

Smart Cities - Bosch Security Systems



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Presentation structure

1. Bosch Security Systems- who we are

2. Market trends

*Energy efficiency, comfort, security
Automation, connectivity*

3. City challenges and solutions

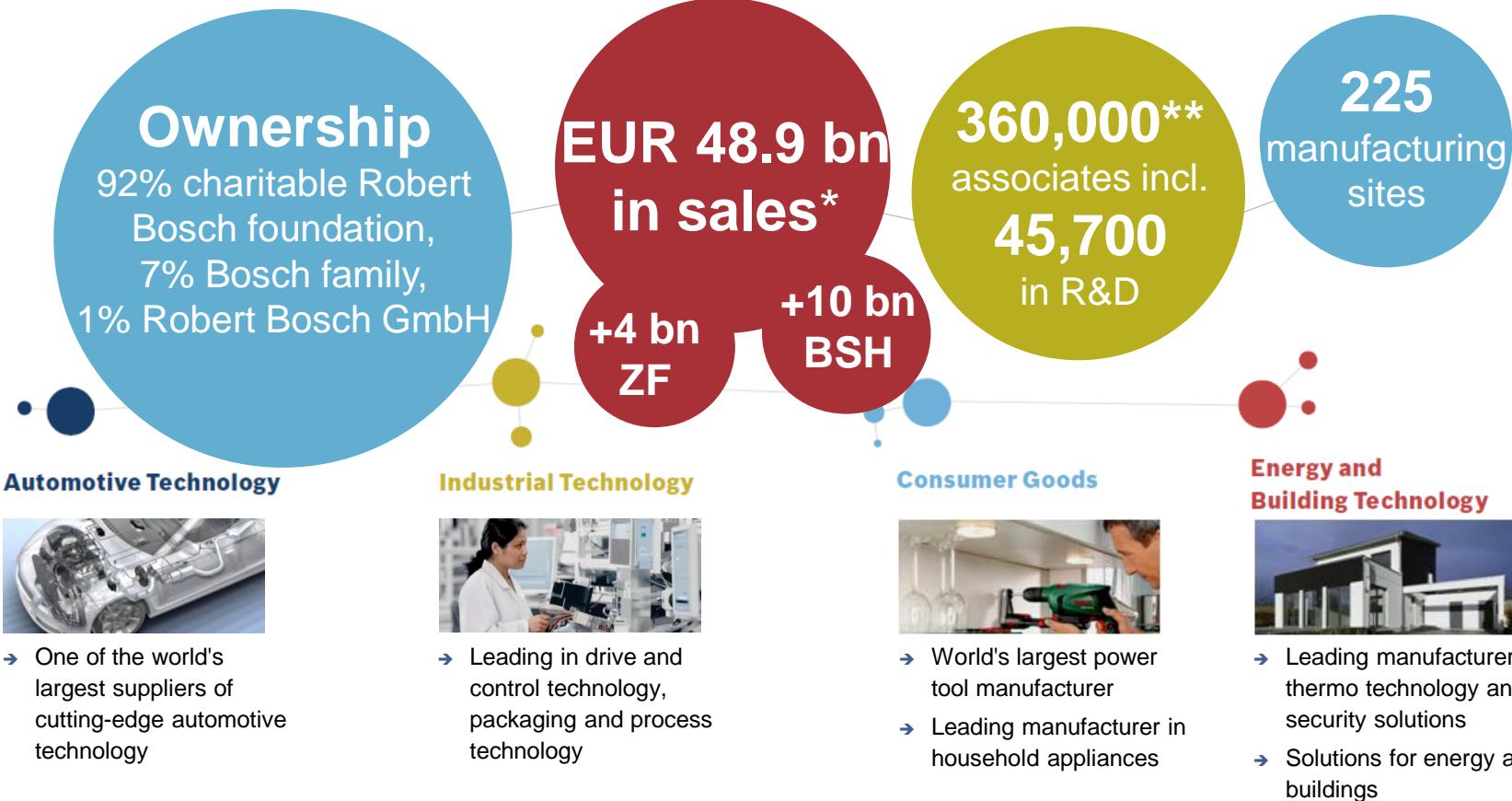
Opportunities in existing and new business areas

4. Smart Security Solutions

Examples



Bosch Group: Who is Bosch?



* Bosch 2014

** as of April 2015, Including BSH și Automotive Steering



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Energy and Building Technology expertise



- Leading global supplier of security, safety, and communications products, solutions and services
- World's largest supplier of heat pumps
- Services for energy management

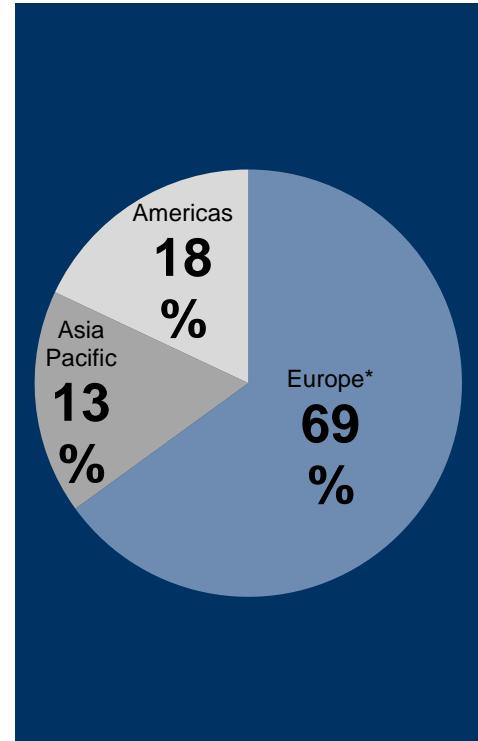
Bosch Security Systems-Key facts 2014

**Total Sales
2014
1,532 billion
Euros**

**Manufacturing
sites
5 locations**
Americas (Mexico, USA)
Asia (China)
Europe (Germany, Portugal)

**Associates –
January 1, 2015
12,500**

**Distribution
Partners
in more than
150 countries**



* incl. Africa and Middle East



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Smart Cities - Bosch Security Systems



