

FROM THINGS TO OTHER THINGS AND THE INTERNET OF THINGS

GAVIN SMITH
PRESIDENT, BOSCH OCEANIA

BOSCH GROUP FOUR BUSINESS SECTORS

Mobility Solutions



Industrial Technology



133 Years
making and selling “things”

\$123 Billion
in sales (AUD)

288
manufacturing sites

Private
92% owned by a charitable trust

Energy and Building Tech.



Consumer Goods



Rank 76
Global Fortune 500

410,000
employees (incl. 62,500 in R&D)

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**Mobility
Solutions**



**Industrial
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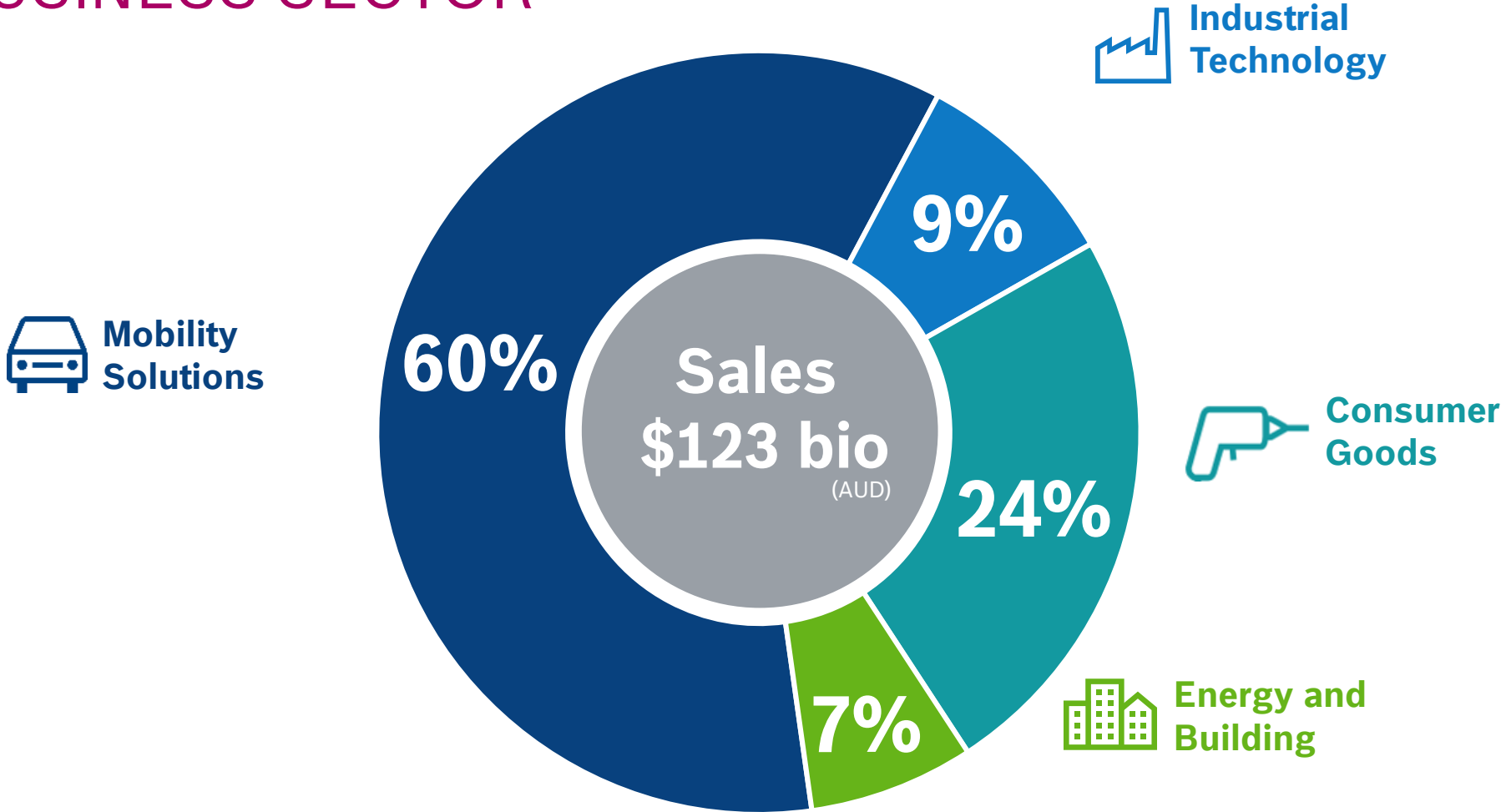
**Consumer
Goods**



