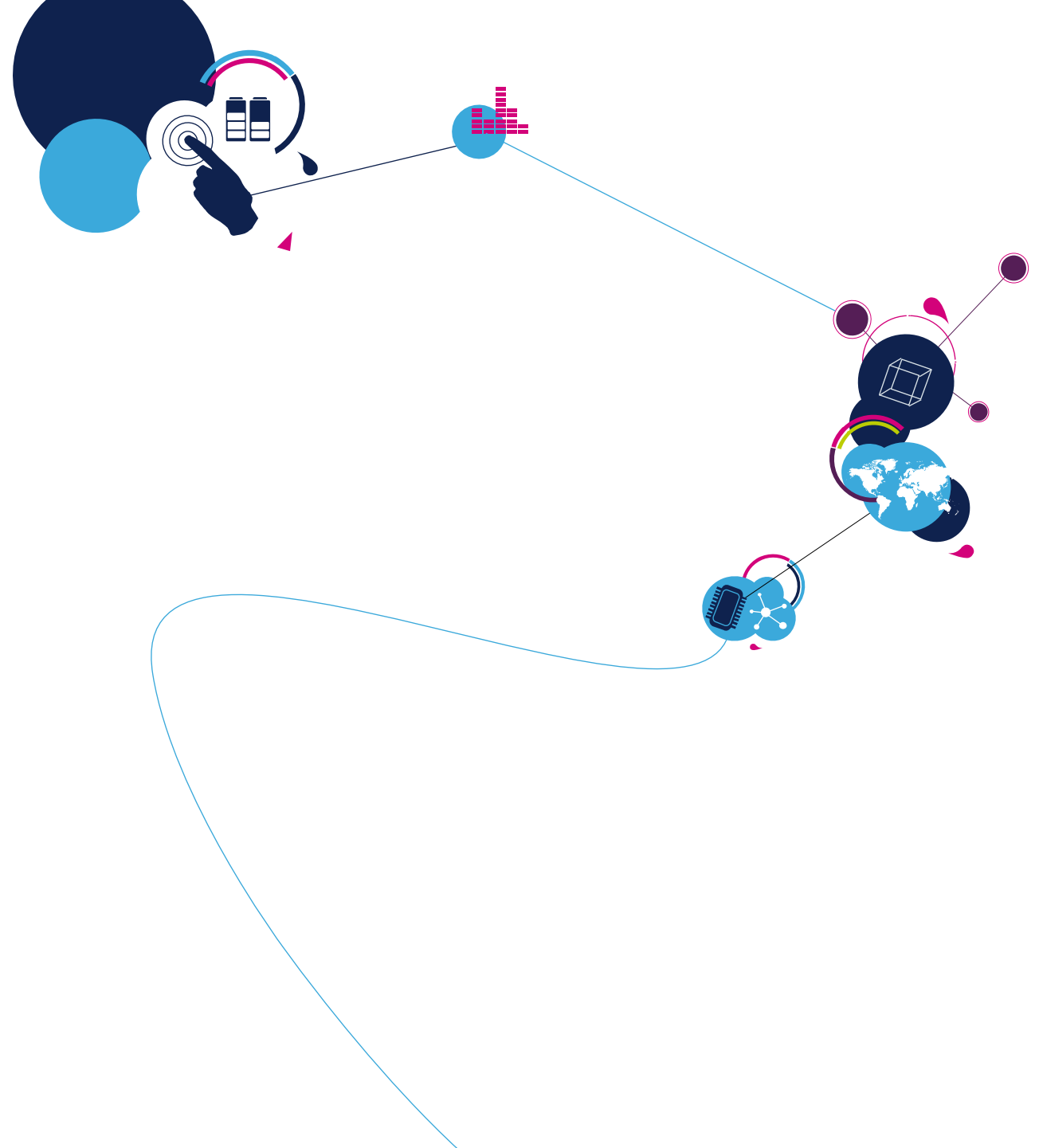# STMicroelectronics

Consumer Electronics Show

January 5, 2015 – Las Vegas

Bob Krysiak

Executive Vice President

President, Americas Region

life.augmented

4:00 pm	Introduction
4:05 pm	Strategy, markets and business
4:45 pm	Q&A
5:00-6:00 pm	Demo Tour

Some of the statements contained in this release that are not historical facts are statements of future expectations and other forward-looking statements (within the meaning of Section 27A of the Securities Act of 1933 or Section 21E of the Securities Exchange Act of 1934, each as amended) that are based on management's current views and assumptions, and are conditioned upon and also involve known and unknown risks and uncertainties that could cause actual results, performance, or events to differ materially from those anticipated by such statements, due to, among other factors:

- *Uncertain macro-economic and industry trends;*
- *Customer demand and acceptance for the products which we design, manufacture and sell;*
- *Unanticipated events or circumstances, which may either impact our ability to execute the planned reductions in our net operating expenses and / or meet the objectives of our R&D Programs, which benefit from public funding;*
- *The loading and the manufacturing performance of our production facilities;*
- *The functionalities and performance of our IT systems, which support our critical operational activities including manufacturing, finance and sales;*
- *Variations in the foreign exchange markets and, more particularly, the U.S. dollar exchange rate as compared to the Euro and the other major currencies we use for our operations;*
- *The impact of intellectual property ("IP") claims by our competitors or other third parties, and our ability to obtain required licenses on reasonable terms and conditions;*
- *Restructuring charges and associated cost savings that differ in amount or timing from our estimates;*
- *Changes in our overall tax position as a result of changes in tax laws, the outcome of tax audits or changes in international tax treaties which may impact our results of operations as well as our ability to accurately estimate tax credits, benefits, deductions and provisions and to realize deferred tax assets;*
- *The outcome of ongoing litigation as well as the impact of any new litigation to which we may become a defendant;*
- *Natural events such as severe weather, earthquakes, tsunamis, volcano eruptions or other acts of nature, health risks and epidemics in locations where we, our customers or our suppliers operate;*
- *Changes in economic, social, political, or infrastructure conditions in the locations where we, our customers, or our suppliers operate, including as a result of macro-economic or regional events, military conflict, social unrest, or terrorist activities;*
- *Availability and costs of raw materials, utilities, third-party manufacturing services, or other supplies required by our operations.*

