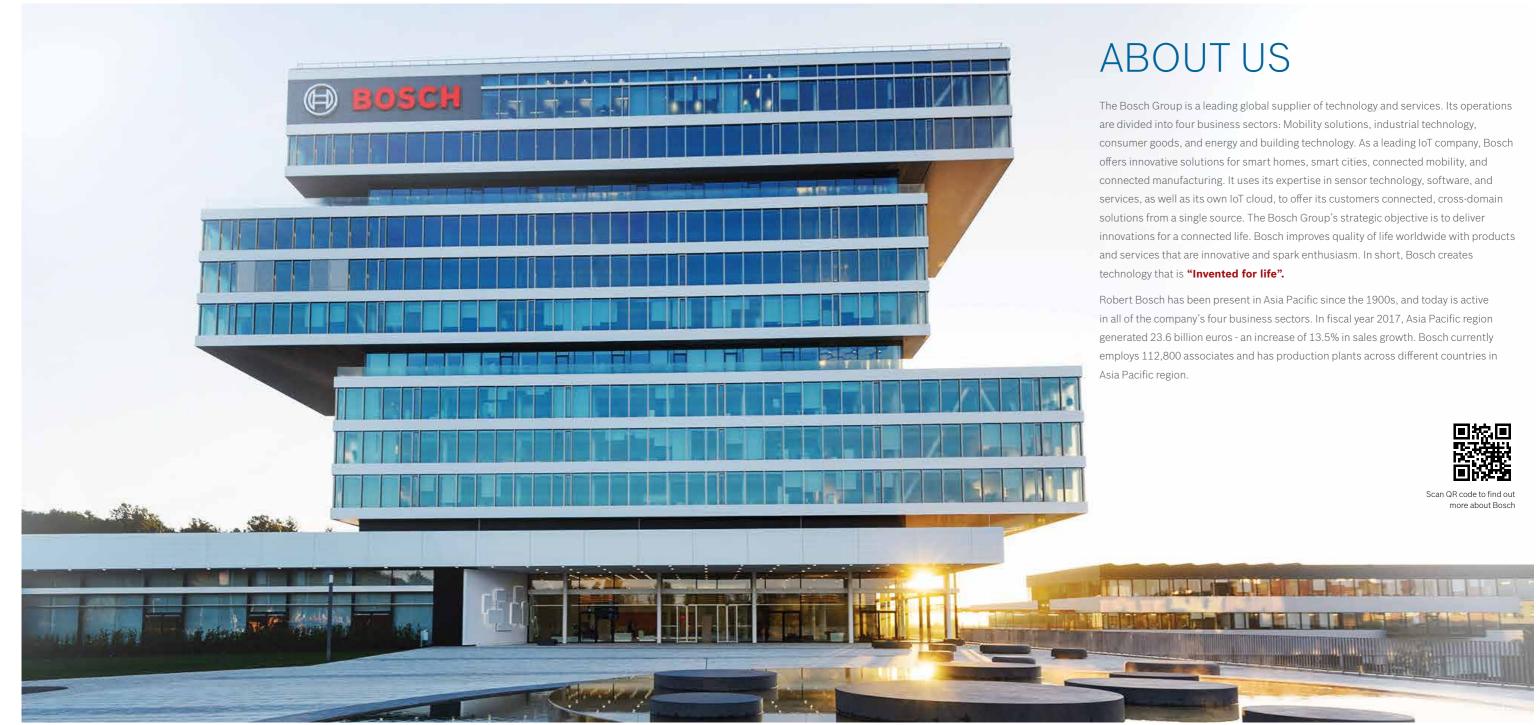


BUILDING TECHNOLOGIES

BOSCH EMPOWERS YOU TO BUILD A SAFER AND MORE SECURE WORLD

www.BoschSecurity.com





OUR HISTORY

Bound to a strong heritage – Quality, the key to the Bosch philosophy:



We should all strive to improve on the status quo: none of us should ever be satisfied with what has been achieved, but should always endeavor to do better. - ROBERT BOSCH, 1918

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BUILDING **TECHNOLOGIES**

The Bosch Building Technologies division is a leading global supplier of security, safety, and communications products and systems. In selected countries, Bosch offers solutions and services for building security, energy efficiency and building automation. About 9,000 associates generated sales of more than 1.9 billion euros in 2017. Protecting lives, buildings and assets is the major aim.

The product portfolio includes video surveillance, intrusion detection, fire detection and voice evacuation systems as well as access control and management systems. Professional audio and conference systems for communication of voice, sound and music complete the range. Building Technologies develops and manufactures in its own plants in Europe, Americas and Asia.

Bosch empowers you to build a safer and more secure world.