Focus areas for the Bosch Foundation

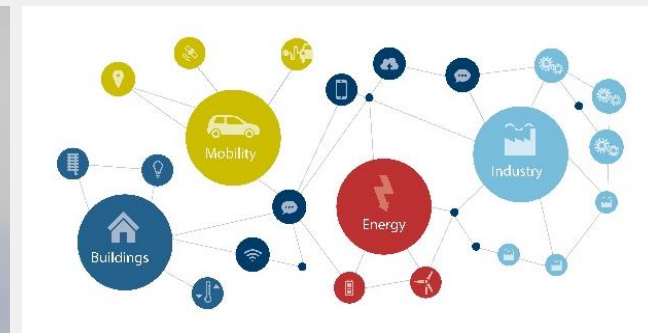


BOSCH GROUP W/W SALES BY BUSINESS SECTOR



MEGATRENDS

CHANGES OF CUSTOMER REQUIREMENTS AND MOBILITY



Demography

The
over-65 age
group is
growing
twice as fast
as others

Urbanization

70%
of the world's
population
will live in cities
in 2050

Energy & Climate

30% more
energy usage
worldwide
by 2035

Connected World

50 billion
connected things
by 2022

MOBILITY SOLUTIONS – SEISMIC SHIFTS



MOBILITY SOLUTIONS – SEISMIC SHIFTS

ELECTRIC, AUTOMATED, CONNECTED, AND MULTIMODAL



