

## **The history of the BMW Group: 100 years of fascination for mobility. Table of contents.**

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## **1. The history of the BMW Group: 100 years of fascination for mobility. (Summary)**

On 7 March 2016, BMW Group will be celebrating 100 years of existence as a company. Over this period of time, a small aero-engine manufacturer based in the north of Munich has been transformed into a world-leading premium manufacturer of automobiles and motorcycles, as well as a provider of premium finance and mobility services. On the route to this status, BMW has always proved to be a highly innovative company which has defined change and looked to the future. Today, the BMW Group is an international group of companies with production and assembly facilities in 14 countries and a global sales network. The company makes significant contributions to designing individual mobility of the future.

Looking at the history of the BMW Group reveals a large variety of events and decisions which exerted a sustainable impact on the development of the company while at the same time being an expression of its character. Pioneering products and strategic trajectories owe a debt of gratitude to these visionary moments. They are all based on the courage to try out something new and strike out on new pathways. The ambition of the company has always been to achieve more than just the basics and to compete with the best, while also fostering the capacity to accept challenges and emerge from them with enhanced strength of purpose.

### **Choosing independent pathways leading to innovative solutions.**

The ambition to achieve superior characteristics and the readiness to opt for completely new and technically complex solutions instead of making do with the mundane has determined product development since the very beginnings of the company right up to the present day. The BMW IIIa aero-engine launched in 1917 already demonstrated exceptional power, reliability and efficiency when operated at great altitudes. These characteristics were based on the robust basic design as an inline six-cylinder engine and on the use of particularly lightweight materials combined with innovative technology for carburettor and ignition.

The company also adopted an independent pathway when it developed the company's first motorcycle. While other manufacturers were still working with the geometry of bicycles, the BMW R 32 was consistently designed around the engine. The model presented in 1923 was the first motorcycle powered

by a horizontally opposed twin-cylinder Boxer engine, featuring a manual gearbox bolted directly to the engine and power transmission along a shaft instead of a chain or belt. These key attributes remain defining characteristics for BMW motorcycles with Boxer, or flat-twin, engines to the present day.

After the company also became an automobile manufacturer in 1928, it initially produced small cars based on an established contemporary design. However, all the common conventions of the period were broken when the BMW 303 formed the first mid-range vehicle launched under the brand powered by an inline six-cylinder engine. The model was presented in 1933 and established a profile that was marked out from its competitors by the distinctive contour of the radiator cover, which is today still recognisable as the BMW kidney-shaped grille. Most importantly, the car also featured low weight as a result of the tubular frame with twin down tubes of different cross sections. These were used for the first time in an automobile. The design engineers thereby refuted the widely held conviction that only a heavy vehicle could deliver stable driving characteristics. The BMW 303 was lightweight, accelerated rapidly, slowed down effortlessly and drove round bends with agile and safe handling. BMW patented the tubular frame with twin down tubes and continued to base its automobiles on the principle of optimising weight.

The automobiles of the BMW i brand are the latest example of intelligent, lightweight construction, powerful innovation and particularly consistent pursuit of independent solutions. Their vehicle architecture has been specially developed for pure electrically powered or plug-in hybrid models, and the design combines an aluminium chassis with a passenger cell made of carbon-fibre reinforced plastic. The holistic approach adopted by BMW i contributes to ensuring that the BMW Group will play a pioneering role in the design of individual mobility for the future.

### **Taking responsibility, mastering challenges.**

Production of aero-engines was initially banned in Germany after the end of the First World War, and from 1918 onwards, engines for trucks and boats, and from 1920 also engines for motorcycles, were among the products bearing the BMW logo. The purchasers included Bayerische Flugzeugwerke AG, which was soon to assume considerable significance for the brand. The company took over the rights to the brand in June 1922 together with the BMW logo, the production facilities and the workforce. The comprehensive renaming of the company as Bayerische Motoren Werke AG also formed the platform for development into an independent engine and vehicle manufacturer. Since Bayerische Flugzeugwerke AG was founded on 7 March

1916, this date is today regarded as the date when the company BMW was established.

Soon after the relaunch of Bayerische Motoren Werke, aero-engines once again became the focus of government procurement agencies and their militarist objectives. In common with a large proportion of German industry, the managers at BMW were also guided by the ambition of achieving business efficiency as they addressed the political framework conditions of the 1930s and 1940s. The company therefore derived massive benefit from the new rearmament efforts. Starting in 1939, convicts, forced workers, prisoners of war and inmates of concentration camps were deployed in the production facilities operated by the company.

BMW Group has lived up to its responsibility for the events during the period of National Socialism and established initiatives that have contributed towards raising awareness and generating public debate. When the book “BMW – eine deutsche Geschichte” (“BMW – a German Story”) was published in 1983, the company was the first German industrial group to open up this chapter of its past to public scrutiny and discussion. Research into the period between 1933 and 1945 was carried out in the context of two dissertations, which were published in 2005 and 2008. In addition, BMW AG was among the inaugural members of the foundation “Erinnerung, Verantwortung, Zukunft” (“Remembrance, Responsibility, Future”) established in 1999 to compensate the former victims of forced labour.

During the immediate post-war period, the company had to adopt a new approach in all aspects of its business. The first post-war motorcycle in the form of the BMW R 24 only came off the Munich production line in 1948. The manufacture of automobiles only started up again in 1952 and the anticipated business success initially eluded the company. At the Annual General Meeting held in 1959, the sale of BMW AG to Daimler-Benz AG – which was on the brink of being signed and sealed – was averted at the last minute. The restructuring plan developed under the aegis of major shareholder Herbert Quandt was based on the independence of BMW AG, new structures and new models. The breakthrough came with the BMW 1500 as the first model of the “New Class”. After just a few years had elapsed, the company had developed from a candidate for takeover into a flagship company.

At the beginning of the 1970s, when the upswing was brought to an abrupt halt by the “oil crisis”, the managers at BMW set about overcoming the hard times and emerging from the crisis with renewed strength. In Munich, the new administrative tower familiar as the “Four-cylinder” and the BMW Museum were opened, and a new production plant started up operations in

Dingolfing. The BMW 5 Series was presented as the successor to the “New Class”. And indeed demand started to gather pace from 1975. BMW was in an outstanding position to respond with new models, expanded production capacities and optimised sales structures.

At the beginning of the 1990s, managers at BMW were once again at a crossroads. In 1994, they followed the sector-wide trend towards processes of concentration and decided to take over the British Rover Group, in order to acquire additional target groups with a wider range of automobiles. The endeavour was not a crowning success. In 2000, the Rover Group was sold again. BMW only continued with development of the MINI brand. The company had meanwhile undergone restructuring and had purchased the name and brand rights for Rolls-Royce Motor Cars.

Just before the onset of the global financial crisis in 2008, the “Number ONE” corporate strategy had defined the principles for sustainable, profitable growth and long-term increase in value. The associated measures were directed towards consolidating the position of the BMW Group as a world-leading premium manufacturer of automobiles and motorcycles, as well as a provider of premium finance and mobility services.

### **Benchmarking with the best: records and successes in motor sport.**

As early as the beginning of the 20<sup>th</sup> century, competitive sporting events were regarded as the ideal setting for manufacturers of motorcycles and automobiles to impress the motoring public with the performance of new vehicles. Setting up national and international records was perceived as another way of providing factual evidence of advanced technology. For example, in June 1919, test pilot Zeno Diemer created a sensation with a world altitude record in an aircraft. He flew to an altitude of 9 760 metres in a plane powered by a BMW IV aero-engine. BMW engines powered the Dornier “Wal” (Whale), which was the first flying boat to go right round the world in the summer of 1932, and the “rail Zeppelin”, which had achieved a world speed record of 230 km/h for rail vehicles in the previous year. BMW works rider Ernst Jakob Henne set up numerous world records between 1929 and 1937 on two wheels. He achieved a speed of 279.503 km/h in his last record ride, which was to hold for 14 years. Records were also set up in more recent years with the objective of demonstrating innovative strength. At the BMW test circuit in Miramas, France, the BMW H<sub>2</sub>R prototype established nine records for vehicles powered by hydrogen in September 2004.

The first racing success for the BMW brand was achieved in February 1924. This was the day when designer and racing driver Rudolf Schleicher won the hillclimb on the steep Mittenwalder Gsteig. The slogan “Tested in Sport –

Proven in Series” (“Erprobt im Sport – bewährt in der Serie”) henceforth became a familiar moniker, underpinned by numerous German championships and the first international successes. The victory gained by Georg Meier with a supercharged BMW racing machine in 1939 was a particular landmark. Meier was the first rider from outside the United Kingdom to win the Tourist Trophy in the 500 cc class, known as the Senior TT, on the Isle of Man. British rider Jock West, also riding for BMW, came in second place. Exactly 75 years later, Northern Irish rider Michael Dunlop followed in Meier’s footsteps and rode to victory on a BMW S 1000 RR at the Senior TT.