Such forward-looking statements are subject to various risks and uncertainties, which may cause actual results and performance of our business to differ materially and adversely from the forward-looking statements. Certain forward-looking statements can be identified by the use of forward looking terminology, such as "believes," "expects," "may," "are expected to," "should," "would be," "seeks" or "anticipates" or similar expressions or the negative thereof or other variations thereof or comparable terminology, or by discussions of strategy, plans or intentions.
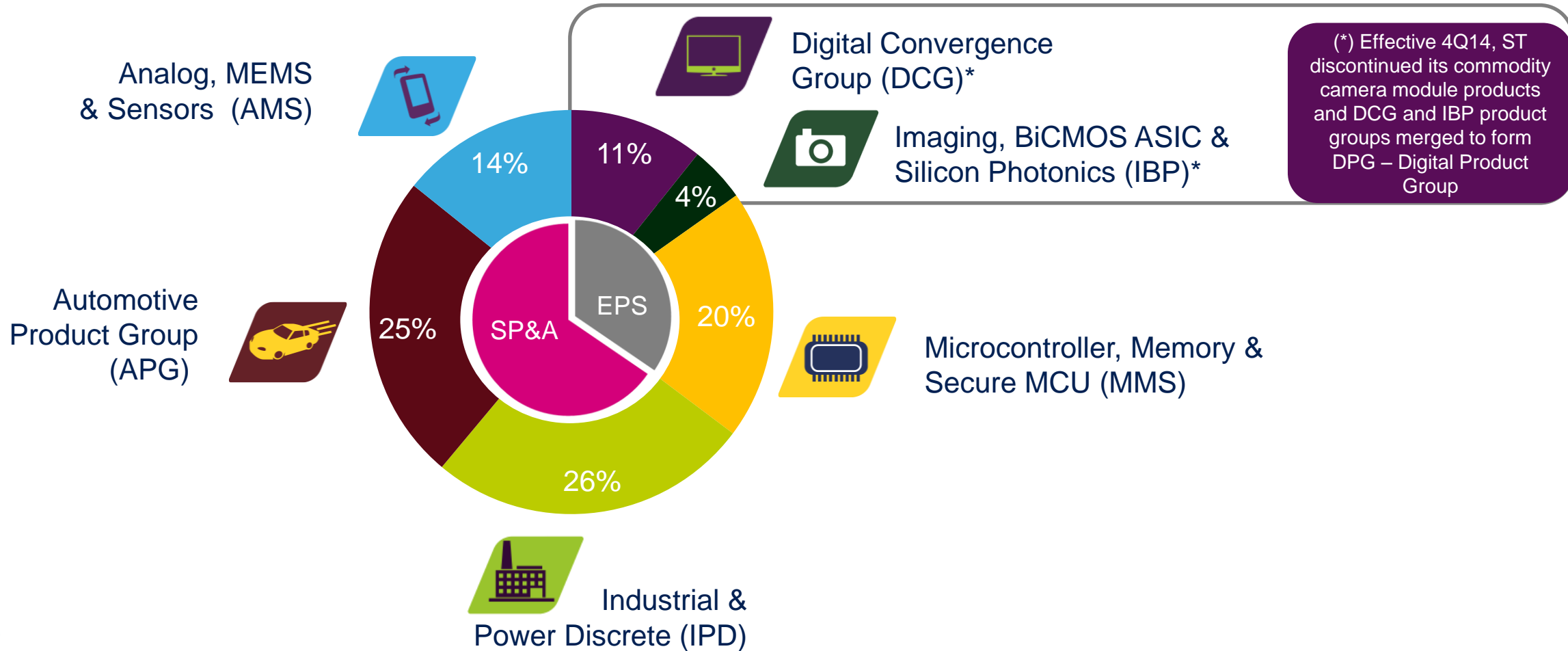
Some of these risk factors are set forth and are discussed in more detail in "Item 3. Key Information — Risk Factors" included in our Annual Report on Form 20-F for the year ended December 31, 2013, as filed with the SEC on March 5, 2014. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in this release as anticipated, believed, or expected. We do not intend, and do not assume any obligation, to update any industry information or forward-looking statements set forth in this release to reflect subsequent events or circumstances
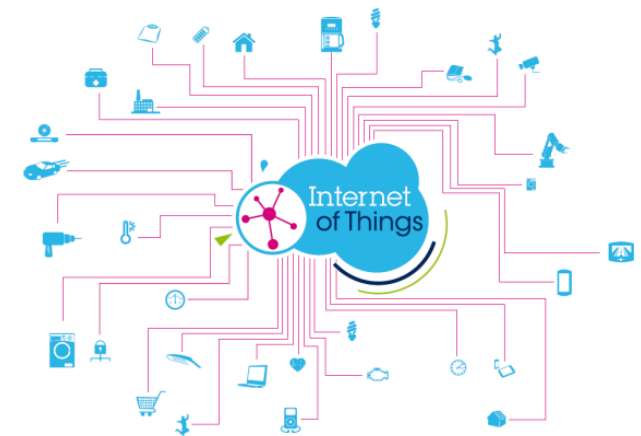
ST's vision and strategy

OUR VISION

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

OUR STRATEGY

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

OUR 5 GROWTH DRIVERS

MEMS and Sensors

Smart Power

Digital Consumer & ASICs

Automotive

Microcontrollers

Well Balanced Product Portfolio

Revenues by Product Group 3Q14

Analog, MEMS & Sensors (AMS)

Automotive Product Group (APG)

Industrial & Power Discrete (IPD)

Digital Convergence Group (DCG)*

Imaging, BiCMOS ASIC & Silicon Photonics (IBP)*

Microcontroller, Memory & Secure MCU (MMS)

(*) Effective 4Q14, ST discontinued its commodity camera module products and DCG and IBP product groups merged to form DPG – Digital Product Group

14%
11%
4%
20%
25%
26%
SP&A
EPS

ST Leader in Set-Top Box

Long-standing market leadership in Set-Top Box

- **Market leadership** in Set-Top Box through focused portfolio

- Complete portfolio for the **US cable market**

- Leading the transition to the **HEVC** and **Ultra HD** Client/Server and Home Gateway

- Established **worldwide ecosystem** of partners and 3rd parties
  - Middleware vendors and integrators
  - Content management and security solutions
  - Services and application provider

- **World-class IP portfolio**, enabling Ultra HD multi-screen video processing & seamless home connectivity

#2	Worldwide
>1 B	MPEG Decoders cumulative shipments

Source: IHS, ST

Addressing a $3.0B SAM in 2015

Americas & EMEA

- High value market

- ST SAM: $2.1B

Asia Pacific

- High volume market

- ST SAM: $900M

ST Solid Number 2

Share by revenues 2013, IHS

Sources: IHS, ABI Research and ST

life.augmented

Towards the Home Cloud

Complete Product Portfolio

HOME GATEWAY

Network Access
DOCSIS
Telephony
Routing

CLIENT & SERVER

Content Anywhere
High Multimedia
Performance
Ultra HD

BROADCAST STB

Cost-Effective
Multimarket
Solutions

Alicante
STiD12x

CableLabs CERTIFIED
DOCSIS 3.0

Medium Screen Clients

Small Screen Clients

Monaco
STiH4xx

Cannes
STiH3xx

4K UHD 2160p

ARM Cortex

HEVC VP9

Clients

Liege 2
STiH301

Liege
STiH2xx

HEVC

HD TV 1080p

On the Move

Over-The-Top Services

Operator Man Network & S

life.augmented

Complete and cost optimized HW/SW Portfolio

Ad-Hoc devices for specific use cases

HW/SW compatibility within each product family

From entry broadcast to high-end HEVC on ARM

Cisco Technology

NAGRA KUDELSKI

soft at home

wyplay

ARM

Linaro

RDK REFERENCE DESIGN KIT

android

Leading in Ultra HD & HEVC Video Technologies

CLIENT & SERVER

Content Anywhere
High Multimedia
Performance
H.265, Ultra HD
Graphics

HOME GATEWAY

Network Access
DOCSIS
Telephony
Routing

STiH3xx Cannes

STiH4xx Monaco

STiD12x Alicante

Driving Operator & OEM CAPEX optimization

Enabling large-scale Ultra HD deployments

Bringing an exciting new experience to the consumer

UHD - 3840 x 2160

Full HD - 1920 x 1080

ULTRAHD

HEVC

H.265 - HIGH EFFICIENCY VIDEO CODING

life.augmented
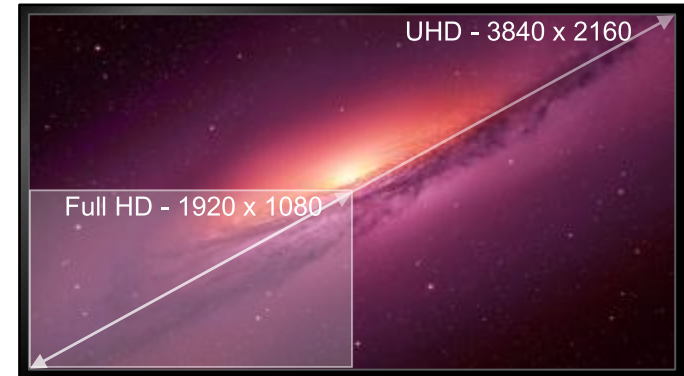
Complete Solution for US Cable Set-Top Box

Next generation high speed broadband

- High bandwidth, high bit rate, high OFDM QAM constellation order (4K)
- ARM® v8 Cortex™ 64-bit cores and FD-SOI technology for next generation power-to-performance ratio
- DOCSIS 3.1 demonstrator available

FD-SOI

Cable Data Gateway

- A standardized software framework for Broadband gateway products
- Outbound/Inbound phone call
- Complete SW stack from eRouter to Packet Cable

RDK-B

PacketCable EMPOWERING BROADBAND™ A CableLabs® Technology

Interactive Cable Gateway

- DOCSIS 3.0 complete Pay-TV multimedia gateway
- STiD12x has DOCSIS 3.0 Certification by CableLabs®
- Securely distribute premium content to retail connected devices

CL CableLabs CERTIFIED

Home-entertainment Networking

- High-quality content distribution to multiple IP boxes
- In line with growing bandwidth of network access
- Improved quality of service (QoS)

MoCA Multimedia over Coax Alliance

Wi-Fi™

Client & Server RDK Available NOW

- Leveraging open SW technology
- Partnering with key UI providers for US cable operators
- Proactive and continuous integration of RDK-LLC

RDK REFERENCE DESIGN KIT

Advanced Use Case on Deployed Client

- Wi-Fi for best video quality experience
- Cloud gaming on deployed ARM-based solutions
- Transcoding for client devices

Wi-Fi™

life.augmented

Product Portfolio Expansion
Entry broadcast to high end/UHD HEVC on ARM

Ultra High Definition

- HEVC decode in 4kp60
- HDMI2.0 support
- VP9 in UHD decode

Ultra High Definition services

- Forensic watermarking
- Protection of content
- High Dynamic range for improved video quality

