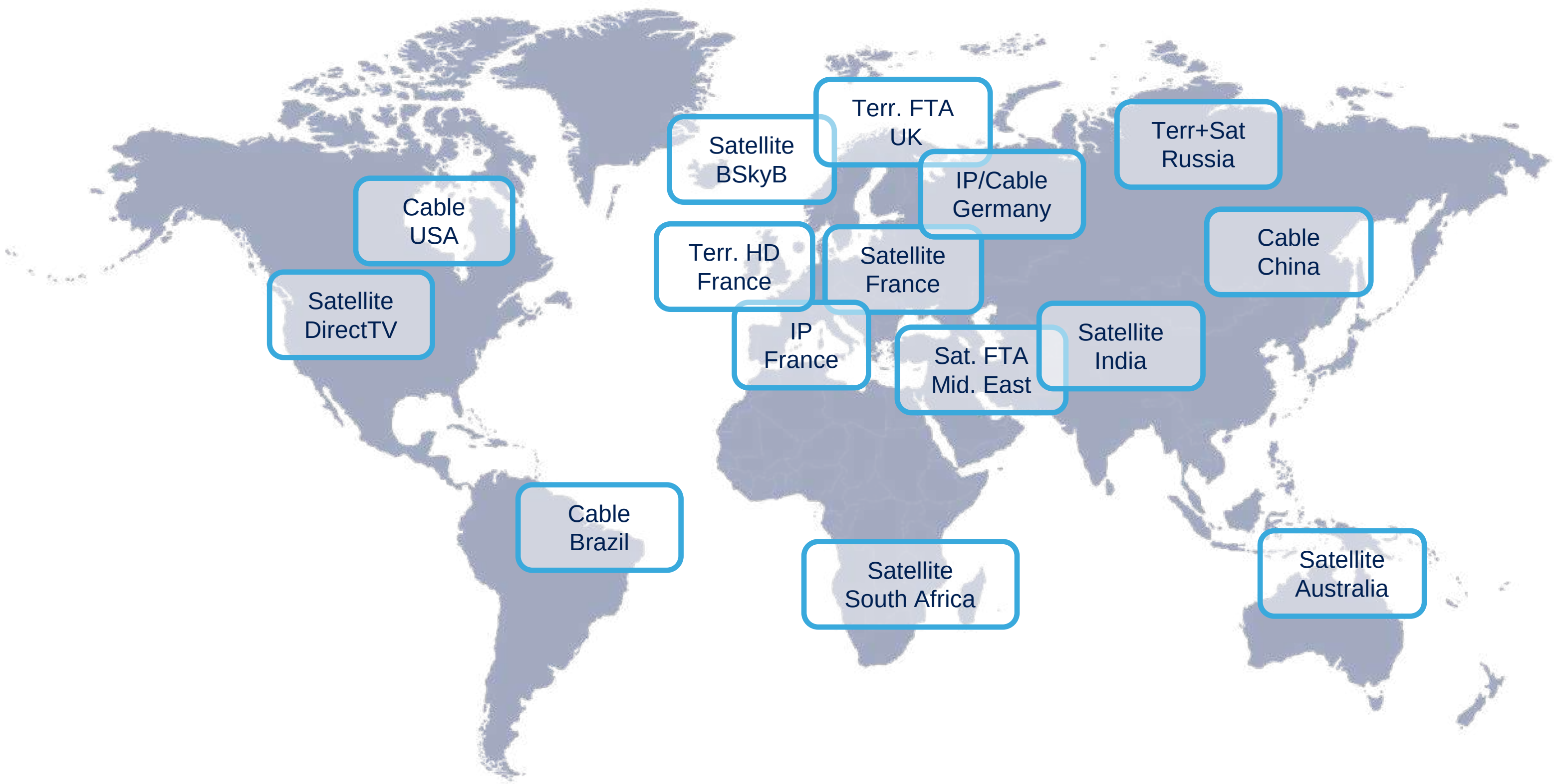


>3x Performance at low voltage
45% Performance increase at nominal voltage

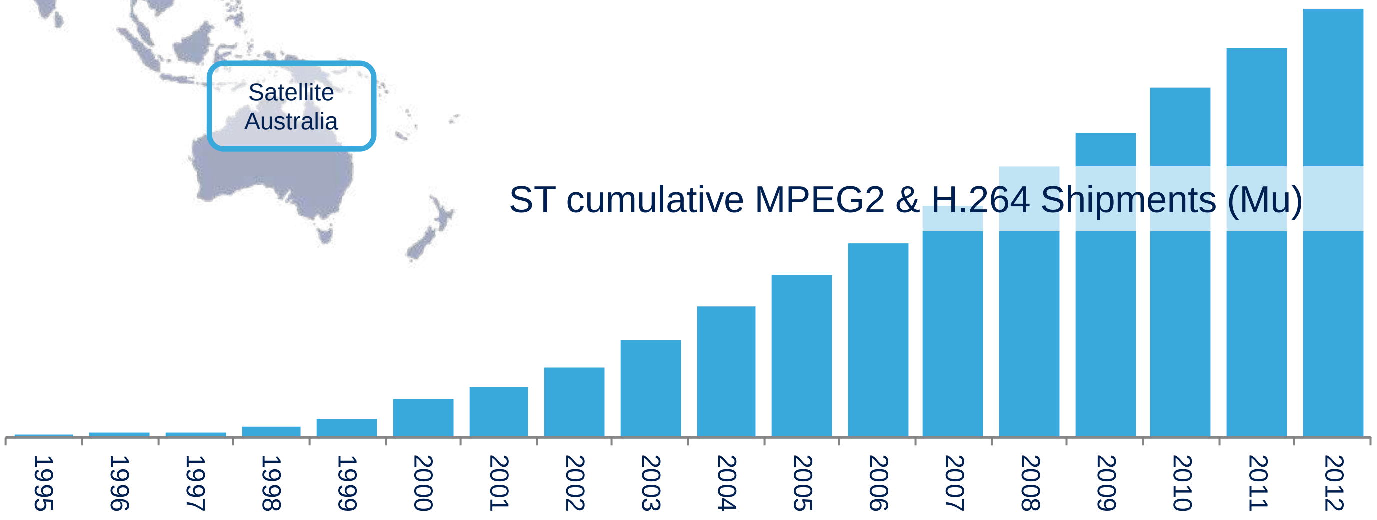
>40% Better power efficiency at low OPP

life.augmented

Leader in Set-Top-Box



- #2 WW, #1 outside US
- > 860 M MPEG Set-Top Box SoC shipped by end 2012
- Opening all Major Digital TV Markets since 1995

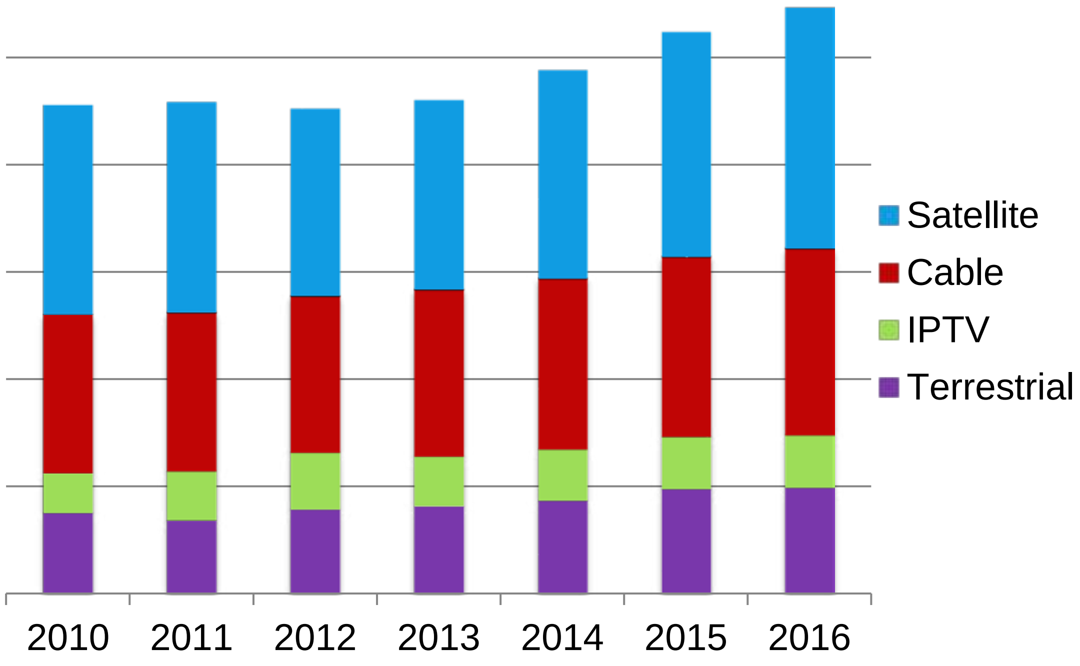


Source: ABI Research April 2013, ST

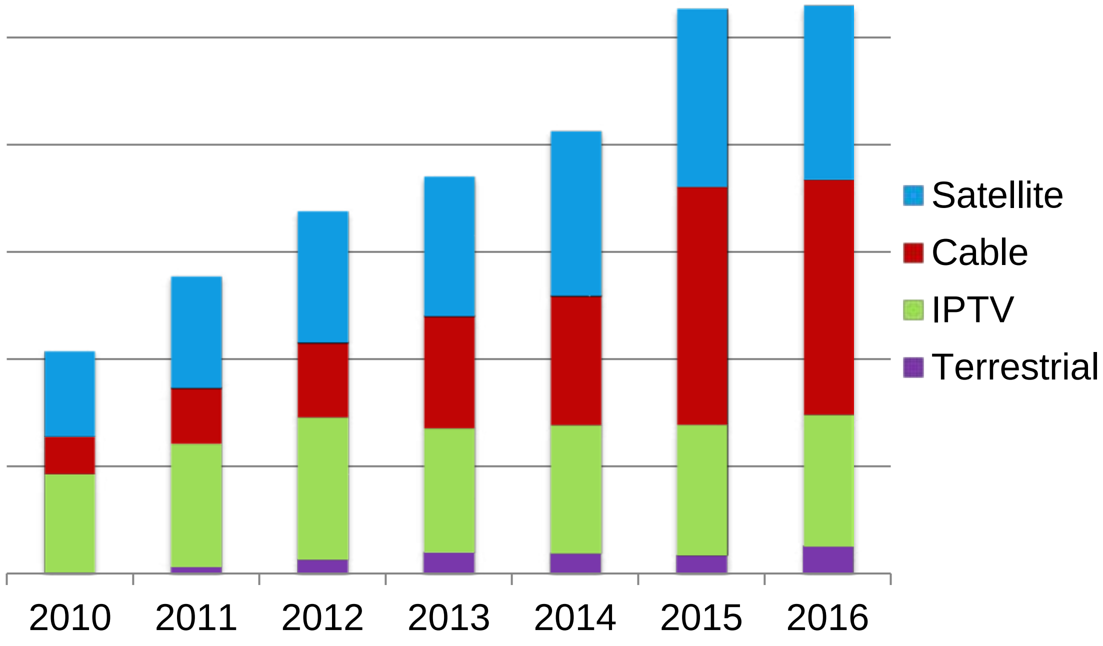
life.augmented

Connected Clients

Global Set-Top Box Market
226M boxes in 2012
5.2% CAGR 2012-2015



Internet-Enabled Set-Top Box Market
68M boxes in 2012
18.5% CAGR 2012-2015



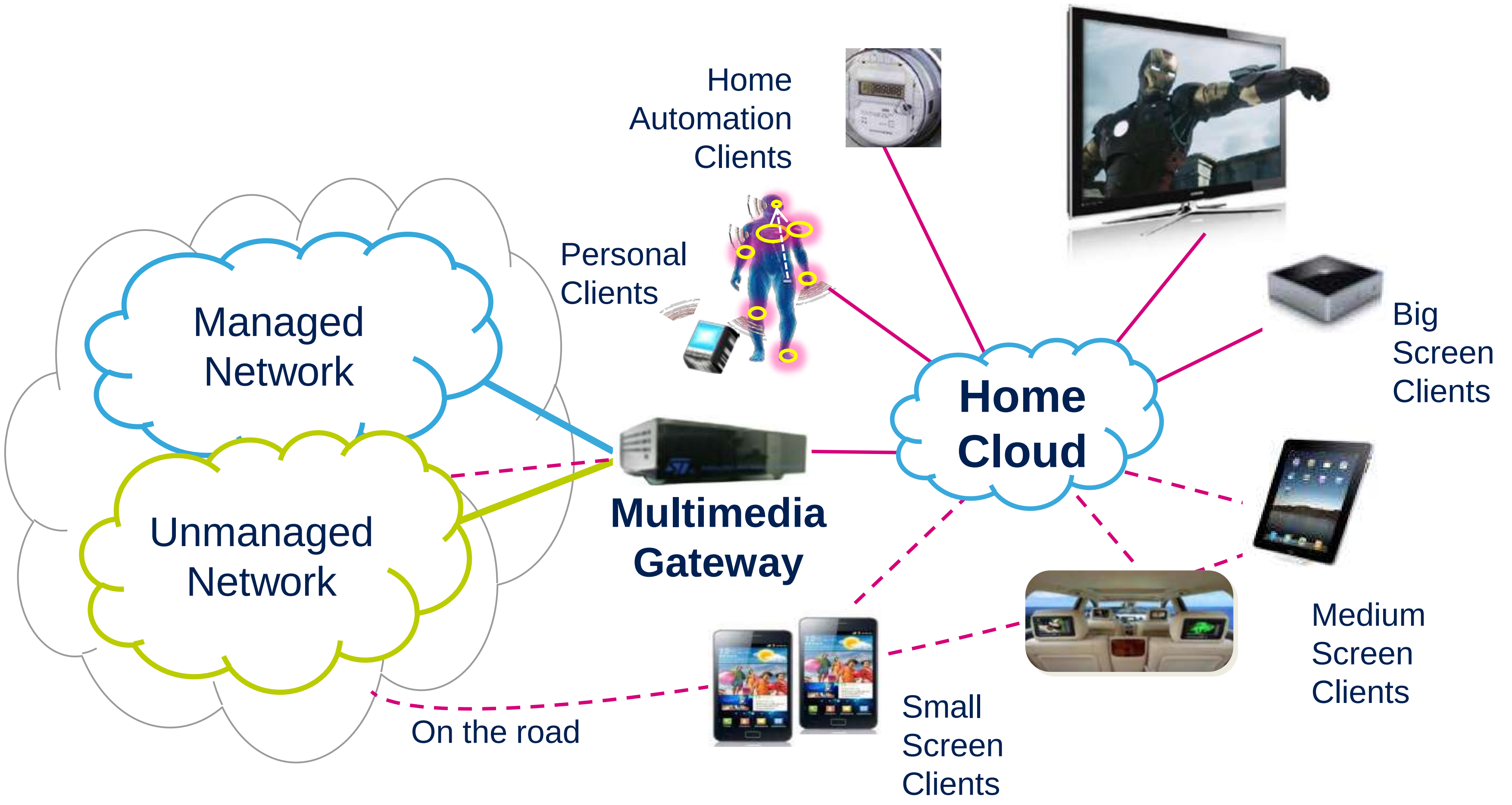
Connected Clients is the fastest growing segment

Source: IHS Screen Digest, January 2013

Smart Home

Towards Client-Server Architecture for the Home

- Any client benefits from managed network services
- New applications across multiple clients
- QoS thanks to Multimedia Gateway acting as a cloud proxy
- Home Services continuity for mobile clients



Smart Home is the next big transition

life.augmented

Addressing All Opportunities

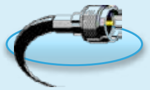
Security, BOM Cost Optimization, SD/HD

Legacy Set-Top-Box

HEVC, ARM Ecosystem, Open SW

Connected Client

Leverage DOCSIS 3.0
Accelerate DOCSIS 3.1



Data & Headless Gateway

Best in class Performance & Integration

Multimedia Headed Gateway

Key Differentiators

MM & DISPLAY: AV, Graphics, HEVC, Faroudja

Full portfolio of SECURITY SOLUTIONS

ARM ARCHITECTURE & Multiple SW Stack

DOCSIS 3.0 / 3.1, MOCA 2.0, WiFi AC

ST Strategy to Market Leadership

LEGACY STB

Keep
Market Leadership
outside the US

CABLE AND
CONNECTED

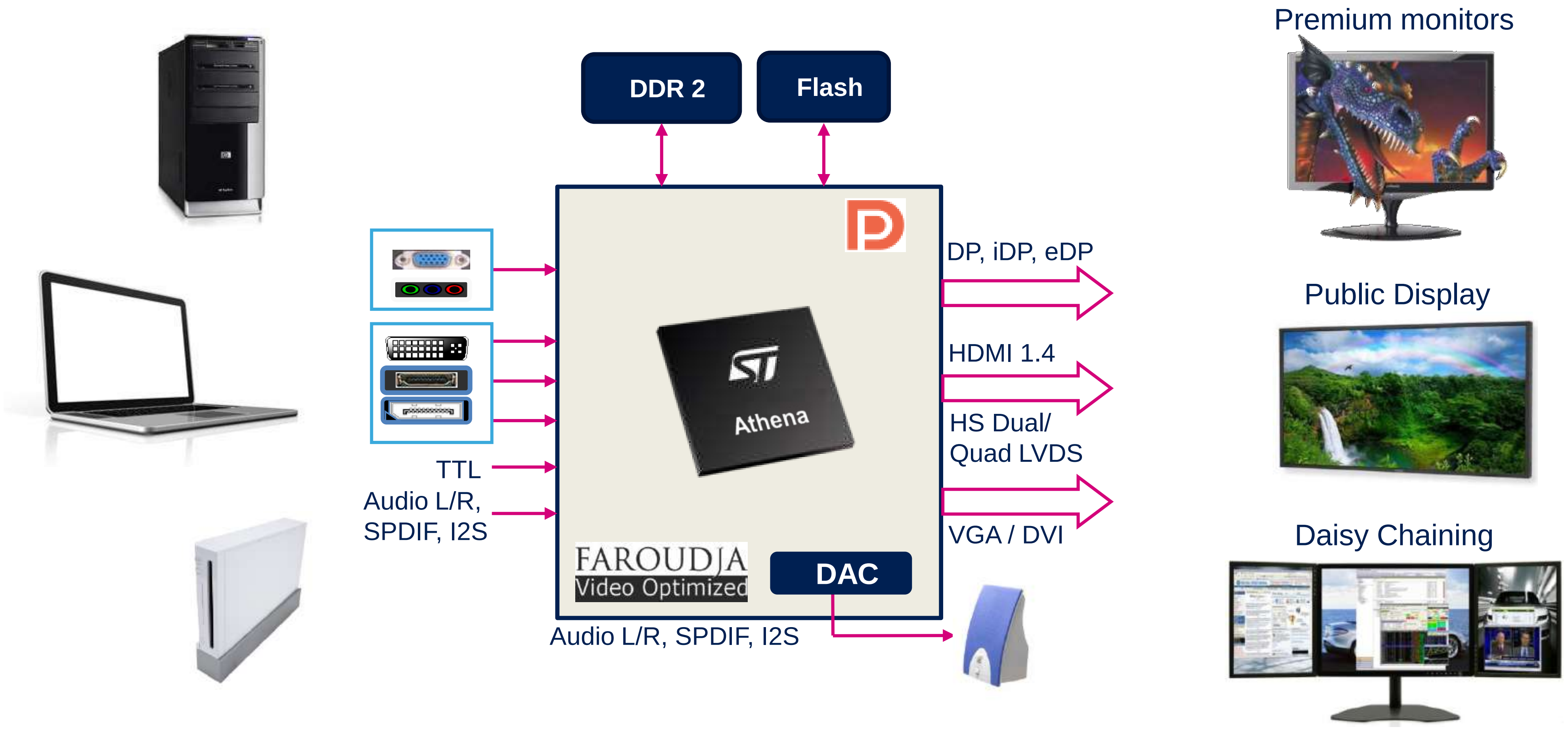
Expand
ST presence
in the US market

CLIENT / SERVER

Lead
the transition
to Smart Home

…

Leading the transition to 4K2K



life.augmented

2013 Priorities

Recent Achievements

- Successfully expanded our share in 32/28nm ASIC, including initial adoption of FD-SOI technology
- Fast adoption of the 40nm New Class 2 (Legacy Set-Top-Box) and 28nm Orly (Home Gateway) product families
  - Sumitomo Electric Network selected Orly for its advanced generation of Smart IPTV Set-Top-Box
- Fast Adoption of the Athena product family for Premium Monitors