“Schorsch” Meier continued his earlier successes in the post-war period and won the German Championship in 1947. The team’s racing machines powered by BMW engines in the Sidecar Combination World Championship had a particularly impressive series of wins with 20 constructors’ titles and 19 riders’ titles between 1954 and 1974. In 1980, the BMW R 80 G/S created a sensation in off-road racing for the first time. Winning the European Off-road Championship was followed by victories in the Paris-Dakar Rally in the years 1981, 1983, 1984 and 1985.

The first automobile produced by BMW also proved its worth in sporting competitions right from the start. Just four weeks after the car went on sale, the BMW 3/15 PS achieved a victory in the International Alpine Rally. The legendary BMW 328 roadster made its first public appearance on the race track. In June 1936, Ernst Henne proved his success on four wheels by driving the new model to class victory straightaway in the Eifel Race on the Nürburgring circuit. Four years later, the BMW brand achieved one of its biggest triumphs up to that point. Fritz Huschke von Hanstein and Walter Bäumer won the overall placings in the Mille Miglia endurance race held in Italy driving the BMW 328 Touring Coupé.

Initially, the post-war era only brought modest successes in motor racing. The “New Class” also notched up the first sensation here. In 1966, Hubert Hahne won the European Touring Car Championship driving the BMW 2000 TI. He also became the first driver to take a touring car round the north loop of the Nürburgring in less than ten minutes. The growing importance of motor-sport activities was manifested by the establishment of BMW Motorsport GmbH in May 1972. In the subsequent years, numerous successes were achieved mainly in touring-car racing. The collection of titles was enriched by the BMW 3.0 CSL, the BMW 635 CSi, the BMW 320 Group 5 and, most importantly, the BMW M3 Group A, which became the most successful touring car in the world.

In 1982, BMW took to the stage of Formula 1 as an engine supplier together with its partner Brabham. The big triumph followed just one year later. Brazilian driver Nelson Piquet won the World Championship. He was the first driver to take the title driving a car powered by a turbo engine. As a result of realigning its commitment to motor sport, BMW returned to the German Touring Car Masters (DTM) in 2012. The comeback brought with it maximum success at a stroke. Canadian Bruno Spengler ended the inaugural season driving the BMW M3 as German Touring Car Masters Champion. BMW also won the constructor's and team placings.

### **The right product at the right time.**

The pathway from aero-engine manufacturer with sales primarily dependent on procurement by a government agency to a leading supplier of premium automobiles with global appeal is closely linked with the history of individual mobility over the past 100 years. Again and again, the company succeeded in using its engineering skills and creativity to create products that successfully met contemporary needs and desires with unique qualities and an independent character. New vehicle segments were established and additional target groups were harnessed with an unerring instinct for identifying customers' aspirations that were not covered by other players in the market. This flair also identified market niches with potential for sustainable growth and developed innovations that were transformed into trends.

The growing importance of civil aviation during the 1920s encouraged Bayerische Motoren Werke to design new and particularly powerful aero-engines on the basis of proven designs. The BMW VI aero-engine, a twelve-cylinder V engine, was launched in the marketplace in 1926. It went on to become an export hit across the world and developed into the company's most successful product in the 1920s. The BMW VI was also fitted in the Heinkel HE 70, which was regarded as the fastest commercial aircraft in the world at the time and was given the nickname "Blitz" or "lightning".

The company also precisely geared its first motorcycle to the needs of the time. The BMW R 32 was launched in 1923 and featured safe and sporty handling characteristics alongside a high level of reliability. The drive shaft had clear advantages of low wear and minimum maintenance on dirt tracks. BMW was also aiming to attract sophisticated customers with its first mid-range automobiles. Most importantly, the BMW 326 launched in 1936 was powered by a 50 hp six-cylinder engine and presented an exclusive offering with a generously spaced interior and high-quality craftsmanship. Around 16 000 units were sold and this made it the brand's best-selling automobile up to that point. The company was on a successful technological and

commercial trajectory with its aero-engines, motorcycles and automobiles before the political changes in Germany during the 1930s brought the international alignment of the company and diversification in the civilian production programme to an abrupt halt.

In post-war Germany, the BMW Isetta initially reflected the spirit of the times during the years of the economic miracle. More than 160 000 units of the “Motocoupé” were sold – the two-seater was even in demand in the USA, the country of road cruisers. The BMW 700 lived up to sporty ambitions and was initially launched as a coupé in 1959 and a little later as a saloon. The successful sales of this car ensured the very survival of the company. In 1961, BMW finally launched a model in the BMW 1500 which customers had clearly been missing. The sales strategists perceived a need for a high-quality, mid-range saloon. The design engineers delivered a four-door automobile with a streamlined design and a powerful four-cylinder engine and advanced chassis technology. The “New Class” was a symbol of individuality at a high level, and its special character was mainly based on comfortable characteristics and sportiness. In 1965, the most powerful model up to that point was launched with the BMW 1800 TI/SA as a platform for motor sport – and at the same time the new slogan, which continues to be used today, encapsulated the reasons for the success of the “New Class”: “Freude am Fahren” – “The Ultimate Driving Machine”.

Seven years later, “The Ultimate Driving Machine” also became the guiding principle for BMW motorcycles. The company had previously launched the new models BMW R 50/5, BMW R 60/5 and BMW R 75/5 on the market. Riding motorcycles had now become an enjoyable leisure pastime which could be enjoyed particularly intensively on the sporty touring machines. In 1980, BMW engineered the next pioneering achievement in the motorcycle segment. The touring Enduro BMW R 80 G/S was a precursor to the popular category of motorcycles which still generates sheer riding pleasure today on off-road terrain and on roads.

A new form of diversity also characterised the pioneering vehicle concept with which BMW created a sensation in the automobile sector in 1999. Even before the global SUV boom became established, the company launched the BMW X5 at the North American International Auto Show in Detroit, which combined the dynamic performance on the road typical of the brand with superior all-round characteristics, a high seat position and all-wheel drive. This heralded the launch of the Sports Activity Vehicle segment where BMW also played the role of pioneer as it transferred the concept to other vehicle classes in the years to come. The range now comprises five BMW X Models,



including two Sports Activity Coupés which enabled the brand to conquer new conceptual territory with a great deal of success.

On the threshold to the next century of its corporate history, the BMW Group is taking on a pioneering role in designing a form of mobility that is independent of fossil fuels and free of local emissions. Since 2013, the BMW i3 has provided the Ultimate Driving Machine in a pure electrically powered premium automobile. Furthermore, the plug-in hybrid model BMW i8 introduced in 2014 allows drivers to experience the future of the sports car right now.

## **2. Choosing independent pathways: Creativity and courage for innovative solutions.**

The first product to bear the brand name BMW was an aircraft engine with a capacity of 19 litres and a peak output of 185 hp. The BMW IIIa was developed in 1917 by Max Friz, chief designer at the time. It was based on the principle of an “over-sized and high-compression high-altitude engine”. Friz designed his engine for high altitudes right from the start in order to guarantee maximum power, reliability and efficiency. He used individual solutions that were already available and combined these with innovative details such as aluminium pistons and a special altitude carburettor which allowed the pilot to regulate the fuel mix manually to match the oxygen content in the air. The six-cylinder inline engine was therefore able to generate optimum power precisely where it was required – at an altitude of approximately 2 000 metres. The BMW IIIa was soon regarded as the world’s best aero-engine.

The characteristic platform for the BMW IIIa and its successors was an ideal basic technical design optimised with innovations tailored precisely to the relevant requirements. At the beginning of the 1920s, this pattern was also transferred to power units for use in trucks, busses, tractors and boats. The concept was also used for the new “Bayern Kleinmotor” or “Bavaria small engine” designed to power two-wheelers. A variety of German and Austrian motorcycle manufacturers used the twin-cylinder Boxer engine as a power unit for their vehicles, including Bayerische Flugzeugwerke AG. Similar to Bayerische Motoren Werke, the company had no longer been able to operate in its primary area of activity of aircraft construction since the end of the First World War, and it was now manufacturing a variety of products including a motorcycle called Helios.

The new connection did not remain restricted to the sourcing of engines. In June 1922, Bayerische Flugzeugwerke AG took over the brand rights together with the BMW company logo, the production facilities and the employees, and this secured the know-how and the design plans for the engines. The immediate renaming of the company as Bayerische Motoren Werke AG also laid the foundations for developing the company into an independent engine and vehicle manufacturer. Since Bayerische Flugzeugwerke AG was founded on 7 March 1916, this date is today regarded as the date when the company BMW was established.

**Robust concept, innovative implementation, high level of reliability.**

The new start for the company and the acknowledged quality of the engines allowed plans to come to fruition quickly for the construction of a complete motorcycle. Chief designer Max Friz also had very clear ideas for this project with a robust basic concept and proven technologies being combined with innovative forms of implementation. While other manufacturers were still focused on the geometry of bicycles, Friz consistently developed the BMW R 32 around the engine. The most important innovations were the twin-cylinder Boxer engine, now designed with horizontally opposed cylinders and a capacity of 500 cubic centimetres, featuring a manual gearbox bolted directly to the engine, and power transmission along a shaft instead of a chain or belt. These key attributes were to emerge as pioneering for the future. They have remained characteristic for BMW motorcycles with Boxer, or flat-twin, engines to the present day.