Android TV

- Latest Android TV 5.0 Lollipop
- Linear-TV services integration
- Integration of Trusted Execution Environment (TEE) & Secure Data Path (SDP)

Entry level HEVC boxes & services

- HD HEVC based boxes
- KreaTV from Arris
- OTV5 Gravity Edge HTML-5 user interface
- HTML-5 based boxes

Servicing all markets

- Multiple flexible broadcast flavors tailored to market needs
- STiH301: Flexible Broadcast Frontends
- Accelerate Time-to-Market

Video Grade Wi-Fi

- Strategic partnership with Quantenna
- Video grade quality over 5 GHz Wi-Fi 802.11ac
- High QoS/QoE Wi-Fi platform
- Seamless integration in Set-Top Box

The Car as a Technology Hub

Car evolution is dominated by three domains with a high level of interaction

Fuel Economy

Entertainment & Telematics

Safety & Security

life.augmented

Volkswagen Golf

Peugeot RCZ

Mercedes CLS

BMW 3 Series

Ford F150

Toyota Corolla

Infotainment

| **Telematics & GPS** | **Car infotainment** |

Body electronics

| **Door modules, Anti-theft** | **Lighting, Wipers, BCM** |

Changan

Hyundai Sonata

Safety

| **Braking Vehicle steering** | **Airbag Active safety** |

Powertrain

| **Engine** | **Transmission** |

Nissan juke

Fiat 500

Chevrolet Corvette

Porche 918 Spyder

Ferrari La Ferrari

Audi A6

life.augmented
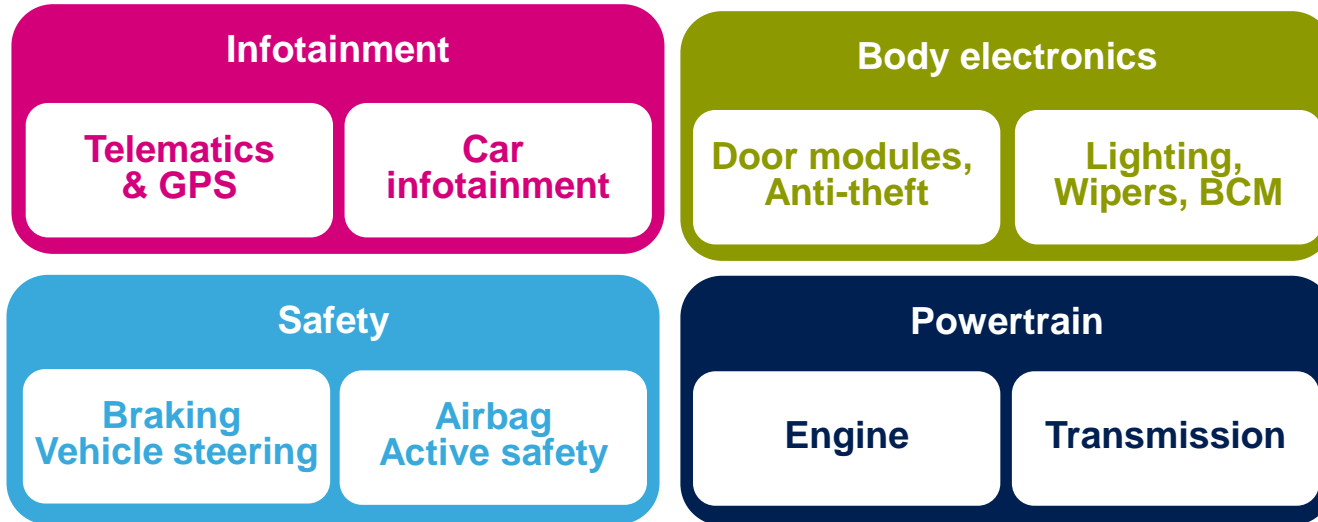
Consumer Technologies growing fast in Cars

Consumer technologies need to be adapted to automotive requirements

Real-time Processing

Low Speed Networking

Cryptography

Smartphone/Tablet OS

2D/3D Graphics

Audio Amplifiers

Image Sensors

Motion Sensors

Environmental Sensors

High Speed Networking

Active Safety

Microcontrollers

Fuel Economy

Safety & Security

Entertainment & Telematics

Infotainment Systems

Terrestrial & Satellite Receivers

Infotainment Processors

Bluetooth

Navigation & Positioning

GNSS

Vision Processing Systems

FD-SOI

Object Recognition

Car to X

Wi-Fi Automotive (802.11-P)

Micro-Mirror projection

Autonomous Driving

Application Processors

life.augmented

Content Evolution Driven by Automotive Digital Products

Digital Semiconductor Business Opportunity M$

	2014	8-16 Bit	32-bit Auto	32-Bit Infot	32-Bit ADAS	2020
	6,589	326	950	1,159	366	9,389
		Legacy	5% CAGR	Fast Growing 13% CAGR	Fast Growing 19% CAGR	

Mirror-link®

Car Play ®
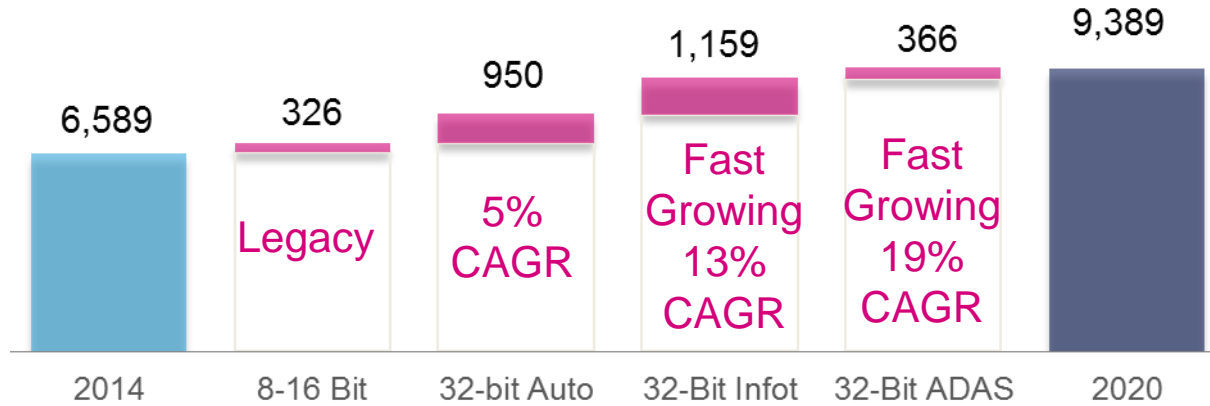
Positioning Receivers CPU	Digital Satellite Receivers CPU	Chassis & Safety MCU
Low–end Infotainment 32-bit CPU	Digital Terrestrial Tuners	Body, General Purpose Auto MCU
ADAS MPU	Processors with Connectivity	Powertrain MCU

Source: Strategy Analytics, July 2014

life.augmented

The Connected Car Opportunity

Vehicle-to-X market

M units

Bar chart showing values for 2016, 2018, 2020 with categories:
- Car Option (blue)
- Aftermarket (pink)
- US Mandate (gray)

Y-axis: 0, 10, 20, 30
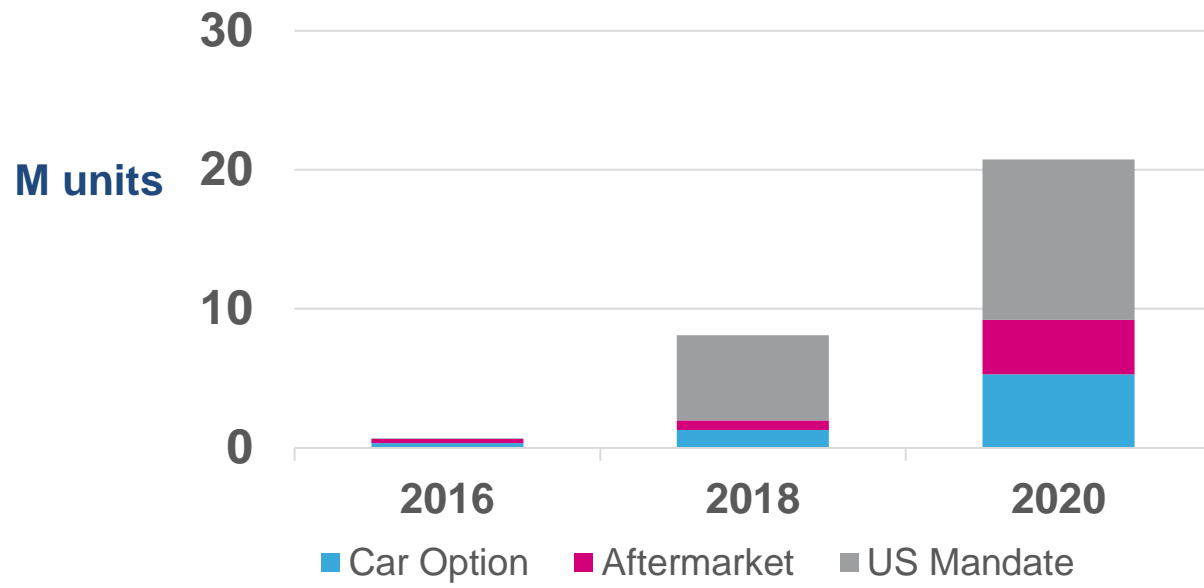
Teseo Positioning — GNSS