Scan QR code to find out more about Bosch Building Technologies



We are passionate about making our world safe, secure, efficient and enjoyable.

* In round figures

associates³

WORLDWIDE PROJECTS



 \sim

149 Railway/Metro

<u>5</u> 360

: Government

172 Manufacturing

BILLION total sales*



Retail



332 Office Buildings

Worldwide vertical areas with our engineered solutions and products

SOLUTIONS FOR VERTICAL SPACES

Bosch designs a wide range of Building Technologies solutions for smart cities.





Religious Building

CUSTOMER'S STORY | CANCUN AIRPORT, MEXICO

AIRPORT

With the evolution of transportation, the world is now a smaller place. We are more connected than before. Transport systems therefore must adopt technologies to facilitate the smooth flow of goods and people across borders, while meeting demanding criteria with regards to security, safety, communications and building automation.

Cancun Airport, Mexico's second largest, added a fourth terminal. To create a centralized, integrated security system, Bosch Video Management System and Bosch Video Recording Manager were deployed. Overall security at Cancun Airport is guaranteed with improved communication and effective coordination. Even as an airport expands, security must never be compromised.

KEY PROJECT REFERENCES

Singapore, 2011 Changi Airport Terminal 1 & 2

Vietnam, 2012 Da Nang International Airport

Cambodia, 2016 Phnom Penh International Airport

CUSTOMER'S STORY | HELSINKI METRO, FINLAND

TRANSPORTATION

From protecting passengers and employees, dealing with fire and explosions, building an all-rounded prevention of terrorism, to managing a plethora of access authorizations – all metro areas require a reliable emergency and public address system to ensure security success.

When the Helsinki Regional Transport Authority expanded its rail system into the neighboring city of Espoo, the challenges of ensuring sound consistency, control and integration arose. Bosch Praesideo public address and emergency sound system delivered crystal-clear sound quality at all stations and greatly increased emergency response times. The Praesideo has been installed in 20,000 projects across the world.





KEY PROJECT REFERENCES

Sao Paulo, 2007 Metro Sao Paulo

China, 2014 Shanghai Hongqiao Comprehensive Transportation Hub

Italy, 2013 Metropolitana Milanese

PUBLIC BUILDINGS

Building on true world-class expertise, Bosch has led the conference market for over 65 years. In events where stakes are high, such as local, regional and national governments and international summits, the DICENTIS Conference System can be trusted to facilitate a user-friendly yet truly secure environment.

Representing the family of IP-based conference solutions for the integrated conference world of tomorrow, the DICENTIS Conference System from Bosch has been declared "the best you can get" for 2018 Brussels NATO summit.

A total of 76 multimedia devices were deployed for the world leaders and ministers of foreign affairs, and 38 discussion touchscreen devices served the ministers of defense. Strict risk assessment left no room for information leakage. The event was declared a success through Bosch's intuitive, user-centric solutions.

KEY PROJECT REFERENCES

Malaysia, 2018 Shah Alam City Council

United Kingdom, 2016 Runnymede Borough Council

Italy, 2017 La Spezia - Biblioteca Beghi

Australia, 2015 Newcastle City Council Chamber

OFFICE & BUILDINGS

In a world where everything is digitized, the building industry is taking a cue from the human-centric workspace and smart homes by building smart skyscrapers. These commercial structures will become more powerful, more energy efficient, with high performance integrated security.

Standing at 632 meters, Shanghai Tower is China's tallest landmark and the second tallest building in the world. The 128-storey "vertical city" can accommodate up to 16,000 people per day. Providing a safe and pleasant experience for all is a significant task.

Bosch deployed a fully-integrated network of video surveillance, intrusion systems, public address and professional sound solutions – delivering vigilant intelligence, reliable intrusion detection and evacuation solutions, and the greatest possible audio experience.





KEY PROJECT REFERENCES

Australia, 2014 Qantas Headquarters

Bangladesh, 2013 Metropolitan Chamber of Commerce and Industry

Indonesia, 2011 Dharmawangsa Residence



SECURITY



Video Systems

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Intrusion Alarm



Access Control



SAFETY



Fire Alarm Systems



Voice Alarm Systems

COMMUNICATIONS



Voice Alarm Systems (þ))





Conference &





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SECURITY





VIDEO SYSTEMS

Bosch constantly pushes the boundaries of technology to develop intelligent solutions that go beyond the highest security demands of today, delivering clear business advantages beyond security. We believe that the logical next step for security is to enable customers to interpret the data and start repurposing these huge amounts of video data. The ability to interpret video data directly at the source helps to substantially improve levels of security, as well as offers clear business advantages.