The BMW R 32 was marketed as a premium product right from the start because of the complex design principle. The high price tag for the machine was justified by the safe ride characteristics, quality craftsmanship and reliability. This concept enabled the brand to quickly establish a reputation as a manufacturer of particularly high-quality motorcycles, and in 1929 the company was once again defining benchmarks with the new 750 cc models. The motorcycle's innovative pressed-steel frame provided the machine with enhanced ride stability and also gave it a forceful presence. The powerful appearance gave rise to the concept of the "German School" of motorcycle construction and helped to forge a style for the entire sector.

Already a few years later, the BMW design engineers once again generated a sensation – initially on racing tracks, where a new machine powered by a 500 cc Boxer engine raced from one success to the next. It was a design prototype for the BMW R 5 which was launched in the marketplace in 1936 and also opened up a new dimension of sporty riding on the road. This leap forward was propelled by the new engine now generating 24 hp but most importantly by the tubular frame with twin down tubes made of conical oval tubing and used in motorcycles for the first time. The production experts applied an innovative electric inert-gas welding method. This overcame the disadvantages of the earlier soldered joints – fractures when subject to excessive stress – and eliminated the causes. The new frame was a perfect match for the telescopic fork which BMW had previously presented with the R 12 and R 17 models as the first manufacturer in series production. The foot-operated gearshift replacing the hand lever made an additional contribution to the sporty character of the new model, since previously it had only been used in racing machines. The rear brake could now also be operated with the tip of the rider's foot. The sporting character was also

reflected in the design contours. The R 5 was distinctive not least visually as an elegant sports model with a profile that stood out among the contemporary competition.

**Bucking all conventions: lightweight construction as a factor for success.**

BMW also became a manufacturer of automobiles when the company took over automaker Fahrzeugwerke Eisenach in 1928. The factory produced the Dixi 3/15 PS under licence, based on the Austin Seven manufactured in England. This was followed by the more advanced model BMW 3/15 PS BMW, which was in turn superseded by the company's first in-house design in the form of the BMW 3/20 PS. The more far-reaching ambitions of the company were documented with the BMW 303 presented at the Berlin Motor Show in 1933. A new six-cylinder inline engine under the long bonnet and generous space inside the car signalled a move up the scale into the mid-range class. The front of the BMW 303 was graced by a two-part radiator grille styled with swept-back contours – the first version of the kidney-shaped grille typical of modern BMW automobiles. The most important design feature could not be identified at first glance. A tubular frame with twin down tubes and variable cross sections contributed to an exceptionally low weight for the BMW 303. With this feature, BMW Chief Designer Fritz Fiedler and his team departed fundamentally from established principles in automobile construction. Received wisdom held that only heavy vehicles could provide stable and therefore safe road-holding. The BMW 303 was by contrast lightweight and this enabled the vehicle to accelerate promptly, steer round corners with agile handling, and brake effortlessly.

Adopting an independent approach had once again provided the route to a success story. Weight optimisation now became a basic principle for the development of BMW automobiles. Up to the present day, intelligent lightweight construction, and features such as the BMW kidney-shaped grille, the six-cylinder inline engine and the proportions defined by a long engine bonnet and wide wheelbase have defined the characteristic attributes of the brand.

**Innovative force as a trademark.**

During the post-war period, BMW AG also enjoyed a high reputation as a manufacturer of high-quality vehicles with sophisticated technical details. The management of the company decided to make use of the company's cachet for the construction of a saloon in the luxury class. Alongside opulent styling contours and a generously proportioned interior, the BMW 501 presented in 1951 also offered a large range of refinements which would have the capacity to capture the imagination of sophisticated target groups. However, equally

impressive performance characteristics only came along in 1954 when BMW created the “Baroque Angel” powered by an eight-cylinder engine designed with a crankcase and cylinder head in aluminium. This was the first V8 all-alloy engine installed in a volume-produced automobile. A more powerful version generating 150 hp was mounted in the BMW 507 roadster, which was presented in 1955 and has now become an iconic legend.

The limited demand for exclusive and high-priced models meant that renewed demonstration of the innovative strength of the company could not be transformed into the anticipated sales figures during the 1950s. Instead, the mid-range provided the impetus for the trajectory of success. The “New Class” presented in 1961 was intended to address those customers who also aspired to something special for their automobile in this segment. The BMW 1500 projected an independent profile as a four-door saloon with the focus on sporty driving characteristics. Its new four-cylinder engine delivered 80 hp and required super-grade fuel. The chassis was designed with McPherson spring struts at the front and a semi-trailing arm rear axle, making it perfectly tuned for neutral handling when driving round bends. Innovative low-profile tyres enhanced the side forces and large brakes optimised the deceleration rate. BMW made a promise to deliver “The Ultimate Driving Machine” – advertising with this slogan for the first time – and a complete model range had been created by 1971 powered by up to 130 hp under the bonnet.

Engines and chassis technology were taken over from the “New Class” for the two-door model launched in 1966. A wheelbase that was shorter by 5 centimetres and the rather more compact dimensions enabled a further enhancement of the agile handling characteristics for the models in the BMW 02 Series. The most spectacular highlight was the BMW 2002 turbo. This was the first European series automobile to be fitted with an exhaust turbocharger. The return to the automobile luxury class also succeeded with the assistance of innovative engine technology. The inline engines launched in 1968 for the models BMW 2500 and BMW 2800 had been equipped with an innovative geometry for the combustion chamber. They were also engineered with a forged crankshaft supported by seven bearings with twelve counterweights to provide the characteristic turbine-like performance that is typical for BMW engines of this type.

Premium, sporty, technically sophisticated and innovative – these were the characteristics that enabled BMW to identify the appropriate “niche” and define the unique character of its vehicles. The search for independent technical solutions continued to remain very important for the company. This was indicated by a number of advances including the establishment of BMW

Technik GmbH in 1985 and the construction of the Research and Innovation Centre (FIZ), which was officially opened in 1990.

At the beginning of 1987, the new flagship version of the BMW 7 Series was presented at the Geneva Motor Show. The BMW 750i was the first twelve-cylinder model to roll off a German production line since the 1930s. Only six months later, the BMW Z1 premiered. The roadster with a unitised steel monocoque construction and enveloped in a plastic skin was fitted with retractable doors and had been developed at BMW Technik GmbH. Another open-top technology platform arrived on the roads in 2000. The intriguingly designed BMW Z8 roadster was powered by a powerful V8 engine generating 400 hp under the bonnet. The self-supporting aluminium spaceframe gave the car exceptionally high body stiffness with optimised weight.

### **Precursor for efficient, intuitive operation and networking.**

The development of vehicles and technologies within the scope of EfficientDynamics today empowers BMW to embark on a unique path to new models. They will feature further enhanced driving pleasure and a downward trend of reduced consumption and emission values. Alongside continuous advances in intelligent lightweight construction and outstanding refinement in the area of drive technology, they also have highly advanced options for optimising drag, which were created at the Aerodynamic Test Centre opened in 2009.

The BMW Group has also defined benchmarks with pioneering innovations in the areas of control and networking. The revolutionary iDrive control system first launched in the fourth generation of the BMW 7 Series is regarded today as the epitome of intuitive, convenient and safe control for vehicle, communication and infotainment functions within the vehicle. The systematic concept is now being adopted by other automobile manufacturers. This system will now be supplemented in the latest generation of the luxury saloon by the equally unique BMW gesture control. BMW also adopted a pioneering role with independent solutions when it launched the first Head-Up Display for series automobiles in 2004. Bayerische Motoren Werke was the world's first automobile manufacturer to provide unrestricted use of the Internet in a vehicle already in 2008.

### **Sheer riding pleasure on two wheels.**

Exclusive innovations in the motorcycle sector contributed to BMW AG deriving disproportionately positive benefit from the growing enthusiasm for travel on two wheels that emerged during the 1970s. In 1976, the company

presented the BMW R100 RS as the first volume-produced motorcycle to have a full fairing developed in a wind tunnel. Its revolutionary appearance also increased comfort when travelling at high speed. The equally innovative single swing arm, or monolever, imbued the BMW R 80 G/S presented in 1980 with unique all-round properties on the road and in off-road terrain alike. The new model laid the foundation stone for the exceptionally popular segment of touring Enduros, which continue to appeal today. In 1988, BMW was the world's first manufacturer to supply brakes with an anti-lock braking system for motorcycles, and 1991 saw the world premiere of a three-way catalytic converter. Ultimately, the BMW R 1100 RS presented in 1994 ushered in a fundamental change in the design of motorcycles. The engine in this model fulfilled a structural function for the first time, rendering a main frame superfluous.

**The first premium automobiles consistently developed for sustainable mobility.**

Almost 80 years after the launch of the first automobile developed in conformity with the principle of intelligent lightweight design, the BMW Group also entered new conceptual territory with the BMW i brand, which is consistently based on sustainability. The completely new LifeDrive vehicle architecture was developed for BMW i automobiles with the key features of an aluminium chassis (Drive Module) and a passenger cell (Life Module) manufactured from carbon fibre reinforced plastic (CFRP). This concept created the world's first premium automobiles designed from the ground up for a pure electric or plug-in hybrid drive.