Gyroscope & Accelerometer

V2X System-on-Chip
with embedded Hardware Security Module

Wi-Fi
GNSS
Security
ISO26262

V2X Partnership

Endorsed by Audi

life.augmented

Pedestrian Collision Warning

Lane Departure

Forward Collision Warning

Headway Monitoring

Mobileye Intelligent High-Beam

Speed Limit Indication

Vision Partnership

Audi

Only an innovative technology and IP provider committed to Automotive can match the stringent requests of the Automotive market

Volume and Market Share

Non Automotive IP

Automotive IP

System Knowledge

Broad Range Silicon Technologies

Automotive Commitment

Independent Manufacturing

Quality Mindset

Customer Intimacy

Leadership in Emerging Markets

Market Knowledge
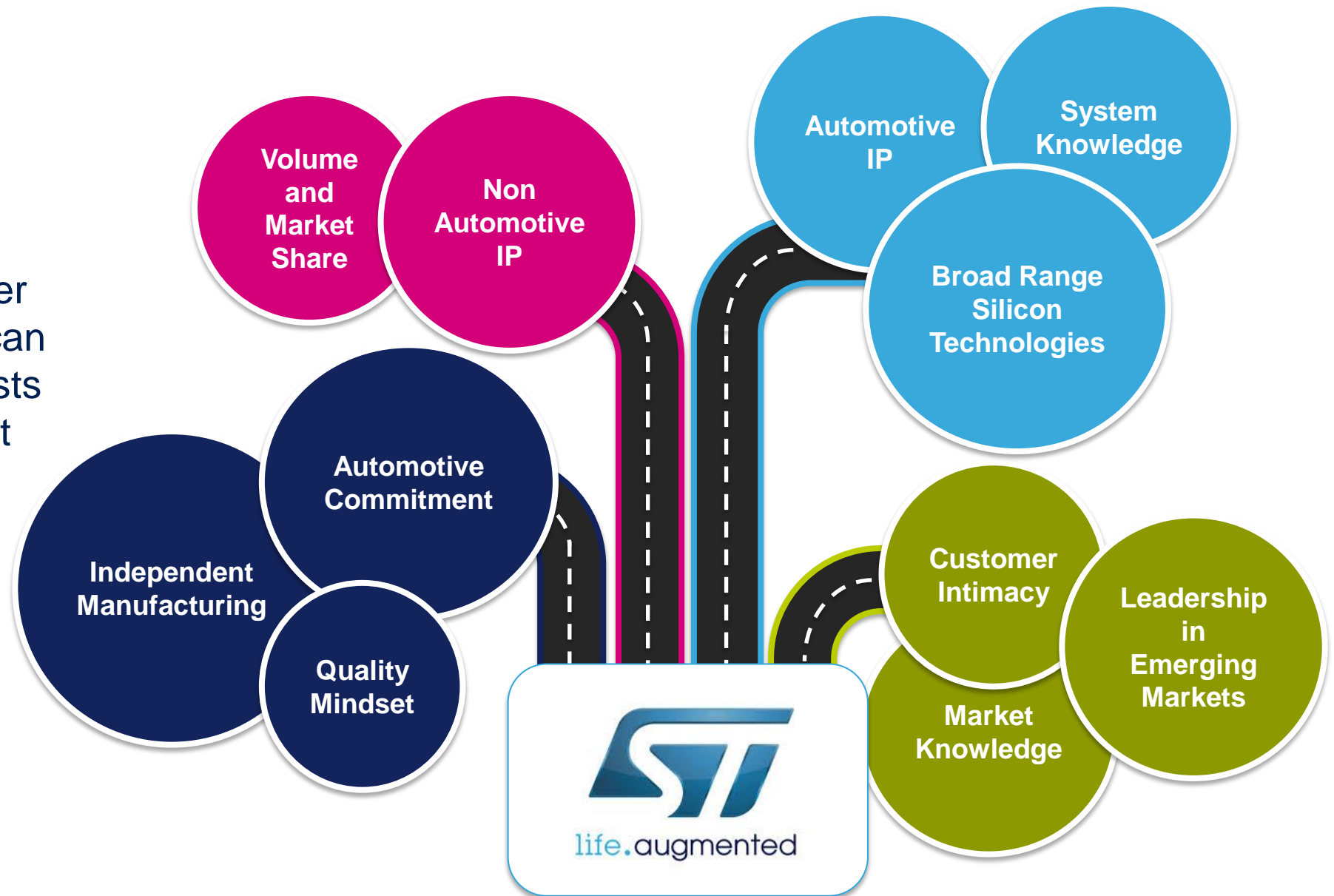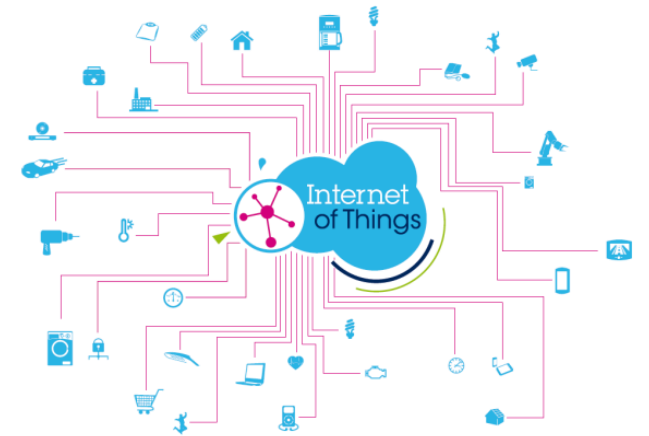
life.augmented

Existing Things augmented
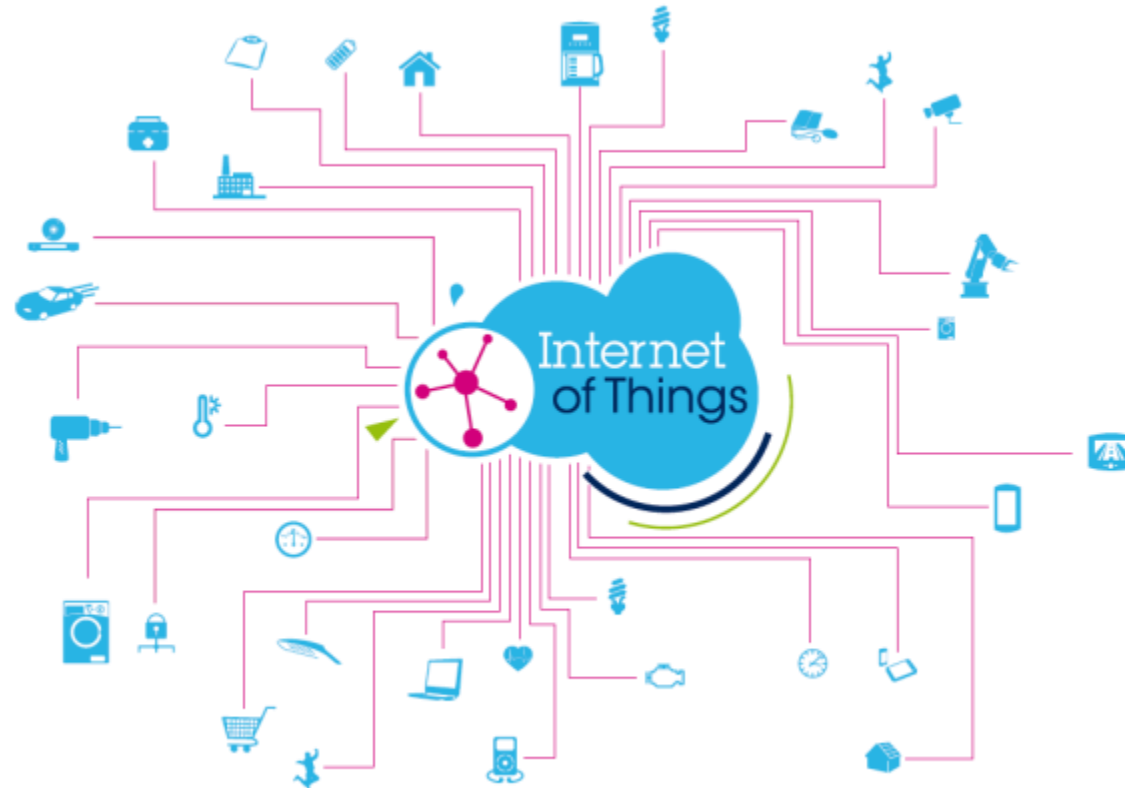
New Things to augment life