Priorities for 2013

- Continue the deployment of New Products (New Class 2, Orly, Cannes, Alicante, Athena)
- Gain share in the US market (Cable, Gateway and Connected Set-Top-Box)
- Exploit the potential of FD-SOI technology in ASIC
- Execute the $600M plan
  - Unified Processing Platform
  - No Merchant Silicon for TV or Mobile
  - Synergies and optimized R&D structure

life.augmented

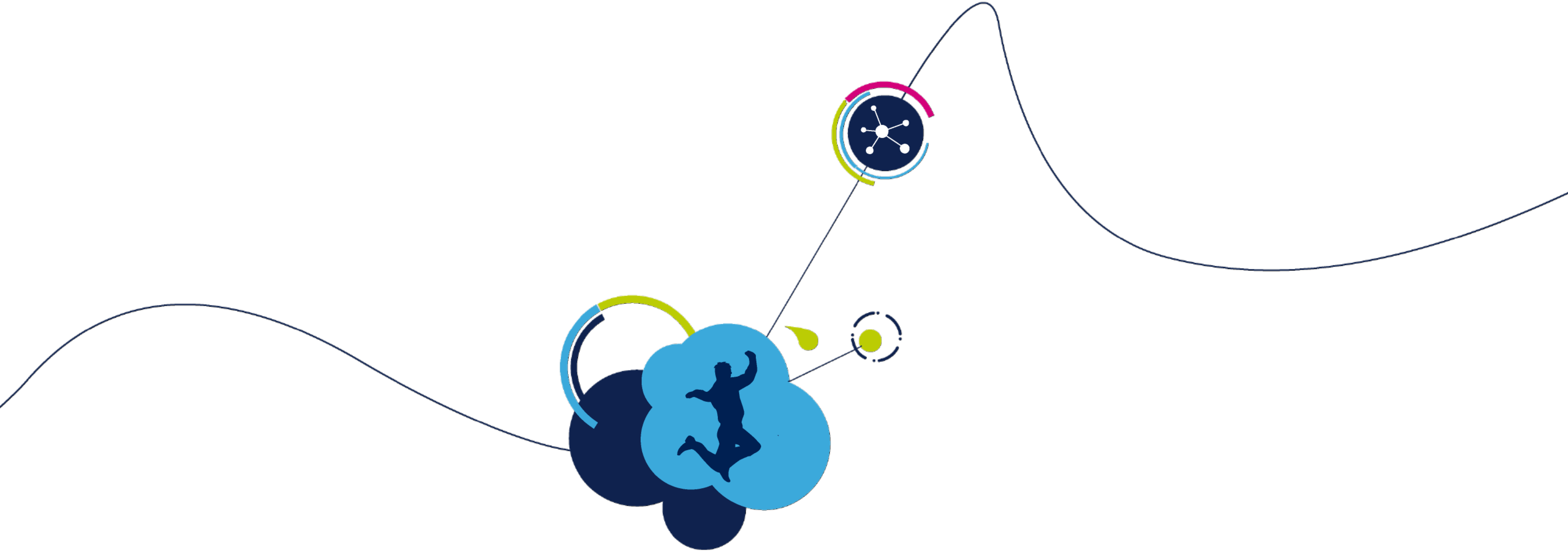
Summary

Growth opportunities
Network Infrastructure & Multiscreen Environment

Market leadership
Through Focused Portfolio

Competitive advantage
FD-SOI & IP

Growth drivers
New Class 2, Cannes, Orly, Alicante, ASIC, Athena



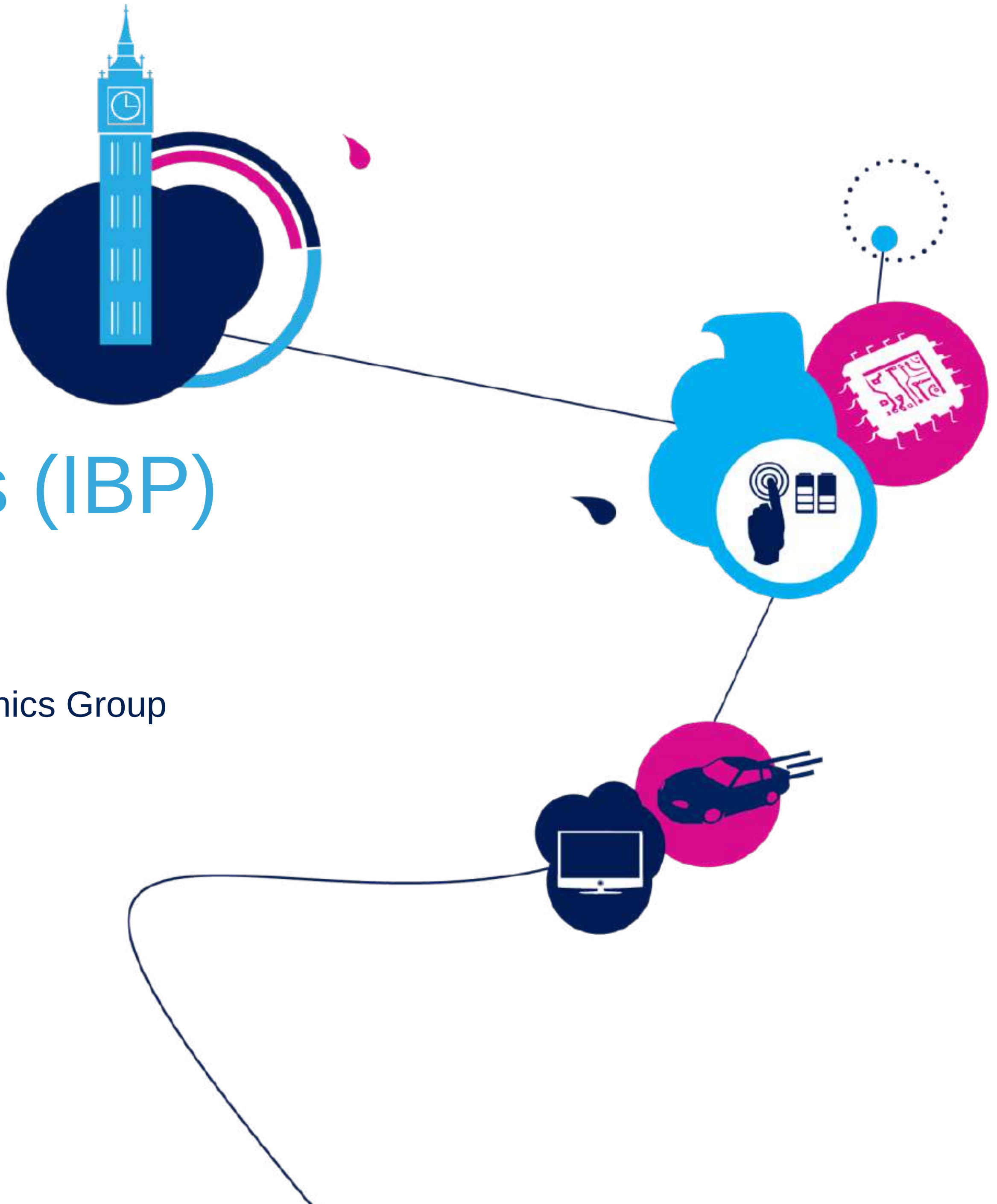
Thank You

life.augmented

Imaging, BiCMOS ASIC and Silicon Photonics (IBP)

Eric Aussedat
Corporate Vice President
General Manager, Imaging, BiCMOS ASIC and Silicon Photonics Group

Flavio Benetti
Group Vice President
General Manager, Mixed Processes Division



life.augmented

IBP Targets

Targeting leading position in all addressed applications

Imaging:

Within the Top 5 in image sensors

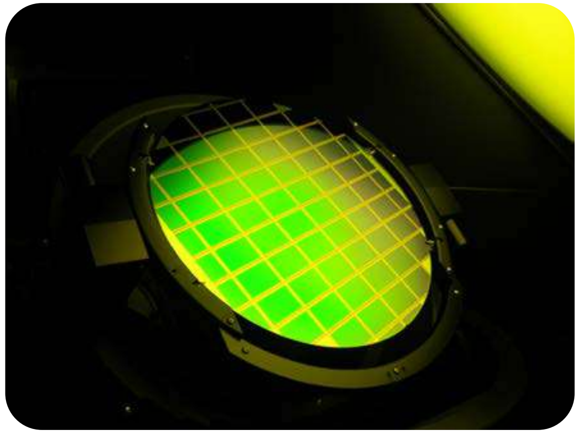
Within the Top 3 in cameras

Worldwide leader in proximity sensors and image processors

Mixed Processes:

The leader in optical interconnect & Silicon Photonics

Within the Top 2 in RF SOI



Strengthening IBP Fundamentals

Focus on growing markets

Imaging:
- Camera phones
- Digital Still Camera
- Imaging sensor pervasion in new applications
- Proximity sensors, gesture recognition

MPD:
- Mobile Front-End (GaAs to CMOS)
- Optical ICs

Key differentiators

- Comprehensive & unique imaging solutions offering – one-stop-shop
- Design, manufacturing and packaging verticalization
- 28nm FD-SOI for imaging SoC

Enlarged leading customer base

- Expanding number of camera phones customers from 2 to 5
- Working with worldwide leaders in new markets
  - Gaming
  - Automotive
  - Healthcare
  - Mobile phone FE modules
  - Base station and servers

Technology & unique IP portfolio

Imaging
- In-house FSI and BSI processes
- High performance pixel technology
- Time of flight proprietary solution
- Broad-range image processing portfolio

MPD
- High performance BiCMOS roadmap
- Si Photonics process under development
- State of the art RF SOI for RF FE solutions

Solid manufacturing capability

Front-End
- In-house capacity in BiCMOS & RF SOI
- 12” dedicated imaging process capacity
- Secure outsourcing capabilities
- Silicon Photonics

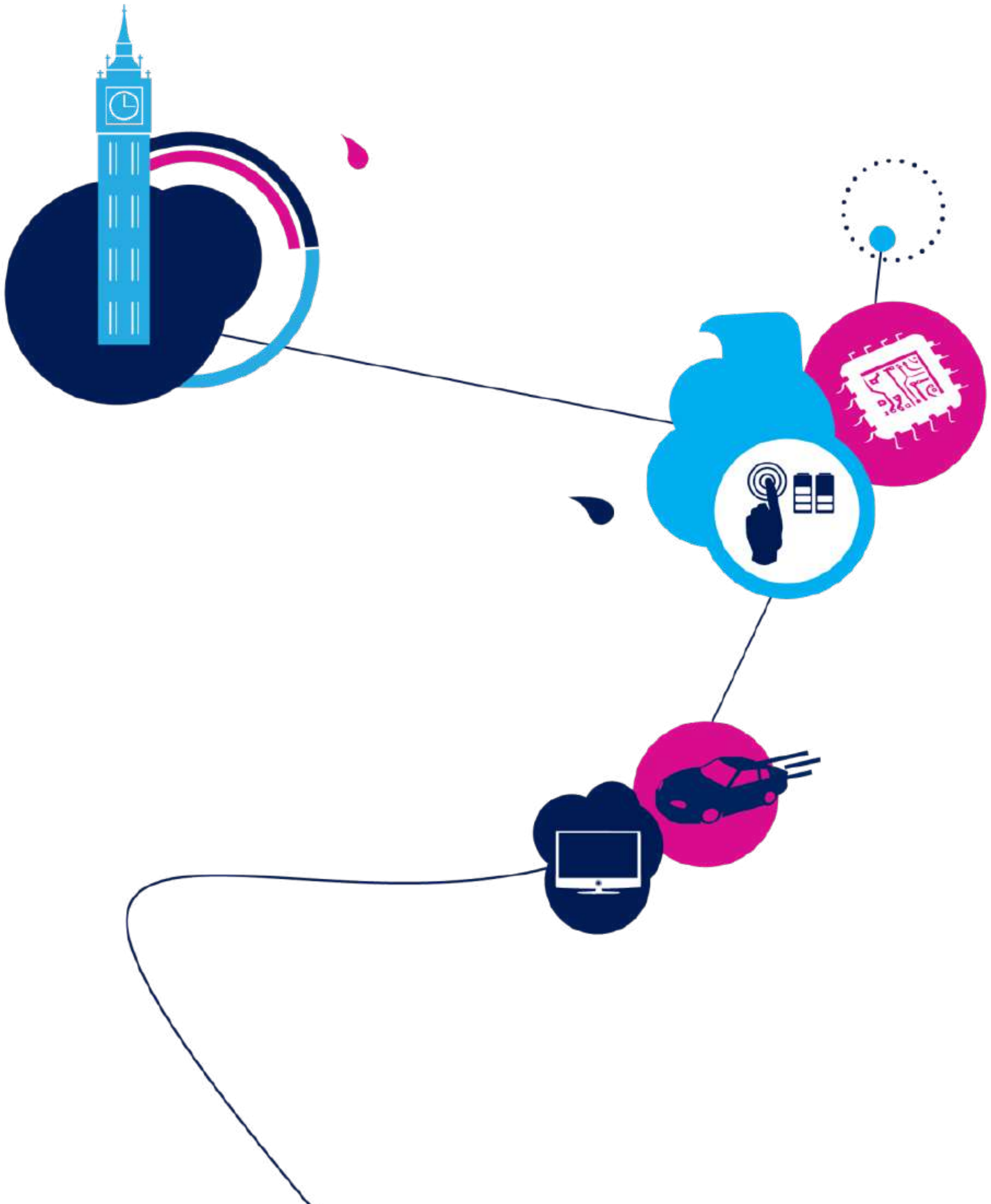
Back-End
- Highly automated camera module assembly and test lines

Strong & experienced team

- Accumulating 20 years of experience in imaging and mixed process
- Significant increase of resources in Analog, SoC and Process R&D over the last 2 years

life.augmented

Mixed Processes Division



Flavio Benetti
Group Vice President
General Manager, Mixed Processes Division

life.augmented

MPD Division and Market

MPD has two product families

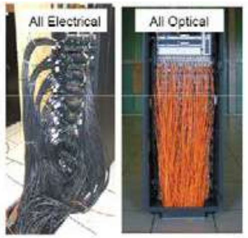
- Optical Interconnect
- RF Infrastructure & Front End

Market trends

- Market strongly driven by data traffic growth both mobile and fiber connections
- RF Front-End market growing thanks to move from GaAs to silicon based solutions

MPD Product Families

RF ICs for Infrastructures and Mobile Front End



ICs for Optical Interconnect

TAM (US$M)	**2012**	**2016**	**CAGR Y16/12**
ICs for Optical Interconnect (include Silicon Photonics)	369	562	11%
ICs for RF Infrastructure (Base Station and BackHauling)	254	339	7%
ICs for RF Front End (RF SOI)	276	735	27%
Total MPD market	899	1636	17%

life.augmented

MPD Division – Key Pillars

RF

RF ICs for Infrastructures (base station and backhaul)

Technology:

BiCMOS7RF,

BiCMOS9/9MW/55
Packages QFP etc.

Products:
synthesizer, mixers, down-converter, transceivers

RF SOI

RF ICs for Mobile Front End (RF SOI technology)

Technology: RF SOI

Business model: wafer foundry

Optical Module

Electronic ICs for Optical Interconnect (Telecom & Datacom Transceivers)

Technology:
BiCMOS9/MW
Packages QFP etc.

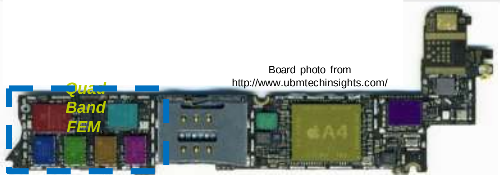
Products:
trans-impedance amplifiers, clock data recovery, photo detector

Silicon Photonics

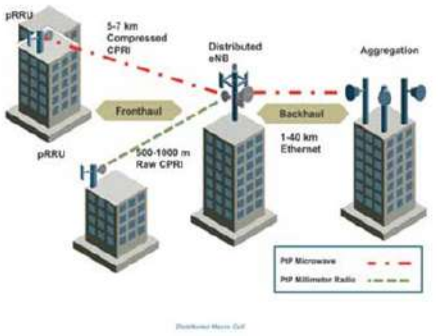
Photonic ICs for Optical Interconnect (Transceivers, Board-to-Board, Chip-to-Chip)

Technologies :
PIC25 Photonic,
advanced copper pillar,
optical packaging

Products :
integrated transceivers,
HS data link



life.augmented

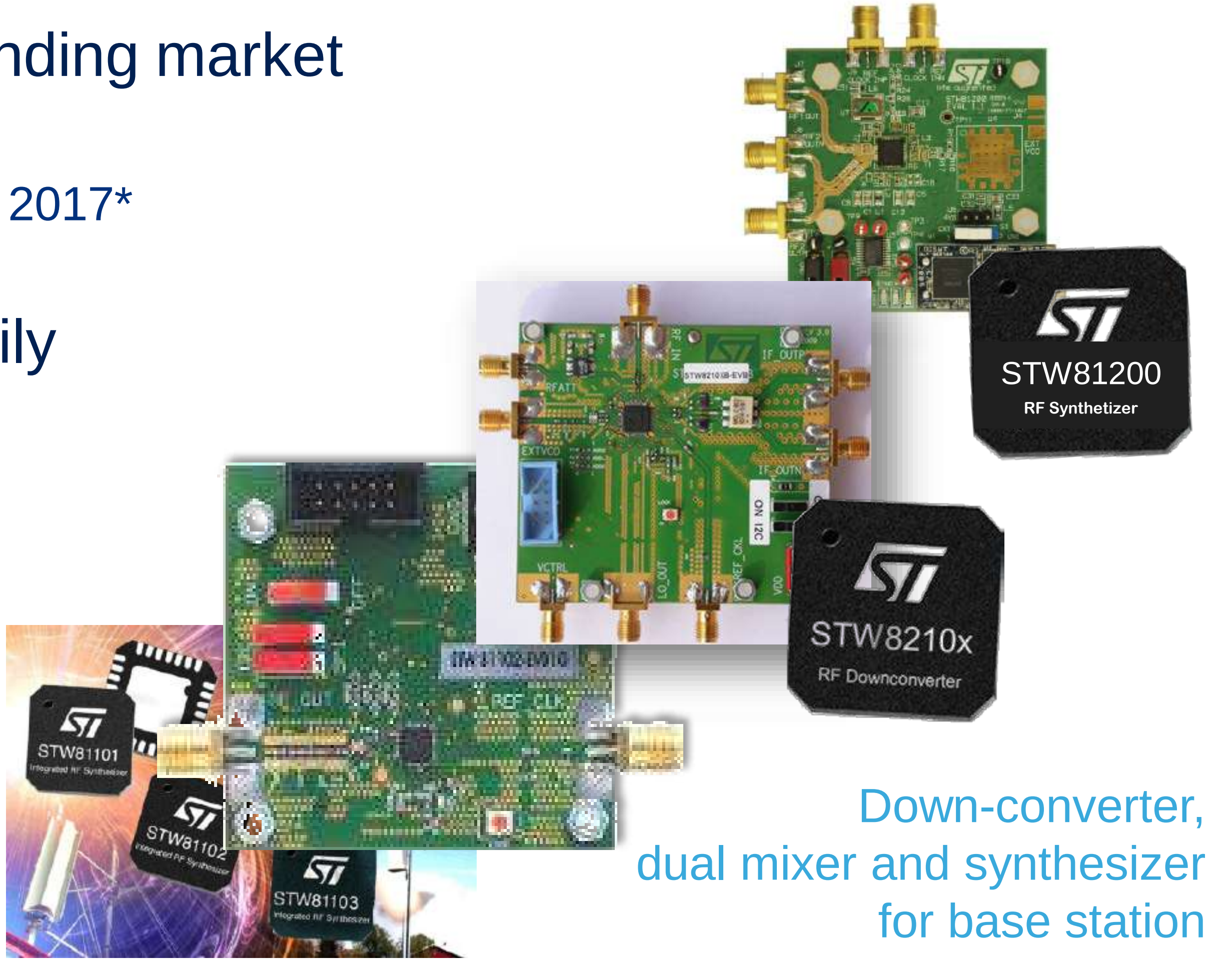


RF for Infrastructure

Base Station and Backhaul

- A solid roadmap for a growing and demanding market
  - Base Stations and Point-to-Point Backhaul
  - Mobile Backhaul equipment growing : $9.1bn by 2017*

- ST is developing a complete product family able to face the new network topology
  - Addressing Small Cells needs
  - Bringing new BiCMOS solutions to High Frequency Bands (up to 70GHz)



Down-converter,
dual mixer and synthesizer
for base station

life.augmented

*Ovum

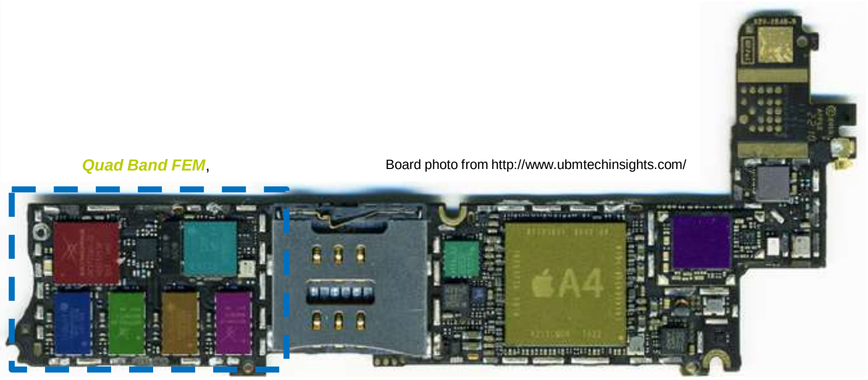
RF for Mobile Front End

RF SOI technology

- ST is committed to be a long term player in ICs for Mobile and WiFi Front End and among the top 2 suppliers

- RF SOI Business moved from ST-Ericsson to MPD
  - H9SOI technology produced in ST Crolles fab since 2008

- ST is investing in RF SOI technologies for Mobile and WiFi Front-End
  - New optimized, state-of-the-art technology at final stage of qualification : H9SOI-FEM



life.augmented

Electronic ICs for Optical Interconnect
Telecom & Datacom Transceivers

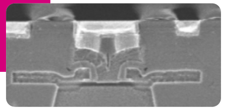
- ST is a leading supplier of ICs for optical modules
  - Among the Top 3
  - Serving the leader
- Serving the top players and gaining new customers, thanks to
  - Wide range of BiCMOS technologies
  - Highest level of quality standard
  - Superior Engineering Support
  - Wide choices of Packages
  - Full Supply Chain support

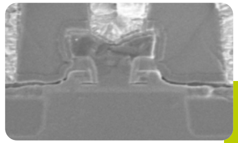
12''

B55
55-nm CMOS
SiGe-C HBT
f_T > 300 GHz
f_{MAX} > 400 GHz

BICMOS9MW
0.13-µm CMOS
SiGe-C HBT
f_T = 220 GHz
f_{MAX} = 280 GHz

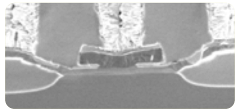
BICMOS9
0.13-µm CMOS
SiGe-C HBT
f_T = 160 GHz
f_{MAX} = 160 GHz