This holistic approach was pursued single-mindedly – facilitating a significant reduction in weight and ushering in a pioneering design. The use of CFRP and aluminium compensate for the weight of the batteries. These are located on the floor of the vehicle in a position that saves space and favours dynamic driving. The BMW i brand also places unique emphasis on sustainability through innovative use of natural and recyclable materials, and indeed in the production process itself. Energy generated from renewable sources is used exclusively in the manufacture of carbon fibres – the starting material for CFRP components – and in the assembly of BMW i automobiles. The know-how collected during the development of BMW i automobiles means that today the BMW Group is playing a pioneering role in the design of a sustainable form of individual mobility which is independent of fossil fuels.

### **3. Taking responsibility, mastering challenges: Powering through highs and lows**

Even the first economic successes achieved with vehicles bearing the BMW logo were not based solely on their technical qualities. Rather, they were primarily successful due to the high demand for aero-engines generated by the First World War. The new beginning after the conclusion of the Versailles Treaty was correspondingly difficult since the treaty initially brought the production of armaments to an end. The BMW designers identified attractive areas of activity in the construction of engines for trucks, boats, agricultural machinery, and motorcycles. Yet the company had only just moved into new civilian markets with the production of motorcycles and automobiles designed by its own engineers when aero-engines once more became the focus of attention for government commissioning agencies and their military objectives.

In common with a large proportion of German industry, the managers at BMW AG were also guided by the ambition of achieving business efficiency as they addressed the political framework conditions of the 1930s and 1940s. The company therefore derived massive benefit from the new rearmament efforts. At the behest of the National Socialist regime, the production of civilian vehicles was scaled down while the manufacture of aero-engines was made a top priority. And this was not the only factor to have an impact. Polish prisoners of war were put to work as early as December 1939 in order to increase capacities. Soon afterwards, convicts, forced labourers, prisoners of war from other countries and inmates of concentration camps were also working in the company's plants.

#### **Rearmament drive and forced labour under the National Socialist regime: BMW takes part in the public debate.**

The position of BMW as an armaments group in the phase leading up to the Second World War and during the war itself, and the tacit complicity with causing the human suffering associated with forced labour cast a dark shadow over the history of the company that cannot be obliterated. The company was slow to deal with this chapter in its story, particularly since the legal processes following the end of the war were unsatisfactory. BMW Group faced up to its responsibility for the misdeeds during the period of National Socialism and the company is continuing with the process of reconciliation



today. The measures include initiatives that make a contribution to raising awareness and generating debate in the public domain.

When the book “BMW – eine deutsche Geschichte” (“BMW – a German Story”) was published in 1983, the company was the first German industrial group to open up this chapter of its past to public debate. Other publications followed, including two dissertations written by independent historians who carried out research into the role of the company during the years 1933 to 1945. BMW AG was also among the founding members of the foundation “Erinnerung, Verantwortung, Zukunft” (“Remembrance, Responsibility, Future”) established in 1999 to compensate the former victims of forced labour.

### **New beginning on two and four wheels.**

During the immediate aftermath of the war, the company had to adopt a new approach in all aspects of its business. Some of its production facilities and buildings had been destroyed or dismantled. Any possibility of regaining control over the plants in the Soviet Occupation Zone had been lost and meaningful areas of activity for the remaining employees were few and far between. The first post-war motorcycle in the form of the BMW R 24 only came off the Munich production line in 1948. Automobile production did not start up again until 1952 and the anticipated business success initially eluded the company.

Large saloons like the BMW 501 known as the “Baroque Angel” held out the promise of higher levels of profitability but they failed to achieve the necessary number of units. Although more than 160 000 units of the little BMW Isetta were sold and were the symbol of mobility in the economic miracle, this success was also unable to prevent red figures from dominating the balance sheet of the company. Not until 1959, when the newly designed small car designated as the BMW 700 was presented were the hopes of the engineers and the sales force in the company fulfilled.

### **Restructuring instead of sale – the “New Class” brings new success.**

The perspectives associated with the popular model that found immediate popularity with customers also convinced the industrialist Herbert Quandt to extend his commitment as a shareholder in the company BMW. He was thereby also responding to the efforts of a group of small shareholders to maintain the independence of the enterprise. At the Annual General Meeting of the company held in December 1959, the sale of BMW to Daimler-Benz AG – which was on the brink of being signed and sealed – was averted at the last minute. A restructuring plan was developed instead under the aegis of

Quandt and this was dedicated to securing the independence of BMW AG, and establishing new structures and new models.

The success of the BMW 700 formed the platform for the new beginning, and the breakthrough came in 1961 with the BMW 1500. This was the first model in the “New Class”. Automobile production was taken to a new level with the sporty mid-range saloons and the models in the two-door 02 Series marketed from 1966 onwards. In the space of just a few years, the company had developed from a candidate for takeover into a flagship company. As early as 1963, the company’s balance sheet posted a profit and the company once more paid a dividend to shareholders in the following year. In 1966, Bayerische Motoren Werke took over automaker Glas, which had initially manufactured agricultural machinery and then went on to produce the Goggomobil microcar and other models in higher vehicle classes. This acquisition gave the company additional production locations in Dingolfing and Landshut, which were gradually integrated within the production network. In 1968, sales of the company broke through the barrier of one billion marks.

### **BMW bucks the oil crisis and focuses on an international future.**

At the beginning of the 1970s, the upswing was brought to an abrupt halt by the “oil crisis”. While speed limits and bans on Sunday driving created a strong public impact and there was even talk of petrol being rationed, the managers at BMW AG set about overcoming the hard times and emerging from the crisis with renewed strength. Alongside new models and additional production capacities, the company also strengthened the dealership structures within Germany and prompted internationalisation by strategically establishing its own sales companies.

The events of the year 1973 are symbolic of this confidence. This was the year that the “Four-Cylinder” was established in Munich. The new administrative centre made up of four circular segments was officially opened in Munich along with the BMW Museum. The striking building shells were ready in time for the Olympic Games in 1972 and the work on the interiors was now completed. In Dingolfing, a new production plant started up operations. The BMW 5 Series was presented as the successor to the “New Class”. In South Africa, the company took over an assembly plant from the importer there and this facility was to become the company’s first production site located outside Germany. In France, BMW AG established the first of an array of foreign subsidiary companies dedicated to the sale of vehicles. In 1975, when the upturn in demand for automobiles set in, BMW was ideally positioned with new models, expanded production capacities and optimised sales structures.

### **From realignment after the takeover of Rover to the Number ONE strategy.**

At the beginning of the 1990s, managers at Bayerische Motoren Werke once again undertook a change in direction. In 1994, they followed the sector-wide trend towards processes of concentration and decided to take over the British Rover Group, in order to acquire additional target groups with a wider range of automobiles. The endeavour was not a crowning success. In 2000, the Rover Group was sold again. BMW only continued to develop the MINI brand. The company had meanwhile undergone restructuring and had purchased the name and brand rights for Rolls-Royce Motor Cars. BMW also succeeded in leading these new brands into the future with the new constellation. As the world's first supplier of small cars in the premium segment, MINI developed into the icon of driving fun and individual expression. As the epitome of perfection on four wheels, Rolls-Royce was soon restored to its old glory and resplendent with a new lustre in a short space of time.

The ongoing international alignment of the company continued with expansion of the global production network. This enabled the BMW Group to meet the challenges associated with volatile exchange-rate fluctuations and individual developments in different markets. On the basis of the premise that "production follows the market", production facilities were set up in the USA and China. The BMW Plant Spartanburg was opened in the US state of South Carolina in 1994 and gained special importance as a centre of competence for the BMW X models, which are particularly popular on the continent of North America. In 2004, BMW established a vehicle production facility at Shenyang in north-eastern China together with joint-venture partner Brilliance China Automotive Holdings Ltd. in order to supply the local market.

Just before the onset of the global financial crisis in 2008, the "Number ONE" corporate strategy had defined the principles for sustainable, profitable growth and long-term increase in value. The associated measures included expansion of the range of services provided on the basis of individual mobility and they were directed towards consolidating the position of the BMW Group as leading global premium manufacturer of automobiles and motorcycles, as well as a provider of premium finance and mobility services.

The consistent use of EfficientDynamics technology has enabled the BMW Group to consistently reduce fuel consumption and CO<sub>2</sub> emissions for the vehicles of its brands. The BMW Group is also taking responsibility by adopting a conservative approach to handling resources in the production process. As early as 2014, more than half the energy obtained from across the world is produced from renewable sources. Moreover, the establishment of the new BMW i brand created a holistic initiative for sustainable mobility

within the framework of EfficientDynamics. The BMW Group is adopting a leading role in structuring individual mobility for the future with attractive electric and plug-in hybrid vehicles, innovative services and consistent implementation of sustainability targets along the entire value chain.

#### **4. Competing with the best: Sporty competition as motivation to peak performance.**

As early as the beginning of the 20th century, competitive sporting events were regarded as the ideal setting for manufacturers of motorcycles and automobiles to impress the motoring public with the performance of new vehicles. Setting up national and international records has always been perceived as providing factual evidence of advanced technology. For example, in June 1919, test pilot Zeno Diemer created a sensation with a world altitude record in an aircraft. He took off from Munich's Oberwiesenfeld airfield in an aircraft manufactured by Deutsche Flugzeugwerke and powered by the BMW IV aero-engine, and flew to an altitude of 9 760 metres.

