Press release



Annual Press Conference 2019 in Japan Sales revenue increases by 10 percent to 325 billion ven in 2018

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Moving forward with automation, electrification, and connectivity technologies

- ▶ Bosch's global sales to Japanese automakers*¹ grew by 8.8 percent in 2018
- ► Automation: Initial trials within the year for commercialization of automated valet parking
- ▶ Electrification: 48V hybrid system series production for Japanese automaker
- ► Connectivity: "Perfectly Keyless" secure keyless entry system demonstration vehicle unveiled in Japan for the first time
- ▶ Bosch to reduce carbon footprint to zero at its 400 locations around the globe by 2020

Tokyo — The Bosch Group, a leading global supplier of technology and services, ended its 2018 fiscal year with 325 billion yen (approx. 2.4 billion euros) in consolidated sales to third parties in Japan, thus registering healthy growth of 10 percent compared with the previous year's sales.

"We have recorded double-digit growth for two consecutive years since 2017. In particular, the Mobility Solutions business significantly exceeded the 0.4%*2 yearon-year growth rate of total automobile production in Japan for the same year, indicating an increasing penetration rate for our products in the Japanese market," said Klaus Meder, president and representative director of Bosch Corporation.

Almost all business sectors performed well in 2018. Sales driver was again Mobility Solutions, which comprises most of the domestic sales in Japan, registered double-digit growth. This was mainly due to increased sales in powertrain-related products, safety systems such as advanced driver assistance systems, and body electronics products. "Other than the Mobility Solutions business, increasing demand for hydraulic and electric drive industrial equipment products in China has also contributed to sales growth. Despite the difficult global environment, Bosch Japan expects its sales in 2019 to increase around five percent with a robust growth in the mobility solutions business," added Meder.

8.8% worldwide increase in sales for Japanese automakers

Bosch Japan uses its worldwide network to support not only the Japanese market, but also automobile development and production for Japanese automakers in the overseas market. This is an important role for Bosch Japan, and business with Japanese automakers is an important indicator of Bosch Japan's business development. In 2018, Bosch global sales to Japanese automakers increased by 8.8% year-on-year, which is higher than the 1.4%*3 year-on-year production growth rate of Japanese automakers in the same year for the global market. Sales to Japanese auto makers have grown briskly year-on-year, averaging a double-digit pace since 2013, and Bosch expects healthy growth until 2021.

Automation:

Bosch started initial trials of automated valet parking technology in Japan

Bosch is a key player in the development of automated driving. One area Bosch is focused on in the Japanese market is automated valet parking. In 2017, Bosch and Daimler conducted the world's first automated valet parking demonstration in Germany, in an actual living environment with pedestrians and manually driven cars. As Bosch automated valet parking system can be installed in existing parking lots, it is thought to have great potential. After the test in Germany, a dedicated business unit for automated valet parking business was established in Japan in order to study the feasibility of commercialization in Japan from a market and technological aspect. This year, Bosch started an initial trial to test automated valet parking technology for low-speed driverless transport system within a logistics facility in Japan. It is the first test for the Bosch Group with plans for technical testing for practical use.

Electrification:

48V hybrid systems goes into series production for Japanese automaker

Bosch aims to lead the mass market for electromobility. By 2025, the company aims to increase its sales in this area tenfold, to a total of 5 billion euros. No other company has such a broad range of e-mobility technologies. The eAxle electrical powertrain, which contains an integrated motor, inverter, and gearbox, will begin series production in the latter half of the year. Last year, series production of 48-Volt battery began in China. Japanese automaker's scheduled model with Bosch component for the 48V hybrid system will go into series production in the second half of the year. This system is a superb cost-effective electrification solution that can be installed in compact cars. Bosch estimates that 26 percent of new cars

produced throughout the world by 2030 will be equipped with a 48V hybrid system.