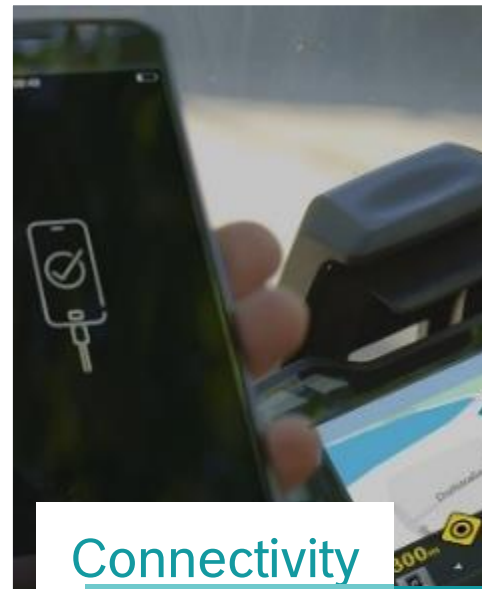
Electrification

- ▶ Growth of e-mobility
- ▶ Decline of combustion engine



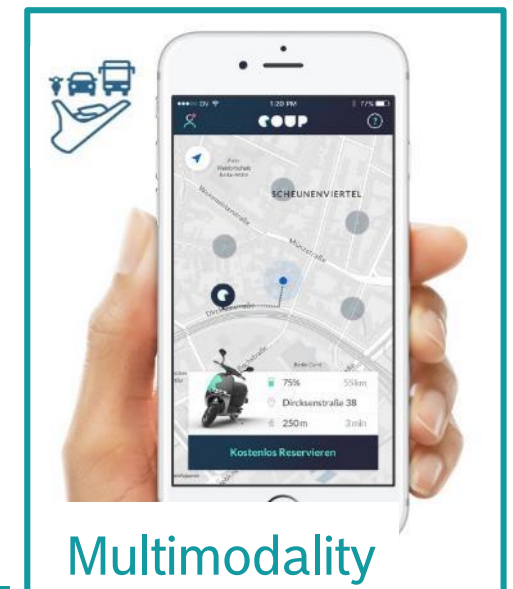
Automation

- ▶ Fully automated driving may arrive sooner than expected



Connectivity

- ▶ Connectivity as enabler for new applications and business models

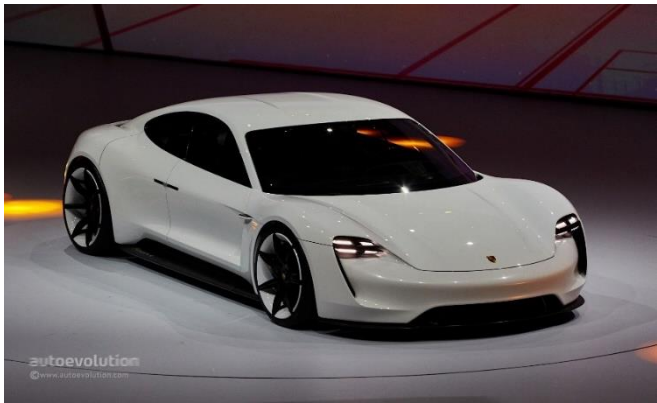


Multimodality

- ▶ Mobility will become multimodal, especially in urban areas

MOBILITY SOLUTIONS – SEISMIC SHIFTS

ELECTRIFICATION



>90% OF CRASHES DUE TO HUMAN ERROR AUTOMATION



Bensalem Exits
EXIT 351 1 2 1/2
EXIT 352 132