A quarter of a year later, Diemer achieved a new record for passenger aircraft. On 13 September 1919, he flew to a height of 6 750 metres in his Junkers F 13 powered by a BMW IIIa aero-engine with eight passengers on board. Between July and November 1932, Walter von Gronau and his crew flew the Dornier "Wal" (Whale) powered by a BMW engine for a total of 254 flight hours over a distance of 44 800 kilometres to complete the first circumnavigation of the world in a flying boat. The "rail Zeppelin", designed by railway pioneer Franz Kruckenberg and also powered by a BMW engine, set up a world speed record of 230 km/h for rail vehicles along a 12 kilometre stretch of track between Ludwigslust and Wittenberg.

On two wheels, BMW works rider Ernst Jakob Henne established numerous speed records between 1929 and 1937. The company used the records to advertise with the slogan "BMW – the fastest motorcycle in the world". For his last record, Henne rode his machine powered by a 500 cc supercharged engine with streamlined fairing to a speed of 279.503 km/h on a cordoned off stretch of motorway near Frankfurt – a record that was to hold for 14 years. Records were also set up in more recent years with the objective of demonstrating innovative strength. At the BMW test circuit in Miramas, France, the BMW H<sub>2</sub>R prototype established nine records for vehicles powered by hydrogen in September 2004.

#### **Early slogan: "Tested in Sport – Proven in Series".**

The first racing success for the BMW brand was achieved in February 1924. This was the day when designer and racing driver Rudolf Schleicher won the

hillclimb on the steep Mittenwalder Gsteig. The slogan “Tested in Sport – proven in Series” (“Erprobt im Sport – bewährt in der Serie”) henceforth became a familiar moniker, underpinned by numerous German championships and the first international successes. The victory gained by Georg Meier with a supercharged BMW racing machine in 1939 was a particularly landmark. Meier was the first rider from outside the United Kingdom to win the Tourist Trophy in the 500 cc class, known as the Senior TT, on the Isle of Man. British rider Jock West, also riding for BMW, came in second place. Exactly 75 years later, Northern Irish rider Michael Dunlop followed in Meier’s footsteps and rode to victory on a BMW S 1000 RR at the Senior TT.

“Schorsch” Meier continued his earlier successes in the post-war period and won the German Championship in 1947. The team’s racing motorcycles powered by BMW engines in the Sidecar Combination World Championship had a particularly impressive series of wins with 20 constructors’ titles and 19 riders’ titles between 1954 and 1974. In 1980, the BMW R 80 G/S also created a sensation in off-road racing for the first time. Winning the European Off-road Championship was followed by victories in the Paris-Dakar Rally in the years 1981, 1983, 1984 and 1985. Two more overall victories were also achieved in the world’s most spectacular endurance races with single-cylinder models in the 1999 and 2000.

### **From the Golden Alpine Trophy to overall victory in the Mille Miglia.**

The first automobile produced by BMW AG also proved its worth in sporting competitions right from the start. Just four weeks after the car went on sale, the BMW 3/15 PS achieved a victory in the International Alpine Rally. It was staged as a reliability test over a distance of 2 650 kilometres from Munich to Como in Italy. The team from BMW managed to avoid any breakdowns and penalty points, and went on to win the Golden Alpine Trophy. At this point, motor sport had already become an essential forum for testing and then refining new developments under demanding conditions.

The legendary BMW 328 roadster also made its first public appearance on the race track. In June 1936, Ernst Henne proved his success on four wheels by driving a pre-series prototype of the new model to class victory straightaway in the Eifel Race on the Nürburgring. Furthermore, he also drove the fastest lap against competition with more powerful engines. Four years later, the BMW brand achieved one of its biggest triumphs up to that point. Fritz Huschke von Hanstein and Walter Bäumer won the overall placings with a significant lead in the legendary Mille Miglia endurance race held in Italy driving the BMW 328 Touring Coupé. Other BMW 328 vehicles crossed the

finishing line afterwards in places three, five and six to also bring the team from Munich victory in the team placings.

### **Record on the north loop, winning series in touring-car sport.**

Initially, the post-war era only brought modest successes in motor racing. At the beginning of the 1960s, the first victories were achieved in hillclimb and circuit racing with the BMW 700. The "New Class" also notched up the first sensation here. In 1966, Hubert Hahne won the European Touring Car Championship driving the BMW 2000 TI. He also became the first driver to take a touring car round the north loop of the Nürburgring in less than ten minutes.

The growing importance of motor-sport activities was manifested by the establishment of BMW Motorsport GmbH in May 1972. In the subsequent years, numerous successes were achieved mainly in touring-car racing. The collection of titles was enriched by the BMW 3.0 CSL, the BMW 635 CSI, the BMW 320 Group 5 and, most importantly, the BMW M3 Group A, which became the most successful touring car in the world.

The BMW 3.0 CSL was also the first model to attract attention as an Art Car. In June 1975, a model of the coupé powered by a 450 hp six-cylinder engine lined up at the start of the 24 Hours of Le Mans. The paintwork for the body of the car had been designed by American artist Alexander Calder. BMW Motorsport GmbH also created a sensation on race tracks throughout the world with a high-powered sports car as a completely new development. The BMW M1 was launched in 1978 and this car enabled private drivers to compete against Formula 1 drivers in the BMW Procar Series which had been especially created for it.

### **World Championship Title in Formula 1 after just 630 days.**

During the second half of the 1960s, BMW competed in Formula motor racing for the first time with a four-cylinder engine derived from series vehicle manufacture. In 1967, Hubert Hahne and Jo Siffert took part in Formula 2 racing with the British Lola team driving vehicles powered by BMW engines. After some initial difficulties, second place was already achieved in the Formula 2 European Championship in 1969 (Hubert Hahne). When the BMW Works Team withdrew following the season in 1970, BMW returned to Formula 2 as an engine supplier and dominated the race series in subsequent years. Success was particularly marked with the March Engineering team. This constellation initially helped French driver Jean-Pierre Jarier and in the following year fellow French driver Patrick Depailler to win the Formula 2 European Championship. Furthermore, by 1982, the drivers Jacques Laffite,

Bruno Giacomelli, Marc Surer and Corrado Fabi also became champions in this racing series thanks to BMW power.

In 1982, the brand BMW took to the stage of Formula 1 as an engine supplier together with its partner Brabham. Once again, the company brought a four-cylinder engine into the partnership. The 1.5 litre four-cylinder engine was fitted with an exhaust turbocharger and digital engine electronics that were unique in Formula 1 at the time. Initially, the engine generated around 800 hp and later went on to deliver up to 1300 hp. On 13 June 1982, Brazilian driver Nelson Piquet won his first victory in Canada. In the following year, he already drove to his big triumph. Piquet won the World Championship – just 630 days after the first race where the joint BMW and Brabham Team competed in Formula 1 for the first time. Nelson Piquet was the first driver to take the title in a car powered by a turbo engine.

### **Success story in the German Touring Car Championship (DTM).**

The combination of the letters BMW and DTM are closely associated with each other in motor sport. In 1984, the German Touring Car Championship – then still known as the “Deutsche Produktionswagen-Meisterschaft” (DPM) or “German Production Car Championship” – was created as a trial of strength for near-series production Group A vehicles. At the first race in Zolder, Belgium, the BMW 635 CSi drove to a fourfold victory. Volker Strycek provided a perfect end to the season for BMW by winning the title.

In 1987, the BMW M3 made its debut in touring-car racing and straightaway won the three most important titles of the season. Eric van de Poele was German Touring Car (DTM) Champion, Winfried Vogt became European Champion and Roberto Ravaglia secured the title for the Touring Car World Championship, which was held for the first time. In 1989, Italian driver Ravaglia won the second DTM title in the BMW M3. Ravaglia was also the driver who won the final race of the season in the DTM on the last occasion that this model was entered for a works team. The first generation of the BMW M3 dominated international touring-car racing for five years. The innumerable victories achieved by the car make it the most successful touring car ever to the present day.

Even after this, BMW brand remained active in touring-car racing. Additional successes continued to be achieved mainly at European level. In 1988, the BMW 320d won the 24 Hour Race at the Nürburgring as the first vehicle to win this race powered by a diesel engine. In 2001 and 2004, Dutch driver Peter Kox and British driver Andy Priaulx each won the European Championship Title driving a BMW 320i. In 2005, when the new edition of the World Touring Car Championship was launched, Priaulx straightaway drove to



victory. In 2006 and 2007, he also successfully defended his World Championship Title driving the new BMW 320si.

In 2012, the BMW brand returned to the DTM – the letters now stood for Deutsche Tourenwagen-Master or German Touring Car Masters. Three teams and six drivers went into the race with the fourth generation of the BMW M3. The comeback brought maximum success from a standing start. Canadian driver Bruno Spengler ended the first season as the DTM Champion in the BMW M3. BMW also won the constructors' and team placings. In the following year, the BMW Team achieved five race victories. Brazilian driver Augusto Farfus closed the season by taking second place in the drivers' placings and made a significant contribution to BMW again coming out at the top of the constructors' placings.