"Things that leverage the internet to make them smarter…"

Existing Things Augmented

Making Things smarter

It used to tell you the time → Now it tells you what to do → And how you are doing

It used to remind you of someone close to your heart → Now it reminds you to take care of your heart → And exactly what you doing

They used to keep your feet warm → Now they help you keep you and your feet fit
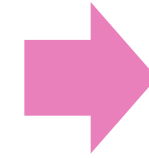
They used to help you see clearly → Now they help you to see more

Motion Sensors

Ultra-mobile Projector

FingerTip Touch Sensor

MEMS Microphones

Environmental Sensors

Proximity & Ambient Light Sensors

Imaging solutions

ST addressing the fastest growing part* of the Wireless market

12.2% growth

$12.8 billion

$20.3 billion

2013   2017
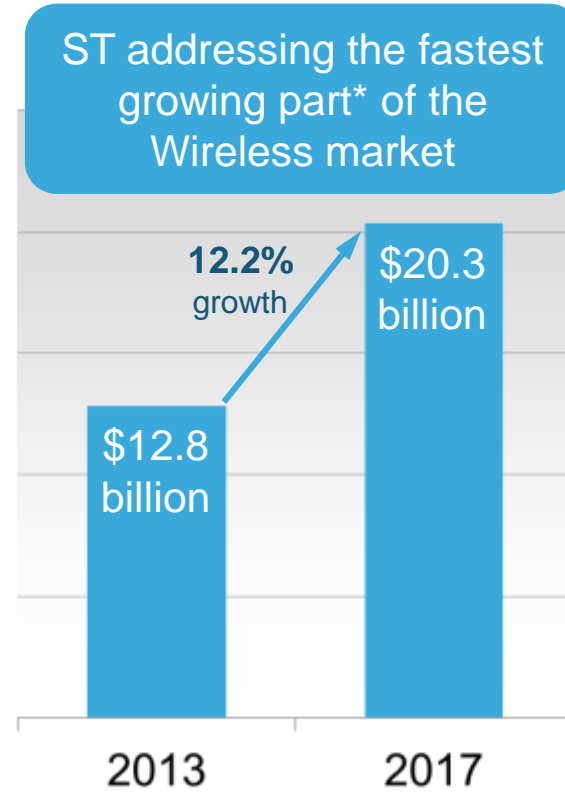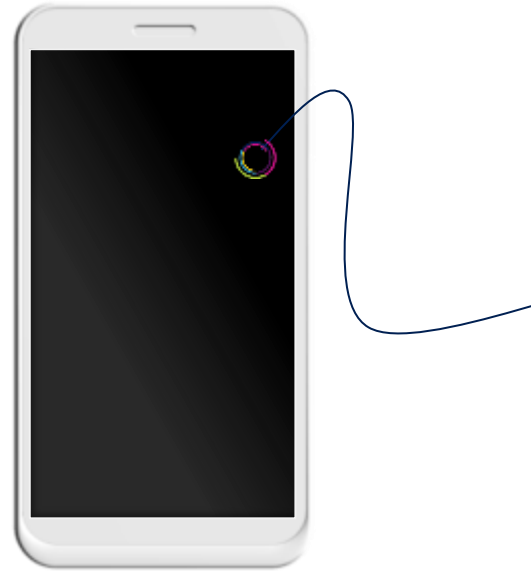
Low-power Microcontrollers