BICMOS7
0.25-µm CMOS
SiGe HBT
f_T = 70 GHz
f_{MAX} = 90 GHz

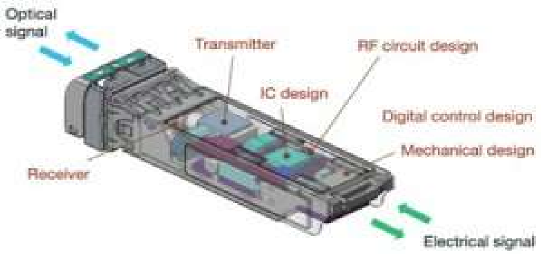
BICMOS7RF
0.25-µm CMOS
SiGe-C HBT
f_T = 60 GHz
f_{MAX} = 90 GHz



BICMOS6G
0.35-µm CMOS
SiGe HBT
f_T = 45 GHz
f_{MAX} = 60 GHz

BICMOS6/6M
0.35-µm CMOS
Si BJT
f_T = 25 GHz
f_{MAX} = 40 GHz

8''



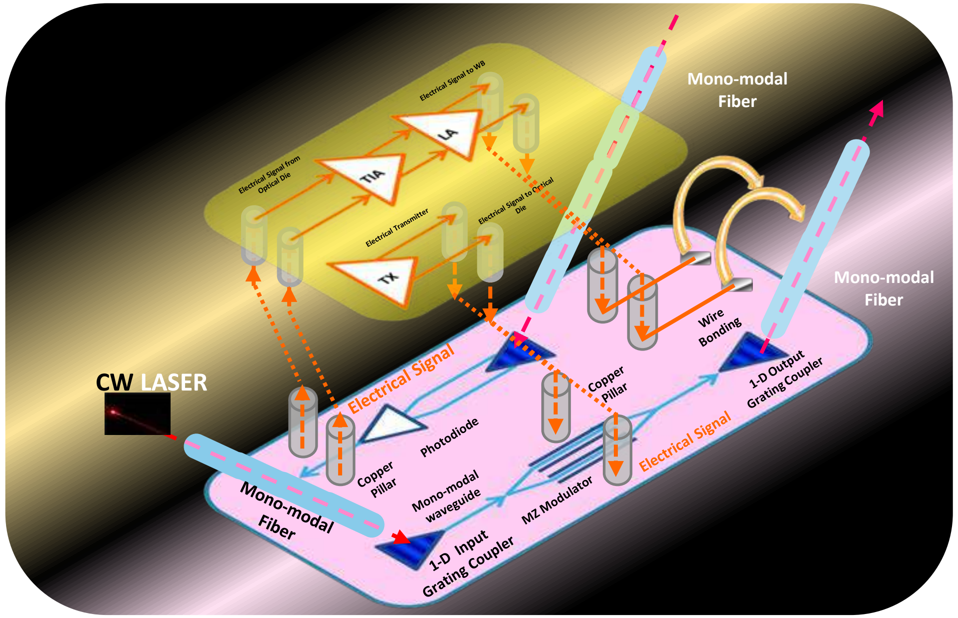
About 100M Modules powered by ST BiCMOS technologies in the field today

life.augmented

Photonic ICs for Optical Interconnect

Silicon Photonics

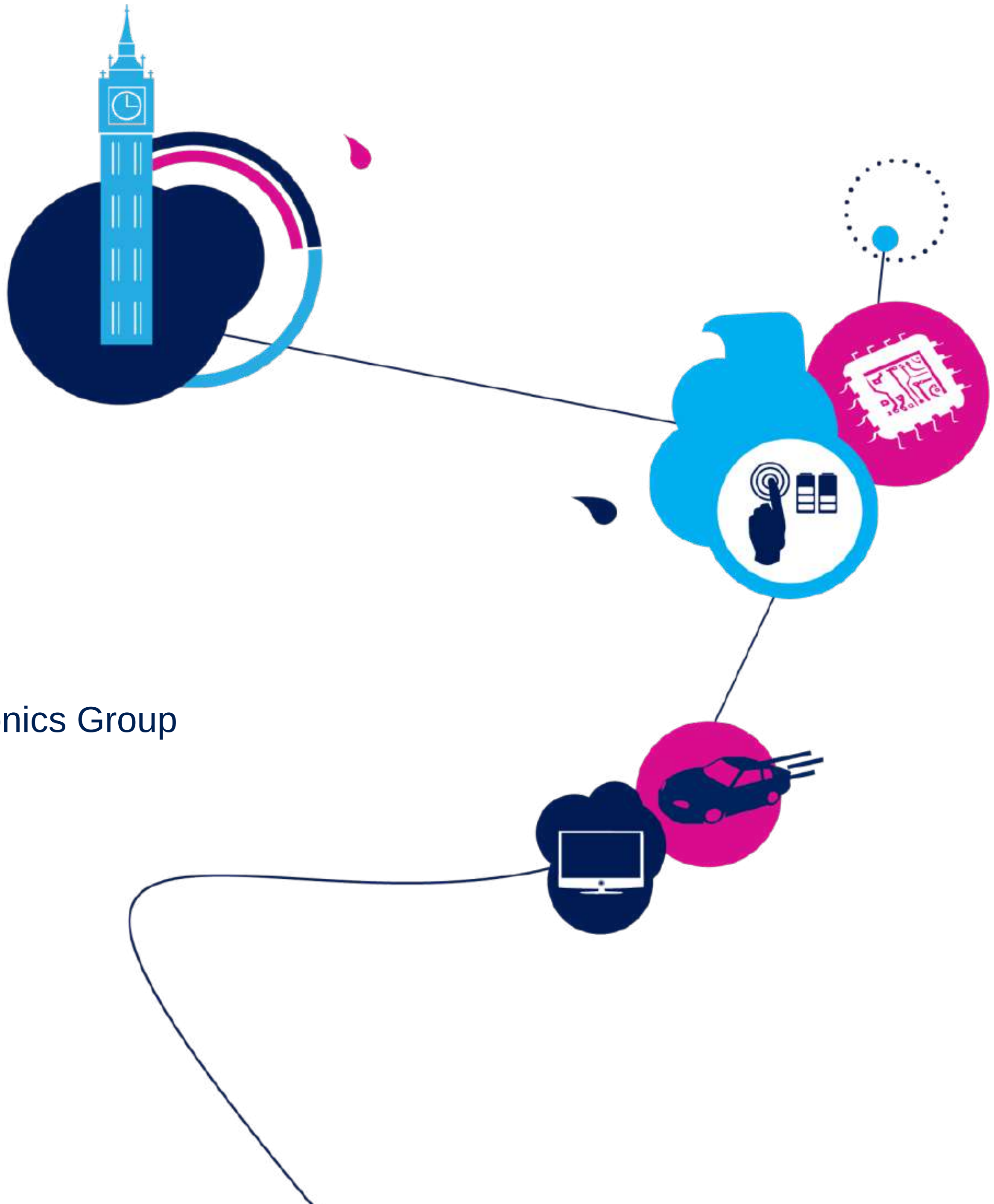
- ST aims to be the market leader supplier providing industrial, volume oriented, Silicon Photonics technology, named PIC25
  - PIC25, a variant of Luxtera licensed technology, was set up in ST in early 2012
- PIC25, mainly fabricated using 65nm line, is successfully being implemented in 12" Crolles fab
  - Production start expected in 4Q 2014
- One award by a major player and another expected within the next quarter
  - First project application could be in the domain of short-range connectivity



Silicon Photonics is a technology that allows processing and manipulation of light signals on silicon, bringing a dramatic increase in processing speed and outstanding power consumption reduction.
.

life.augmented

Imaging



Eric Aussedat
Corporate Vice President
General Manager, Imaging, BiCMOS, ASIC and Silicon Photonics Group

life.augmented

Imaging – Market Trends

- Continuous growth in existing and new applications
  - Camera phones
  - Camera and secondary camera penetration
  - Touch screen phone requiring proximity detection
  - CMOS image sensor for digital still camera
  - New segments (automotive, etc.) and new applications (gaming, etc.) requiring image sensors, photonic sensors, optical modules and ISP/SOC
- As a result, TAM expected to grow from $14B in 2012 to $26B in 2016

Source: ST

Imaging Division – Key Pillars

Imaging Semi-conductor

Image Sensor

Production from 1.4um to 5.6um pixel

1.1um development

From VGA to 24Mpix

12" ST foundry

12" UMC second source qualified (ST process)

12" ST TSV foundry

Semi-conductor

Sensor

User detection, Proximity, ALS, Optical navigation, Man machine interface, Automotive, Medical

8 & 12" ST & external foundry available

12" ST TSV foundry

Packaged Lens & sensor

Module

Fixed focus camera

Wafer Level re-flowable camera

EDOF camera

Auto-focus camera

Innovative optics, assembly & test technologies

ST manufacturing

Long term optics & supply chain partners

Image Signal Processing

Coprocessor

Stand alone ISP

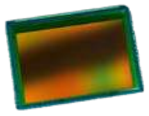
Full ST video pipe IP

Integration of third party IP on demand

12" CMOS40nm ST & foundries in production

Developing IC's in12" CMOS28nm

ST internal BGA assembly line



Imaging: Key Products Driving Growth

Camera phones:
- From re-flowable to moving optics camera
- FSI & BSI sensors
- HDR sensors & chipset

Entered New Applications:
- Digital Still Camera
- Automotive, security & Medical
- Microdisplays

New range of imaging dedicated SoC & open market Imaging Signal Processor devices

Innovative proximity sensors based on proprietary Time of Flight technology FlightSense™

Imaging Strategy Execution

Camera phones

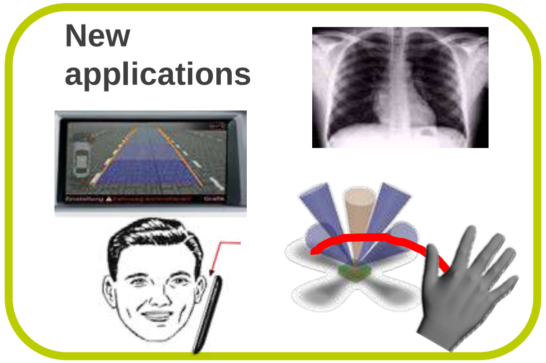
- Sensors
  - Ramp-up of Back Side Illumination (BSI) process one quarter ahead of schedule for smartphone maker flagship device
    - Including brand new technology concept
    - High Performance Pixel: DTI, Vertical Diode, large pixel, HDR, low dark optimization
  - Investment of color capacity into Crolles 300mm ready in 3Q'13 (+100%)
  - 65nm Back Side Illumination process development with UMC under execution as planned
- Modules
  - Mass production in large volumes of 5 Mega pixel Auto Focus camera
  - Mass production of 8 Mega pixel Auto Focus camera
  - Mass production of several large volumes Fixed Focus cameras (from 720p to 5Mpix resolutions)
- ISP's
  - Mass production of large volume ISP for smartphone maker flagship handset (40nm)

life.augmented

Imaging Strategy Execution

New markets, new applications

- Digital Still Camera
  - Three quarters of mass production of full frame sensors for high end DSLR market (Mastering 2D stitching technology)
- Automotive and Security
  - Sampling automotive & security HDR sensor and ISP in 3Q’13
  - Sampling automotive and security ISP in 3Q’13
  - Several design wins/ins under execution
- Gaming
  - Mass production of large volume ISP for new gaming platform (40nm)
- Proximity sensing solutions
  - Design-wins on industrial and consumer applications: Mass Production 2H13
- Design win for large volume **optical mouse sensor**
- **Near infrared detection ASIC** for large display optical touch (AIO PC’s) in production

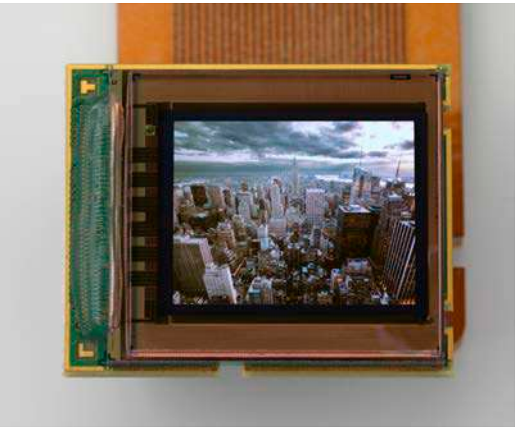


life.augmented

Imaging Strategy Execution

Microdisplays

- ST acquired 40% of MicroOled company
  - ST gradually taking over the full supply chain
  - New product design in ST CMOS technology
  - FE manufacturing
  - Color line
  - Packaging and test



- In production on Electronic View Finder and Customer Goggles since 4Q12

- ST and MicroOled partnering to compete for new design wins in Electronic View Finder (EVF) and Augmented Reality areas

life.augmented

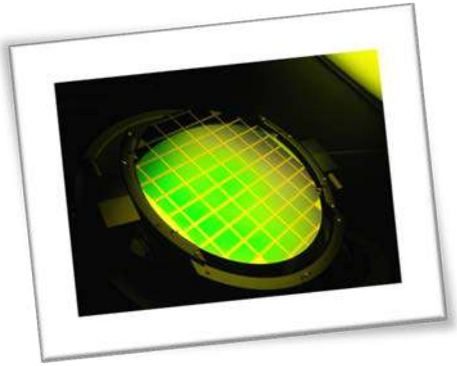
Conclusion

Imaging

- ST is pursuing its redeployment in imaging, aligning product development resources, process R&D efforts and FE and BE manufacturing capacity
- The strategy execution is on track, with major programs in all targeted segments, technologies and applications
- The efforts are focused on the goal to become a highly recognized leader in this industry

Mixed Processes

- Exploit full potential of BiCMOS and RF CMOS technologies:
  - Dominate Optical Module IC market
  - Gain share in RF networking market
  - Become a reference player in mobile and WiFi Front-End market
  - Gain share in segments still dominated by GaAs technologies today
- Become the leader in Silicon Photonics, with a one-stop-shop approach
- Cover the short-term optical module market to long-term Chip-to-Chip connectivity



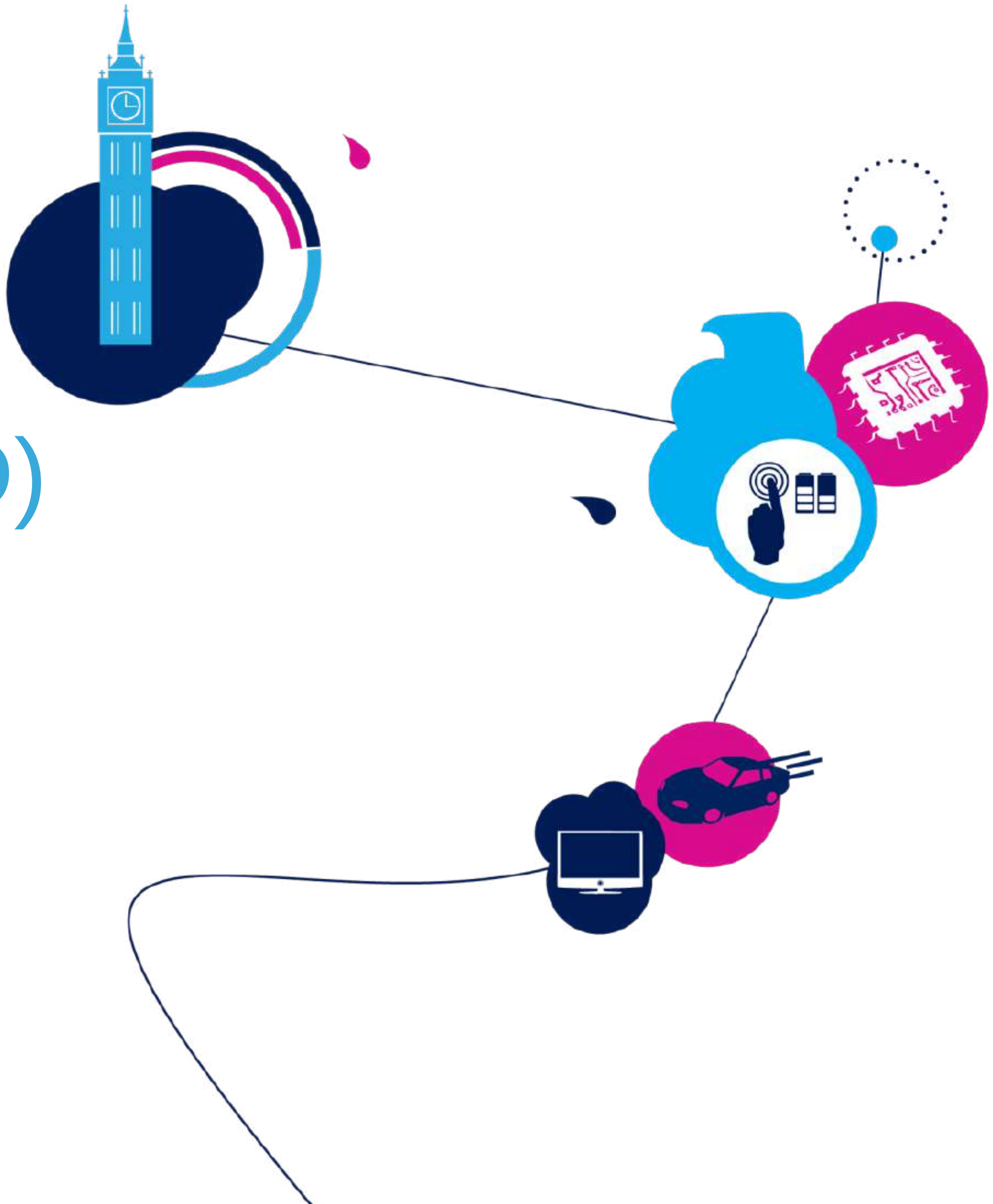
Thank You

life.augmented

Industrial
& Power Discrete (IPD)

Carmelo Papa
Executive Vice President
General Manager, Industrial and Multisegment Sector

Matteo Lo Presti
Group Vice President
General Manager, Industrial & Power Conversion Division

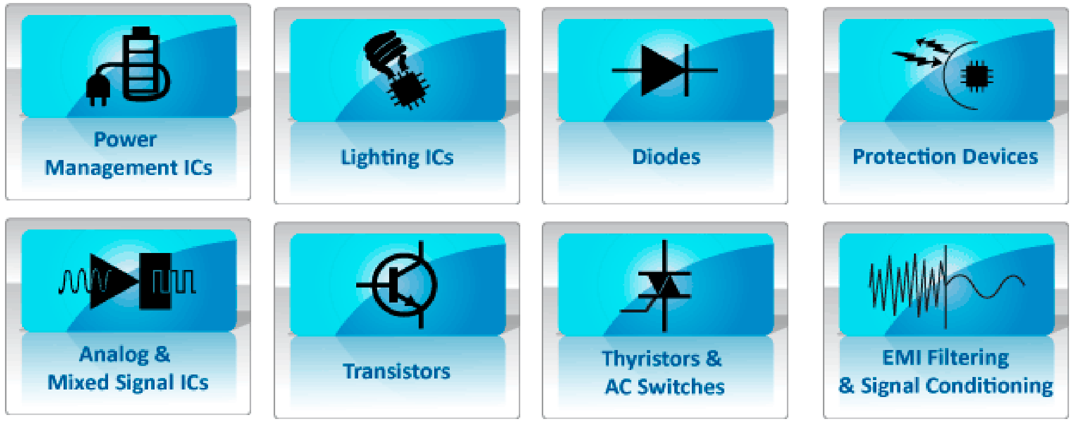


life.augmented

IPD at a Glance

2012 key facts

- TAM = $ **33.1B**
- Billing = $ **1.75B**
- Market share = **5.3%**



A significant breakthrough in **Innovation**

- **> 700** new products introduced in the last two years
- **16%** of sales are products < 2 years old
- **> 290** new patents and patent applications (filed or granted) in 2012

Diversified product portfolio embedding Power, Smart Power and Analog ICs

- … more than **7,300** available products

Serving a large and balanced customer base: OEMs, Distributors and Mass Market Accounts

- **> 5,800** final customers supported

Wide mix of Technology (HCMOS9, Power, BCD), IPs, SW and Packages supporting product roadmap evolution

life.augmented

Market Leader in Power & Smart Power

Industrial Analog ASSP

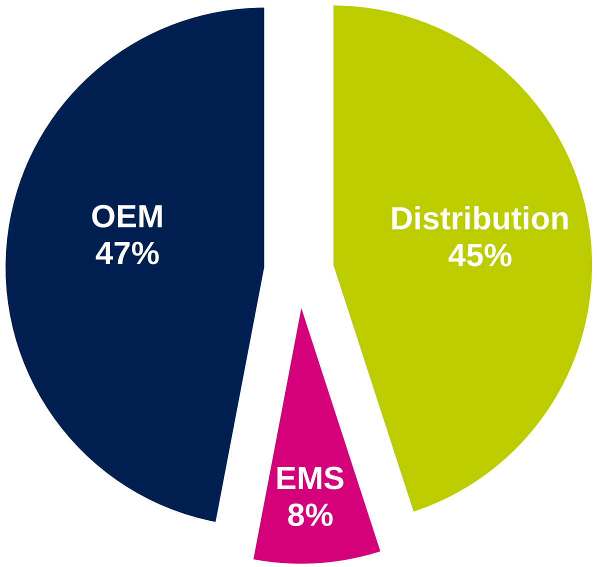
AMOLED Power Supply	Power Line Modem for Smart Metering	Power Factor Correction for Lighting	High Voltage Smart Driver for BLDC Motors	HDD Power COMBOS	HV Resonant Converters in SMPS
75%	80%	25%	25%	45%	25%

High Voltage Power MOSFETs (> 400 V)	**Thyristors & Triacs (< 55A)**	**Schottky & Ultrafast Diodes**	**IPAD™ & RF IPD**	**EOS, ESD & Lightning Protection**
18%	14%	10%	11%	10%

