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**30 Years of BMW all-wheel drive.
From the BMW 325i “Allrad” to the BMW X5 xDrive40e.**

Woodcliff Lake, N.J.: October 16, 2015 ... BMW, one of the world’s most successful premium carmakers, also boasts an excellent position in the all-wheel-drive market, a segment it first entered 30 years ago. Around one in three BMW’s sold around the world is now equipped with xDrive, BMW’s intelligent all-wheel-drive system. BMW’s success in this segment has been driven not only by the ever-popular BMW X models but also by all-wheel-drive models based on the other model series ranging from the BMW 1 Series to the BMW 7 Series. At the same time, BMW continues to refine this technology and take it in new directions. By offering BMW xDrive in combination with a hybrid drive and with a transversely mounted engine, the company has repeatedly demonstrated its proficiency in the all-wheel-drive field, proficiency that will secure BMW’s position at the forefront of this sector well into the future. Globally, BMW offers more than 110 models – featuring either transmission type – with BMW xDrive in 12 different model series, as well as the plug-in hybrid BMW i8 sports car and the compact BMW 225xe with electrified all-wheel drive.

The focus from day one: traction and dynamics.

BMW’s first foray into the all-wheel-drive market came with the unveiling of the BMW 325i “Allrad” at the Frankfurt Motor Show (IAA) in 1985. The newcomer didn’t immediately reveal its inner qualities, positively surprising journalist on the track. This very first BMW all-wheel-drive system improved traction and increased dynamic handling through corners, particular in harsh weather conditions. German car magazine Auto Zeitung reported “The new BMW is the new champion when it comes to handling.”

The intelligent BMW xDrive all-wheel-drive system takes typical BMW driving dynamics to new levels. The current generation of this system is controlled by the Integrated Chassis Management (ICM) system, which ensures that xDrive always responds appropriately at the earliest possible moment, based on reliable sensing and monitoring of the current driving situation. The interventions may be performed either entirely by BMW xDrive, or by xDrive in combination with Dynamic Stability Control (DSC) or Dynamic Performance Control (DPC). The resulting fast and precise control of drive power distribution ensures typical BMW handling characteristics even under extremely dynamic cornering.

The all-wheel-drive system is biased towards the typical BMW rear-wheel-drive characteristics. This means, on the all-wheel-drive models a greater share of the drive power is sent to the rear wheels, even under normal driving conditions. This maintains the typical BMW precise steering response, with virtually no torque steer. For crisp turn-in and high cornering stability, the latest-generation BMW xDrive system starts increasing the amount of torque sent to the rear wheels as soon as the vehicle enters a corner.

BMW all-wheel-drive technology: continuous evolution since 1985.

The full-time all-wheel-drive system featured on the BMW 325i "Allrad" of 1985 split the drive power in a ratio of 37 to 63 percent between the front and rear wheels. In response to wheel speed differences, visco locks in the transfer case and rear differential were capable of providing a virtually rigid connection between the front and rear wheels, in order to improve traction and stability. This model's name was soon changed to BMW 325iX, and from 1988 it was offered in a "touring" version.

1991: BMW 525iX.

In 1991, BMW introduced an all-wheel-drive system to the BMW 5 Series model line. For the first time, the power split was now electronically controlled. The newly developed system featured multi-plate clutches that allowed the default 36:64 front-to-rear power split to be varied seamlessly and automatically in line with driving conditions. Initially a hydraulically controlled multi-plate clutch was used at the rear axle, which was later replaced by an electronically controlled selective braking intervention. The system monitored the driving situation using wheel speed signals from the Anti-lock Braking System, supplemented with information about brake status, engine speed and throttle valve position.

From the outset the all-wheel-drive system of the BMW 525iX was a class apart. The electronic control system delivered a very fast and precise response, resulting in safe,

neutral handling characteristics even in difficult driving conditions, such as on wet roads or snow. In the BMW 5 Series, too, the first all-wheel-drive models were offered in both sedan and touring (Sports Wagon) versions.

1999: Introduction of the Sports Activity Vehicle (SAV).

In the run-up to the new millennium, a highly innovative vehicle concept from BMW made its sensational debut. The BMW X5, the first Sports Activity Vehicle (SAV), impressed customers with driving dynamics that were unmatched among other all-terrain vehicles of the time. The outstanding all-wheel-drive system played a big part in this. A planetary gear system split the drive power in a ratio of 38:62 percent between the front and rear wheels, while electronic control systems such as DSC (Dynamic Stability Control), ADB-X (Automatic Differential Brake) and HDC (Hill Descent Control) ensured the new BMW X5 was both sporty on the road and equipped to handle challenging conditions off the beaten track.

In the years following the successful launch of the SAV concept, there was no let-up in the fast pace of all-wheel-drive development at BMW. The following year, 2000, a model-specific version of the BMW X5's all-wheel drive technology became available for the fourth generation of the BMW 3 Series.

2003: BMW xDrive makes its debut in the BMW X3 and BMW X5.

BMW kept up the momentum by launching the SAV concept in another vehicle segment. The new BMW X3 was more compact than the BMW X5 and offered even more agile handling. It set new benchmarks and remained the only premium model in its class for years to come.

The newly developed BMW intelligent xDrive all-wheel-drive system, which was introduced in the same year in both the BMW X3 and the BMW X5, soon extended BMW's lead in the AWD segment. Based on an extremely fast-acting electronic multi-plate clutch in the transfer case, xDrive worked in tandem with the Dynamic Stability Control system (DSC) to continuously adapt the drive power split to the current driving situation. In addition to wheel speed, for the first time the electronic control system also took into account Dynamic Stability Control data, for example about steering angle, accelerator position and lateral acceleration. This is what makes BMW xDrive the world's first, and only, "intelligent" all-wheel-drive system. Unlike conventional all-wheel-drive systems, which only react when at

least one wheel is already spinning, xDrive is able to detect a risk of oversteer or understeer at the very first sign, and proactively corrects this by redirecting the flow of drive power.

