#### **BMW** i

### **Corporate Communications**



Press release 5 February 2020

### Novel "Aerodynamic Wheels" for the purely electric BMW iX3.

All-round efficiency – More design freedom – Featuring also on the BMW iNext and BMW i4.

**Munich.** In today's automobiles, the wheels and their aerodynamic flow influence the overall vehicle efficiency by up to 30%. That is why a further developed technology of the BMW Aerodynamic Wheel is making its debut together with the BMW iX3, whose market launch is planned for 2020: The new combination of aluminum base wheel and individually designed inserts complements the efficient basic alignment of the BMW Group's first purely electric Sport Activity Vehicle (SAV) effectively.

While reducing drag for about 5% compared to a conventionally powered BMW X3 the new Aerodynamic Wheels are not only more efficient but also lighter than previous ones: Thanks to optimum airflow around the wheel arches, the wheels are 15% lighter than the aerodynamic wheels previously fitted by BMW. Their benefits in terms of aerodynamics and weight have the overall effect of lowering power consumption for the BMW iX3 by another 2% in the European WLTP test cycle – equating to 0.4 kWh/100 km – and thereby extending the vehicle range by 10 kilometres. The wheels' appearance can be varied in numerous different ways, enabling a vast variety of possibilities for the design of wheels on future models.

The new Aerodynamic Wheels will also feature on the BMW iNext and BMW i4, which are going to be introduced in 2021.

The Aerodynamic Wheels on the BMW iX3 blend lightweight construction and reduced air resistance with the sporting elegance of a V-spoke aluminium wheel in a whole new way. The dimensions of the base wheel ensure the wheel living up to all the structural challenges involved in transmitting dynamic driving forces. Inserts with a high-class finish are responsible for achieving the necessary aerodynamic impact. This new division of tasks heralds a substantial weight saving over previous aerodynamic wheels from BMW.

Furthermore, the new base wheel is made using less material than its precursor

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adding up to the reduction of unsprung mass by lightweight inserts. This enhances both, driving dynamics and efficiency. Additionally, the mix of materials is benefitting a resource-efficient manufacture, as there is no need for further tools to produce special wheel options with optimised aerodynamics. To fit the lightweight base wheel, the inserts are precision-moulded and integrated into the outside of the wheel between the spokes. Thus, they are highly effective in reducing wheel-arch air turbulence – and therefore aerodynamic drag. As a result, the Aerodynamic Wheels form a key element of

the overall package developed for optimum efficiency of the BMW iX3.

#### Design variants enable maximum individualisation.

The BMW Group is the first automobile manufacturer to combine cast aluminum wheels with inserts consisting of a plastic carrier and an aluminum visible surface. The high-quality material used for the inserts and their precise integration into the wheel design with no visible gaps reinforce the premium character of the rims. The patented process for optimising aerodynamic properties while minimising weight opens an unprecedented scope for vehicle customisation. The Aerodynamic Wheels can be painted in different colours while the customer can also choose between matt or polished finish, just as known from conventional wheels. All versions of the base wheel can be fitted with inserts whose appearance can vary in endless ways according to the sheen, polish and pattern specified. This means that, for example colour accents from the body design can be incorporated into the inserts' styling. Furthermore, inserts can also be combined with different surface designs within a single wheel. The end result is a multitude of aerodynamically optimised wheel possibilities, each with a design that matches the vehicle's character, the equipment line selected and the customer's individual preferences.



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#### The BMW Group

With its four brands BMW, MINI, Rolls-Royce and BMW Motorrad, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. The BMW Group production network comprises 31 production and assembly facilities in 15 countries; the company has a global sales network in more than 140 countries.

In 2019, the BMW Group sold over 2,520,000 passenger vehicles and more than 175,000 motorcycles worldwide. The profit before tax in the financial year 2018 was € 9.815 billion on revenues amounting to € 97.480 billion. As of 31 December 2018, the BMW Group had a workforce of 134,682 employees.

The success of the BMW Group has always been based on long-term thinking and responsible action. The company has therefore established ecological and social sustainability throughout the value chain, comprehensive product responsibility and a clear commitment to conserving

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