Follow ONLY

HIGHLY AUTOMATED DRIVING
THE PERCEPTION

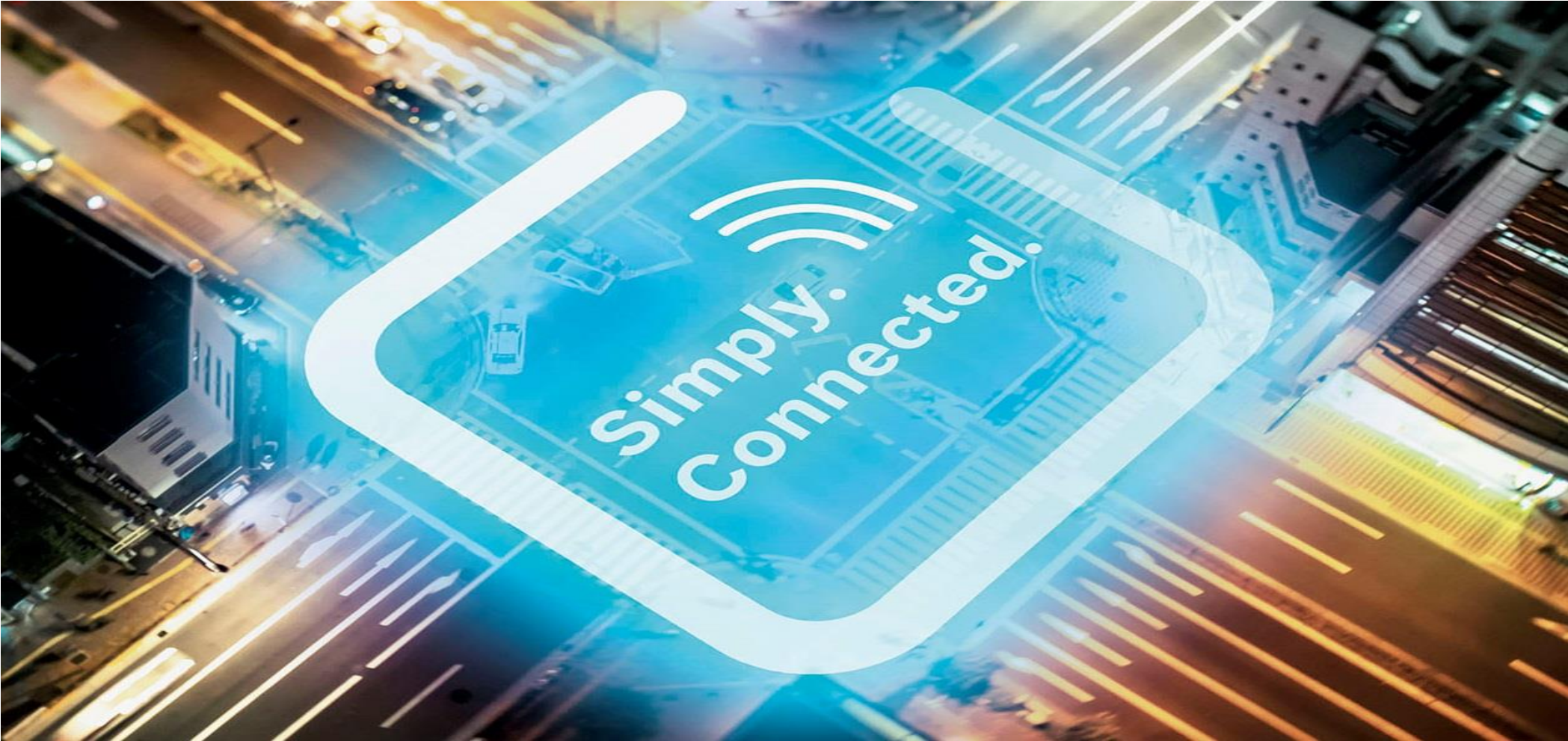


KNIGHT RIDER

HIGHLY AUTOMATED DRIVING
THE REALITY

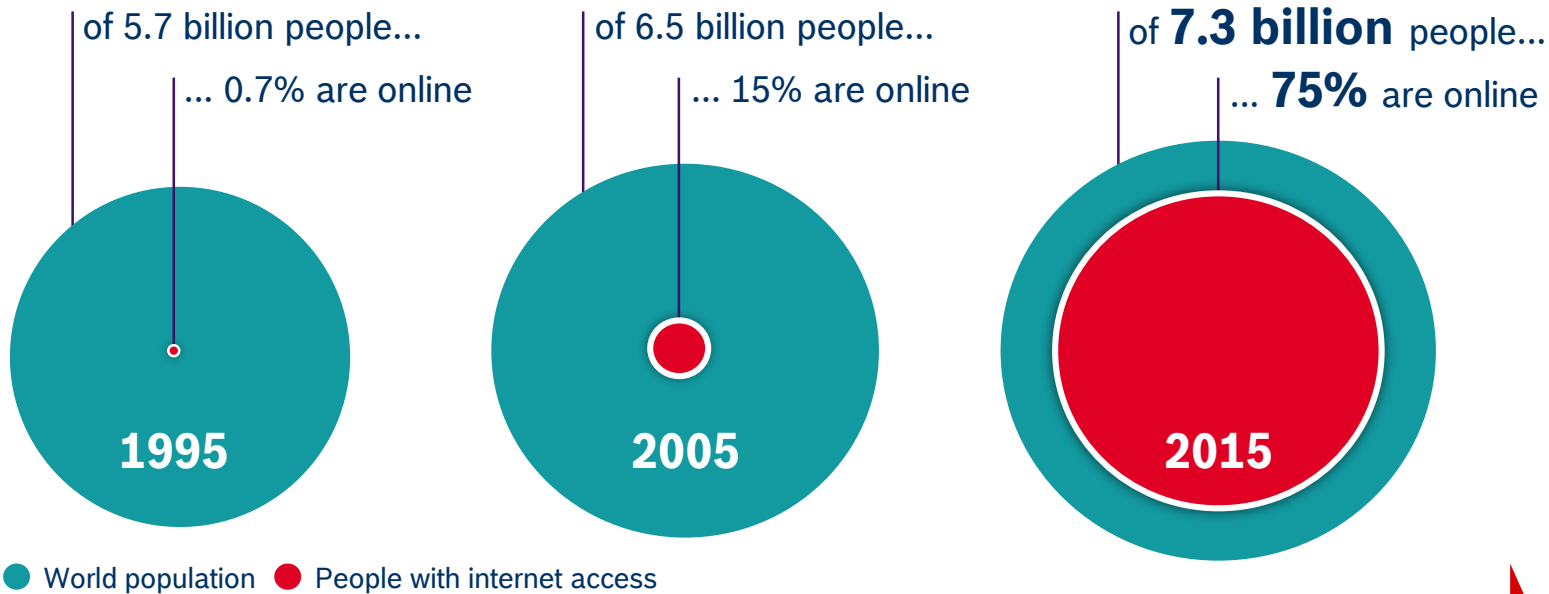


THE INTERNET OF THINGS



BOSCH GROUP IN A RAPIDLY CHANGING WORLD

CONNECTIVITY ACCELERATING



0.04 billion

0.75 billion

> **6.6 billion**

Connected devices

Web 1.0 “Classic Web”
connecting enterprises/ organisations with people, rather static

- Homepages
 - E-Commerce
- ≈ 1990

Web 2.0 “Social Web”
interconnecting also people, dynamic interaction between common users

