

BMW

BMW and its innovative mobility services

The BMW Group is the world's leading manufacturer of premium automobiles and motorcycles, and provider of premium financial and mobility services.

Today, the BMW Group counts with over 134,000 employees across 31 production and assembly facilities in 15 countries. In 2018, the company delivered almost 2.5 million automobiles to its customers, and obtained 97.480 billion euros in revenue.

Based in Singapore, BMW Group Asia is the regional hub overseeing the East Asia region comprising 13 markets including Singapore, Philippines, Indonesia, Vietnam, Brunei, Sri Lanka, Bangladesh, New Caledonia, Tahiti, Guam, Cambodia, Laos and Myanmar. Established in 1985, the office in Singapore is the regional base for key corporate functions like corporate audit, corporate sales, direct sales and special vehicles, government affairs and corporate affairs. The regional office is also home to the BMW Group IT Service Managements, BMW Asia Treasury Centre and BMW Group Financial Services, as well as the Asia-Pacific regional office for BMW Motorrad, MINI and Rolls-Royce Motor Cars. Other functions include market re-

sponsibility and the management of BMW Group subsidiaries in Singapore and Indonesia, as well as the supervision of all importers across East Asia.

CHANGE DRIVEN BY CUSTOMERS AND TECHNOLOGY

The products and technology of the BMW Group came from a fascinating history of inventors, pioneers and brilliant designers. Christopher Wehner, Managing Director of BMW Group Asia, is keen to show how the industry is changing and how BMW is changing with it. "What you currently see in the automobile industry is a lot of change. From electrification and digitalisation to autonomous driving, our business model is altering in fundamental ways. On the one hand, we need to think not only about how to move people from point A to point B, but also what we can offer our customers while they are inside the car driving. People want to have full connectivity now via tools such as apps. On the other, some customers

wish to have mobility, but that doesn't necessarily mean that they wish to own a car. That's why we have started offering mobility services, such as ParkNow, DriveNow or ShareNow, which are responding to present and future consumer demands."

"Customers are at the heart of everything we do. They are the drivers of innovation in our company and they are the ones who impel us to modernise. BMW invests a considerable amount of money in market research to understand both worldwide and region-specific trends in consumer preferences. We want to understand what our customers want to have in their cars in terms of tools, equipment, design, services. This is an enormous task, because it takes about 5 years to develop a car and a car's lifecycle is about 7 years. Therefore, our market research teams are always looking at a 12-year horizon, and they constantly project their research into the future."

"Technology change is another driver of innovation. A good example is 3D printing: this technology allows us to produce parts in lower quantities which we use for prototypes but also to personalise cars according to a given customer's preference, inscribing their name into their car for exam-



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ple. In this way, technology-induced innovation also helps us to serve our customers better who, as I have mentioned before, are at the centre of our efforts."

But it is not only in the area of car production that BMW is innovating, Wehner pointed out. In logistics, too, digitalisation and Industry 4.0 are crucial to BMW's operations. Within BMW's production halls, tigger trains or smart transport robots (STR) are increasingly used to transport parts, with 30 STRs set to be in operation this year. Another future technology being piloted is the Smart Watch, which supports logistics staff while they are changing over parts containers. The device announces an approaching tigger train via a vibration alarm. The employee can then read which containers should be uploaded and send the tigger train on to its next destination by tapping the display.

In addition, BMW is using ConnectedDrive technology to integrate all of its new cars into the Internet of Things (IoT) and enable remote software updates. Navigation is a core aspect of the ConnectedDrive

service, as the car's embedded SIM enables the vehicle to transmit GPS and speed information to a cloud server and, in return, receive real-time traffic information based on the same data from phones in other cars on the road.

CHANGE IN AND BY SINGAPORE

Singapore, a city-state that Mr Wehner aptly described as "the capital of the future", serves as an important hub for BMW's operations. "From here we manage 12 other markets, but it is also where we have established a considerable number of our corporate services such as our IT department. This is because Singapore offers a pool of international talent, of highly-skilled people who hail from all over the world. Additionally, Singapore has an impressive history of development, and its political and economic stability as well as its respect for intellectual property are attractive for companies in general and for BMW in particular."

Singapore is the place where BMW first tests its innovative products. It was the first market in Asia and the second in the world where BMW

launched 'Access by BMW', a new vehicle subscription service that provides members with flexible access to a diverse fleet of BMW vehicles through a single monthly subscription. The launch of this subscription service is integrated into BMW's strategy of truly becoming a 'mobility provider', and Singapore plays a crucial role in this journey due to the availability of partnerships with both the public and the private sector that exist here.

Other projects that BMW is currently undertaking in Singapore are, for example, a partnership with Tribe Accelerator which aims at developing new business models through the use of blockchain technology, and a project with NTU whose objective is to create post-quantum protocols that prevent autonomous-driven cars from hacking. "Singapore is a fantastic regional base for BMW for the many opportunities it offers, and we hope to keep on growing here and in this region", concluded Christopher Wehner.