ACCESS CONTROL SYSTEMS

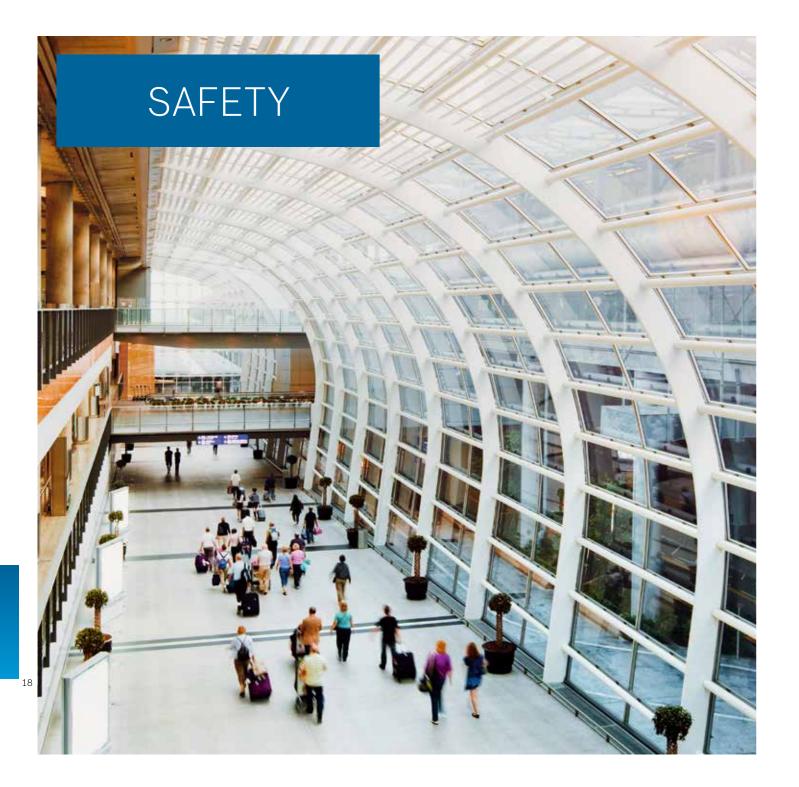
Investing in the right technology is central to the protection of your employees, site visitors and ultimately the success of your company. Even as you naturally would want your business premises to be as open and welcoming as possible while making it easy for staff and visitors to move around the building, you need to ensure maximum protection against unauthorized intruders. In the event of an emergency, not only the future of your business but people's lives as well hang on the reliable functioning of access control systems. This combination of cutting-edge technology, open access and strict security is precisely what Bosch Access Control solutions can offer you.

INTRUSION ALARM SYSTEMS

Protect people and property with security you can rely on. From simple installations to extensive projects, we offer integrated security solutions based on award-winning technology and backed by superior support. Our easy-to-use alarm systems integrate seamlessly with video cameras, smoke alarms, home automation devices, and more. We offer customizable solutions to address the challenges you face every day.

MANAGEMENT SOFTWARE

Key industries such as transportation, retail, logistics and critical infrastructures require superior video management. At Bosch, our solutions are scalable and will grow with your needs. All of Bosch Video Management Software – Viewer, Plus, Professional and Enterprise - are designed for small, medium and large enterprises, and are compatible with Bosch and non-Bosch cameras.





FIRE ALARM SYSTEMS

Keeping people safe against the threat of fire hazards under the protection of Bosch Fire Alarm System is Bosch's first priority. Sensors, voice and control software far exceed industry standards and are quick to locate, verify and control fires.

We can minimize the occurrence of costly false alarms, allow operators to guide people to safety, monitor evacuation proceedings, and help coordinate rescue operations to ensure seamless operation under any contingency.

VOICE ALARM SYSTEMS

Two key words define an effective Voice Alarm System: performance and reliability. Known for its operational versatility, superb sound quality and absolute clarity, Bosch has installed more than 20,000 public address systems worldwide. Besides public announcements and scheduled events, Bosch high quality voice alarm system is essential in times of emergency, and for dealing with security and safety challenges.



COMMERCIAL AUDIO

Ranked among the top three firms in both the professional music and public address system industries, Bosch promises maximum flexibility and reliability. Bosch Commercial Audio Solutions provides different control methods and speaker types tailored to the needs of different business environments. Enhance the customer retail and hospitality experience, encouraging customers to stay longer and make purchases.

CONFERENCE & DISCUSSION

In an increasingly digitized world, more is required from a conference system. Organizations are expected to extend reach via video, social media, remote interaction and expandability. Bosch Conference Solutions grows with your needs. Build on world-class expertise and experiences, Bosch award-winning systems cater to various customers ranging from boutique-sized organizations to multinational corporations, as well as local, regional, and national governments and international summits.



