



Ladies and gentlemen,

June 6, 2018

Thank you for attending the Bosch Group in Japan Annual Press Conference 2018 and my first Annual Press Conference since I took over the responsibility as the president of the Bosch Corporation in July 2017. Today we are already in a period of major transformation in our business environment. Connectivity is bringing change to all industries. In the field of mobility especially, we have seen significant progress in connectivity over the past few years, as well as in automation, electrification, and mobility service trends. Bosch is working to ensure that the technologies driving these trends contribute to the daily lives of everyone in Japan. And today, I'd like to introduce the business highlights of the Bosch Group in Japan.

Before I introduce our financial result in Japan, please allow me to give a brief overview of the Bosch Group's global results, which were announced recently. In 2017, we exceeded our growth forecast, and further improved our result. Bosch remains on a growth course. Bosch Group sales rose from 73.1 billion euros to 78.1 billion euros – a new record for our company. Compared with the previous year, sales revenue increased substantially by 6.8 percent. All business sectors, and especially Mobility Solutions, grew their sales revenue significantly in 2017. The sales revenue of Mobility Solutions increased 7.8 percent to 47.4 billion euros. This means the business sector outpaced global automotive production growth of 2.4 percent by a factor of three. Now to the development of sales in the individual regions. Overall, all regions except North America saw growth in 2017. I would like to highlight the strong sales development in Asia Pacific. The Bosch Group generated sales of 23.6 billion euros in the region. Compared to last year, this is a significant increase of 14 percent. Aside from sales revenue, we also managed to substantially boost earnings overall and particular our EBIT margin in 2017. On a like-for-like basis, our 2017 EBIT of 5.3 billion euros and our operating margin of 6.8 percent were significantly up from the previous year. Research and development cost reached approximately 7.3 billion euros, compared with 6.9 billion euros in the previous year. We are making heavy upfront investments in driver assistance systems, more specifically in autonomous driving functionalities, display and

infotainment systems, and sensor technology. At the same time, we are still focusing on developing state-of-the-art powertrain technology, both for even more efficient combustion engines and for e-mobility.

So what is the outlook going forward? Although we see a series of economic risks due to geopolitical developments, we want to increase our sales revenue for 2018 on a like-for-like basis of the previous year. I only briefly touched on the financial figures here. Please visit our press page for extensive figures.

Bosch achieved record high operating results all over the world and outperformed its growth forecasts. For the Bosch Group in Japan, 2017 was also a year of tremendous progress. Consolidated sales to third parties in Japan for 2017 grew 10% from the previous year to approximately 295 billion yen. This result was significantly higher than Japan's domestic growth in car production volume, which was around 5%. This growth in sales was partly driven by increased business for products in the powertrain field and the safety field, including advanced safe driving assistance, in response to increasing global demand for car safety. Factors outside of Mobility Solutions include growth in sales of inspection and packaging equipment for medical products, as well as a recovery in sales of products for hydraulic and electrical industrial equipment in response to an economic recovery in Asia.

Sales revenues in 2018 are forecasted to increase by around 3 to 5% with expectations for a solid expansion in the Mobility Solutions business. First quarter sales revenues are up 6.7% from the previous year, which is a good start towards even further sales growth in 2018.

As you can see, Bosch has achieved strong growth inside Japan, but the activities of the Bosch Group in Japan extend overseas as well. In fact, we support the business of Japanese automakers all over the world. Bosch's global sales to Japanese automakers have increased steadily since 2013, with year-on-year growth over this period averaging double digits. 2017 was no exception, as we recorded strong year-on-year growth of 11%. This result greatly exceeded the growth in Japanese automakers' production volume for the global market, which was 3%. In addition to the power train and safe driving assistance products that I have mentioned, we also increased our business with Japanese automakers in the field of car navigation products and gateway computers. The latter is a cyber security measure that has become an urgent task globally.

First, I will present some of the highlights in Mobility Solutions, which is our largest business sector. Today, automated driving, connected cars, and electric vehicles have become major trends that are featured in the media virtually every day. Bosch had already announced its focus on electric, automated, and connected driving in 2013 at the Frankfurt Motor Show. In Japan, we have also achieved certain milestones in each of these fields.