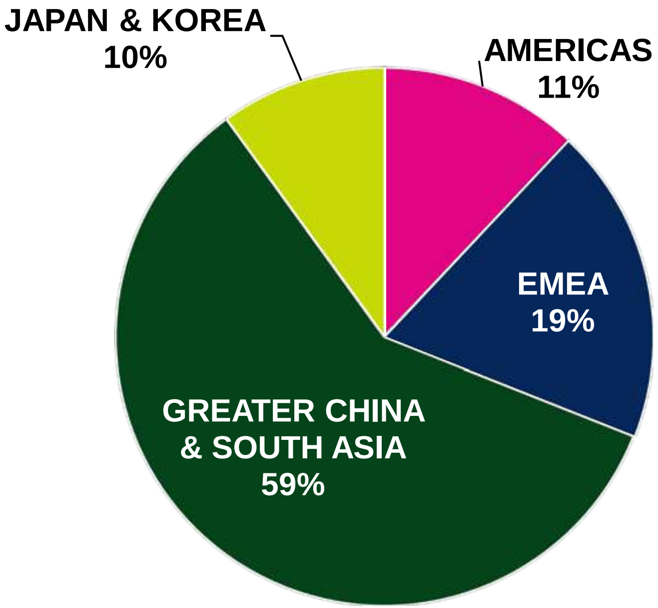
Source: WSTS, IHS iSuppli, ST

Well Balanced Customer Base…

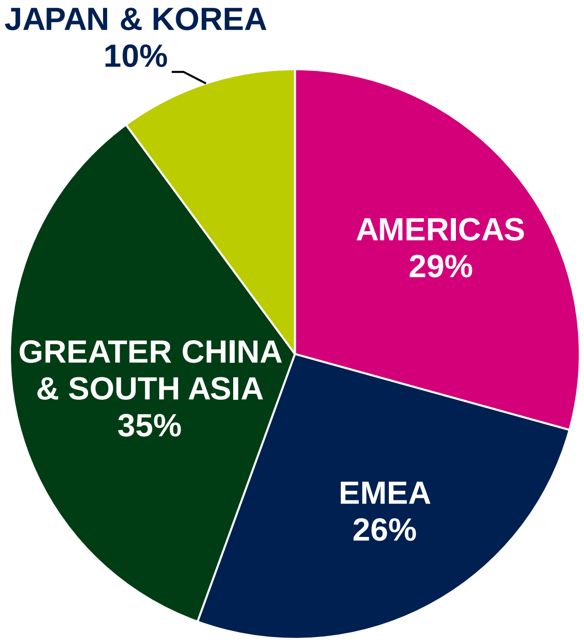
Revenue by customer type



Revenue by region of shipment



Revenue by region of origin

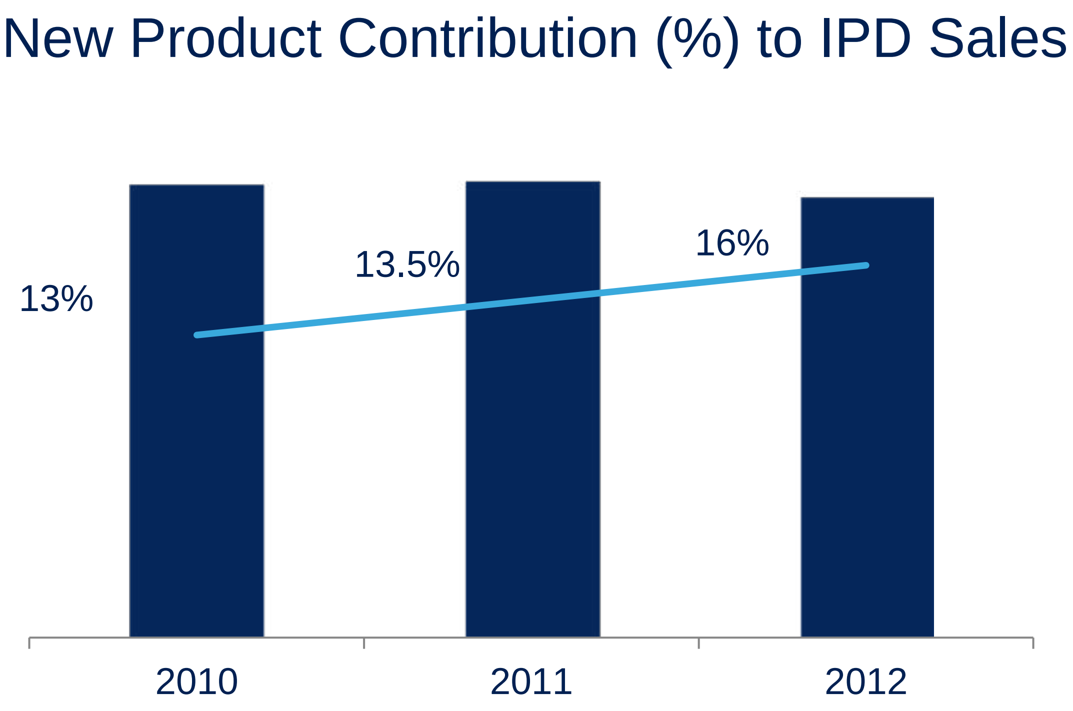


…and well balanced across Market Segments

life.augmented

Source: ST

New Products: a Key Contribution to Sales



2014 Target: 20%

Long lasting product portfolio for Industrial Applications

Competitive Design & Manufacturing process

23 new Key Power & Smart Power technologies introduced in the last 2 years

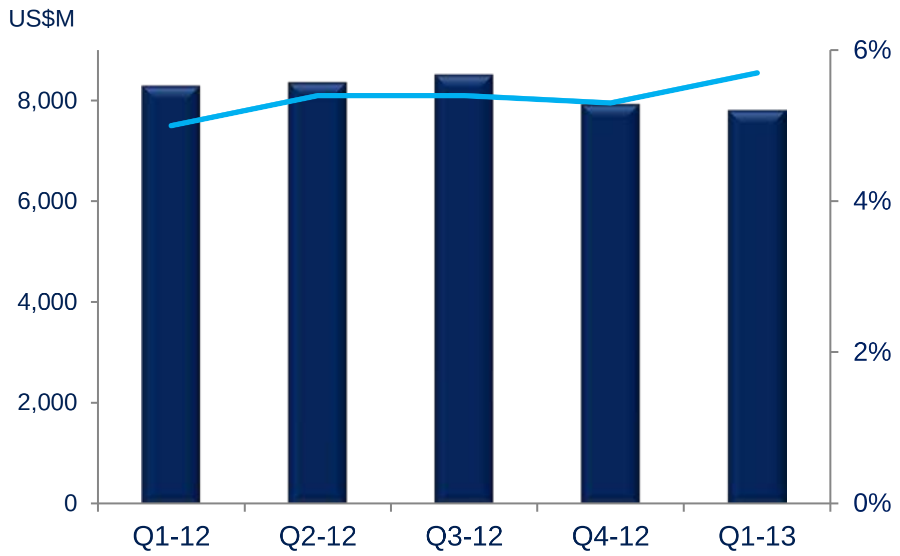
Large Power, Analog & Digital IP portfolio for developing Advanced Smart Power products

Power Packages enabling high power applications and power density optimization

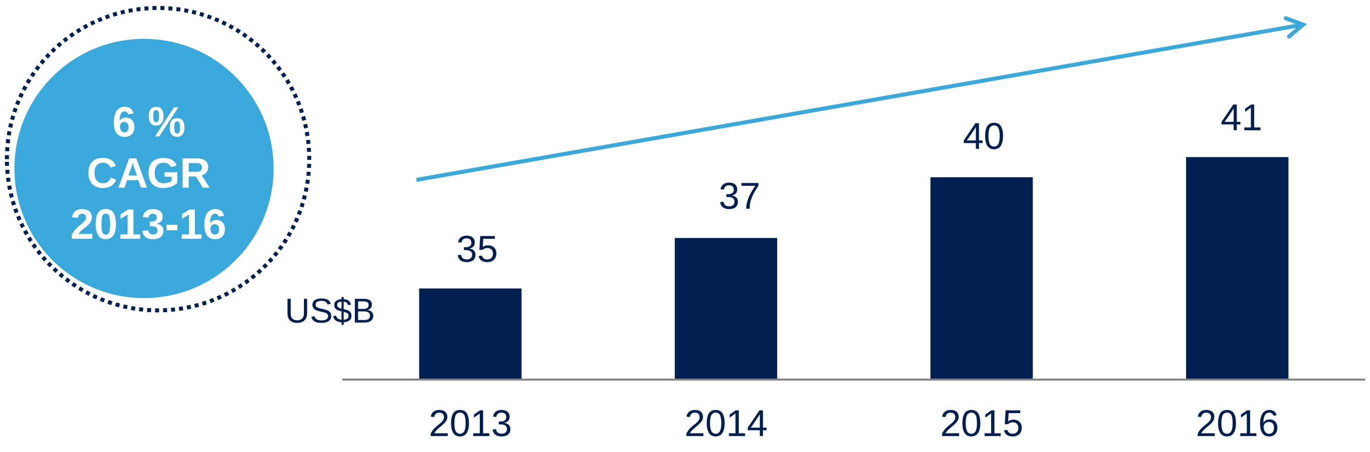
Source: ST

IPD: 2012 Results & TAM Evolution

TAM & IPD Market Share



IPD TAM



Key Products Focus

- Power Management ICs for Smartphones and Tablets
- Industrial ASICs and ASSPs for factory automation and motion control
- IGBT Power Modules for industrial applications
- Tunable Capacitors for mobile phones
- SiC Diodes for high power converters

Source: WSTS, ST

Key Market Trends & Focus Areas

Smart Grid

$6B TAM in 2016
CAGR 13-16: +14.2%

Key Applications:

Smart Metering, Renewable Energy, Energy Saving, Power Conversion, HEV-EV, LED Lighting

Automation

$8B TAM in 2016
CAGR 13-16: +7.5%

Key Applications:

Factory Automation, Industrial Motor Drives, Home & Building Automation, Networking, Security

Portable

$9B TAM in 2016
CAGR 13-16: +7.4%

Key Applications:

Smartphone, Tablet, Handheld Consumer, Fitness, Consumer Medical

Source: IHS iSuppli, Semicast, ST

Recent Major Achievements in Portable

Portable

AMOLED Displays ICs:
Ensuring longer battery life and high immunity to cellphone communication noise, resulting in flicker-free displays

- > 75% Market Share
- Now expanding into TV display applications

Integrated Passive & Active Devices (IPAD):
combining multiple functions in a single tiny package

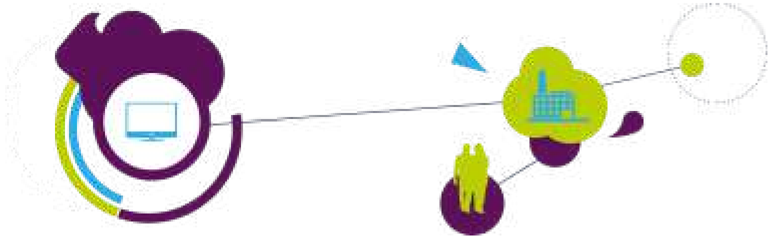
- Won new socket at major Chinese smartphone makers

High-Speed Electrostatic-Discharge Protections:
Increasing application robustness & reliability

- Collected multiple design wins in mobile phones and tablets, TV displays, PCs and laptops at major global OEMs.

High Voltage MOSFET:
Extending product range for battery chargers for smartphones and tablets

- > 400% sales growth in 2012 vs. 2011 with new MOSFET technology in major smartphone manufacturers



life.augmented

Recent Major Achievements in Automation

Automation

Motion Control ICs:
Unrivaled integration with Smart Power technology

- **x-SPIN™** family doubling sales in last 3 years
- Introduced new Technology Platforms for **Micro-Stepping & Multi Motor Drivers,** allowing penetration into new, high margin Industrial applications (representing 30% of the Market)

SmartDRIVE™:
Advanced solution for robust and high efficient driving of **IGBT/MOS**

- SmartDRIVE product family sales growing by 120% in the last 3 years in Home Appliances (market growing by 10% per year)

EOS & ESD Protection:
for Ethernet & Security Networks

- New design wins will double ST 2013 revenues vs. 2012

IGBT/MOSFET Power Modules:
Integrated & efficient modules for flexible & robust designs

- Won socket for **SLLIMM** (IPM) Intelligent Power Modules in high-end washing machines at a leading European household appliance maker & at US white goods manufacturers
- First custom product sockets won at Industrial customers for High Power Conversion and Motion Control

Recent Major Achievements in Smart Grid

Smart Grid

Power Line Communication:
Undisputed Leadership with **STarGRID™** Platform

- 80% market share in power line modem for Smart Metering
- 120% sales growth 2012 vs. 2010

Power Conversion:
ICs for Energy Saving

- Increase market penetration thanks to strong relationship with OEM and know-how reuse in new ASSP for open market

HV Power Discrete and Smart Power:
For Energy Management

- **Super Junction MOSFET** sales growth +7 % in 2012 vs. 2011 representing 61% of High Voltage sales in 2012
- Secured design wins for the robust **Trench-Gate Field-stop IGBTs** with several solar-power and welding customers in Europe and China
- Introduction of Power Transistors and ICs for HEV Application: design won with Key OEMs

life.augmented

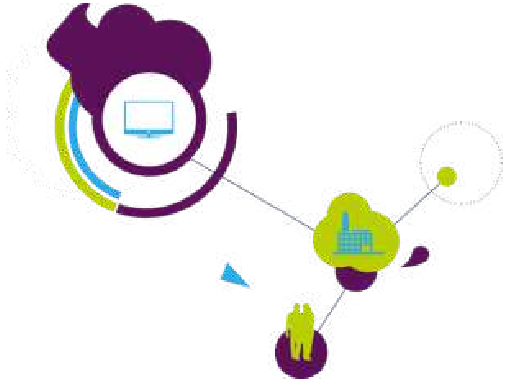
IPD: Priorities for 2013

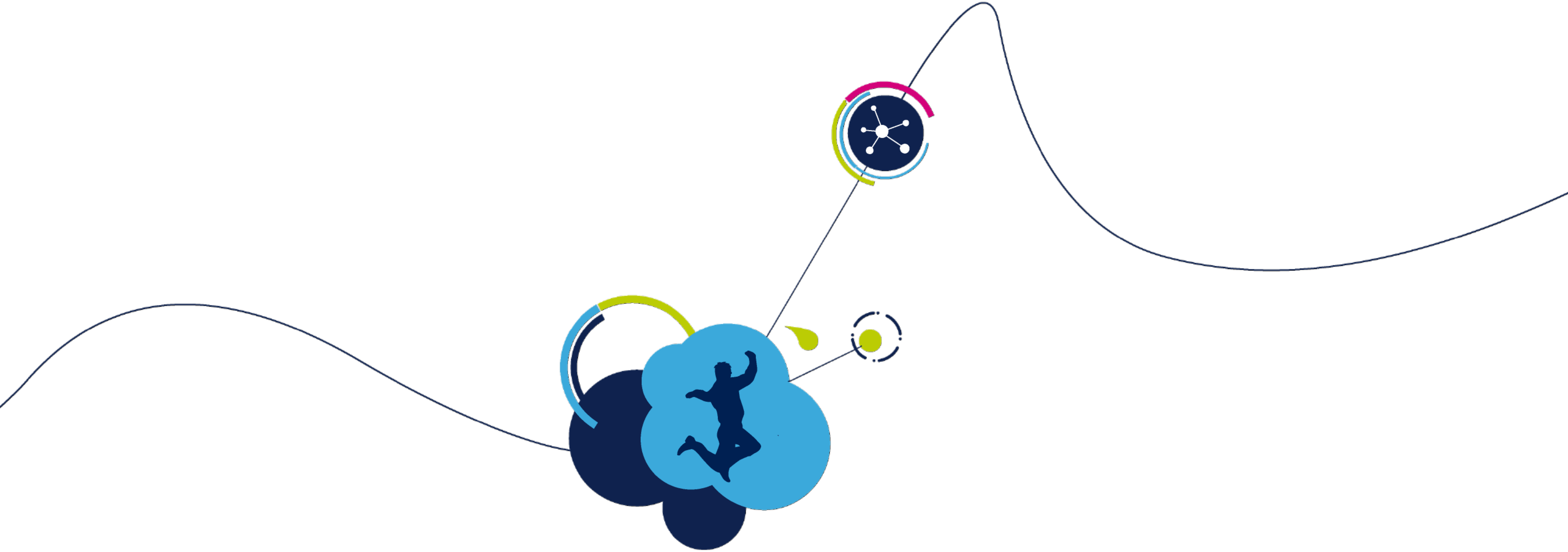
2013

Expansion of **Low Voltage MOSFET** and **IGBT** (including modules) addressing Industrial, Telecom, and Automotive applications

Major turnaround in the distribution & mass market, following tough market conditions in 2012

Introduce innovative solutions in Power Management for Portable Equipment, exploiting ST-Ericsson resources, know-how and IPs





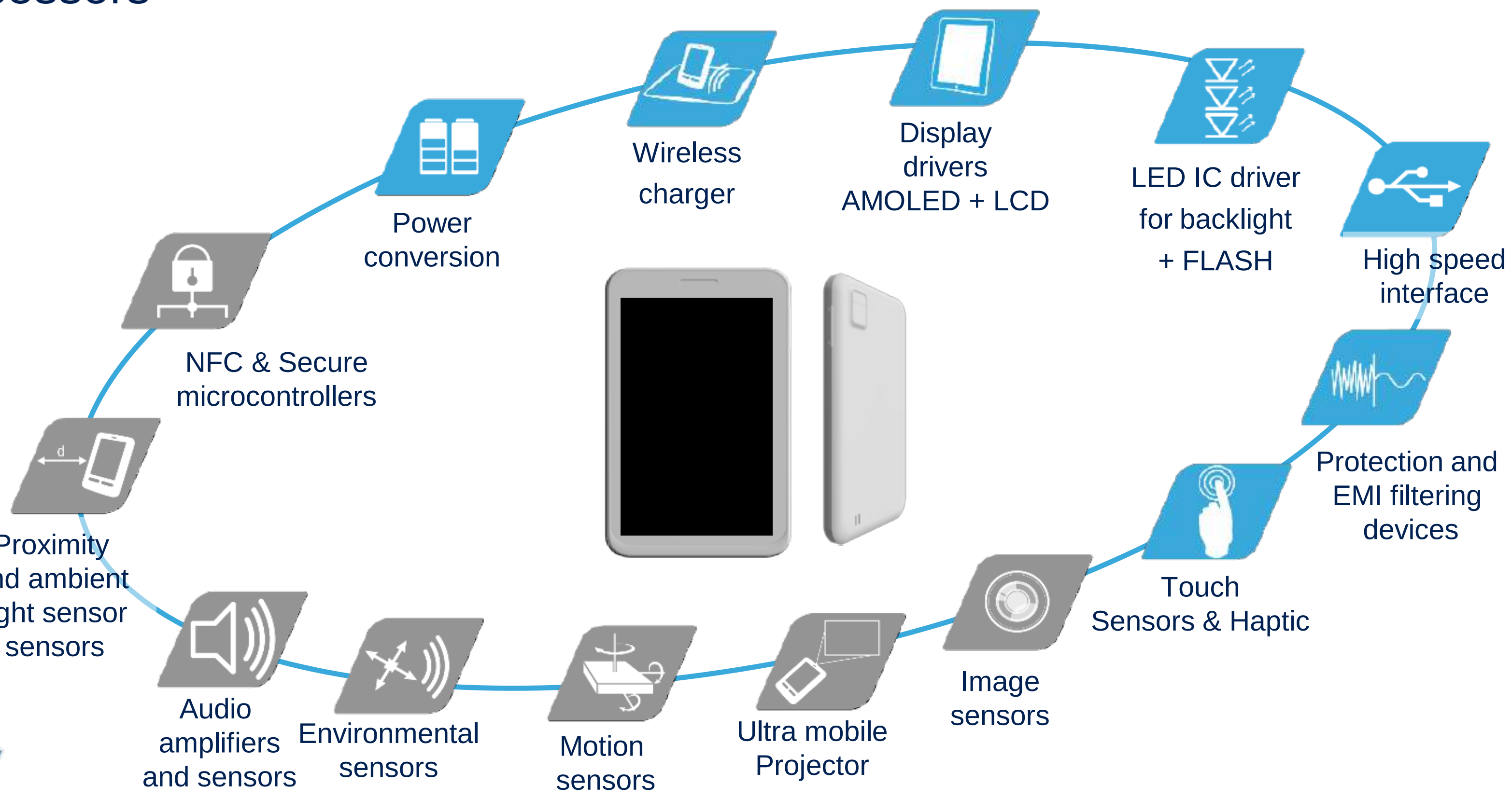
New Technologies and Advanced Products to Serve the Market

life.augmented

Portable

Expanding Leadership in Power Management ICs for Smartphones & Tablets

Complete application know-how and broad IP portfolio for integrated solutions: from **AMOLED** DC/DC to **Power Management Integrated Circuit (PMIC)** for application processors



WW Smartphone & Tablets
CAGR 13-16: >15%
2016 TAM: >1.5 Billion units

Source: Displaybank (IHS) 2012

Portable

Entering New Areas for Discrete Power & Antenna Tuners

Smart RF Antenna Tuners: Introducing high-performing, power-saving Tunable Capacitors for new generation 4G LTE devices for leading smartphone manufacturers

- Mobile Phone antenna is matched by design (GSM or 3G) and/or configuration (“in hand” or “free space”)
- ST tunable solution adapts the antenna impedance to various modes and preset configurations in order to Boost 4G Connections & Battery Life
- Enhancing the transfer of energy from the handset amplifier to the antenna under various operating conditions

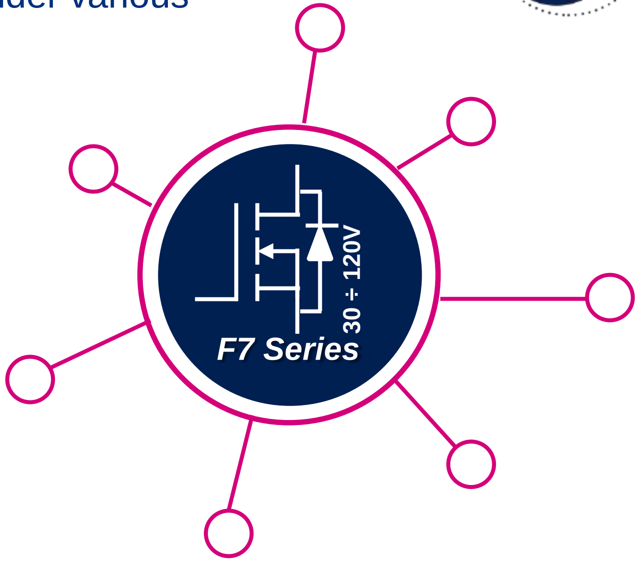
Longer Battery Life

Fewer Dropped / Missed calls

Faster data-rate

Expanding our Market Leadership from high voltage to low voltage **Power Transistors**

- Power MOSFET low conduction losses & efficient intrinsic body diode allow package miniaturization & small form factor of final system



life.augmented

Smart Grid

New Paradigm in Digital Power Supply

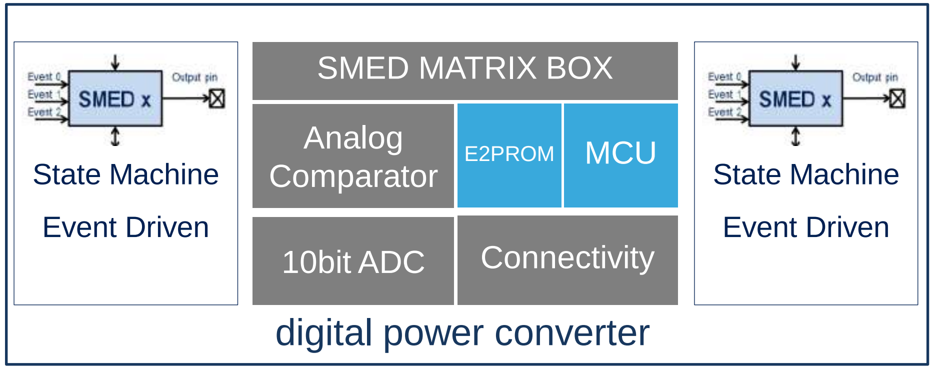
STLux: The first digital platform specifically for power conversion.