Connectivity:

Bosch presents Perfectly Keyless demonstration vehicle in Japan

Although popularization of keyless entry systems deliver a more convenient experience, relay attacks have resulted in auto theft. Standard keyless entry systems use a radio signal in the low frequency or ultra high frequency range to communicate between the key and car. On the other hand, Bosch technology Perfectly Keyless uses a smartphone to communicate with the car via Bluetooth. This eliminates the need to carry a physical key to unlock and lock the doors, and start the engine. The BLE (Bluetooth Low Energy) chip built into the smartphone plays a crucial role in communication between the smartphone and the car. Perfectly Keyless only works when characteristics of the radio wave unique to each chip matches. This means that signals used in an attempt to wirelessly transmit data from other electronic devices can be blocked, preventing unauthorized access to the car. Because the digital key used in Perfectly Keyless can be managed in the cloud, the same car can be used for passenger cars as well as multiple users in car sharing, and by businesses as part of a fleet of cars used in shipping and transportation enterprises. The Perfectly Keyless demonstration vehicle was revealed for the first time in Japan at the annual press conference.

Encouraging diversity and inclusion as an attractive employer

Improving the work environment for associates is an important management strategy for Bosch Japan that is equivalent to investing in business. At the press conference, Alexandre Riesterer, executive vice president and director of Bosch Corporation, addressed the importance of workforce diversity: "Bosch is focused on creating an environment where associates can work with peace of mind and maintain a balance between professional and private life, as well as promoting diversity and inclusion, where all associates are valued regardless of their traits and backgrounds". The McKinsey research*4 came to the conclusion that gender, ethnic, and cultural diversity are linked to hiring best talents, improved employee satisfaction, and improved customer satisfaction at corporations, resulting in a close relationship with company's performance.

<u>Paid leave</u>: For over 30 years, Bosch has promoted taking paid leave in Japan in order to sustain the mental and physical health of associates. Currently, non-managerial associates in Japan take 98.2 percent of their paid leave. Of the 20 paid days off granted to Bosch associates annually, over 19 days are used on average. This is vastly higher than the Japanese national average of 49.4 percent*⁵.

Flexible working system: There are various elements that affect how associates work, such as childcare, caring for elderly relatives, commute times, and time differences from overseas offices. The human resources policy Bosch is currently most actively engaged in is supporting diverse work styles so that each individual associate can work in a way that suits their needs. In 2011, the Bosch Group introduced a work-from-home system to support associate's efforts in childcare and caring for elderly family members. Currently, telecommuting is approved for all associates who are able to work effectively from home. As short hours are possible while telecommuting, the combination of the flex-time system and telecommuting help to formulate a flexible schedule with greater freedom.

<u>Diversity and inclusion</u>: Promoting associate diversity and inclusion is an important management strategy which is necessary for improving competitiveness at Bosch. The company actively promotes diversity, inclusion and equal opportunity for all associates regardless of race, gender, age, nationality, religious belief, disabilities, sexual identity and orientation. Most recently, Bosch has been strengthening efforts related to LGBTQ. In 2018, LGBTQ associates and allies founded the internal LGBTQ network in Japan, and taking actions in promoting understanding of the LGBTQ community.

<u>Unique reemployment system</u>: The Bosch Management Support system makes use of the skills of associates who have reached retirement age. A platform that matches retired associates and project managers who require assistance has dispatched BMS personnel to nearly 200 projects in Japan so far.

Employment for people with disabilities: In order to provide quality employment for persons with disabilities, Bosch in Japan established the Business Support Center (BSC) in 2017. The center actively employs persons who have mental or developmental disorders. In Japan, social stigma and delays in mandatory employment of individuals with mental or developmental disorders have resulted in a far lower employment rate than those with physical or intellectual disabilities*6. They also experience a much higher turnover rate, with half of such persons resigning within one year*7. Although it is difficult for persons with mental and developmental disorders to find work, the BSC utilizes persons with a diverse range of skills in English, engineering, medicine, and other specialties in over 100 projects. Ever since the BSC was established, over 20 persons with mental and developmental disabilities have been hired, but none have yet left their jobs. All managers at the BSC are certified as Corporate Adaptation Supporters for working with persons with disabilities. Among these associates are those with nationally recognized certification for supporting persons with mental and developmental disorders, and certified Psychiatric Social Workers.