In the field of automated driving, we started testing on Japanese public roads in 2015 to develop an automated driving system designed for Japan's unique traffic conditions. And since the end of 2017, we have been involved in the Japanese government's automated driving development program, SIP-Automated Driving Universal Service. There are several steps that need to be achieved in order to realize automated driving. These include realizing 360-degree car periphery sensing and on-board computers with high processing capabilities. Bosch is actively engaged in R&D for both of these, and is accumulating knowledge across the area of automated driving. Vehicle localization is also an important step. Today, I will present Bosch's research and development activities in Japan for vehicle localization. In the area of vehicle localization for automated vehicles, Bosch is developing a high resolution map localization layer called "Bosch Road Signature" that uses on-board radar and cameras. Following our collaboration with leading map providers in Europe and China, we cooperated on a pilot project in Japan with INCREMENT P CORPORATION, a wholly-owned subsidiary of Pioneer. In this project, we integrated Bosch's localization layer with the high resolution maps developed by INCREMENT P CORPORATION and its partner company, Dynamic Map Platform, to create a map for automated driving, and successfully carried out automated driving on public roads. Bosch is also working to realize an automated driving system that can operate with certainty in any environment and traffic scenario. To achieve this, in addition to Bosch Road Signature we are developing vehicle localization technology that uses satellite positioning systems. This system is known as Vehicle Motion and Position Sensor, or "VMPS." It is able to localize a vehicle even in environments that have few objects to be detected by radar and cameras. Let's take a look at one environment where VMPS is effective. Around half of Japan is in a heavy snow belt, subject to some of the heaviest snowfalls in the world. Heavy snow fall or build up of snow can create a situation where it is difficult to detect the surrounding environment using radar or cameras. Here, the VMPS can estimate the location of

the car using satellite positioning. I mentioned Bosch's wide knowledge around automated driving just before, and vehicle localization technology is a current area of focus for us.

In cars equipped with advanced safety systems like automated emergency braking or lane keeping support, it is necessary to understand whether the computer-controlled systems are operating as intended. An Event Data Recorder, or EDR, records the status of a car when an accident occurs. The recorded data includes speed, brake operation, and steering angle. The EDR stores important data for ascertaining the status of the car at the time of the accident. It is similar to the flight data recorder of an aircraft. Japanese authorities are considering compulsory fitting of recording devices such as EDRs on automated vehicles, along with setting up an environment for using associated data read-out tools. According to a recent news report, a future investment conference held in March established the broad outline of a system environment including mandatory fitting of recording devices by around 2020. Bosch's tool for retrieving data from the EDR is called Crash Data Retrieval, or CDR. Bosch is an industry leader in EDR data retrieval with a 17-year track record. Bosch's CDR tool is Number One in the world, compatible with 51 car brands and 17 manufacturers. Until now, Bosch has sold only hardware in Japan; however, at the end of 2017 we gained the capability to provide data analysis training. Over there is Sato-san, our data analysis trainer conducting training in Japan. Strengthening our training system in Japan has led to CDR being used by automakers, Aioi Nissay Dowa Insurance Company Limited and other major insurance companies, and the National Research Institute of Police Science, the Metropolitan Police Department and other police organizations. Accident data analysis by CDR is an effective approach for analyzing the cause of an accident, not only for automated vehicles, but for all cars that can be fitted with a CDR.

Automation of mobility is one approach to safer transportation. However, connectivity is another important approach. Some of you may remember in the 2016 press conference that an adapter for a retrofit automatic emergency call, or eCall, system was introduced. At the CES event held in January 2018 in Las Vegas, we announced a new plug, the Telematics eCall Plug, or TEP, that enables automatic eCalls as well as driving behavior analysis.

And in Japan, we entered an agreement with Fujitsu Limited to collaborate on sales of TEP. Fujitsu Limited has many years of experience in developing IT

solutions in Japan. By partnering with them, we were delighted to be able to supply TEP to a wide range of Japanese customers, providing them with both safety and convenience. The TEP works by simply inserting it into the car's cigarette lighter. By the way, you can still charge your phone through the featured USB socket even when using the TEP. The plug has an inbuilt acceleration sensor and integrated micro controller to detect the shock of a collision, as well as gather data on driving behavior, such as acceleration, braking, and steering. When it detects a collision, the plug automatically sends a report including GPS and other information via the driver's smartphone, which connects to the plug with Bluetooth. In Germany, it is estimated that eCall enables emergency responders to arrive at the scene of the accident 40 percent faster in a city, while in rural areas, they can cut the usual response time in half. TEP is able to gather driving behavior data using the same principles as eCall. It can therefore be used to provide telematics insurance linked to driving behavior or to improve existing services for drivers.