Main Advantages:

- Topology independent solution
- Control, communication and monitoring functions
- Thermal management
- Easy to program, easy to use
- Very high efficiency with control algorithm adapted to load conditions

Improved reliability:

- Fault detector, precursor & recorder



ST Market Leadership in Analog Power Management will expand to Digital Power Management

life.augmented

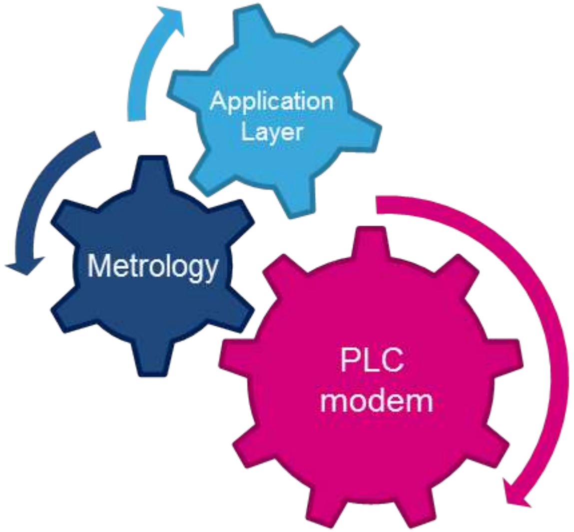
Advanced Products for Metering Applications

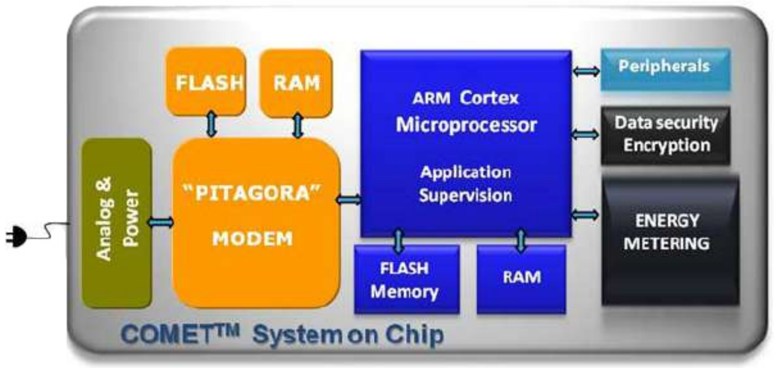
Power Line Communication

- From first smart PLC modem generation to super integrated 5th generation SoC platforms
- Unique System on Chip architecture with highest integration for emerging Smart Grid applications
- Integrated: PLC Module, Metrology Engine and Application Core

New Meter Analog Front End

- Programmable SoC energy calculator
- Configurable DSP energy calculator with Multiple Channels AFE





WW installed Smart Meters CAGR 2011-17: 33% **from 97 Million to 544 Million**

Source: ABI Research, 2012

Smart Grid

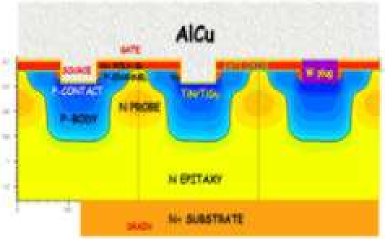
Advanced Power Discrete

SiC and GaN

- 600/650V SiC Diode already in mass production
- 1200V SiC Diode available
- 1200V SiC MOSFET (Planar Technology) available in 3Q13
- 650V / 200A HEMT GaN Transistor under development
- 600V GaN Power Diodes available next year

AFER Diodes

- Low Vf providing an immediate 1% efficiency improvement
- Low Ir providing extra margin against thermal runaway
- Perfect price/performance positioning between Schottky & standard rectifiers

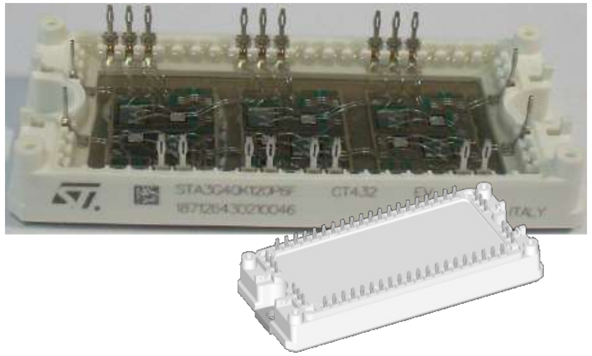


life.augmented

Advanced Power Discrete

IGBT

- Trench Field Stop technology: the most advanced IGBT technology, offering 50% better efficiency than planar technologies
- 1200V Trench Field Stop thin wafer for better thermal characteristics and Power Module applications
- 650V / 200A Trench Field Stop IGBT for HEV and high-end Motor Control Applications

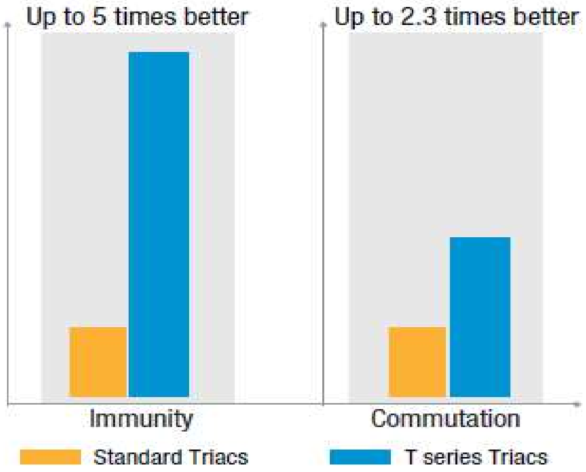


Power Modules

- High Power Modules for industrial and automotive applications
- Proprietary ST packages: compact size and available in Solderable or PressFit Pins
- Improved thermal exchange
- Design for reliability

Triacs New generation

- Better commutation (x3) and noise immunity (x5) vs. standard solutions



New Triac series features

life.augmented

Advanced Smart Power

Intelligent Power Switches (IPS)

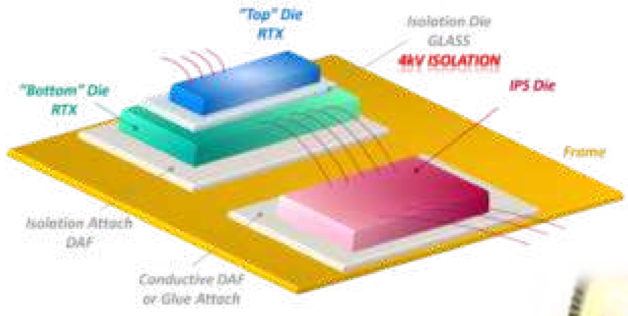
- Galvanic Isolation Break-through Technology for IPS
- Self protection and diagnostic
- Programmable devices with configurable output stages
- New product portfolio offering high integration and diagnostic for PLC, Digital I/O Systems
- Novel IO-LINK Transceivers for industrial networking

IO-Link

Elementary Coreless Transformer unit

GapDrive

- Galvanic Isolated Gate Driver
- Serial Configuration / Monitoring
- High Current Driving capability
- Fault Protection
- Also addressing automotive applications



WW Growing TAM 2014: **$2B**

Source: IHS Suppli, Strategy Analytics, ST

Excellence in Analog & Power Mix through SiP

POWER

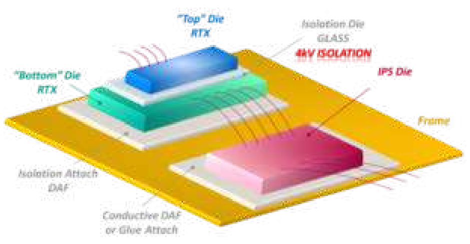
Sensors

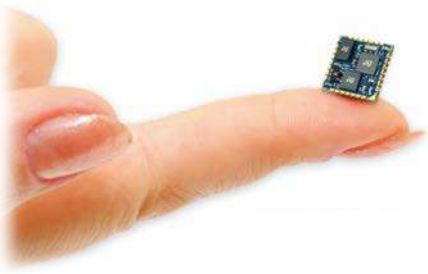
Analog Front End

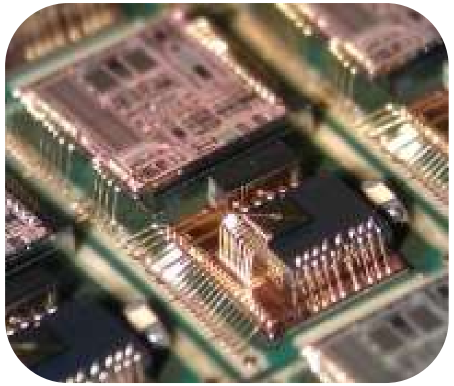
SMART POWER

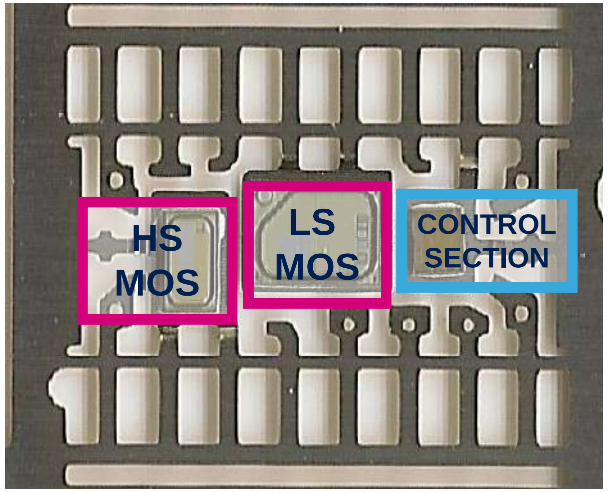
Key Benefits

- Miniaturization
- Improve cost-effectiveness
- Enhance functionalities
- Protect IPs
- Power Density
- Flexibility
- Mix of hybrid technologies
- Heterogeneous integration









life.augmented

A combination of IPs and Technology for a Smart System-In-Package

Focus on Mix and Profitability

- Targeting high-end growing markets
  - Smart Grid
  - Automation
  - Portable
- Improving product mix
  - Enriching **Power Discrete** product families by introducing SiC, GaN, High and Low Voltage MOSFET, FER Diodes.
  - Combining efficient **Power Technologies** (MOSFET, IGBT, SiC, GaN) **with Smart Power ICs** in Advanced Modules for Smart Grid, Automotive and Automation Markets
  - Entering **Digital Power Conversion** in High Performance and High Efficiency applications, supporting new stringent energy regulations
  - Expanding Smart Power Leadership entering in **Power Management IC**s for Smartphones and Tablets
- Leveraging on new resources transferred from ST-Ericsson to:
  - Reach a critical mass in the area of Power Management and Smart Power
  - Contribute to achieve the $600-650M Net Opex target, thanks to repatriation of external development
- New products and focus areas will contribute to the improvement of Gross Margin and Operating Profit

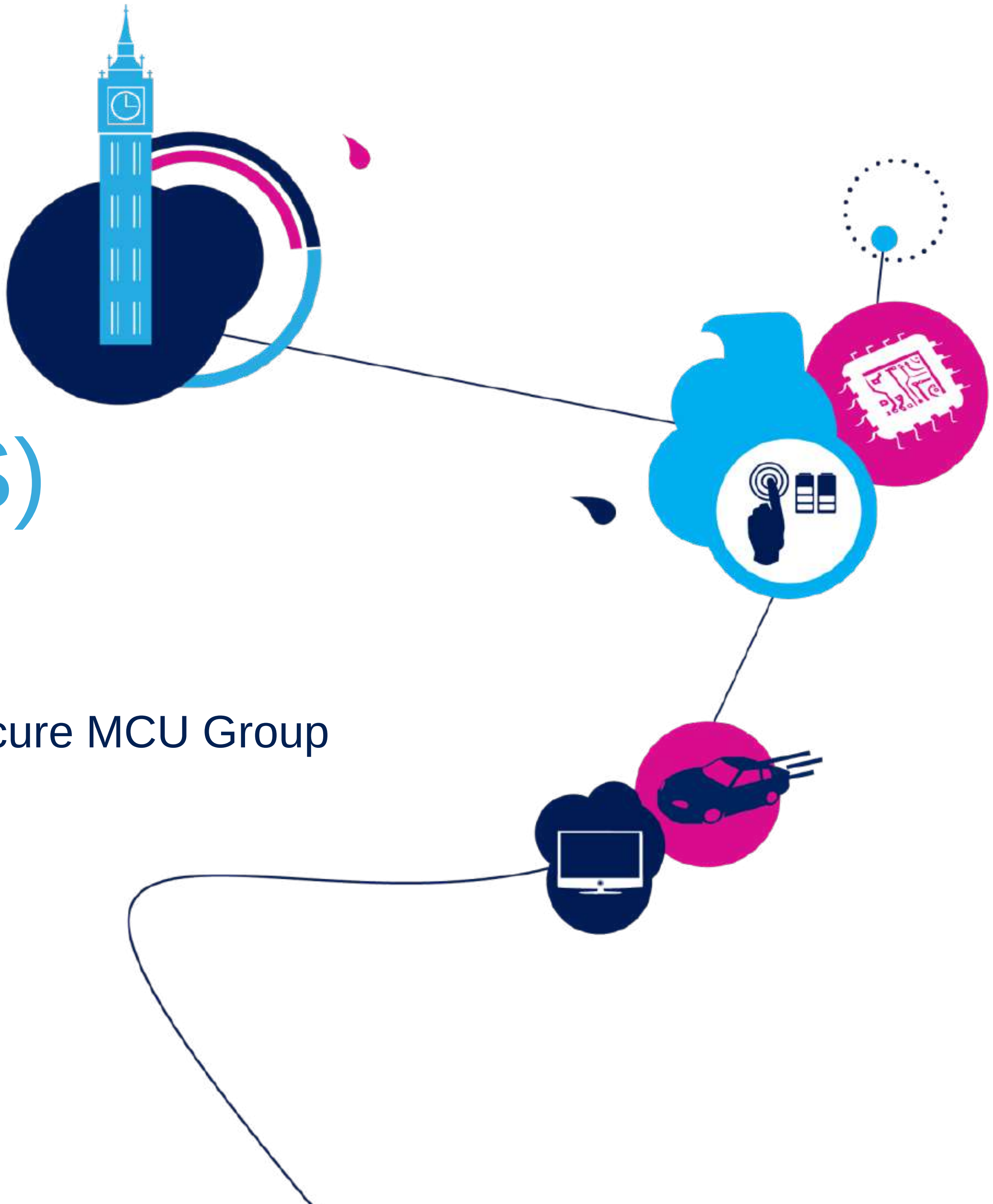
Thank You

life.augmented

Microcontrollers (MMS)

Claude Dardanne
Executive Vice President,
General Manager, Microcontroller, Memory & Secure MCU Group

François Guibert
Executive Vice President,
President, Greater China and South Asia



life.augmented

Microcontrollers in MMS Product Group

Memories

- Serial EEPROM
- RF memories
- #1 WW Supplier

Secure Microcontrollers

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

GP Microcontrollers

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

Key Enablers

- State-of-the-art embedded NVM technology
- Advanced 8 & 32-bit CPU platforms
- System & Security expertise
- Market leadership in key applications

Supporting our target markets

SmartGrid / Industrial

Healthcare

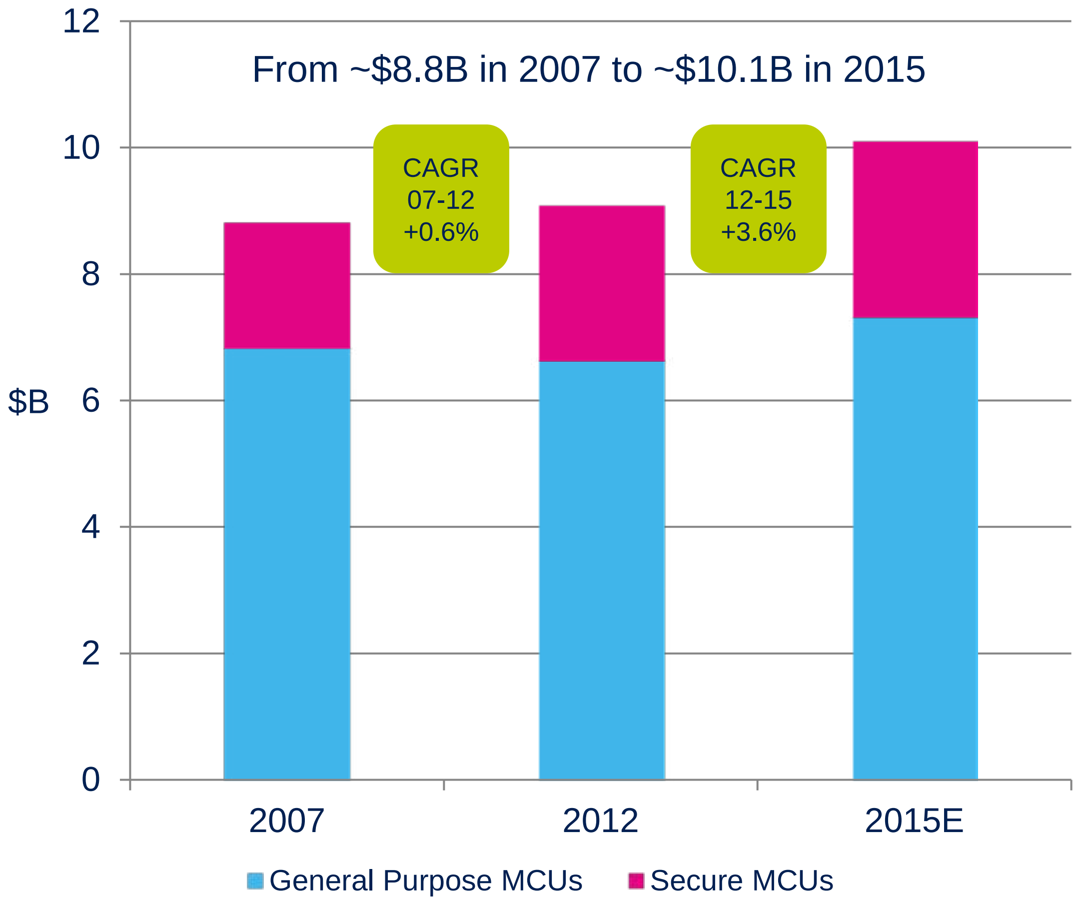
Appliances

Consumer

Security

life.augmented

WW TAM Microcontrollers* 2007-15



*WW TAM Microcontrollers excluding automotive → Source WSTS February 2013

- General Purpose MCUs

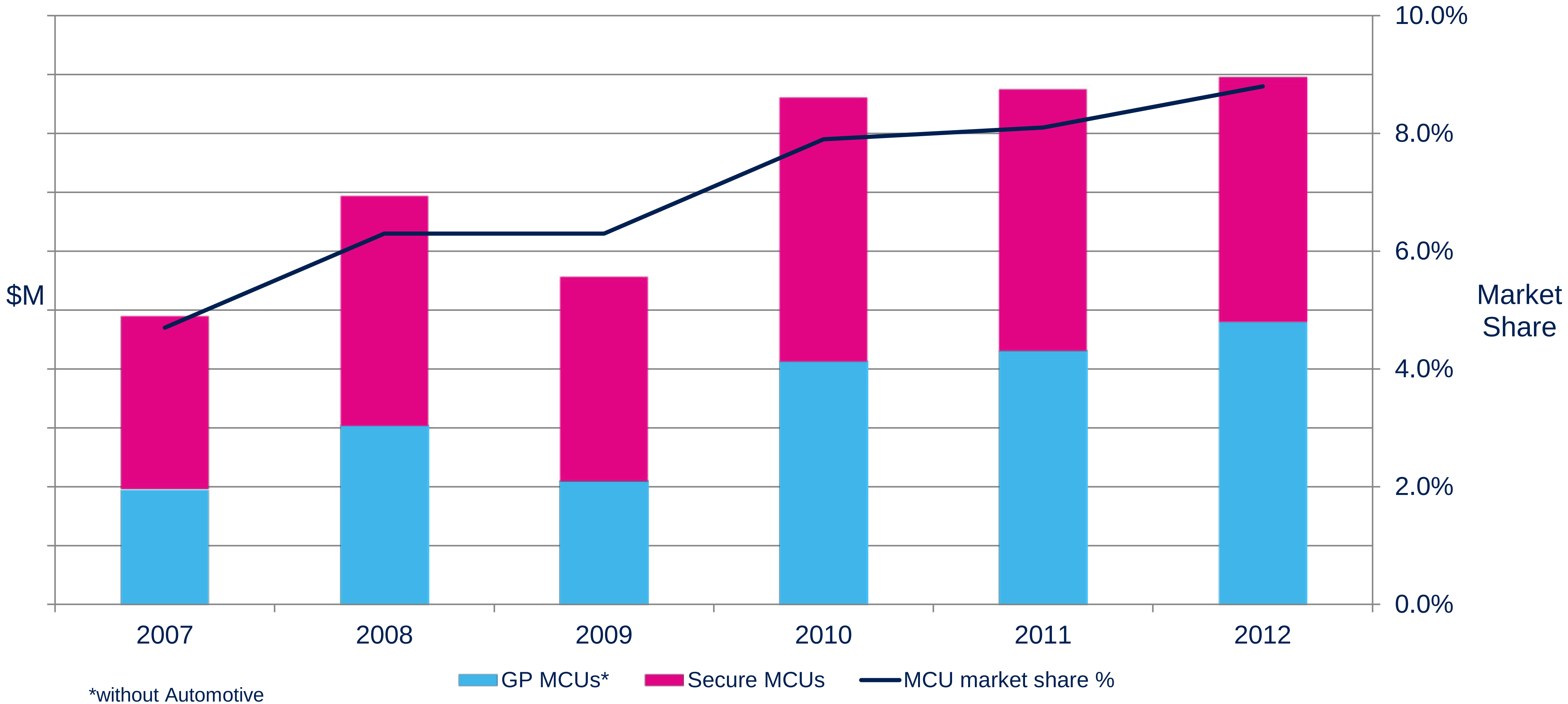
  - Mass market, very large customer base
  - Very fragmented and stable multi-segments market
  - Well established and profitable business model
  - Long product life cycles
  - Customer commitment to a selected platform
  - ST leading the running migration to 32-bit.