In the years that followed, the BMW xDrive intelligent all-wheel-drive system was fitted not only on the X models but also on the xDrive versions of the BMW 3 and 5 Series Sedan and Touring models. By the time the second generation of the BMW X3 was introduced in 2010, more than 600,000 units had already been sold worldwide. Sales of the BMW X5 – which entered its second generation in 2006 – had topped the one million mark.

2008: Sports Activity Coupe with DPC and hybrid drive.

With the two Sports Activity Vehicles now firmly established in their respective segments, BMW presented the world's first Sports Activity Coupe in 2007. Unveiled at the Frankfurt Motor Show (IAA), the all-new BMW X6 elevated the typical dynamic character of the BMW X models to a new level of intensity. For the first time, the intelligent all-wheel-drive system was combined with Dynamic Performance Control (DPC), which varies the drive power split between the rear wheels when cornering to ensure unrivalled agility and stability, even under sudden throttle changes or on overrun. In 2009, the BMW Active Hybrid X6 demonstrated the perfect combination– between BMW xDrive and hybrid propulsion. Meanwhile, in the same year, BMW M GmbH added two very special models to its range of high-performance sports cars. With an M-tuned BMW xDrive system, including Dynamic Performance Control, the BMW X5 M and BMW X6 M boasted performance that was previously unknown in the all-wheel-drive market.

2009 also saw the arrival of a new X model, the BMW X1. For many years to come, the BMW X1 was destined to remain the only vehicle of its kind in the premium compact segment. Its intelligent BMW xDrive all-wheel-drive system, like that of the new BMW X3 (2010), was also combinable with Performance Control. This system selectively brakes the wheel on the inside of a turn while simultaneously increasing engine power, resulting in quick and precise turn-in to corners and taking the agile handling of both models to new levels.

BMW xDrive available across model series.

The steady advance of the BMW X models has been accompanied by an increase in the number of xDrive versions offered across other BMW model series. Designed to improve cornering agility, traction and precision, BMW xDrive provides an enhanced driving experience and an optimal combination of dynamics and comfort. In 2009 the intelligent

drive technology was incorporated into the BMW 7 Series. In spring 2012, the first all-wheel-drive Coupe and Convertible were offered in the sporty BMW 6 Series. BMW xDrive can also be ordered on the current BMW 3 and 5 Series and, since 2013, on the BMW 4 Series Convertibles, Coupes and Gran Coupes.

Development and Progress.

In 2014, BMW launched the BMW X4 entering into the premium mid-sized segment. The new Sports Activity Coupe offers a unique blend of driving excitement, sophisticated style and contemporary practicality. BMW xDrive comes standard and is available in a wide range of engine versions. In 2014 BMW also presented the third generation of the BMW X5, the second generation of the BMW X6, and an M Sport versions of both models. BMW xDrive also made its debut in the new BMW 2 Series Active Tourer – the first time BMW combined its intelligent all-wheel-drive system with a transversely mounted engine.

With the unveiling of the BMW i8 in 2014, the BMW Group took a bold new step in new directions – which also extended to the all-wheel-drive system. This 2+2-seater sports model is powered by a highly advanced plug-in hybrid drive system that pairs an internal combustion engine driving the rear wheels and a high-performance electric motor driving the front wheels.

BMW xDrive meets BMW eDrive.

BMW's latest all-wheel-drive models bring technology advances that are firmly focused on the future of mobility. The BMW i8 was followed by the international launch of the first production plug-in hybrid model from the BMW core brand: the BMW X5 xDrive40e. Thanks to full-time BMW xDrive all-wheel-drive and eDrive BMW EfficientDynamics technology, this Sports Activity Vehicle combined sporty performance with efficiency. Intelligent hybrid power management synchronizes the operation of the internal combustion engine and the electric motor to maximize efficiency at all times, while also responding perfectly to the driver's demands. The drive from the two power units is transferred to the road via the full-time BMW xDrive intelligent all-wheel-drive system.

BMW 7 Series: Integral Active Steering combinable with BMW xDrive.

In September 2015, the sixth generation of the BMW 7 Series made its world debut at the Frankfurt Motor Show (IAA). This high-end BMW luxury model pioneers groundbreaking innovations on all fronts and will be available with BMW xDrive. The new luxury sedan will

also be the first model to allow intelligent all-wheel-drive to be combined with Integral Active Steering.

More Information as well as images and video:

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BMW Group In America

BMW of North America, LLC has been present in the United States since 1975. Rolls-Royce Motor Cars NA, LLC began distributing vehicles in 2003. The BMW Group in the United States has grown to include marketing, sales, and financial service organizations for the BMW brand of motor vehicles, including motorcycles, the MINI brand, and the Rolls-Royce brand of Motor Cars; Designworks, a strategic design consultancy based in California; a technology office in Silicon Valley and various other operations throughout the country. BMW Manufacturing Co., LLC in South Carolina is part of BMW Group's global manufacturing network and is the exclusive manufacturing plant for all X5 and X3 Sports Activity Vehicles and X6 and X4 Sports Activity Coupes. The BMW Group sales organization is represented in the U.S. through networks of 339 BMW passenger car and BMW Sports Activity Vehicle centers, 148 BMW motorcycle retailers, 124 MINI passenger car dealers, and 36 Rolls-Royce Motor Car dealers. BMW (US) Holding Corp., the BMW Group's sales headquarters for North America, is located in Woodcliff Lake, New Jersey.

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Journalist note: Information about BMW and its products in the USA is available to journalists on-line at www.bmwusanews.com.

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