These managers with expert knowledge in their fields support labor management and career development for each individual associate. Managers are also actively involved in handing over authority to section staff to enhance their skill sets. For instance, section staff are involved in evaluation of hiring new BSC employees. These efforts have resulted in a high level of stability in the workplace at Bosch. In the future, the BSC looks forward to engaging in efforts to contribute to improving company-wide productivity and develop a system that enhances the careers of associates instead of simply achieving the mandated legal requirements.

Bosch Group: outlook 2019: climate action and air-quality measures

The Bosch Group expects global economic development to be subdued in 2019. Despite the difficult environment in industries and regions that are important for the company, Bosch expects its sales in the current year to slightly exceed their 2018 levels. Regardless of the short-term prospects, the company is intensifying its efforts to combat climate change and improve air quality. "Climate change is not science fiction; it's really happening. If we are to take the Paris Agreement seriously, then climate action needs to be seen not just as a long-term aspiration. It needs to happen in the short term," said Dr. Volkmar Denner, chairman of the board of management of Robert Bosch GmbH, at the annual press conference in Renningen, Germany. "We're also committed to meeting public demand for good air quality in cities. As an innovation leader, we want to deliver technological solutions to ecological problems."

This is why, on the one hand, Bosch is intensifying its already successful efforts to reduce its CO₂ output. "We will be the first major industrial enterprise to achieve the ambitious goal of carbon neutrality in a little over a year," Denner announced. "All 400 Bosch locations across the globe will be carbon neutral from 2020." On the other hand, Bosch is also pursuing an ambitious target when it comes to air quality: "We want to reduce air pollution from traffic to virtually zero. To do this, we're looking beyond the car's hood," Denner said. In this endeavor, the company will be basing its activities on three pillars: it is developing low-pollutant powertrain technologies, working with municipal governments on projects to maintain steady traffic flow, and implementing a company mobility management system at its own locations.

^{*1} Japanese automakers include manufacturers of motorcycle, agriculture and construction machinery

^{*2} JAMA Automobile Statistics

^{*3} According to a Bosch in-house survey

^{*4} McKinsey & Company, Delivering through diversity report 2018

^{*5} Ministry of Health, Labour and Welfare "General Working Conditions Survey 2017"

- *6 Ministry of Health, Labour and Welfare "2017 Persons with Disabilities Employment Totals"
- *7 Ministry of Health, Labour and Welfare "Survey and Research on the Status of Persons with Disabilities Employment 2017"

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Bosch in Japan is currently represented in the country by Bosch Corporation, Bosch Rexroth Corporation, Bosch Packaging Technology K.K. and other affiliates. Bosch Corporation is responsible for the development, manufacturing, sales and services of automotive original equipment, automotive aftermarket products and power tools. Bosch Engineering K.K. provides engineering services, such as development and application for automotive systems. ETAS K.K. develops and provides engineering of development support tools of electrical control units. Bosch Rexroth Corporation develops and manufactures hydraulics, FA module components and other systems which contribute to industrial technologies. Bosch Packaging Technology K.K. provides processing, packaging and inspection technology. Bosch Security Systems Ltd. provides security and communication products and solutions to help secure the safety of lives, buildings and properties, and is also a supplier of professional sound systems. In 2018, Bosch Japan achieved sales to third parties of some 325 billion yen and employed approximately 6,800 associates.

Additional information is available online at http://www.bosch.co.jp Bosch Japan Website (Japanese)
https://twitter.com/Boschjapan Bosch Japan Twitter (Japanese)
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The Bosch Group is a leading global supplier of technology and services. It employs roughly 410,000 associates worldwide (as of December 31, 2018). The company generated sales of 78.5 billion euros in 2018. 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 460 subsidiary and regional companies in over 60 countries. Including sales and service partners, Bosch's global manufacturing, engineering, and sales network covers nearly every country in the world. The basis for the company's future growth is its innovative strength. At nearly 130 locations across the globe, Bosch employs some 68,700 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 up-front 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.

Additional information is available online at <u>www.bosch.com</u>, <u>www.iot.bosch.com</u>, <u>www.bosch.com</u>, <u>www.twitter.com/BoschPresse</u>.