- Secure MCUs

  - Fast growing market driven by new applications requiring more embedded security functions
  - Vertical market, limited customer base
  - Turn key solutions oriented
  - Technology driver for all MCUs
  - ST gaining share on new Secure Solutions: NFC, Secure Authentication, Contactless payment…

life.augmented

MMS MCUs Revenue 2007-2012



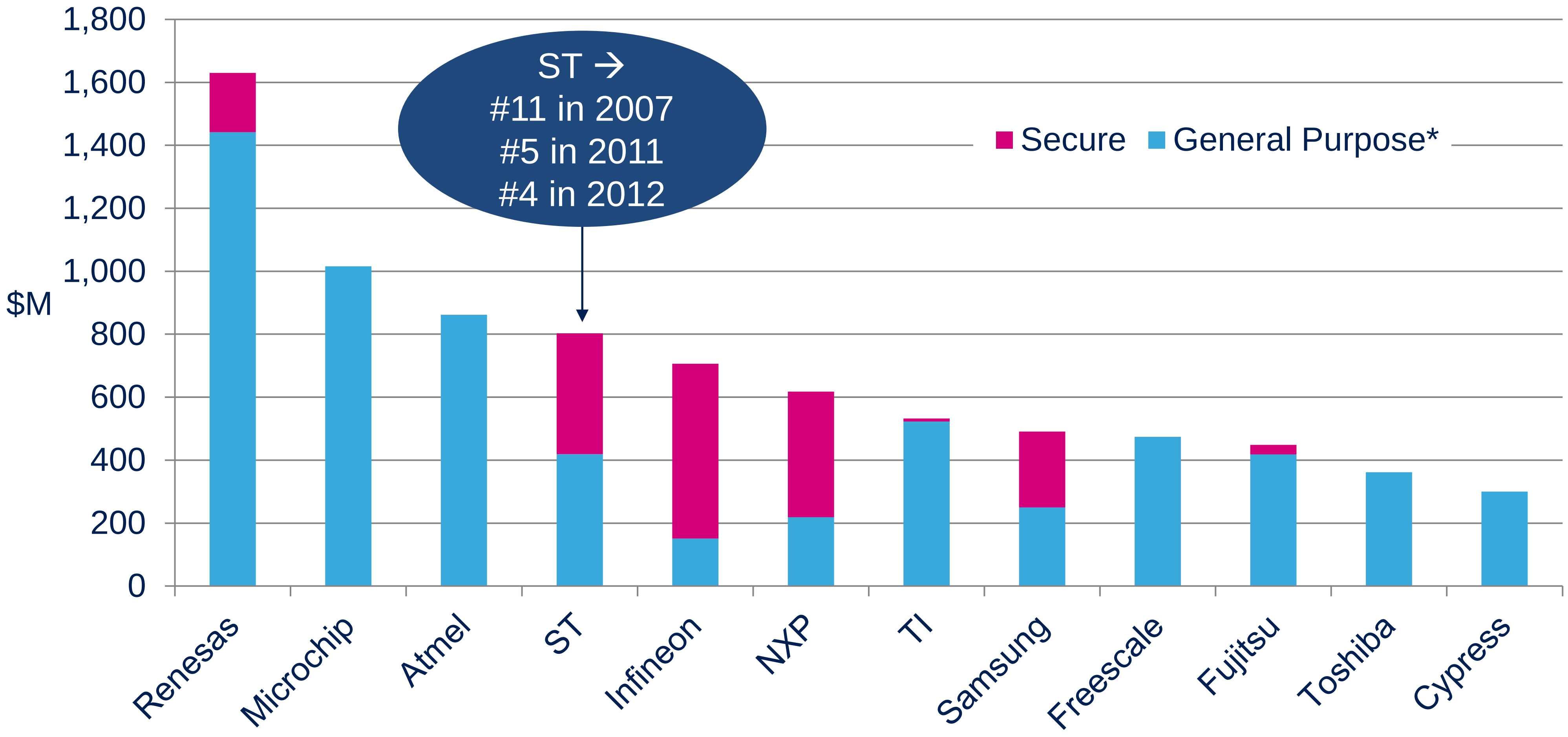
*without Automotive

MCUs revenues = GP MCUs* + Secure MCUs

Market share for consolidated MCUs excluding automotive, payphone memories & cards (Source WSTS February 2013)

life.augmented

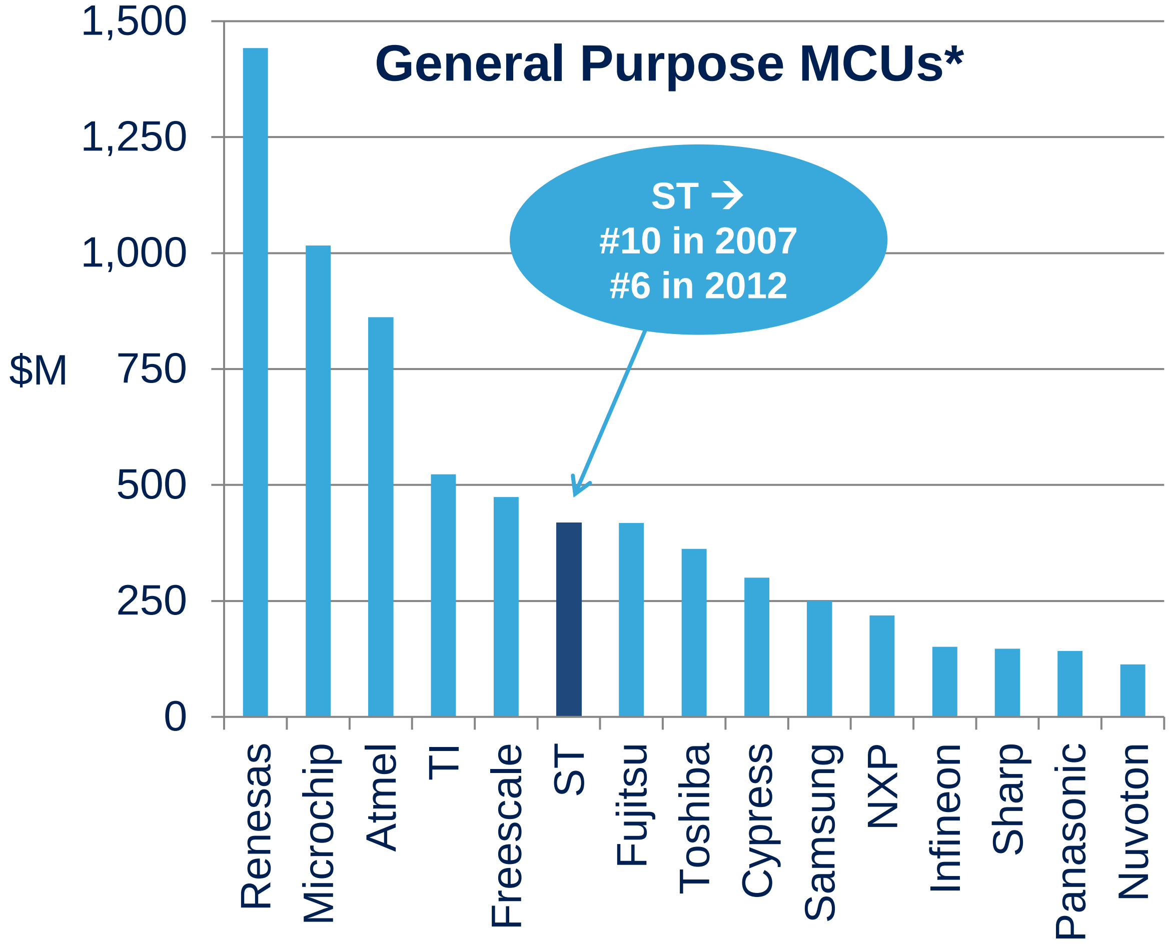
2012 GP & Secure MCUs Top Suppliers Revenues



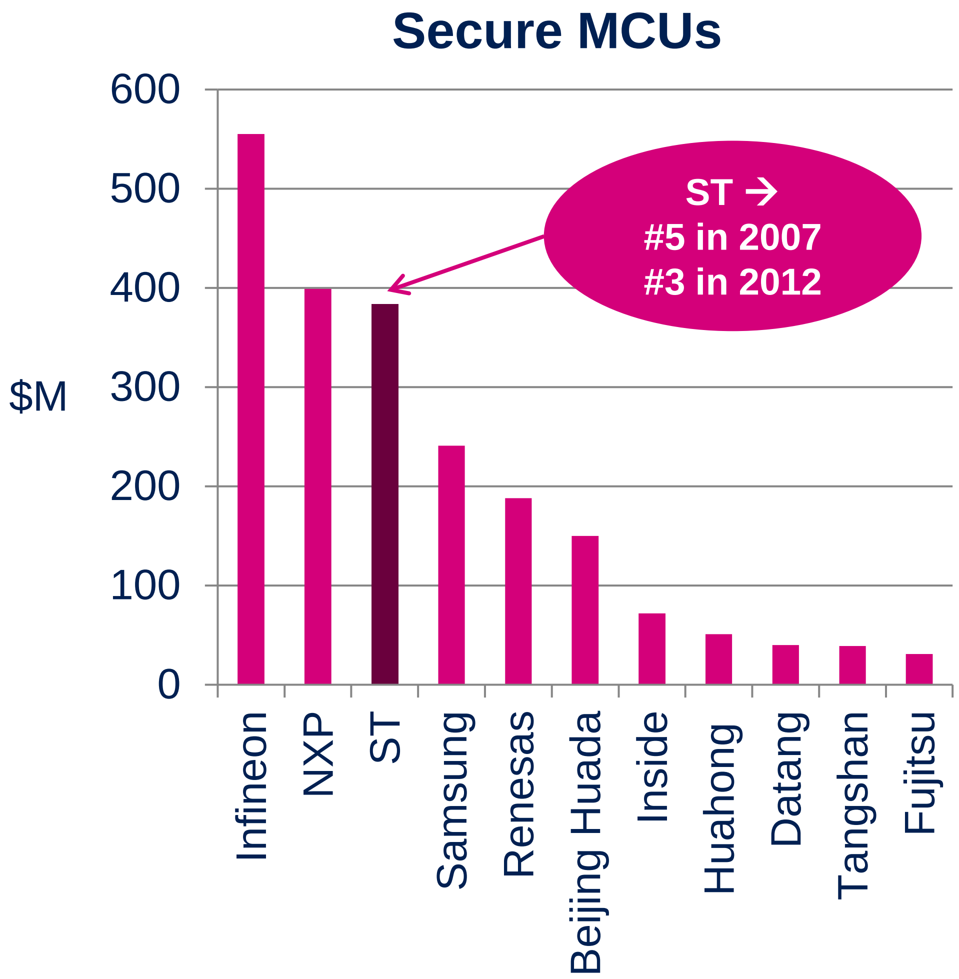
*without Automotive

Source: IHS iSuppli CLT March 2013

2012 GP & Secure MCUs Top Suppliers Revenues



*without Automotive



Source: IHS iSuppli CLT March 2013

life.augmented

General Purpose Microcontrollers

General Purpose MCUs Perimeter

Market

SmartGrid

Healthcare

&

Consumer
& Audio

Mass Market
(10K's customers)

Industrial

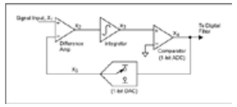
Appliances

OEMs

Enablers

eNVM
Technology

Performance



Advanced Analog

Ultra Low Power
& Connectivity

Ecosystem

General Purpose MCUs - Growth Drivers

- General Purpose products portfolio covering a broad application range
- Leadership based on 5 main axes:

Performance → MHz, DMIPs, DSP	STM32F2	STM32F4
Cost → 32Bit @ 30cts	STM32F0	+ Value Line concept
Low power → Harvesting	STM32L1	
Innovation → Analog, RF, Touch keys	STM32F3	STM32W
Ecosystem → Easy to develop with	STMCube • Compatible Software over portfolio • Product and FW configuration tool	

- Application drivers

Smart metering

Industrial

Digital switching power supply, motor control

Consumer

Gaming , Remote control, Smartphone and Tablet

Healthcare

Sport watch, Respiratory, Glucose-meter

life.augmented

General Purpose MCUs - Features trend

Sense & Drive Accurately

Synchronize Precisely

Magnify User experience

Store Seamlessly

Analog & Data Conversion
ADC, DAC, Comparators…

Peripherals

User Interface
LCD, TFT, Switches, Touch

Timers Counters
Hi-Resolution

System
Power Mgt, Reset, Regulator, RTC, Osc…

Wireless Connectivity
ZigBee, BTLE, ANT, RF4CE, WiFi, NFC…

Digital Signal Processing
Enhanced instruction set

CPU
Cortex
Intelligent Processors by ARM

Wired Connectivity
I²C, SPI, USART, CAN, USB…

Security & Crypto

Memory

SRAM
Up to 256KB

EEPROM
Up to 512KB

FLASH
Up to 2MB

FW Libraries

Interact Easily

Connect your Digital life

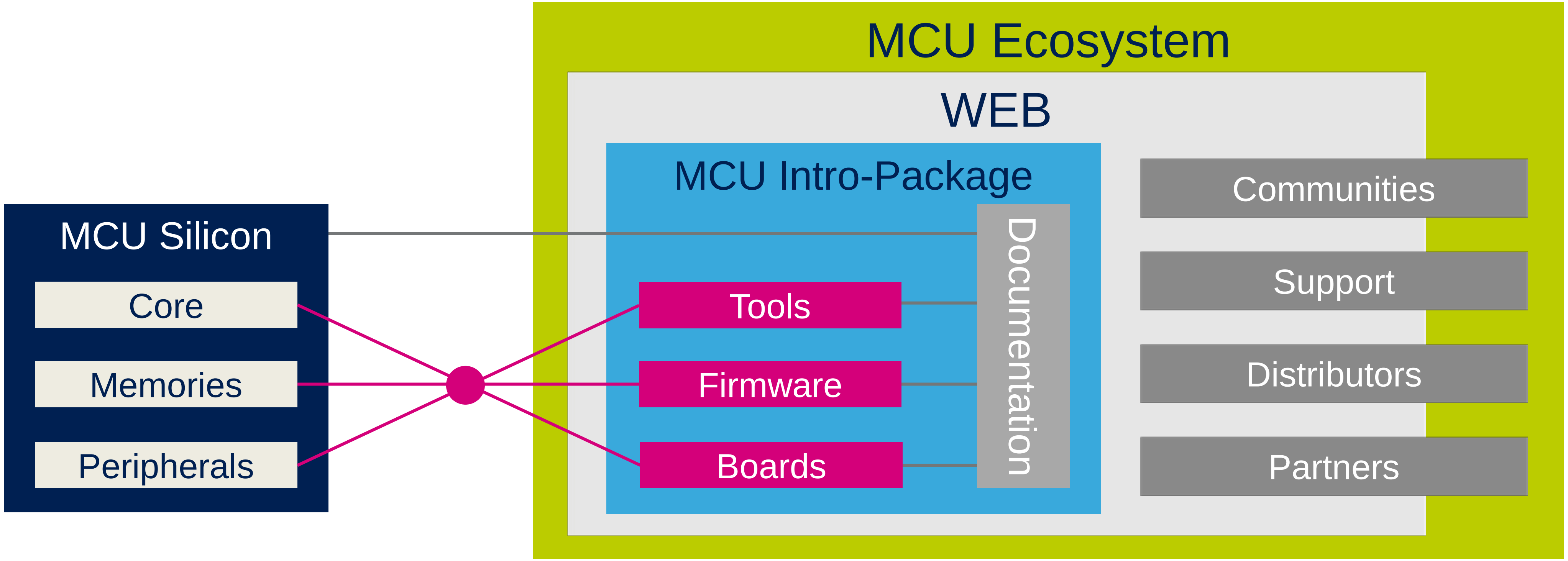
Transfer Data

Powerful Computing

More integration to connect applications and
broad product portfolio to adapt to application needs…STM32 → >400 P/N

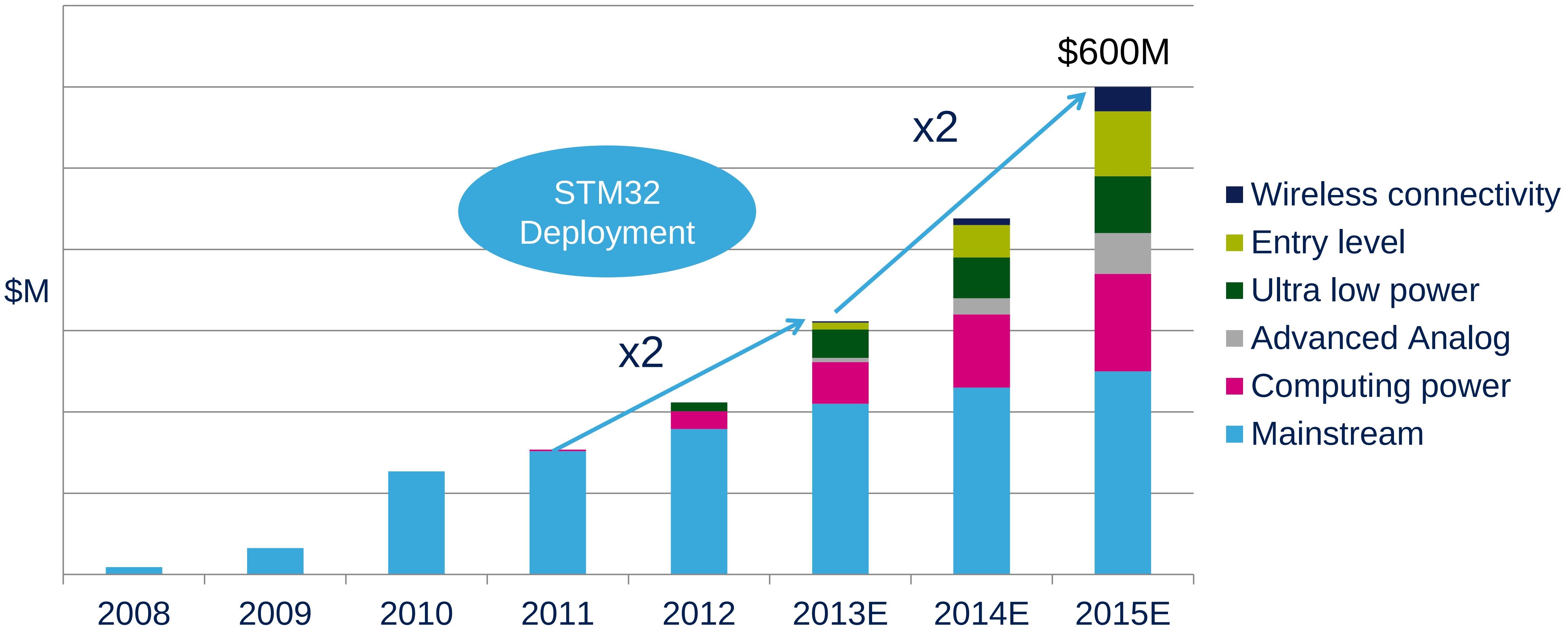
Mass Market MCU Ecosystem

- The product is part of the offer and Ecosystem is the enabler
- Support is a differentiating factor