- Blogs, Social Communities
 - Platforms like Facebook, Twitter, YouTube...
- ≈ 2005

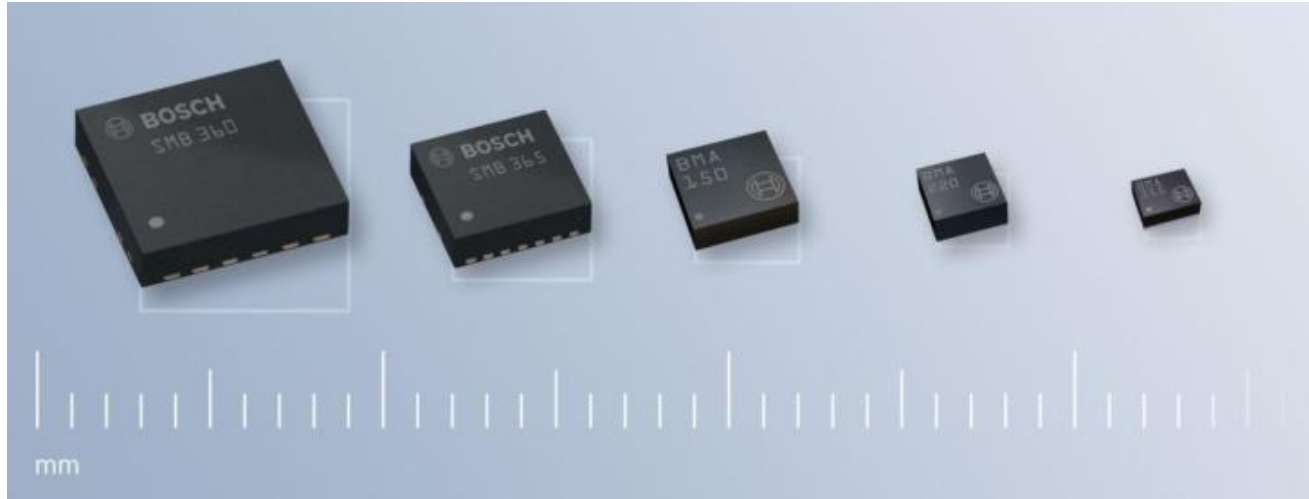
Web 3.0/4.0 “Internet of Things”
interconnecting also objects of everyday use to create

- Industry 4.0
- Connected Mobility
- Smart Home ...

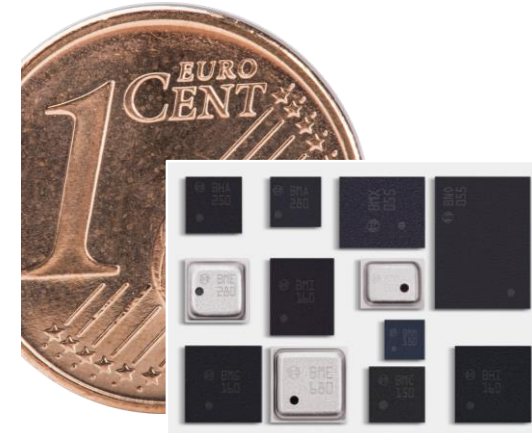
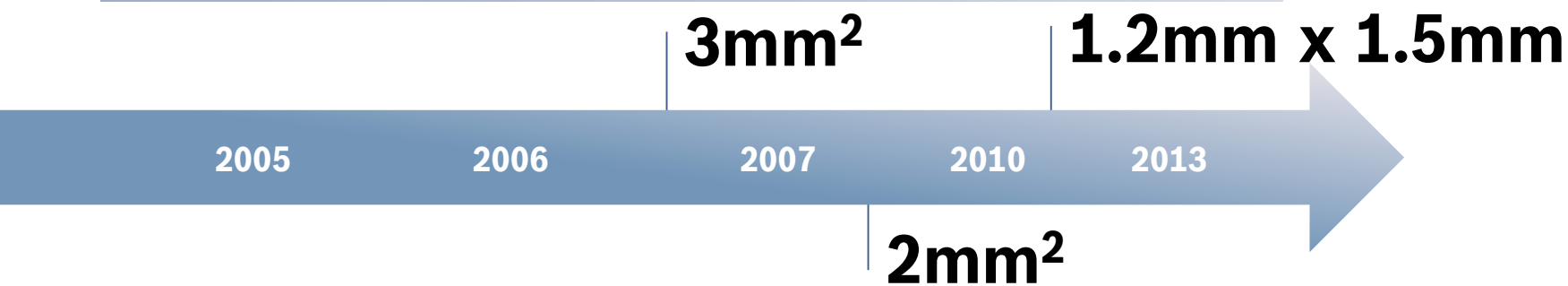
BOSCH GROUP IN A RAPIDLY CHANGING WORLD