In the 2014 DTM season, BMW competed for the first time with the new BMW M4 DTM. Right from the start, German driver Marco Wittmann drove the new vehicle to victory. As the season progressed, Wittmann took three more racing victories and secured the drivers' title as the youngest German Champion in the history of the DTM. The team placing also went to BMW. The following season was defined by starting difficulties and a spectacular pursuit. The season came to a close with another victory for BMW in the constructors' placings.

## **5. The right product at the right times Ahead of the trend and into the future.**

The pathway from aero-engine manufacturer with sales primarily dependent on procurement by a government agency to a leading supplier of premium automobiles with global appeal to customers throughout the world is closely linked with the history of individual mobility over the past 100 years. Again and again, the company succeeded in using its engineering skills and creativity to create products that successfully met contemporary needs and desires with unique qualities and an independent character. New vehicle segments were established and additional target groups were harnessed with an unerring instinct for identifying customers' aspirations that were not covered by other players in the market. This flair also identified market niches with potential for sustainable growth and developed innovations that were transformed into trends.

After the production of six-cylinder aero-engines for military purposes had defined the initial years of the company, opportunities for new applications and challenges came up after the end of the First World War. The growing importance of civil aviation during the 1920s encouraged the company to design new and particularly powerful aero-engines on the basis of proven designs. The BMW VI aero-engine, a twelve-cylinder V engine, was launched in the marketplace in 1926. It went on to become an export hit across the world and developed into the company's most successful product in the 1920s. The BMW VI was also fitted in the Heinkel HE 70, which was regarded as the fastest commercial aircraft in the world at the time and was given the nickname "Blitz" or "lightning".

### **High-quality technology for sophisticated customers.**

The company also precisely geared its first motorcycle to the needs of the time. The BMW R 32 was launched in 1923 and featured safe and sporty handling characteristics alongside a high level of reliability. The drive shaft had clear advantages of low wear and minimum maintenance on dusty dirt tracks. Right from the start, the BMW R 32 acquired a reputation as a high-quality motorcycle. Over subsequent years, BMW brought out new models with new design details and increasing power almost every year. Over subsequent years, touring and sports motorcycles were made for widely differing customer aspirations. Sales figures developed positively not only in the home market. BMW also encountered rising demand in the USA, in South America

and in South Africa, as well as in the Far East. Even as far back as 1928, almost 5 000 BMW motorcycles were manufactured at the plant in Munich.

BMW was also aiming to attract sophisticated customers with the first mid-range automobiles. Most importantly, the BMW 326 launched in 1936 was powered by a 50 hp six-cylinder engine and presented an exclusive offering with a generously spaced interior and high-quality craftsmanship. Around 16 000 units were sold and this made it the brand's best-selling automobile up to that point. The company was on a successful technological and commercial trajectory with its aero-engines, motorcycles and automobiles before the political changes in Germany during the 1930s brought the international alignment of the company and diversification in the civilian production programme to an abrupt halt.

### **BMW finds its “niche” in the mid-range class.**

In post-war Germany, the BMW Isetta initially reflected the spirit of the times during the years of the economic miracle. More than 160 000 units of the “Motocoupé” were sold – the two-seater was even in demand in the USA, the country of road cruisers. The BMW 700 lived up to sporty ambitions and was initially launched as a coupé in 1959 and a little later as a saloon. The successful sales of this car ensured the very survival of the company.

In 1961, BMW AG finally launched a model in the BMW 1500 which customers had clearly been missing. The sales strategists perceived a need for a high-quality, mid-range saloon. The design engineers delivered a four-door automobile with a streamlined designed, a powerful four-cylinder engine and advanced chassis technology. The “New Class” was a symbol of individuality at a high level, and its special character was mainly based on comfortable characteristics and sportiness. This vehicle had enabled the company to identify that “niche” in the automobile market which facilitated economic success with attractive products. In 1965, the most powerful model up to that point was launched with the BMW 1800 TI/SA as a platform for motor sport – and at the same time the new slogan which continues to be used today, encapsulated the reasons for the success of the “New Class”: “Freude am Fahren” – “The Ultimate Driving Machine”.

After eleven years, more than 350 000 vehicles in the “New Class” had been sold. This took the production figures of the company into a completely new dimension. Nevertheless, at this early stage the potential was identified for a further model series situated in the “New Class” on the basis of its dimensions and its sale price. In 1966, the BMW 1600-2 celebrated its premiere at the Geneva Motor Show. The styling of the compact, two-door saloon provided an even more emphatic expression of the sporty character.

The power unit and chassis technology were taken from the four-door versions, as was the strategy of offering the models with different power units.

The most spectacular version was the BMW 2002 turbo launched in 1973 – not simply because of the 170 hp mobilised by the engine but mainly because an exhaust turbocharger was fitted for the first time in a European automobile. Quite apart from the level of power, the two-door version generated a great deal of enthusiasm among experts and the motoring public alike with its unique and agile handling qualities. The response in the automobile markets was overwhelming. By 1977, more than 862 000 units of the BMW 02 Series had been sold across the world.

### **Motorcycle riding as a leisure pastime – on and off the road.**

In 1973, “The Ultimate Driving Machine” also became the guiding principle for BMW motorcycles. The company had previously launched the new models BMW R 50/5, BMW R 60/5 and BMW R 75/5 on the market. Riding motorcycles had now become an enjoyable leisure pastime which could be enjoyed particularly intensively on the sporty touring machines. The aspirations of the new target groups for comfort were also taken into account with a comfortable seat and an electric starter.

In 1980, the company engineered the next pioneering achievement in the motorcycle segment. The touring Enduro BMW R 80 G/S was a precursor to the popular category of motorcycles which still generates riding pleasure today on off-road terrain and on roads. Once more, the exceptional characteristics were based on exclusive innovations which in this case were primarily derived from the world’s first single swing arm, or monolever, used in a motorcycle. The all-rounder with the initials GS today forms the most successful model series in the product range of BMW Motorrad.

### **Success with a new vehicle segment: The Sports Activity Vehicle.**

A new form of diversity also characterised the pioneering vehicle concept with which BMW created a sensation in the automobile sector in 1999. Even before the global SUV became established, the company launched the BMW X5 at the North American International Auto Show in Detroit, which combined the dynamic performance on the road typical of the brand with superior all-round characteristics, a high seat position and all-wheel drive.

This heralded the launch of the Sports Activity Vehicle segment where the BMW brand also played the role of pioneer as it transferred the concept to other vehicle classes in the years to come and since then has succeeded in achieving above-average growth rates. The range now comprises five BMW X models, including two Sports Activity Coupés which also enabled the brand to

conquer new conceptual territory with a great deal of success. Right from the start, the BMW X5 has been produced at the US BMW Plant Spartanburg, where the models BMW X6, BMW X3 and BMW X4 are now also produced.

**The future of individual mobility has begun.**

On the threshold to the next century of its corporate history, the BMW Group is taking on a pioneering role in designing a form of mobility that is independent of fossil fuels and free of local emissions. The first models of the new BMW i brand have ushered in the future of individual mobility in the premium segment.

Since 2013, the BMW i3 has provided the Ultimate Driving Machine in a pure electrically powered premium automobile. Its pioneering character is specifically due to the fact that it is not based on an existing model where the internal combustion engine has simply been exchanged for an electric motor. The fact is that a completely new vehicle architecture has been developed. Furthermore, the plug-in hybrid model BMW i8 introduced in 2014 allows drivers to experience the future of the sports car right now.

## **6. Timeline: 100 facts from 100 years.**

### **7 March 1916**

Bayerische Flugzeugwerke AG is established as the successor to aircraft manufacturer Gustav-Otto-Flugmaschinenfabrik with registered office at Lerchenauer Straße in Munich. In 1922, engine construction, the name and the brand logo of Bayerische Motoren Werke AG are transferred to this company. This is therefore regarded as the date of establishment of the “New BMW AG”.

### **21 July 1917**

The aero-engine maker Rapp-Motorenwerke GmbH, founded in 1913, is entered in the Commercial Register with the name of Bayerische Motoren Werke GmbH, and soon afterwards, new manufacturing facilities are set up at Moosacher Straße in Munich.

### **10 December 1917**

The round brand logo with the letters BMW and the stylised propeller designed in the Bavarian national colours of blue and white is entered under the number 221388 in the Trademark Registry of the Imperial Patents Office. At the end of the 1920s, this livery appears for the first time in advertising as a stylised rotating propeller, which has since then formed the basis for the interpretation of the logo.

### **17 June 1919**

Test pilot Zeno Diemer reaches an altitude of 9 760 meters in his aircraft manufactured by Deutsche Flugzeugwerke and powered by the BMW IV inline six-cylinder engine, setting up a new world altitude record.

### **6 July 1922**

Bayerische Flugzeugwerke AG takes over the company name of Bayerische Motoren Werke, the brand logo and engine construction from the current owner, Knorr-Bremse AG.

### **28 September 1923**

At the German Motor Show in Berlin, the BMW R 32 is presented: the first motorcycle produced under the brand, developed under the management of Max Friz, powered by a horizontally opposed twin-cylinder, four-stroke Boxer engine.