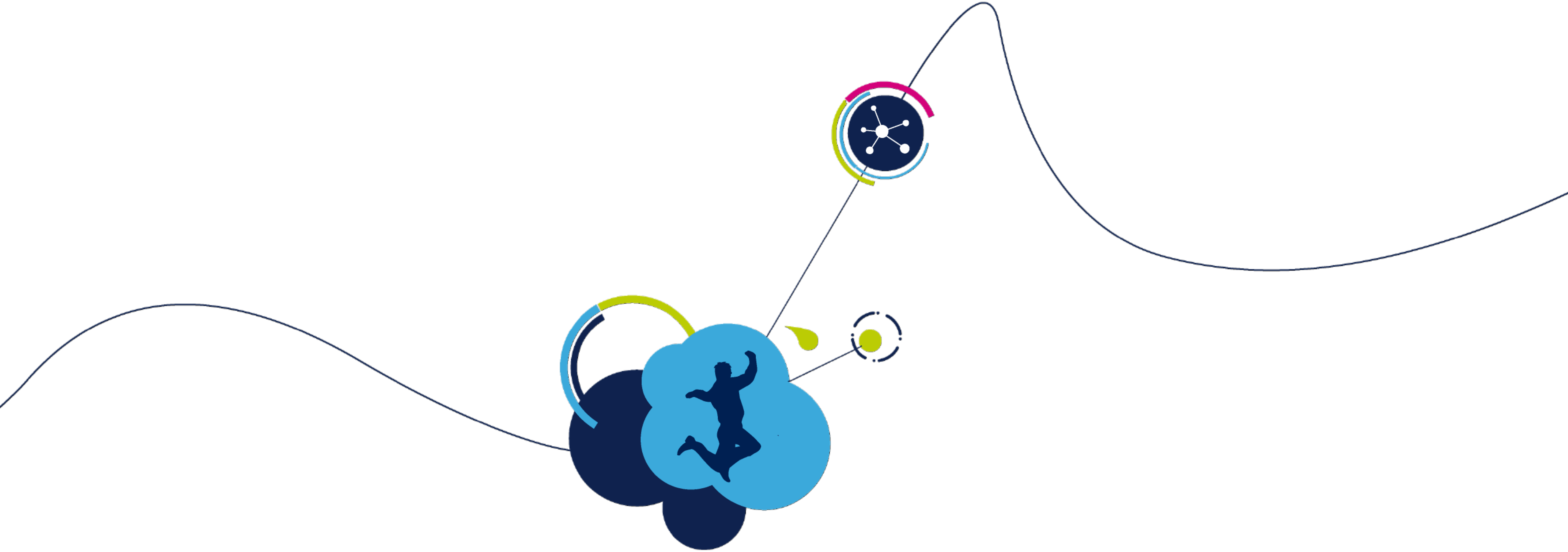


- Intro-Package is a key part of our Product offer → easy to develop
- Web is our users eStore, eLibrary and eForum → easy to access
- Ecosystem is our customer’s expectations → comfort

General Purpose MCUs growth driven by STM32 deployment



life.augmented



Secure Microcontrollers

life.augmented

Secure MCUs Perimeter

Market


Banking


Pay TV

Personal Security


Mobile NFC / SIM & M2M

Embedded Security


Identity


Transport


Computer Consumer Security

Enablers


eNVM Technology


Advanced security


Contactless performance


Software & Turn-key solutions

life.augmented

Secure MCUs Growth Drivers

Market growth driven by mobility, contactless convenience and an increasing need for security & authentication in the digital world (consumer, …)

life.augmented

Personal Security Target Markets

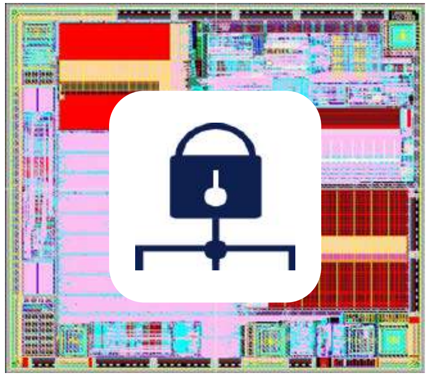
Banking

Contact cards

Contactless

Transport

Contactless cards



Secure MCUs

Identification

e-passport

ID, Healthcard

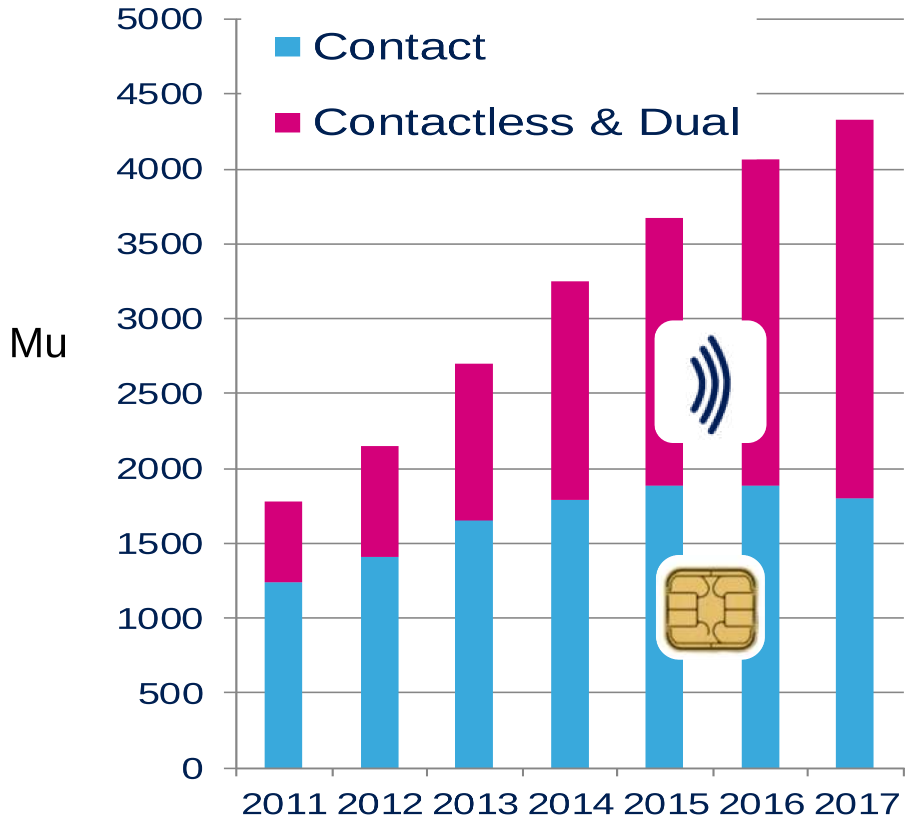
Growth driven by contactless connectivity

Pay TV

Highly secure ICs
for Conditional Access

Personal Security Market

WW TAM (Munits)
Secure MCUs in Banking, ID, Pay TV, Transport



Contactless & Dual interface Focus

→ 30% CAGR 2011-2017

- Banking migration
  - China, US & Europe

- New National ID & passport programs
  - Advanced cryptography
  - High transaction speed
  - Flash flexibility

- Transportation

Source: ABI 2012

ST31Advanced Contactless Platform

ST23 platform

90nm ROM / EEPROM
ISO 14443 Type A & B

ST31 Platform → 32-bit

90nm ROM / EEPROM
ISO 14443 Type A & B
VHBR up to 6.4Mb/sec

80nm FLASH
ISO 14443 Type A & B
VHBR up to 6.4Mb/sec
ISO 18092 passive

- First ARM 32-bit SC000 based Secure MCU → Transaction **speed**
- Multi-protocol ISO 14443 A & B, 18092 passive → **Interoperability**

- MIFARE™ and Calypso enabled → Multi-application **Transport**

- FLASH 80nm technology → Supply chain **flexibility**
- Highly secure CC EAL6+ architecture → **Security**

life.augmented

ST Payment Solutions

Card Payment

Contact cards

Contactless Cards

Mobile Payment

NFC Controller

SWP SIM

Embedded SE

life.augmented

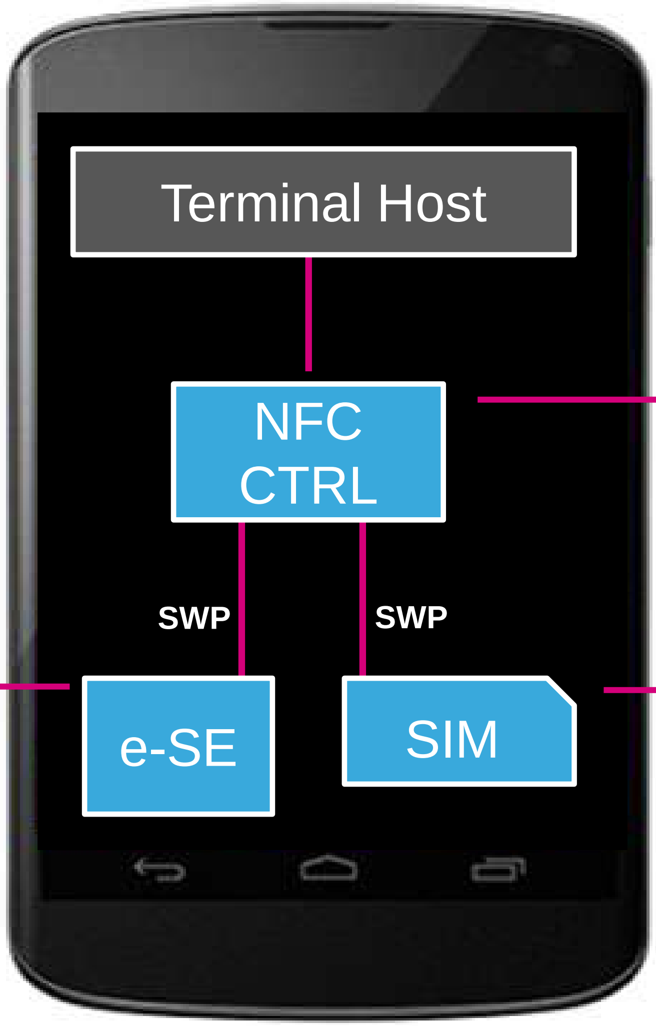
NFC Applications

life.augmented

ST NFC Solutions

ST24SR/LR

- Dual mode EEPROM
- I2C and ISO 14443B /15693



ST21NFC

- Multiple SE support
- Reduced BOM
- Android & WP8 compatible

ST33

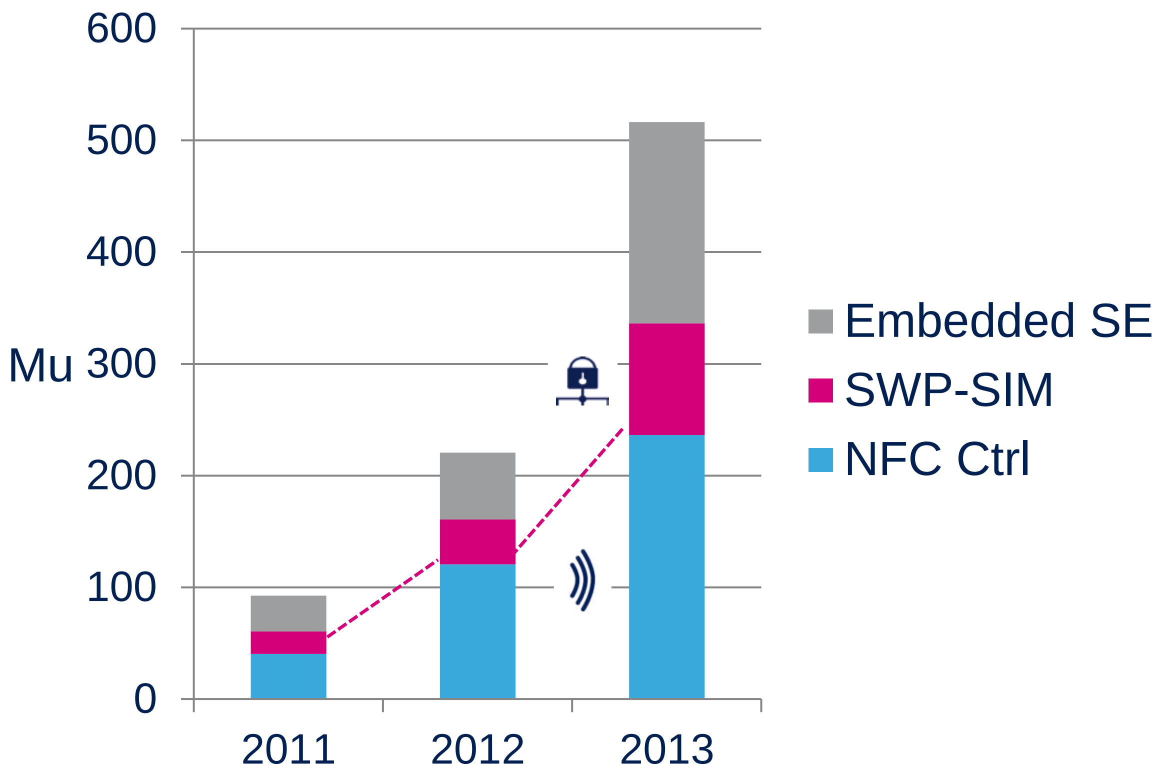
- GP2.2 Operating System
- Google Wallet & others compliant
- Large user Memory 1.2MB
- Mifare compatible
- DFN, WLCSP or stacked with NFC
- Supported by most of leading OEMs
- All payments brands supported

ST33

- Advanced Secure MCU (>1MB memory)
- Endorsed by most leading WW MNOs
- All payment brands supported
- Mifare compatible

life.augmented

NFC Growth Driven by Mobile Payment



ABIresearch

SWP SIMs Establish STMicroelectronics as a Leading Secure Element Vendor

"Both secure microcontroller categories are also benefiting from the acceleration in NFC deployments that we have detected, although the ramp up in NFC SIMs is greater, with it now expected to account for approximately 40% of secure elements in 2012 and 2013. "

*"**STMicroelectronics**, however, is the standout winner, with faster development of NFC SIMs occurring. ABI Research estimates that it will achieve SWP SIM secure element market share in the region of 2-3 times that of its nearest competitor. "*

e_SE: Leading OEMs and Google deploying new payment services and wallets in Embedded Secure Element

SWP-SIM: MNOs to achieve critical mass in deploying NFC services

life.augmented

Source : ABI 2012, ST

Secure Authentication

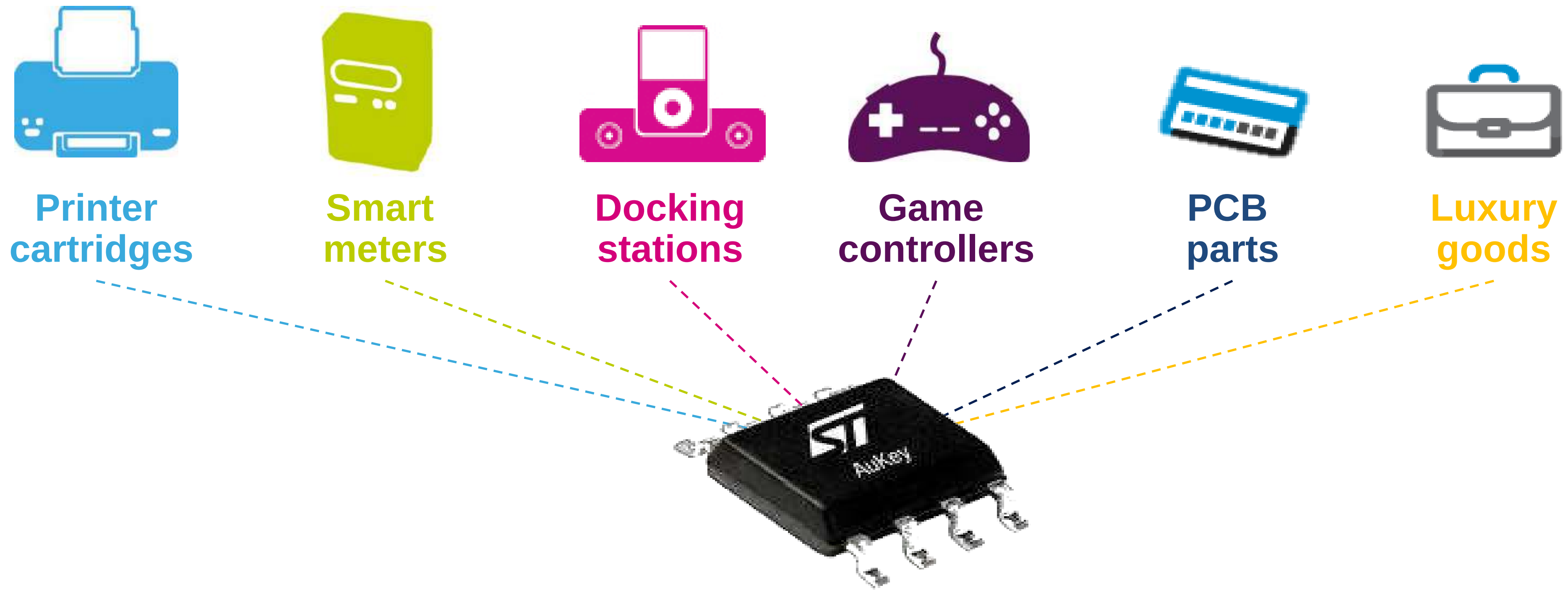
ST secure solution against **counterfeit, cloning** or any **unauthorized use**

With comprehensive **security assets** and **strong experience**, ST is the **ideal partner** to address brand protection

life.augmented

Secure Authentication Applications

Growing counterfeiting and cloning requires stronger authentication services



AuKey : ST’s Solutions for Secure Authentication

State-Of-The-Art Security for Peripheral Authentication

Common Criteria EAL5+ Certified (exceeding banking level)

Command set tailored for accessories authentication

life.augmented

Secure MCUs Growth Driven by Secure Element Deployment

- ST solid leader in Mobile Security
  - More than 50% market share in SIM Secure Element
  - Ramping up Embedded Secure Element for Android Smartphones

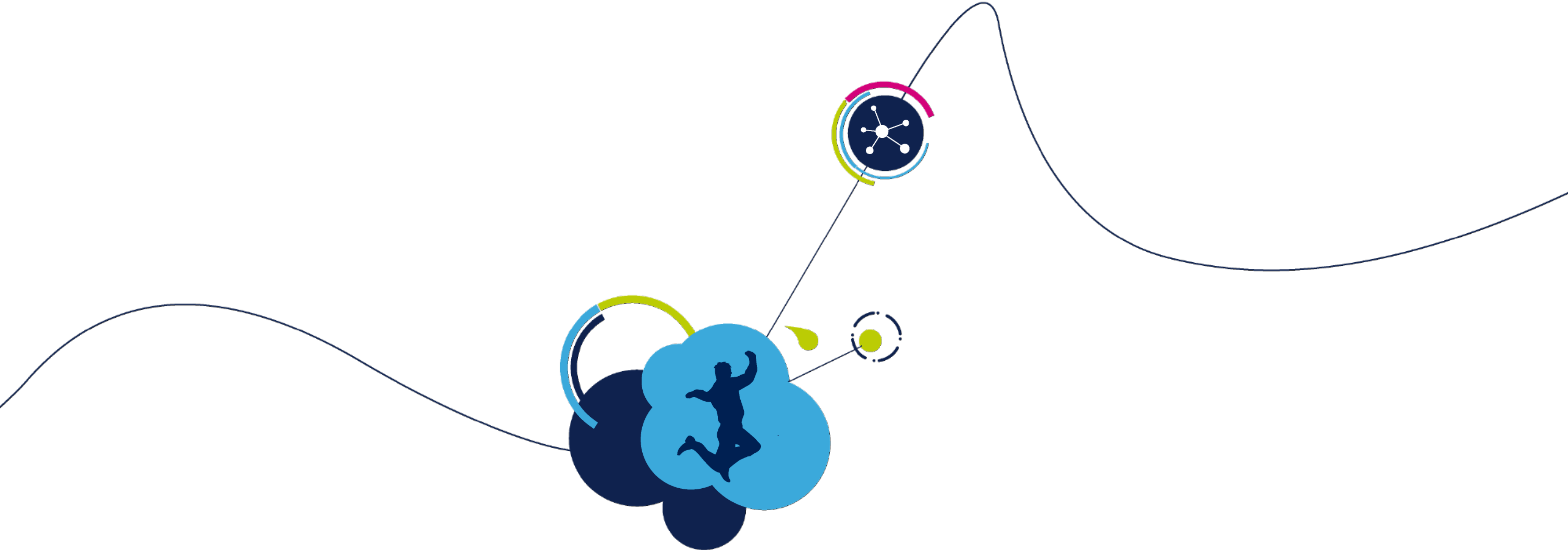
- Solid experience and broad range contactless offer
  - RF multi-protocol ISO 14443 Type A, B and F
  - NFC Controller for Smartphones
  - MIFARE™ libraries for contactless Transport

- Leader in Security
  - First to achieve Common Criteria EAL6+
  - Support certified cryptography library

life.augmented

Microcontrollers → Strategy to Grow

- Capitalize on ST advanced e-NVM technologies
  - e-FLASH 90/80nm in volume production, speed-up migration to 40nm
- General Purpose Microcontrollers → STM32 focus
  - Pursue market share gain capitalizing on 32-bit platform leadership
  - Continue to expand STM32 family as the broadest WW portfolio based on ARM Cortex-M core
  - Focus on ecosystem to address mass market with maximum efficiency
- Secure Microcontrollers → ST33 & ST31 focus
  - Capitalize on solid leadership established in Mobile Security for NFC solutions
  - Enlarge contactless portfolio to fully capture banking and NFC opportunities
  - Reinforce current leadership in security authentication