MINIATURIZED, LOW POWER SENSORS

► Bosch MEMS* development



- Shrinking Size
- Reducing Power Consumption

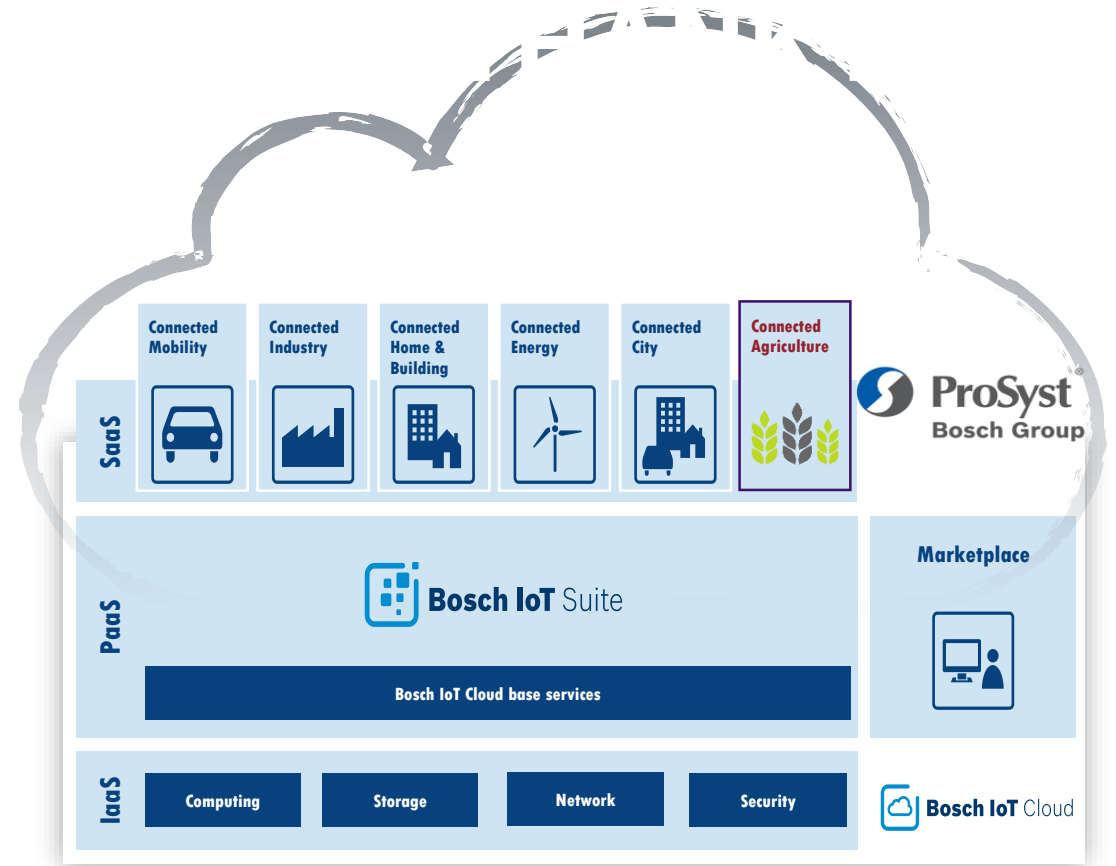




***“Our strategic target
is for all our
Electronic product
categories to be IoT
enabled by 2020”***

**Bosch CEO Volkmar Denner,
December 2011**

“THINGS” COMPANIES MUST, AND ARE, CHANGING



THE 4th INDUSTRIAL REVOLUTION (i4.0) FACTORY OF THE FUTURE



Today a SMART PHONE, Tomorrow a LIFE SUPPORT DEVICE