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Energy and building technology *Market trends*

Energy efficiency
Comfort
Security

Automation
Connectivity



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Mega Trends in a Fast Changing World



Mobility
Parking space search is responsible for 30% of the traffic in cities.



Urbanization
Cities represent 2% of the globe and 50% of the population.



Connectivity
New ICT, data management and IoTs devices increase the need for governance rethinking.

Smart City

Cities consume 75% of the produced energy, buildings have 40% energy efficiency.



Resources

The ageing of Western countries' population implies new needs.



Demography

Quality of life is a key element for attractiveness in the city.



Quality of Life

City Challenges and Solutions Examples

Topics	Challenges	Solutions
Mobility	Reorganize / Revitalize existing infrastructure Connected and efficient public transportation	Smart parking Fleet monitoring and management Intermodal planning, booking, payment
Energy	Manage peak demand Reduced environmental impact Improvement of existing infrastructure	Street light management Smart grid (metering, software) District heating
Security	Public security (mass events, crime) Reduce impact of natural disasters	Video surveillance Emergency services Disaster response
Governance	Market place, data analysis (monitor, control, predict) Share cross segment knowledge necessary	Apps eGovernance City Dashboard
Health	Staying at home longer Self-determination	Connected Life



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Security: our vision



Safety for people



Social media



IP products



**Security of goods
and infrastructure**



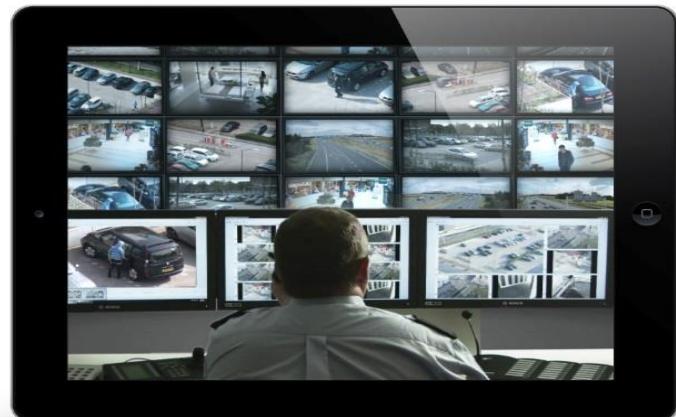
Control

Smart Security: increase safety and security whilst reducing costs.



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Security solutions. Ex.: IVA Technology



Intelligent Video Analysis



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Security solutions. Ex.: Crowd management



Automatic processes based on IVA technology

Example of a security based use case

- Monitor the situation in some defined areas
 - Crowd density on key zones
 - Scenarios according to the normal and abnormal situations
- Automatic alert according to defined scenarios
 - Predefined alert automatically sent to the relevant stakeholder
- Predictive actions

Optimization of security actions and alerts



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Security solutions: Ex preventing terrorism

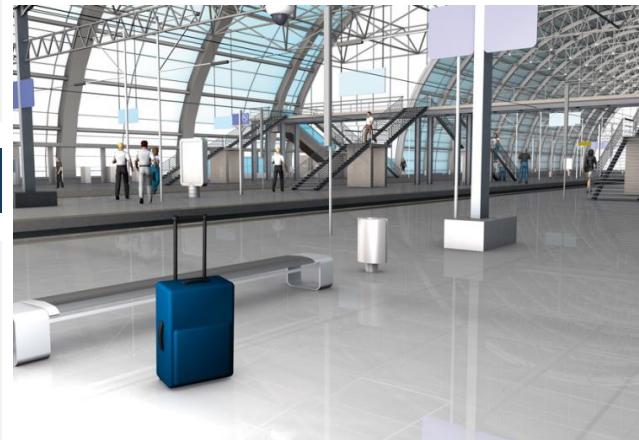
Your challenge

- Automatically spot potentially dangerous unattended luggage in crowded areas
- Quickly direct countermeasures as required

Our solution

Combination of Intelligent Video Analysis (IVA) public address and management system

- Sophisticated Bosch Intelligent Video Analysis (IVA) detects unattended or abandoned objects
- Automatic alarms are sent to central control room if unattended object is spotted, and immediate predefined action plans initiated



Prompt detection of suspicious objects saves lives and downtime



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Smart City Solutions



Smart lightning: Energy + Security + Mobility

Surveillance cameras can be combined with smart streetlights, on street parking solutions and extended with EV charging stations



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Cross-domain competence

- Bosch technology for China's tallest skyscraper
- *Hydraulic pump for concrete work, connected safety and conference technology with audio and video systems, efficient energy technology for heating, cooling, hot water*



*Shanghai
Tower*



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Data security and data protection for the connected world

- Center of Competence for product security
- Security specialist escrypt: leading systems supplier for embedded security
- *Trust as a competitive factor:
highest data-protection and data-security standards set us apart*



Thank you for your interest !



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