Secure Microcontrollers

NFC **Dynamic NFC tags**

EEPROM **EEPROM**

AMOLED Power Supply

Backlight Driver

Energy Management

Wireless Charging

Audio Processors Audio Amplifiers

Antenna Tuning

Ultra-low Power Connectivity

Protection & EMI-Filtering Devices

*Sensors, imaging, MCU, standard logic, display drivers, discretes
Source : IHS

life.augmented

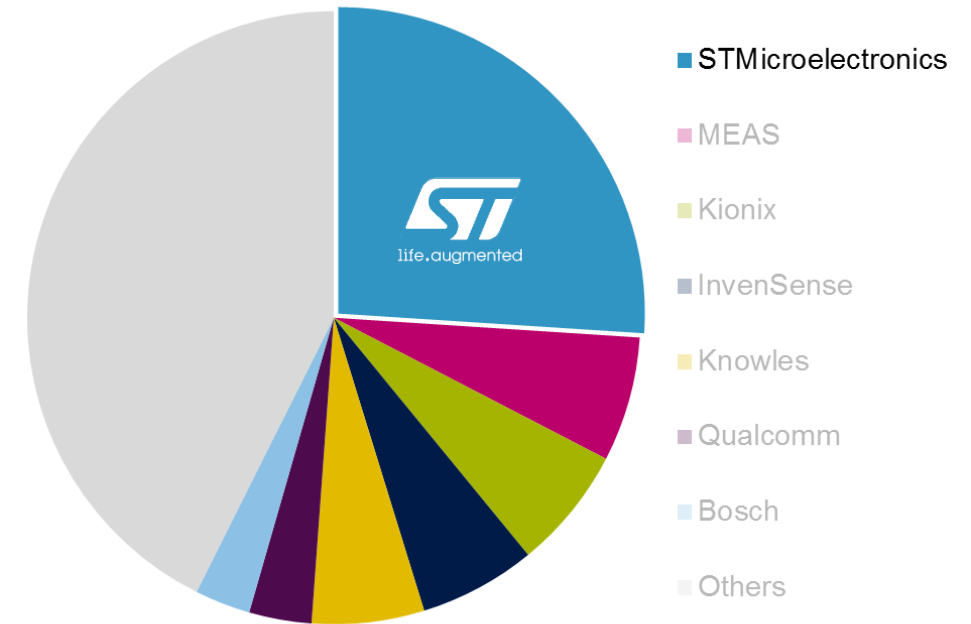# Expanding to Make Things Smarter

Beyond the Smartphone

Smart Home

Smart City

Smart Car

Wearable

life.augmented
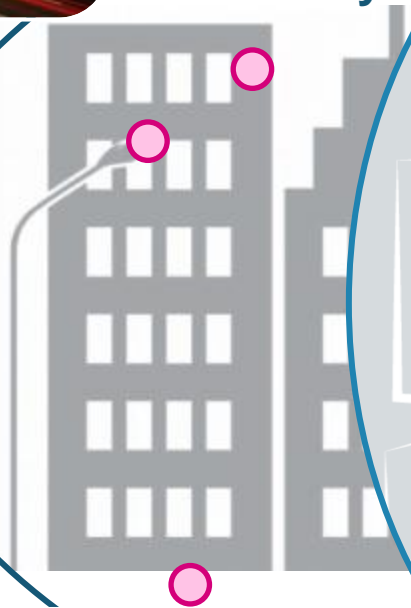
ST Winning in Wearables

Activity Monitor

Heart Monitor

Sports

Smart Watch

Accessories

Glasses & Goggles

IDC forecasts the Wearables Market will grow to be a **$48B** market by 2019
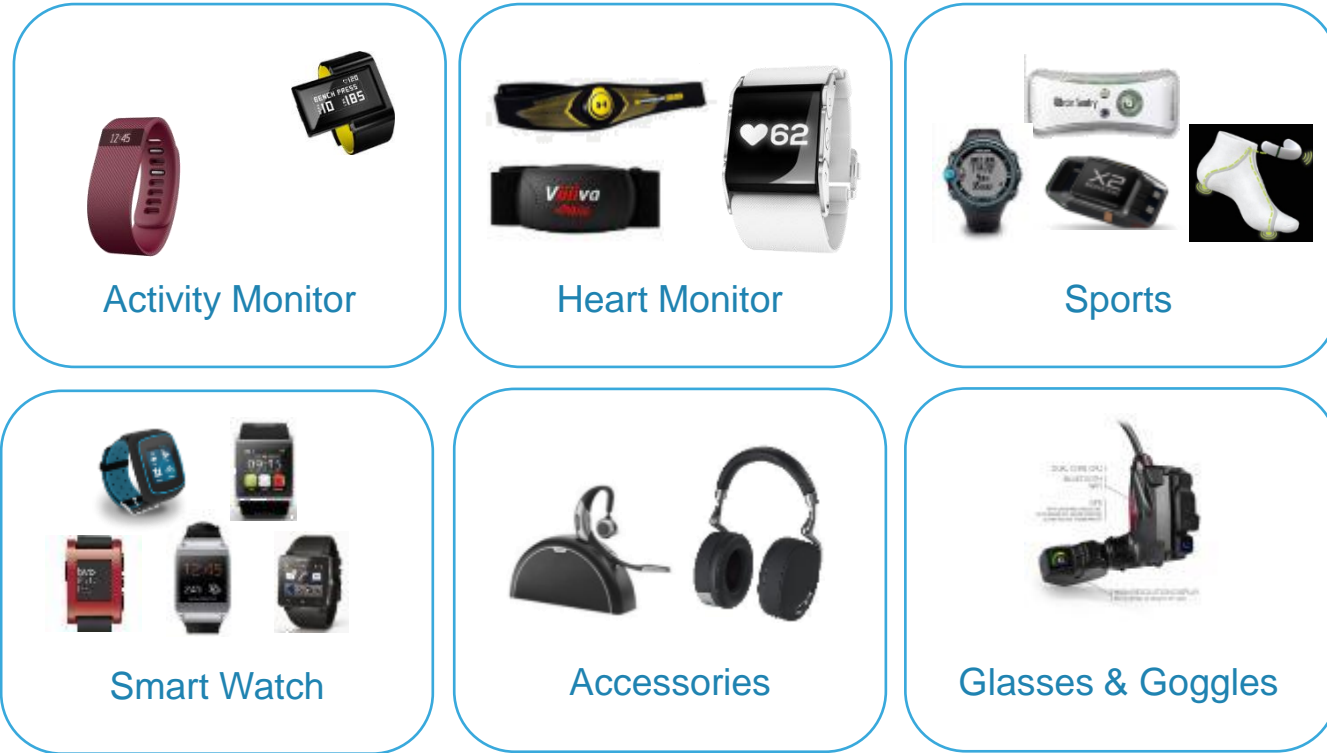
MEMS & Sensors Revenue Share for Wearables – 2013*

- STMicroelectronics
- MEAS
- Kionix
- InvenSense
- Knowles
- Qualcomm
- Bosch
- Others

* IHS MEMS & Sensors for Wearables - 2014

ST Offering for Wearables

Sensors

ULP Microcontrollers & Memories

Ultra-low power connectivity

Analog and mixed signal components

Power and energy management

STM32

32-bit ULP MCUs

Display Power Supplies and LED Drivers

Motion & Environmental sensors Proximity Sensors

Digital sensors

User interface

Audio Amplifiers

Signal transducers

Analog front-end

Microcontroller

Connectivity

BlueNRG

Switches

Sub-1 GHz

Wi-Fi Modules

MEMS Microphones

Analog sensors

Power management

Protection

NFC & RFID

Power management ICs

Battery management & monitoring ICs

ESD Protection EMI Filters & RF-IPD

Current sensing

Smart reset

life.augmented

ST Winning in the Smart Home

- Sensors, intelligence and connectivity being added to many home devices

- Innovative nature of the products allows new companies to challenge established leaders

- ST present with many of the leaders in the first wave of augmented things in the home

Sensors

Microcontrollers & Memories

Ultra-low power connectivity

Analog and mixed signal components

Power and energy management

Intelligent Doorbell
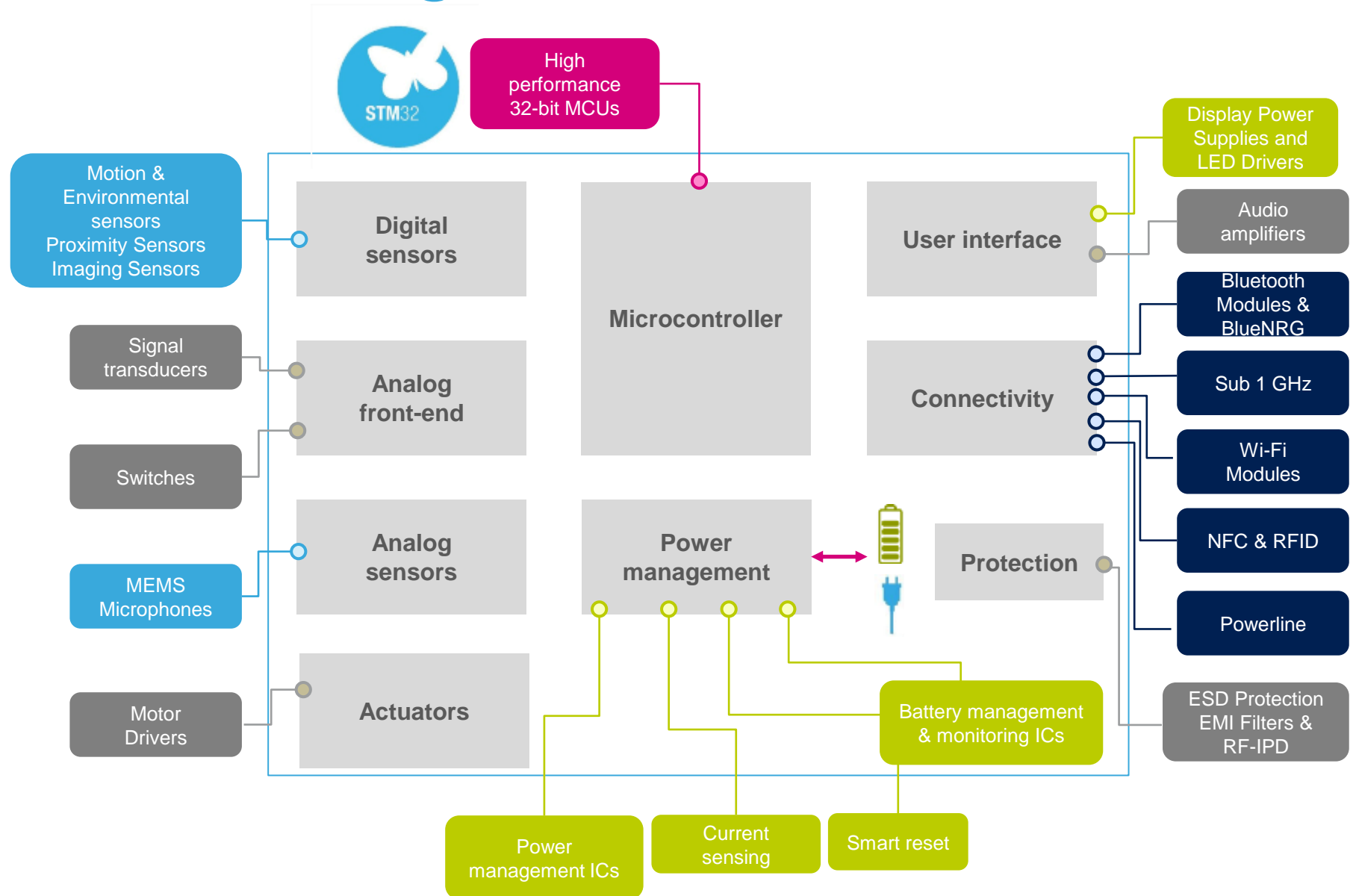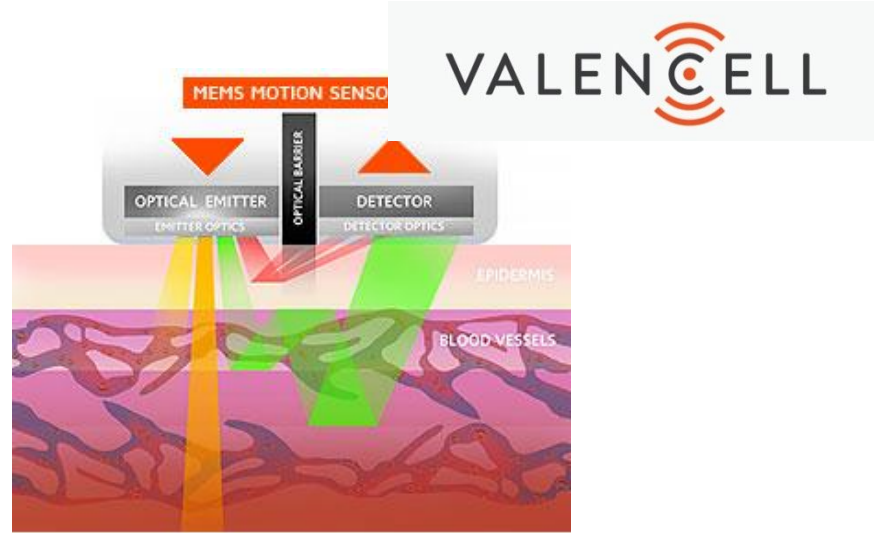
Intelligent Locks