## **2 February 1924**

Engineer and racing driver Rudolf Schleicher achieves the best time riding a BMW R 32 in the hillclimb on the steep Mittenwalder Gsteig – and brings home the first victory to BMW in the history of motor sport.

## **1 October 1928**

BMW takes over automaker Fahrzeugfabrik Eisenach in Thuringia where the Dixi 3/15 PS small car is manufactured as a licensed version of the British Austin Seven. This makes the company a manufacturer of automobiles.

## **22 March 1929**

The first BMW 3/15 PS rolls off the assembly line in the production building rented from coachbuilder Ambi-Budd at the old Berlin-Johannisthal airfield.

## **22 June 1931**

The “Rail Zeppelin” powered by the BMW VI twelve-cylinder aero-engine built by railway designer Franz Kruckenberg reaches a speed of 230 km/h and thereby achieves a new world speed record for rail vehicles.

## **1 March 1932**

BMW ends the licence agreement with Austin and soon afterwards presents the company’s first in-house automobile design: the BMW 3/20 PS with a new four-cylinder engine and a two-door all-steel body.

## **22 July 1932**

Pilot Wolfgang von Gronau takes off in the Dornier “Wal” (whale) flying boat, powered by two 600 hp twelve-cylinder engines of the type BMW VIIa, to complete the first circumnavigation of the world covering a total distance of 44 800 kilometres.

## **11 February 1933**

The BMW 303 is presented at the International Motor Show in Berlin as the brand’s first six-cylinder automobile and also the first model to be styled with the BMW signature kidney-shaped radiator grille.

## **21 December 1934**

The construction of aero-engines is hived off to a dedicated company with retroactive effect to 1 January 1934 and becomes BMW Flugmotorenbau GmbH.

## **15 February 1936**

The BMW 326 is presented at the International Motor Show in Berlin as the new mid-range model powered by an inline six-cylinder in-line engine, designed with a box-section frame, aerodynamically contoured body and hydraulic brake system.

### **14 June 1936**

The two-litre BMW 328 sports car is presented in public for the first time racing in the Eifel Race at the Nürburgring – Ernst Jakob Henne immediately achieves a clear start-finish victory driving the new model.

### **28 November 1937**

The BMW works driver Ernst Henne starts on the last of many world record rides and achieves a record speed of 279.503 km/h on a fully faired BMW motorcycle with a supercharger – a record that is only broken 14 years later.

### **8 June 1939**

Georg “Schorsch” Meier is the first non-Briton to win the Senior-TT on the Isle of Man riding a BMW supercharged motorcycle.

### **30 September 1939**

BMW AG takes over all the shares in Brandenburgische Motoren Werke GmbH in Berlin-Spandau. BMW had already been cooperating with the company on the development of air-cooled aircraft engines.

### **28 April 1940**

Fritz Huschke von Hanstein and Walter Bäumer achieve overall victory in the Mille Miglia endurance race in Italy driving the BMW 328 Touring Coupé, and they also win the team placing in all classes for BMW.

### **30 April 1945**

Soldiers from the 7th US Army reach the so-called shadow plant and the camp in Allach near Munich. From December 1939, prisoners of war, convicts, forced labourers and inmates of concentration camps have been used there and at other locations to produce aero-engines.

### **17 December 1948**

Motorcycle production is started up again in Munich. A BMW R 24 powered by a single-cylinder engine is manufactured there as the first vehicle from BMW AG in the post-war era.

### **11 March 1954**

The BMW 502 presented at the Geneva Motor Show is powered by an eight-cylinder engine, the world's first V8 all-alloy engine to be fitted in a volume-produced automobile.

### **12 September 1954**

After their victory in the final race in Monza, Wilhelm Noll and Fritz Cron achieve their first World Championship Title in sidecar-combination racing on a BMW. By 1974,



BMW had succeeded in collecting 19 riders' and 20 constructors' World Championship Titles in this discipline.

### **1 October 1954**

BMW acquires the licence to build a two-seater microcar with a front door from Italian manufacturer Iso. The BMW Isetta has a lot of refined details, it is powered by BMW motorcycle engines and marketed as a "Motocoupé", the best-selling model sold by the brand during the 1950s.

### **15 January 1955**

A new model series is presented at the Brussels Motor Show with the BMW R 50 and the BMW R 69 manufactured with a full swing arm suspension. The series defined the BMW motorcycle programme until 1969.

### **22 September 1955**

The BMW 507 made its first public appearance at the International Motor Show in Frankfurt. This roadster had been penned by designer Albrecht Graf Goertz with a 150 hp eight-cylinder engine and it is celebrated in the press as the "Dream from the Isar".

### **9 June 1959**

The Board of Management of BMW AG presents the new BMW 700 Coupé to international journalists at a press launch. This car was to lay the foundations for profitable large-scale production of automobiles.

### **9 December 1959**

At the Annual General Meeting of BMW AG, a group of small shareholders prevents the takeover by Daimler-Benz AG. Major shareholder Herbert Quandt decides to make a bigger commitment which secures the independence of BMW.

### **30 November 1960**

The Annual General Meeting of BMW AG approves the restructuring plan for the realignment of the company and this charts the trajectory for a successful future.

### **21 September 1961**

The BMW 1500 celebrates its world premiere at the International Motor Show in Frankfurt – the start of the trailblazing success of the "New Class".

### **29 June 1964**

The positive business development encourages the Annual General Meeting of BMW AG to pass a resolution on paying a dividend to the shareholders for the first time since the end of the war.

### **18 June 1965**

BMW AG sells its remaining shares in BMW Triebwerkbau GmbH to MAN AG and brings its involvement in aero-engine production to an end for the time being.

### **7 March 1966**

The two-door BMW 1600 is presented to guests in front of the Bavarian State Opera House on the occasion of the celebration of the 50th anniversary of the company.

### **2 January 1967**

BMW AG takes over the company Hans Glas GmbH, which produces a number of vehicles including the Goggomobil microcar, numerous other models and agricultural machinery.

### **25 September 1968**

The new six-cylinder models BMW 2500 and BMW 2800 are presented at a press reception on Lake Tegernsee. After a break of several years, the brand once again enters the luxury class with these automobiles.

### **31 December 1968**

BMW AG concludes another record year. More than 100 000 automobiles are produced for the first time in one year.

### **13 May 1969**

Motorcycle production at the BMW main plant in Munich comes to an end. Production is relocated to the site in Berlin where the new BMW /5 Series starts rolling off the production line from September 1969.

### **16 March 1971**

The company enters the financial services business with the establishment of BMW Kredit GmbH.

### **20 October 1971**

The new BMW test track and trial facility is opened in Aschheim near Munich.

### **24 May 1972**

BMW Motorsport GmbH is established. It is responsible for all motor-sport activities and for the development of race cars and particularly sporty automobiles licensed for use on roads.

### **31 August 1972**

BMW AG founds BMW (South Africa) (Pty) Ltd and has a majority shareholding in this sales and production company. This makes the plant at Rosslyn in South Africa the first production facility outside Germany.

### **10 September 1972**

At the Olympic Games in Munich, a BMW 1602 Elektro is used as a support vehicle for the marathon race. This is the first pure electrically powered automobile under the BMW brand.

### **12 September 1972**

BMW launches a new structure for model designations with the first BMW 5 Series as the successor to the “New Class”. This gives BMW clearly defined model designations that are easy to remember, and the principle underlying the system continues to this day. The first digit represents the series and the two subsequent digits specify the model based on the capacity of the engine.

### **8 January 1973**

When the BMW subsidiary is established in France, the company begins to take control of sales activities in the international markets.

### **18 May 1973**

The new administrative building and the BMW Museum are officially opened. Construction of the structural shell of the “Four-Cylinder” and the “Museum Bowl” had been completed in time for the Olympic Games the year before.

### **27 September 1973**

Production starts up in the extensively expanded and modernised Dingolfing Plant. Initially, the models of the BMW 5 Series are manufactured there.

### **14 June 1975**

A BMW 3.0 CSL designed by American artist Alexander Calder is the first BMW Art Car to start at the 24 Hours of Le Mans.

This is the beginning of a fascinating and unique Art Collection which BMW is continuing to augment today.

### **30 June 1975**

In Munich’s Olympic Stadium, the Board of Management of BMW AG presents the BMW 3 Series which is launched as the successor to the successful BMW 02 Series with new technology and new model designation.

### **3 February 1976**

BMW Motorsport GmbH is commissioned to establish a “driving school” which has become established as BMW Driving Experience and MINI Driving Experience, offering a training and experience programme for more joy and safety at the steering wheel. The first official courses start on 22 April 1977.

### **11 March 1976**

The coupés of the new BMW 6 Series are presented at the International Motor Show in Geneva.

### **5 October 1978**

The BMW M1 is presented at the Mondial de l'Automobile in Paris. This is a mid-engined sports car generating 277 hp developed by BMW Motorsport GmbH. Its racing version creates a sensation at races including the Procar Series in the supporting programme for Formula 1 in Europe in 1979 and 1980.