Connectivity can bring safety to our mobility, but it also gives more convenience and freedom. We want to ensure that the society and people receive the full benefit of connected mobility. To that end, our aim goes beyond our traditional business. Bosch established a new division, Connected Mobility Solutions, in February 2018 and it sends a clear signal of our commitment to become a provider of mobility services. Bosch aims for significant double-digit growth with the solutions it offers. One part of this plan is an acquisition of the U.S. start-up, SPLT that develops a ridesharing platform for organizations and commuters. The SPLT app brings together people who want to share a ride to the same workplace or place of study. In addition to entering the ridesharing business, we are pooling all of our connected solutions such as connected parking, predictive diagnostics and charging assistant for EV into the new division. In Japan, our activities are not combined as a dedicated division, but we are planning to establish one here in the future. In the meantime, the responsible business units are working on developing connected services.

These examples that I introduced show how connectivity is becoming an integral part of our business. The same is happening with manufacturing and new smart agriculture business, but let me come back to this later.

I talked about automated and connected mobility. Yet nothing we do will have any value without clean air to breathe. That is why we are pursuing improvement of air quality with both state-of-the-art combustion engines and electrical powertrains. Bosch has made significant investments into e-mobility. And we are now seeing the first results beginning to emerge. On the world's roads, there are already well over 800,000 electric and hybrid cars fitted with Bosch components. Bosch has already won more than 30 electromobility-related orders from international automakers. Last year, we announced series production of the e-axle, an integrated electric axle, and a 48 V battery for e-mobility. Series production for both is expected to start around 2019.

If you would ask me whether the future of mobility markets within cities and infrastructure is going to be electrification, I would say yes, definitely. But it is important to remember that internal combustion engines and electric motors are going to co-exist for a long time yet. Bosch forecasts that in 2025, around 20 million hybrid and electric vehicles will be produced. However, at the same point in time, Bosch also expects some 85 million new car registrations for gasoline or diesel-fuelled vehicles.

At Bosch, our engineers work hard every day to improve air quality with both state-of-the-art combustion engines and electrical powertrains, applying the best technology possible to protect our natural environment. Tomorrow, there will be no electric car without a bit of Bosch inside. At the same time, we are working on the future of diesel as well. Our engineers have developed solutions over the past years that significantly reduce the emissions of diesel engines. New technology from Bosch could enable vehicle manufacturers to reduce emissions of nitrogen oxides (NOx) drastically. Vehicles equipped with the newly premiered Bosch diesel technology reached average NOx emissions of as low as 13 milligrams per kilometer which is far below the European limits that come into force by 2020.

We firmly believe that the diesel engine will continue to play an important role in the options for future mobility. Until e-mobility breaks through to the mass market, we will still need these highly efficient combustion engines. And so we will be happy to explain technological details about the new technology after the press conference.

I have talked about internal combustion engines playing an important role in the future. In ASEAN in particular, the ratio of vehicles with internal combustion engines is higher than at the global level. Approximately 90 percent of the cars produced in 2025 will be gasoline or diesel-fuelled. ASEAN is one of the markets that is expected to see the most vigorous growth going forward. In fact, the number of cars produced in Thailand in 2016 approached 2 million, far exceeding production in the U.K. or Italy. Japanese automakers make up almost 90% of the ASEAN market, and one of Bosch Japan's important roles is to support our Japanese customers in ASEAN. Bosch is meeting this increase in demand in ASEAN! At the end of 2017 we opened our new Hemaraj Plant in Thailand, which manufactures fuel injection components and connectors. The Hemaraj Plant has research and development functions as well. This enables us to provide rapid, on-site support to customers in Thailand in terms of R&D as well as manufacturing. At our Dong Nai Plant in Vietnam, we have been manufacturing pushbelts for continuously variable transmissions since 2011. We now plan to invest 60 million euros to expand the plant. In this way, by advancing our manufacturing and R&D activities locally within ASEAN we will strengthen our support for Japanese automakers even further.