Home Gateway OTT boxes-dongles

Smart Appliances

Smart Control

Toys & Games

life.augmented

ST Offering for the Smart Home

STM32

High performance 32-bit MCUs

Motion & Environmental sensors Proximity Sensors Imaging Sensors

Digital sensors

Microcontroller

User interface

Display Power Supplies and LED Drivers

Audio amplifiers

Signal transducers

Analog front-end

Connectivity

Bluetooth Modules & BlueNRG

Switches

Sub 1 GHz

MEMS Microphones

Analog sensors

Power management

Protection

Wi-Fi Modules

NFC & RFID

Powerline

Motor Drivers

Actuators

Battery management & monitoring ICs

ESD Protection EMI Filters & RF-IPD

Power management ICs

Current sensing

Smart reset

Sensors

Microcontrollers & Memories

Ultra-low power connectivity

Analog and mixed signal components

Power and energy management

life.augmented

Making IoT Building Blocks More Accessible

Sensors & Actuators

- Motion MEMS
- Environmental Sensors
- MEMS Microphones
- Touch Sensors
- Micro-actuators
- Proximity Sensors
- Image Sensors

Brain

- Low-power
- Secure
- Sensor fusion

Communication

- Ultra-low power connectivity

Interfaces

- Analog

Power

- Power and energy management
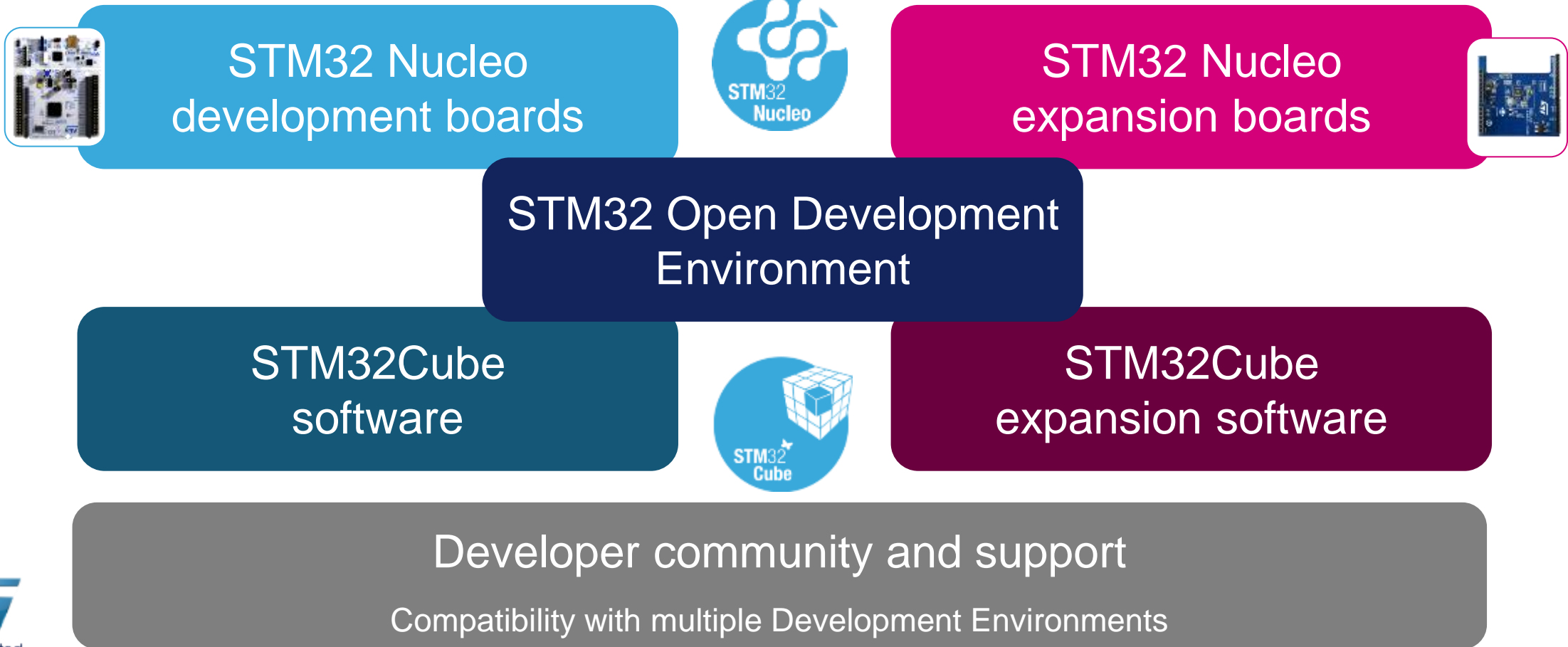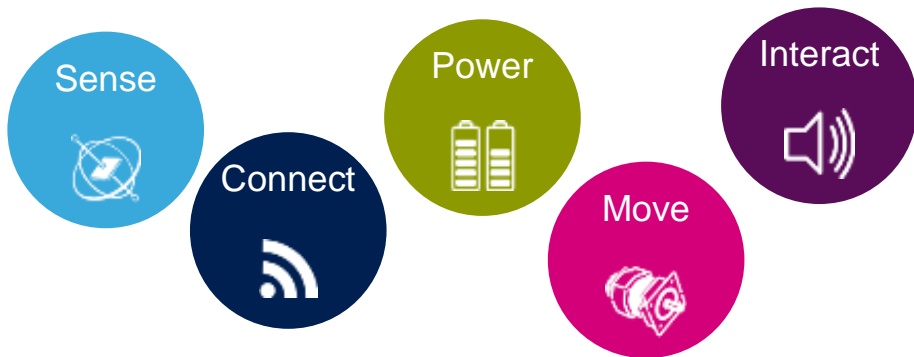
STM32 Open Development Environment

The STM32 Open Development Environment is an open, flexible, easy and affordable way to develop innovative applications

STM32 Nucleo development boards

STM32 Nucleo expansion boards

STM32 Open Development Environment

STM32Cube software

STM32Cube expansion software

Developer community and support

Compatibility with multiple Development Environments

STM32 Open Development Environment

Ultra-low-power | Mainstream | High-performance

STM32 F7
200 MHz

STM32 F4
180 MHz

STM32 F2
120 MHz

STM32 L0   STM32 L1   STM32 F0   STM32 F1   STM32 F3
32 MHz   32 MHz   48 MHz   72 MHz   72 MHz

72 CoreMark	93 CoreMark	106 CoreMark	177 CoreMark	245 CoreMark*	398 CoreMark	608 CoreMark	1000 CoreMark
26 DMIPS	33 DMIPS	38 DMIPS	61 DMIPS	90 DMIPS*	150 DMIPS	225 DMIPS	428 DMIPS

Boards for all STM32 Families

Sense
Connect
Power
Move
Interact

Boards for key functionality

Software to put it all together

STM32 Cube

- **STM32Cube** - A set of free of charge tools and embedded software bricks to enable fast and easy development