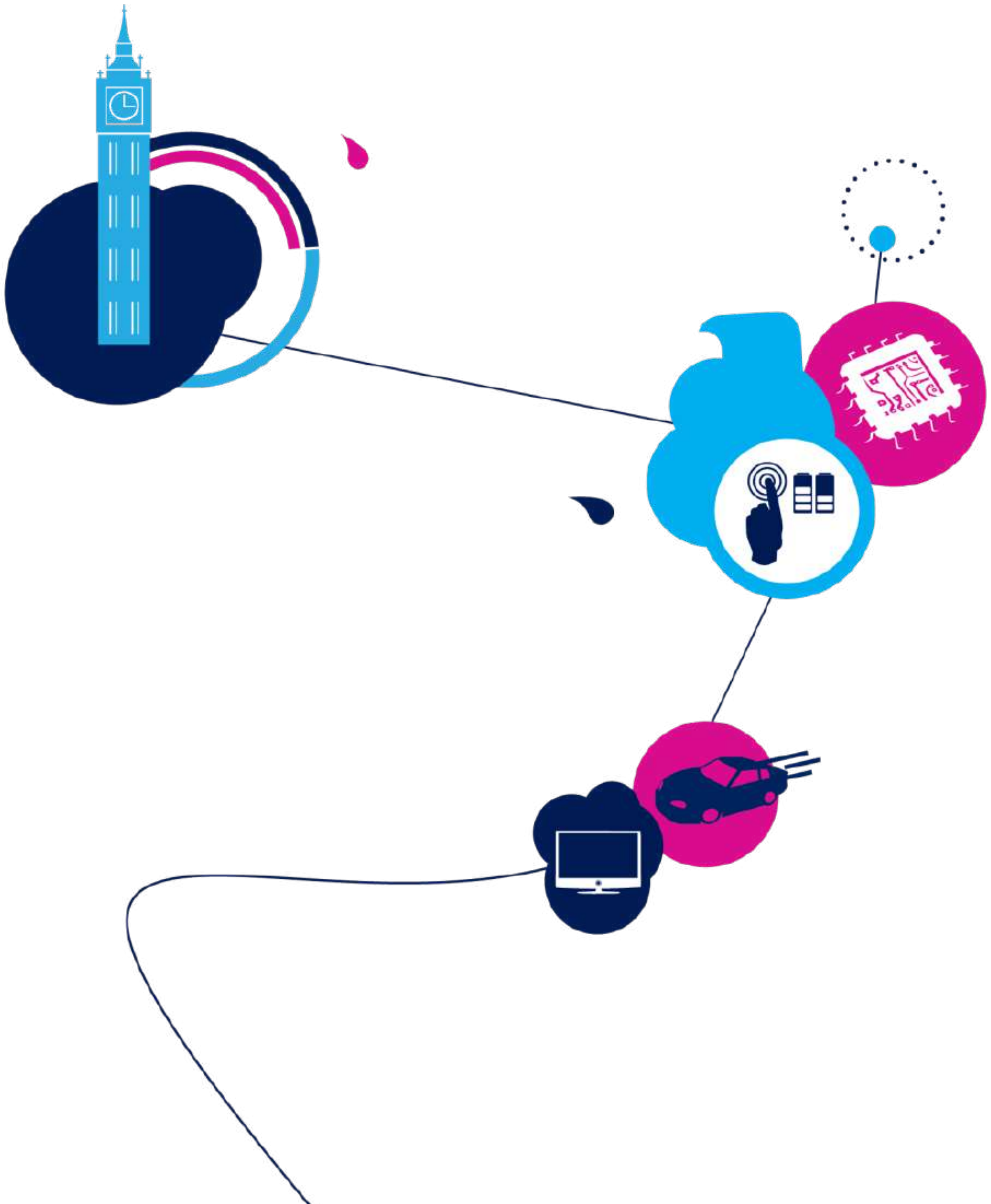
Thank You

Manufacturing and Technology R&D

Jean-Marc Chery
Executive Vice President
Chief Manufacturing & Technology Officer
General Manager, Digital Sector

Orio Bellezza
Executive Vice President
General Manager, Front-End Manufacturing
& Technology R&D, IMS & APG

life.augmented



Manufacturing

Integrated, Flexible Manufacturing Engine

Large technology portfolio
Clustering approach
Internal and external flexibility

Front-End Manufacturing: Unique Capability

Sense & Power and Automotive Products

Discretes

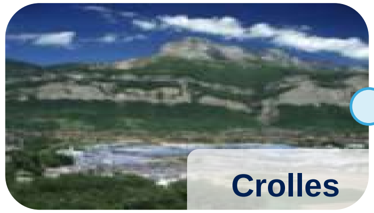
Discretes
Power
BCD

Advanced BCD
Advanced PMOS

Advanced BCD
MEMS

Embedded-NVM
Logics

Foundries



Advanced Logic
Logic
Image Sensors
Embedded-NVM

Embedded Processing Solutions

Front-End Manufacturing Vision

Advanced CMOS and derivatives

- Crolles 300 growth, focusing on balanced mix of technologies
- Embedded-NVM, Analog CMOS and BiCMOS at both 200 and 300 mm (Rousset, Crolles)
- Multiple foundry options to support further growth and flexibility

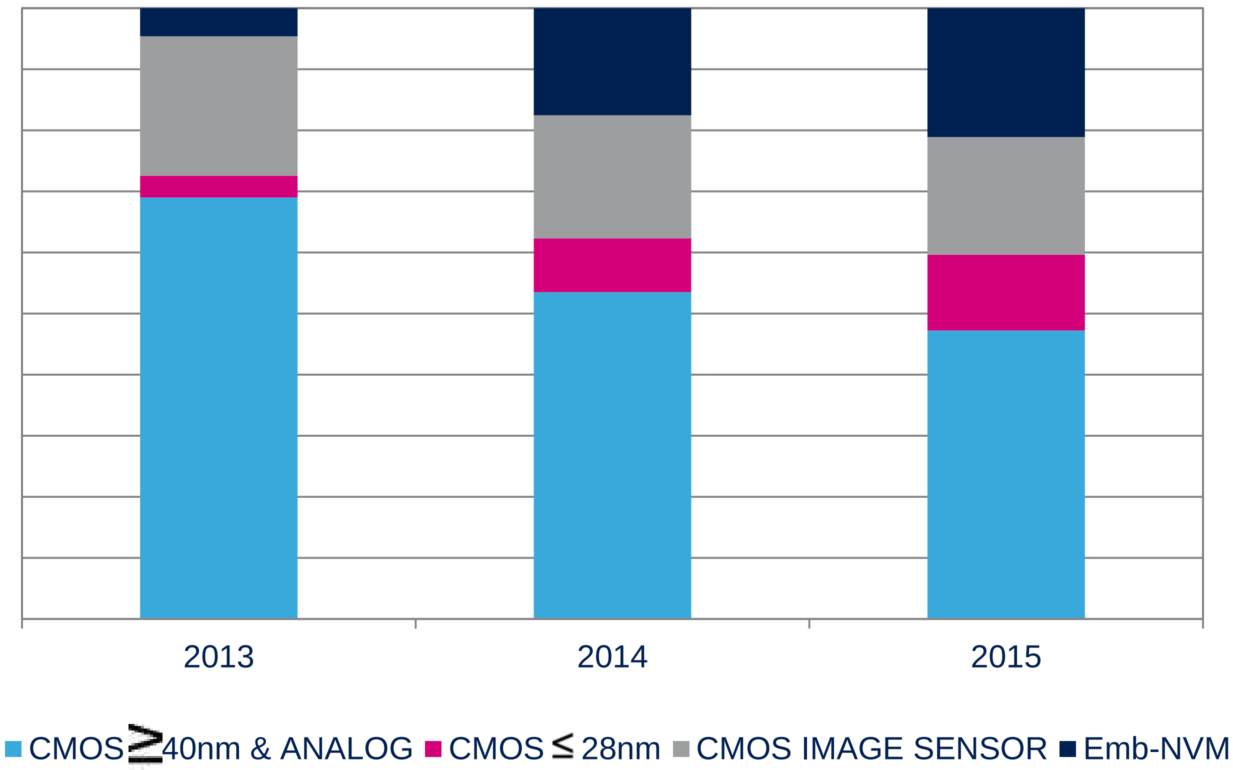
Sense & Power technologies

- Strengthen differentiation at Europe fabs, for MEMS, BCD & Discretes
- Huge scale in Singapore 6”. Option to grow 8” for mature technologies
- Foundry outsourcing, to increase flexibility

life.augmented

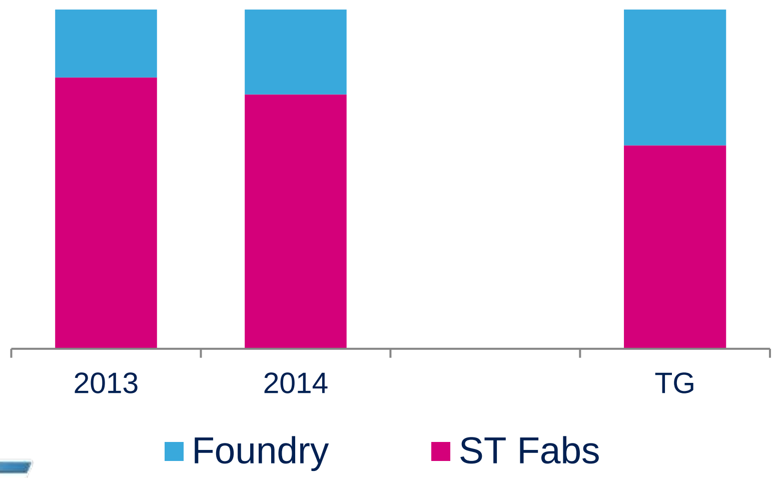
Crolles 300 Differentiation Engine

- Growing differentiating and proprietary technologies
  - High-end CMOS: introducing and ramping FD-SOI <28nm
  - CMOS Image Sensor: ramping 1.4 and 1.1µm BSI
  - Embedded-NVM : 90/55/40nm for Micros and Automotive
- Improving flexibility and assets utilization



CMOS and Derivatives Sourcing

- Crolles/300 expansion and Rousset/Crolles clustering
- Technology/Manufacturing partnerships in Image Sensor/BSI and CMOS FD-SOI
- Multiple sourcing for flexibility Outsourcing growth, targeting 40%



Technology / Source	First: Time to Market	Second	Alternative
CMOS 40LP	Crolles 300	Foundry	Foundry
CMOS 28LP/RF	Foundry	Crolles 300	Foundry
CMOS 28 UTBB FDSOI	Crolles 300	Foundry	Foundry possible
CMOS 20LPM	Foundry		
CMOS 14 UTBB FDSOI	Crolles 300	Foundry	Foundry possible

Technology / Source	First: Time to Market	Second	Alternative
IMG 140 BSI	Crolles 300	Foundry	
IMG 110 BSI	Foundry	Crolles 300	Foundry
BICMOS55/PHCS 25GB/S	Crolles 300		
CMOS M55/M40	Crolles 300	Foundry possible	
CMOS F 80/ 90 PCM	Rousset 200	Crolles 300	Foundry possible

life.augmented

Sense & Power and Automotive

Agrate
Advanced BCD and MEMS

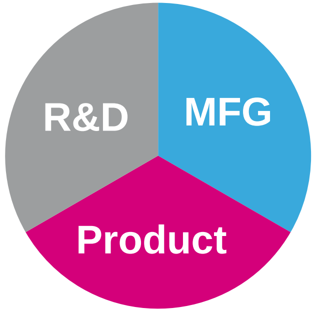
Catania
Smart Power and
Power Discretes

Technology differentiation

- MEMS 6-axis motion sensor
- Smart Power BCD9s
- Power discretes SiC and GaN
- Tunable antenna discretes

Integrated Manufacturing and R&D

- Time to market – time to volume
- Clusters of leadership Mfg/R&D/Product



Cost competitive HVM in Singapore

Tours
Discretes and Tunability

Singapore
High Volume Manufacturing

life.augmented

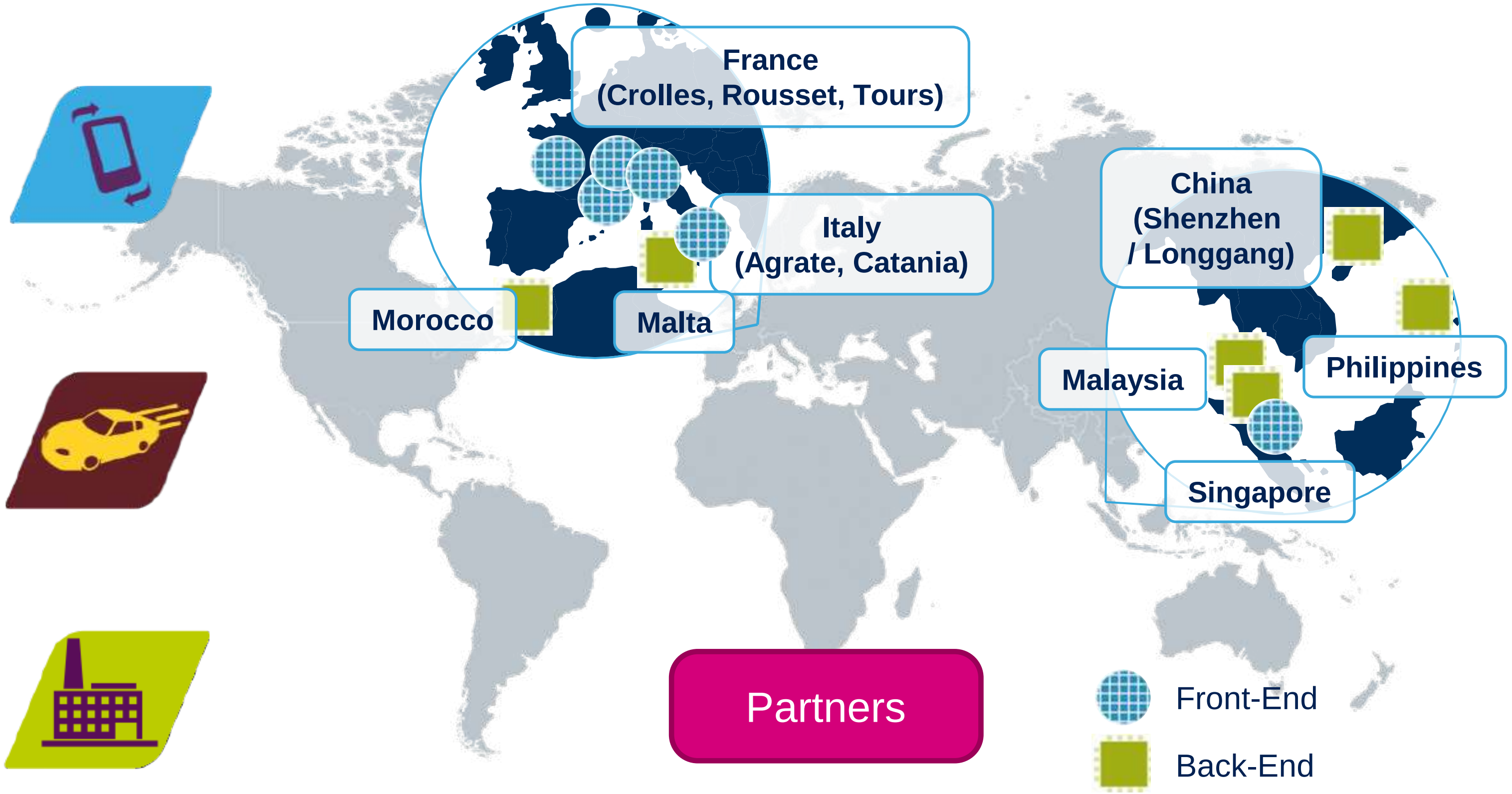
Packaging & Testing Manufacturing

Multipurpose sites
Serving both Product Sectors

Analog, MEMS & Sensors

Automotive

Industrial & Power Discrete



Digital Convergence Group

Microcontroller, Memory & Secure MCU

Imaging, BiCMOS ASIC & Silicon Photonics

life.augmented

Packaging & Test Manufacturing Focus

- Fast time to volume and competitive manufacturing
  - Innovative sensors solutions (MEMS and optical)
  - High Power Modules for Industrial and Automotive
  - High Density lead frames technology
- Gold to Copper conversion road-map
- Relentless quality improvement
- Multi-sourcing for materials
- Increase flexibility vs OSATs

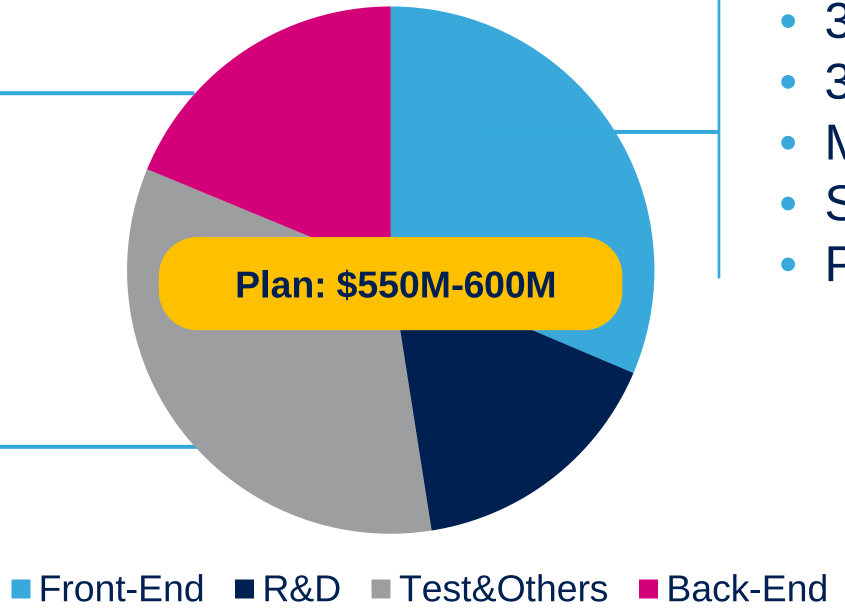





2013 Capital Spending

Back-end Manufacturing
- Capacity increase and mix evolution at Asian plants
- Copper wire conversion
- Manufacturing automation

Front-end Manufacturing/ R&D
- 300mm 14nm FD-SOI capability
- 300mm Image Sensor BSI capacity
- MEMS
- Smart Power mix change
- Productivity and efficiency



Test & Others
- Testing, IT, quality and safety

Investments focused on:
- Strategic businesses growth and key product ramps
- Proprietary technology and manufacturing

life.augmented

Priorities 2013 – Manufacturing

2013

300mm Crolles

- CMOS FD-SOI 28nm Manufacturing ramp-up
- Imaging 1.4µP BSI volume production

e-NVM and RF/Analog

- 90nm e-Flash high volume production
- Optimized130nm RF SOI in production ramp-up

Smart Power and Discrete

- BCD mix evolution to 0.16µm / thick Cu
- IGBT 650/1200V production ramp-up

MEMS

- 6-Axis combo volume production
- µPhone and Compass production ramp-up

Innovation
Time to volume
Quality Excellence
Lean Manufacturing
Productivity
Cost reduction

Manufacturing Summary

- Highly efficient and flexible manufacturing engine, Front-End and PTM
- Differentiating technologies and packages, serving both product segments
- Time-to-market and time-to-volume, driven by clusters of leadership
- Cost efficiency, driven by global lean manufacturing initiative

Technology R&D

life.augmented

EPS - Technology Roadmap

Prototyping start	2013	2014/15	2016/17
CMOS Digital (including RF)	**28nm UTBB FD-SOI**	**14nm UTBB FD-SOI**	**10nm UTBB FD-SOI**
CMOS Imaging BiCMOS & Photonics	1.4µP BSI / 1.1µP BSI Photonics 25Gbps	0.9µP BSI BiCMOS 55nm	Advanced architecture Photonics 40Gbps
CMOS eNVM* (Automotive micro) CMOS eNVM* (GP/secure micro)	55nm NOR 80nm NOR / 90nm PCM	40nm NOR 40nm NOR	28nm PCM

* Logic with embedded memories

Cooperative R&D through agreement with Foundry

FD-SOI: Fully Depleted Silicon On Isolator
UTBB: Ultra Thin Body and BOX (Buried Oxide)

BSI: Backside Illumination
eNVM: embedded Non Volatile Memory
PCM: Phase Change Memories

life.augmented

SPA - Technology Roadmap

Prototyping start	2013	2014/15	2016/17
BIPOLAR CMOS DMOS 0-100V	• 160nm/110nm	• 90nm (200/300mm)	• 65nm (300mm)
BIPOLAR CMOS DMOS >100V	• 320nm OL/160nmSOI		
MEMS	• Motion (6 axis, AMR,Geophone) • Actuators	• Environmental (Hr,Temp) • Audio (Hperf Micro) • Actuators	
Power	• 0.35µm • Oxide Filled Trench • Silicon Carbide (SIC)	• 0.2µm • Oxide Filled Trench Gen2 • Gallium Nitride (GaN)	
Discrete	• HV Scr Triacs 1500V • GaN Pschottky 600V • EnFilm Gen1	• HV Scr Triacs 2000V • GaN Pschottky1200V • EnFilm Gen2	• HV Scr Triacs 2500V • EnFilm Gen3

Priorities for 2013 - Technology

2013

BCD9S technology platform to be ready for production
Power ASIC for Automotive (ABS/ESP) engineering samples delivery demonstrating superior device performances and die area reduction

FD-SOI 14 nm technology to be ready for prototyping and IPs validation vehicles for superior performances and low power consumption SOC and ASICS

Embedded flash 40nm technology for high performance MCUs
Readiness for prototyping and IPs validation vehicles

life.augmented

Thank You