### **21 June 1979**

Ground-breaking ceremony for the engine plant in Steyr, Austria, which today serves as a centre of competence for the development and production of a variety of engines including BMW diesel power units.

### **20 January 1981**

French racing driver Hubert Auriol wins the Paris-Dakar Rally riding a BMW R 80 G/S and provides further proof for the reliability of the Enduro model launched the year before, which is powered by a Boxer flat-twin engine.

### **13 June 1983**

BMW presents the first series of automobiles in the company's history powered by a diesel engine, the BMW 524td with an inline six-cylinder turbo diesel engine generating 85 kW/115 hp.

### **15 October 1983**

At the South African Grand Prix, Brazilian racing driver Nelson Piquet becomes Formula 1 World Champion driving the Brabham BMW – just 630 days after the premiere of BMW in the blue-riband event, and he is also the first champion in a vehicle with a turbo engine.

### **1 January 1985**

BMW Technik GmbH is established as an autonomous think tank and innovation incubator, which develops visionary vehicle and part concepts.

### **12 September 1985**

BMW presents the first all-wheel drive model at the International Motor Show, the BMW 325i all-wheel drive, and the extremely sporty BMW M3.

### **5 March 1987**

The BMW 750i is presented at the Geneva Motor Show, the first twelve-cylinder model to roll off a German production line since the end of the war.

### **22 May 1987**

The new BMW Plant Regensburg is officially opened. The first model that was manufactured there from the end of 1986 is the BMW 3 Series saloon.

### **11 September 1987**

The BMW Z1 roadster developed by BMW Technik GmbH is presented at the International Motor Show in Frankfurt.

### **15 November 1987**

Italian racing driver Roberto Ravaglia becomes the first Touring Car World Champion driving a BMW M3 with the Schnitzer Motorsport team.

### **27 April 1990**

The Research and Engineering Centre (FIZ – today known as the Research and Innovation Centre) is officially opened with a gala ceremony in the Milbertshofen district of Munich. Around 7 000 researchers, engineers, designers, managers and technicians work there in a close-knit network.

### **1 July 1990**

BMW AG joins forces with its partner Rolls-Royce Plc to establish the independent company Rolls-Royce GmbH for the development, construction and sale of aircraft turbines, and this joint venture takes the company back to its origins. In the wake of the realignment of the company, BMW AG sells its shares in Rolls-Royce plc at the end of 1999.

### **10 March 1992**

The new plant of BMW Fahrzeugtechnik GmbH is opened at the traditional heritage site in Eisenach. Pressing tools are manufactured there for the company's production network.

### **1 August 1993**

BMW Motorsport GmbH established in 1972 changes its name to BMW M GmbH Gesellschaft für individuelle Automobile (BMW M GmbH: For individualists.).

### **29 January 1994**

With the signing of the purchase contract, BMW AG takes over the British Rover Group, which includes the brands Rover, MG, MINI and Land Rover.

### **8 April 1994**

BMW Group Mobile Tradition is set up, and from 2008 it is responsible for all requirements relating to the company and product history as BMW Group Classic.

### **8 September 1994**

Vehicle production at the BMW Plant Spartanburg in the US state of South Carolina starts up – a BMW 318i is the first model to roll off the production line. The official opening of the new location is held on 15 November.

### **8 June 1998**

The company announces the continuation of the MINI brand, acquired through the purchase of the Rover Group, in an independent design.

### **14 June 1998**

The BMW 320d is the first vehicle powered by a diesel engine to win the 24 Hour Race at the Nürburgring.

### **10 January 1999**

BMW presents the vehicle concept of the Sports Activity Vehicle at the Detroit Auto Show. The BMW X5 combines sportiness typical of the brand with the versatile qualities of an all-wheel vehicle and thereby establishes a new market segment with this concept.

### **1 October 1999**

BMW AG and the Rover Group are merged in the BMW Group, with the new structure highlighting the Group function of the company as an umbrella for several brands.

### **29 October 1999**

The BMW Tower known as the “Four-Cylinder” and the neighbouring BMW Museum are designated as heritage sites and become subject to protection.

### **9 May 2000**

BMW AG sells the Rover Group without the brands MINI and Land Rover to the Phoenix Venture Group, and two weeks later the Ford Motor Corporation takes over Land Rover. Only MINI remains part of the BMW Group.

### **26 April 2001**

A few months after the relaunch of the brand, the first MINI rolls off the assembly line at the comprehensively modernised production plant in Oxford, United Kingdom, the original home of the classic Mini.

### **13 September 2001**

World premiere of the new BMW 7 Series at the International Motor Show in Frankfurt. BMW introduces its revolutionary iDrive control system for the first time in the fourth generation of the luxury saloon.

### **31 December 2002**

The BMW Group closes the business year with a new sales record. For the first time, more than one million cars of the BMW and MINI brands are sold within one year.

### **3 January 2003**

Since the beginning of the year, the Rolls-Royce brand has been officially part of the BMW Group. Rolls-Royce Motor Cars Limited goes on to present the first model of the new era at the company's new registered office in Goodwood: the Rolls-Royce Phantom.

### **20 May 2004**

The Dadong production plant is opened in Shenyang in the north-east of China. The plant is operated together with the joint-venture partner Brilliance China Automotive Holdings Ltd.

### **25 September 2004**

The sheer driving pleasure typical of the brand is experienced for the first time in the compact segment through the BMW 1 Series presented at the Mondial de l'Automobile in Paris.

### **13 May 2005**

The BMW Plant Leipzig designed by star architect Zaha Hadid is opened. The first cars produced there are vehicles in the BMW 3 Series, and other models follow.

### **7 September 2005**

The BMW Group is listed for the first time in the Dow Jones Sustainability Index as the world's most sustainable automobile manufacturer.

### **13 September 2006**

When production is launched for the new model generation of MINI, the British MINI Production Triangle officially starts operating with sites in Swindon, Hams Hall and Oxford.

### **27 September 2007**

The Board of Management of BMW AG presents the new Number ONE corporate strategy with the objective of long-term, profitable growth.

### **17 October 2007**

BMW Welt is opened. The futuristically designed building with multifunctional use offers a unique brand experience. Customers from all over the world can take delivery of their new car in an atmosphere that is typical of the brand.

### **19 November 2008**

The MINI E is presented at the Los Angeles Auto Show. This is a pure electrically powered small car for field tests in routine everyday traffic. It is a product of the i project created by the BMW Group for the development of sustainable mobility solutions.

### **21 February 2011**

The new BMW i subbrand is presented in BMW Welt. The innovations developed by the company for the subbrand include electrically powered automobiles and innovative mobility services.

### **1 April 2011**

The DriveNow premium car-sharing service starts operating as a joint venture between the BMW Group and Sixt AG in Munich.

### **1 September 2011**

The carbon-fibre plant located at Moses Lake in the US state of Washington comes on stream as a joint venture between the BMW Group and the SGL Group. The plant supplies the starting material for production of the passenger cells in the models BMW i3 and BMW i8, which are made of carbon-fibre reinforced plastic (CFRP).

### **15 January 2012**

The German X-raid private team drives the MINI ALL4 Racing to victory in the Dakar Rally. The car was designed on the basis of the MINI Countryman and was specially developed for endurance rallies.

### **29 April 2012**

After 18 years, BMW returns to the German Touring Car Masters (DTM) in Hockenheim on 21 October in a victory with three titles. Canadian Bruno Spengler becomes DTM Champion in the BMW M3 DTM, and BMW also wins the constructors' and team placings.

### **24 May 2012**

The Tiexi Plant is opened in Shenyang as the second production facility in China operated by the BMW Group and Brilliance China Automotive Holdings Ltd.

### **18 September 2013**

Production of the BMW i3 starts up at the BMW Plant Leipzig. This empowers the BMW Group to put the first premium electric vehicle on the road. The car was designed right from scratch for this type of power unit.



### **26 February 2014**

BMW Group Classic announces its move to a new site. This represents a return to the historic roots of the company. The purchase of the parcel of land in Moosacher Straße, Munich, from Knorr-Bremse AG brings some of the first production facilities back into the ownership of the company.

### **5 June 2014**

The first units of the BMW i8 plug-in sports car hybrid are handed over to customers at BMW Welt in Munich.

### **10 June 2015**

The new BMW 7 Series is presented in BMW Welt. The sixth generation of the luxury saloon offers unique innovations, including the body structure with carbon core, BMW gesture control and remotely controlled parking.

### **6 December 2015**

BMW i is granted the “Momentum of Change” Award by the United Nations at the UN Climate Conference in Paris for commitment to expanding the public charging infrastructure. This is the apogee of a unique series of national and international titles in the automobile sector, including the “Grünes Lenkrad” (Green Steering Wheel) for the BMW i3 and the “World Green Car Award” earned consecutively by the BMW i3 and the BMW i8. These awards were already given to the BMW i brand and its vehicles during the market launch phase.

### **6 January 2016**

The company uses the study BMW i Vision Future Interaction as the basis to present pioneering innovations in the areas of control and autonomous driving at the Consumer Electronics Show (CES) in Las Vegas.

### **7 March 2016**

The 100th anniversary of the company is celebrated at a gala event in Munich's Olympiahalle multipurpose arena.