CRITICAL COMMUNICATION SYSTEMS

RTS is an industry leader in the design and manufacture of intercom solutions. From the Advanced Digital Audio Matrix systems deployed for coordinating major network broadcasts of the world's largest events to small-format systems used for in-house productions, RTS is dedicated to innovating the future of global communications.

Telex has gained a leading position in the aviation market with headsets that now define industry standards, and are trusted in mission-critical applications across the globe. Since 1936, Telex designs and manufactures world-class aviation headset, intercom, radio dispatch, and wireless products that are used in thousands of public and private applications for coordinating communications with emergency response and security personnel.



PROFESSIONAL SOUND SYSTEMS

Dynacord designs and builds precision audio electronics that are trusted by discerning professionals for their uncompromising performance and reliability, technological innovation and high-end audio quality. With a product portfolio including mixing consoles, digital signal processing, power amplifiers and loudspeaker systems, Dynacord products are a premium choice for mobile audio applications, concert sound, large venues and fixed installations.

The Electro-Voice portfolio offers professional audio equipment such as world-class microphones, digital signal processing, amplification, and loudspeakers for the broadcast, retail, commercial, installations, and concert sound markets. For 90 years, Electro-Voice has designed and engineered leading-edge sound reinforcement solutions products that empower the performer, exceed the expectations of the audio professional, and elevate the audience experience.



DYNACORD









PROFESSIONAL SERVICES

ENGINEERED SOLUTION BUSINESS

We work with and through system integrators to help end-users all over the world get the best security and safety solutions for their needs.

Our main market is security systems for facilities that steadily or occasionally host large numbers of people such as airports, train stations or stadiums. Given the size, complexity and high visitor volume of these facilities, this is clearly the most challenging sector of the security systems market. We aim to support our partners through all project phases.



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ENERGY & BUILDING SOLUTIONS

Bosch Energy and Building Solutions in India provides customized energy solutions to help to accelerate your journey towards sustainability and energy independence. As an installer, service provider and consultant, Bosch Security Solutions in Singapore equips customers with holistic solutions for safety and security from a single source.





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Energy Efficiency

We develop tailor-made and future-proof energy solutions for buildings that increase energy efficiency and reduce operating costs.

Sustainability

Our solutions and services help to protect your people, assets and the environment, thereby securing your long-term business sustainability.

Consultancy Services

We offer comprehensive services and consultancy for monitoring, maintenance, modernization and operation for a hassle-free experience.

One-Stop Solution

We assist you in all project phases - planning, solution for you.

BOSCH SECURITY CERTIFIED PARTNER

Our partners are professionally trained and certified to help you resolve all levels of security issues, achieve profitability, and bring your business to greater heights. Expect nothing but the most dedicated dealers to provide you with expert advice and security solutions.

AFTER-SALES SERVICES

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First-rate support means our solutions and products offer a superior return on investment. We are committed to long service periods of spare parts and repair solutions, with continued assistance by experienced experts for predictable and optimal operating costs.

TRAINING & CERTIFICATIONS

Bosch offers extensive training in all security systems and delivers structured certifications for learners to earn their bragging rights. Expand your knowledge and expertise by making use of our classroom trainings, virtual classrooms and web-based trainings.







TECHNICAL **SUPPORT**

Our established network of repair centres with well-trained staff in all our major markets provides companies with the decisive advantage in global competition, ensuring smooth installation and continuous operation throughout a product's life cycle.



WHAT MAKES US

Bosch provides solutions for building safe, secure and enjoyable vertical spaces. Select from our broad spectrum of services such as video surveillance, access control, fire, evacuation and speech alarm systems, as well as robbery and break-in notification systems via networked time and building integration management systems. Minimize risks and maximize security! No matter what your security task looks like, Bosch offers the most suitable solution for every building or application. We are able to seamlessly integrate with other Bosch divisions' products, offering you holistic solutions for buildings across the world.

The integration management system manages different Bosch security subsystems on one single platform and also provides a "tool box" to allow integration with third party. With our open standards, we can help you create leading-edge security solutions, integrated end-to-end, leveraging our market-defining technologies in combination with the multitude of solutions available in the security market ecosystem. As founding member of ONVIF, we believe in easy integration of different products, hardware and software, from different brands.

We support your projects from the start, during design and customization, and provide help during installation and commissioning to assure a smooth handover into operations. Bosch Business Intelligence Services helps our end users to optimize their business on a daily basis. Benefit from our high-value repair service and high-quality spare parts for predictable, optimized operational costs. We provide first-class support that gives customers unsurpassed