The final topic for mobility is advanced safety package for motorcycles. Driver assistance systems for four-wheelers have contributed to road safety, but there is room for making motorcycles safer for riders. To this end, Bosch has developed advanced rider assistance systems, comprising adaptive cruise control, forward collision warning, and blind-spot detection. The technology underpinning these systems is a combination of radar sensor, brake system, engine management, and human machine interface. According to Bosch accident research estimates, radar-based assistance systems could prevent one in seven motorcycle accidents. Giving motorcycles radar as a sensory organ enables these new motorcycle assistance and safety functions while providing an accurate picture of the vehicle's surroundings. As a result, these assistance functions not only increase safety, they also enhance enjoyment and convenience by making riding easier. The motorcycle manufacturers KTM and Ducati will include the new rider assistance systems in production models as soon as 2020. This safety package is one of many indications of further growth of our Two-Wheeler & Powersports business unit based in Yokohama, Japan, the very heart of the international motorcycle industry. The business

unit has increased sales more than 20% for each of the past two years consecutively since its establishment in 2015. And by 2020, Bosch is set to reach sales of one billion euros with motorcycle technologies.

We are serious about making the future of mobility a reality. But we are also actively shaping the future in fields outside of mobility too. The first example I would like to present is our connected industry application called Production Performance Manager, or PPM, which has recently been implemented at our Tochigi Plant. This application monitors manufacturing equipment in real time. It enables predictive maintenance, so it is used at the Tochigi Factory to predict faults with the processing machinery for automobile electronic stability control, ESP. The ability to perform predictive maintenance using PPM makes it possible to establish a proper maintenance plan. According to Bosch's estimation, this enables us to prevent annual losses of around 5.8 million yen due to sudden line stoppages. This PPM has three unique strengths. The first is that it uses edge computing to process and analyse measured data on the equipment side. Using edge computing, the collected data can be processed on the equipment side to produce the information needed for predictive maintenance. The second strength is that it has been used in practice in Bosch's own manufacturing sites, and so it embodies the expertise we have acquired. Bosch's strategy includes playing a dual role as the leading user and leading provider of Industry 4.0 solutions. In other words, our strategy is to use the applications in-house and demonstrate their effectiveness, and then sell them externally. This dual role strategy leads to the third strength of PPM. Bosch has developed this predictive maintenance solution in-house and used it in its own plants. Therefore, we have systems in place not only for collecting and analyzing data, but also for helping customers to utilize the analysis results. PPM is sold internally and outside the Group by our division, Bosch Software Innovations, and is used by customers in Japan. Bosch Software Innovations is the Group's software system house, designing, developing, and implementing software and IoT solutions.

The last topic I'd like to present today is Plantect, a disease prediction service for greenhouse cultivated crops that was announced at our annual press conference last year. The Plantect service provides disease prediction with high accuracy of about 92% by using sensors and AI to assess disease infection risks, which have conventionally been difficult to predict. The service has attracted a high level of interest from growers since it was first announced. It is

a relatively new service, announced just last year, and in just under one year since it was launched we have made strides in developing it. Since the start of sales in August 2017, we have now shipped approximately 2,000 devices including sensors and gateway in total. Looking forward, we hope to provide support with Plantect to around 10% of growers conducting greenhouse cultivation in Japan by 2020. We are currently making steady progress on our sales plans towards this goal. Plantect is able to predict gray mold which is the most common disease appears on tomatoes. In addition to this, Plantect has become applicable for leaf mold in the past May. Furthermore, in 2019 we plan to start providing disease prediction services for strawberries and cucumbers in addition to the current tomatoes. Increasing the range of crops covered is an important milestone for expanding our market share. Adding two new target crops next year is therefore expected to make a strong contribution to growing the Plantect business. There are three "S"s required for developing Bosch's IoT services: sensors, software, and services. Bosch is one of few companies around the world actively engaged in all three fields. The Plantect service was realized by combining Bosch's strengths in these fields with AI. This enabled Bosch to expand its business domains. However, in addition to expanding business domains using the IoT, there are other reasons why Plantect is a highly significant service for Bosch. Bosch's corporate slogan is "Invented for life." The ultimate aim of our corporate activities is to improve people's quality of life using technology. The Plantect service embodies this slogan. It helps to improve quality of life for growers through highly accurate disease prediction. I am delighted that this kind of service originated in Japan and has made such great progress in just under one year.

At today's press conference I have presented several highlights from among Bosch's many activities in Japan. Digitalization, including connectivity and AI, is rapidly transforming our world today. Bosch has the requisite expertise, longstanding experience, and strong determination to ensure that the dramatic evolution in technology we are seeing today will benefit society. Looking ahead, we remain committed to applying our advanced technologies to help improve quality of life for everyone here in Japan.

Thank you for listening.