- **STM32Cube Expansion Software** for every expansion board

- Multiple Development Environments

- Develop community and support

Open.MEMS initiative giving easy access to drivers, middleware, and application software to develop with ST sensors using the STM32 open ecosystem

life.augmented

ST has All the Ingredients for the IoT

ST Enabling Augmented Things in the IoT

- A unique portfolio with all the key technologies & products

- Understanding the sensor-to-cloud value chain

- Engaging with a broad ecosystem

- Expertise in digital-security technologies

- State-of-the-art semiconductor technologies and high-volume production capabilities
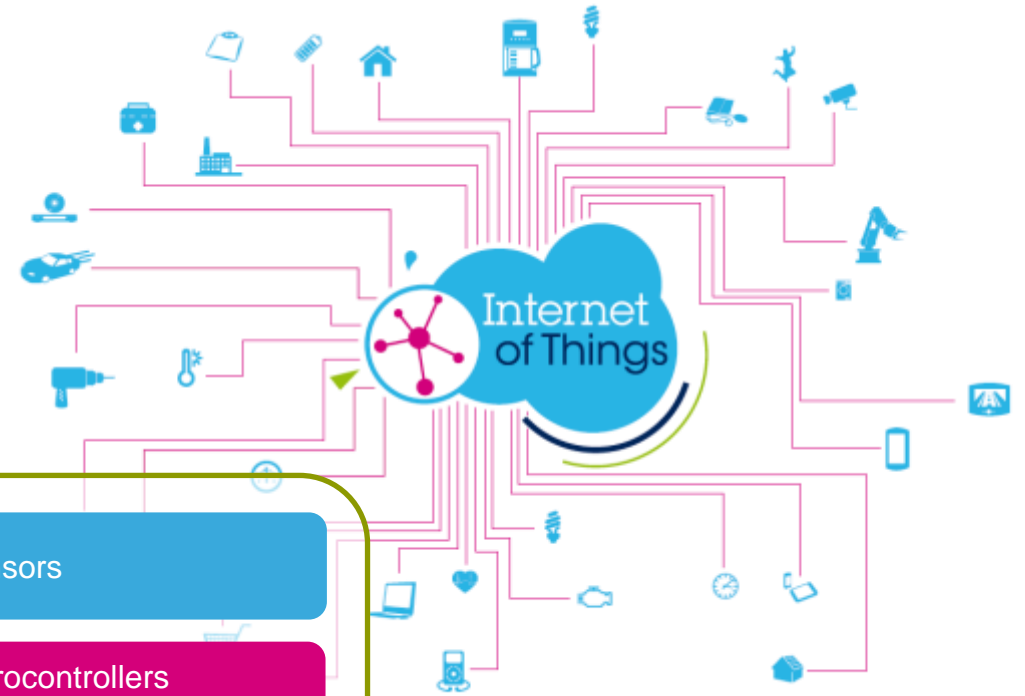
Internet of Things

Sensors

Microcontrollers & Memories

Ultra-low power connectivity

Analog and mixed signal components

Power and energy management

life.augmented

ST is leading the evolution of the Digital Home

- Optimized solutions for broadcast Set-Top-Box & Complete portfolio for the US cable market
- Strong customer traction on recently launched product families
- Best-in-class Ultra HD and HEVC solutions available today

ST is well positioned to continue to lead the Automotive market

- Long-standing commitment to Automotive and established leading positions
- Early investment in key technologies and IP to deliver innovation
- Bringing consumer technologies to the car

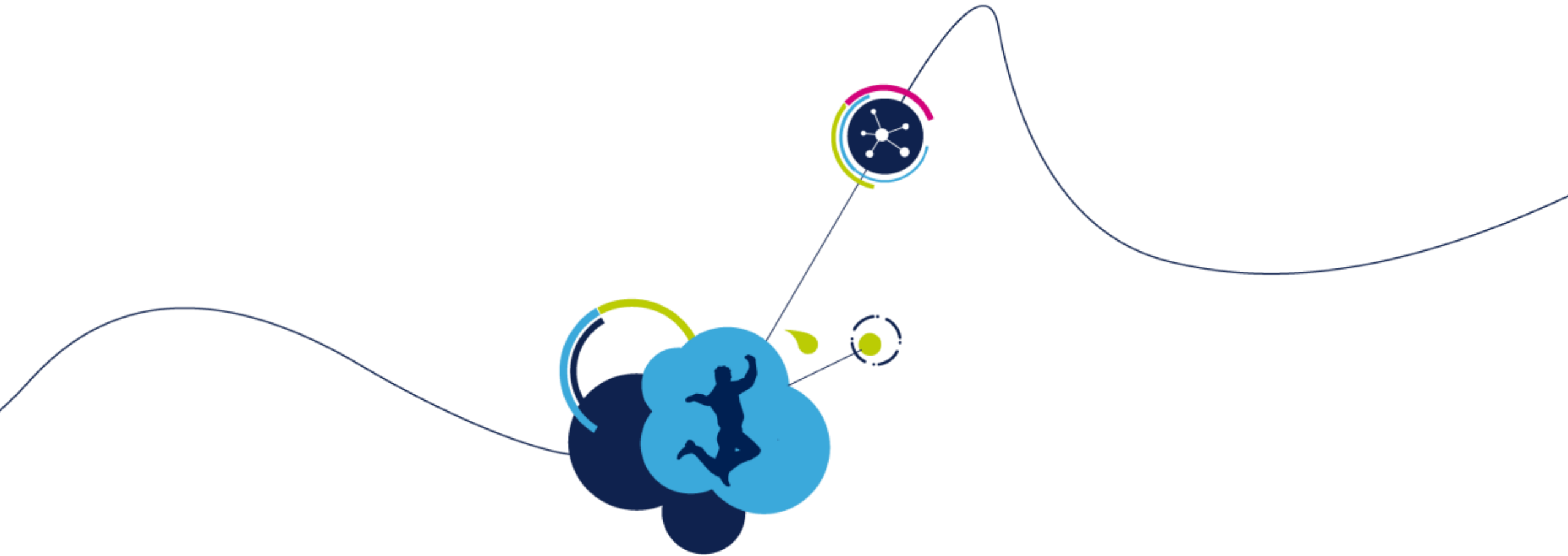**ST is already a leader in the Internet of Things**

- Complete product portfolio including sensors, microcontrollers, connectivity, & smart energy
- Expertise in digital-security technologies & understanding of the sensor-to-cloud value chain
- Strongly engaged with leading players and making IoT technologies even easier to access
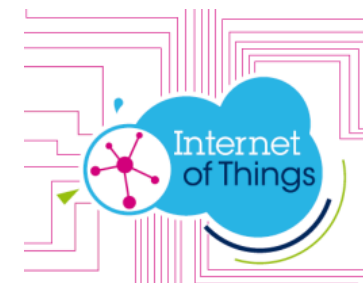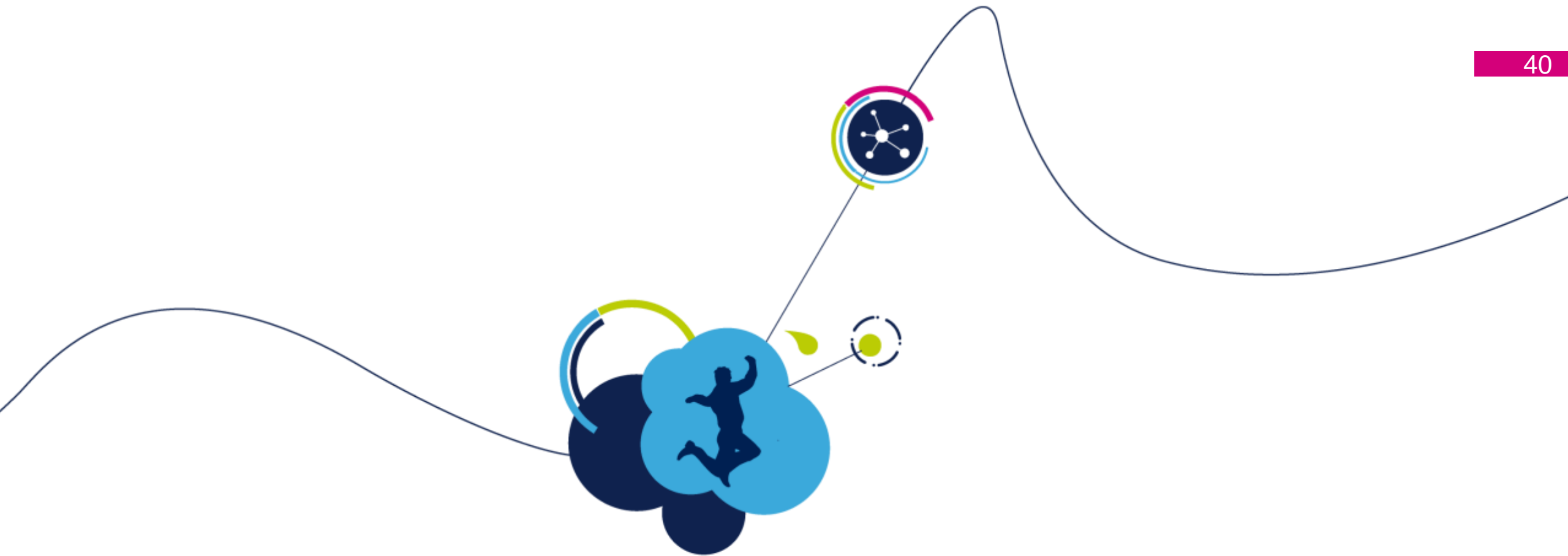
Q&A

> 40 Demos in Encore Tower Suites
5th & 6th floors