Press release Energy and Building Technology



"Attention OR: helicopter landing!" Bosch is making hospitals smart

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- ► Connected solutions for greater safety, convenience, and efficiency in hospitals
- ▶ Operators, staff, and patients benefit from connected services
- ▶ Bosch expects smart hospitals to generate sales of 100 million euros
- ► Energy and Building Technology business sector to grow by around five percent in 2017

Cologne / Stuttgart, Germany - Preventing the theft of expensive medical equipment, stopping unauthorized persons from entering restricted areas, and informing the OR of a rescue helicopter's arrival: with the help of intelligently connected cameras, video technology, and much more, things that used to be impossible at hospitals - or were only possible as stand-alone, non-digital solutions – are now child's play thanks to Bosch's internet of things (IoT) expertise. According to the insurance industry, the theft of endoscopic devices results in millions of euros in damages for hospital operators throughout Europe. Sensor-based video technology in corridors and at points of entry and exit can provide crucial evidence for prosecuting criminals. Prevention is equally important. Intelligently controlled lighting, connected motion detectors on doors and windows, and intrusion alarm systems scare off burglars, prevent theft, and save operators the high cost of having to replace expensive medical equipment. "The internet of things has finally arrived at hospitals," Dr. Stefan Hartung, the member of the board of management responsible for the Energy and Building Technology business sector at Bosch, said at a press conference. Safety and security are not the only benefits, he added: connected solutions also provide greater convenience and efficiency in hospitals. Bosch plans to generate sales of around 100 million euros with smart hospital projects in the years ahead. For the entire Energy and Building Technology business sector, Bosch expects sales growth of around five percent this year, more than double the sector's growth rate last year.

Contributing to hospitals' digitalization strategies

According to a study by Roland Berger, almost 90 percent of all hospitals have developed a digitalization strategy to increase their efficiency and economic performance – and infrastructure is no exception. "We would like to benefit from these ambitions, which is why we will expand our business activities in the field of connected products and services for hospitals. Through our intelligent solutions, we want to make a contribution to greater quality of life, safety, and security at hospitals, as well as to greater resource conservation," Hartung said.

Bosch: a service provider for smart hospitals

Hospitals are under tremendous pressure. They have to function smoothly 24 hours a day, 365 days a year. Under constantly rising cost pressure, doctors and nurses have to care for patients, people and valuable equipment also have to be protected, and technical infrastructure has to be managed optimally. With smart hospital solutions, Bosch relieves the burden on hospital operators and staff when it comes to technical and administrative duties. Patients also benefit from new, connected services in their hospital rooms, such as interactive infotainment systems.

Connected control center at University Hospital in Munich

At the Rechts der Isar hospital in Munich, one of Germany's largest medical centers, a connected control center ensures an optimal overview of the hospital's safety-relevant processes. From there, employees can monitor gates, intercoms, and the installed video cameras. Four multi-picture-display monitors make it possible to keep an eye on 34 clinics and departments. The system is also used to control safety-relevant access points. In addition, connected cameras and monitors register the landing of rescue helicopters, notify the OR directly of their arrival, and inform the relevant members of staff. To enable these new functions, Bosch has added internet capabilities to existing, non-digital surveillance cameras and networked them to create a single system, saving the cost of having to buy more than 70 cameras, cutting the facility's operating costs, and reducing the burden on employees.

Climatec: a long-standing partner in the U.S.

In North America, the Bosch subsidiary Climatec is a long-standing partner of Banner Health. With 29 facilities in seven states, Banner Health is one of the largest non-profit healthcare providers in the U.S. Bosch plans, develops, and integrates solutions in new and retrofitted hospitals for this customer. At 15 Banner facilities, Bosch provides building automation, air conditioning, and fire

detection equipment, as well as nurse-call and infotainment systems for patients – integrated, connected, and from a single source. The goal is to use connected solutions to create comfortable environments for providing medical care to patients that are also economical and reliable.

NH hospital in Bangalore benefits from lower energy costs

Since December 2016, Bosch has been an energy partner for a 750-bed cancer treatment center in Bangalore, India, which handles around 390,000 patients a year. The facility is part of the Narayana Hrudayalaya (NH) chain. With 30 hospitals at 18 locations, NH is one of the largest healthcare providers in India. At the heart of the project is a sensor- and software-based energy solution that will ensure a high degree of energy efficiency in the long term while guaranteeing outstanding convenience and comfort for patients and staff. Bosch is also supporting facility management in its day-to-day work with an innovative energy management and monitoring system, allowing the facility to cut costs by around twelve percent compared to its previous expenses. Staff members can use their smartphones, tablets, and desktop computers to access energy data at any time and react immediately to irregularities.

Indoor positioning can save lives

Together with other partners, Bosch is dedicated to developing additional IoT-based services for the hospital sector. In emergencies, smart indoor solutions can make it possible to locate urgently needed medical equipment, for example, and transport it to certain areas of a hospital. Indoor positioning works by equipping essential medical equipment or other objects with sensors. Using sensor technology, they transmit their position or condition (such as their battery status) in real time via an internal network or a cloud to doctors and nursing staff. Such solutions speed up processes at hospitals and can even save lives – because in an emergency, every second counts.

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The Bosch Group is a leading global supplier of technology and services. It employs roughly 390,000 associates worldwide (as of December 31, 2016). The company generated sales of 73.1 billion euros in 2016. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT company, Bosch offers innovative solutions for smart homes, smart cities, connected mobility, and connected manufacturing. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, crossdomain solutions from a single source. The Bosch Group's strategic objective is to deliver innovations for a connected life. Bosch improves quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is "Invented for life." The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiaries and regional companies in some 60 countries. Including sales and service partners, Bosch's global manufacturing and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At 120 locations across the globe, Bosch employs some 59,000 associates in research and development.

The company was set up in Stuttgart in 1886 by Robert Bosch (1861-1942) as "Workshop for Precision Mechanics and Electrical Engineering." The special ownership structure of Robert Bosch GmbH guarantees the entrepreneurial freedom of the Bosch Group, making it possible for the company to plan over the long term and to undertake significant upfront investments in the safeguarding of its future. Ninety-two percent of the share capital of Robert Bosch GmbH is held by Robert Bosch Stiftung GmbH, a charitable foundation. The majority of voting rights are held by Robert Bosch Industrietreuhand KG, an industrial trust. The entrepreneurial ownership functions are carried out by the trust. The remaining shares are held by the Bosch family and by Robert Bosch GmbH.

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