Media Information
ABB FIA Formula E Championship
25th June 2019

An exciting formula for BMW i: Electrification in production and at the racetrack.

- **Formula E racing series as perfect stage for the BMW Group to demonstrate its innovative expertise in important future issues.**
- **The pioneering role of BMW i in electrification also brings great success in motor racing.**
- **Close transfer of technology makes Formula E a 'TechLab' for future generations of BMW i models.**

Munich. Racing eDrive01 – that's the official title of the highly-efficient power unit at the heart of the success enjoyed by BMW i Andretti Motorsport in the ABB FIA Formula E Championship. It propels the BMW iFE.18 race cars, with drivers António Félix da Costa (POR) and Alexander Sims (GBR), to top performances – and top results – in the official BMW works team's first season in the series for fully-electric formula cars. Félix da Costa won on the team's debut in Ad Diriyah (KSA) in December 2018. That win allowed the same BMW i engineers that are otherwise responsible for the drivetrain in production models, like the BMW i3, to feel like true winners. Their experience of electrification proved to be crucial at the racetrack.

BMW Group Motorsport Director Jens Marquardt said: "At the start of the development process for the E drive in Formula E we were faced with the question: Do we build up our own expertise at BMW Motorsport, or do we use the extensive BMW i experience in this area? We soon arrived at an answer. Naturally, it made sense to make use of the wealth of experience of our colleagues in production."

What followed is a prime example of the interplay between production and motorsport development. Under the umbrella of BMW i Motorsport, a completely new development cycle was established. The goal was always to make the most efficient use of capacities and to create as many synergies as possible. Responsibilities were clearly allocated. The production specialists looked after the

electric motor hardware and the inverter, meaning the entire high-voltage area. This included the software that the inverter uses to control the E motor, as well as the materials used, such as for the rotor and stator.

Meanwhile, the BMW Motorsport engineers primarily handled matters such as the low-voltage control area. They devised recuperation strategies, undertook the design and implementation of the entire rear axle structure and developed the cooling concept. “Everything that each area can do best was intertwined with full transparency. The technology transfer between our BMW Motorsport engineers and BMW i colleagues works really well,“ said Marquardt.

The result is a cycle of know-how and experience, which can only benefit both sides in the future field of electrification. BMW i Motorsport gains experience under extreme conditions at Formula E racetracks – and in direct competition with many other automobile manufacturers. This experience and any findings are then incorporated in development. “This means that every BMW i customer benefits from our joint progress in racing,” said Marquardt. For example, the control software for the high-voltage area, which controls the E motor via the inverter, is used in both the BMW iFE.18 and the BMW i3.

From a sporting perspective, this unique combination has proved to be competitive from race one in Formula E. Away from the track too, the BMW Group is using this ever-expanding racing series to demonstrate its innovative expertise in key future issues within the automotive industry. Electrification forms the basis of this, but other focus subjects, such as autonomous driving, connectivity and services – in combination with pioneering design, such as can be found with the BMW i8 Roadster Safety Car – are in the spotlight at every race. As such, Formula E is becoming a symbol for the consistent future orientation of BMW i, BMW Motorsport and the BMW Group as a whole.

The BMW i Support Vehicle Fleet.
BMW i is “Official Vehicle Partner” of the ABB FIA Formula E Championship in Season 5. Spearheading the fleet are two Safety Cars: The BMW i8 Roadster Safety Car (combined fuel consumption: 2.0 l/100 km; combined power consumption: 14.5 kWh/100 km, combined CO_2 emissions: 46 g/km), which has been specially modified for use at the racetrack, and the BMW i8 Coupe Safety Car (combined fuel consumption: 1.8 l/100 km; combined power consumption: 14.0 kWh/100 km;

combined CO_2 emission: 42 g/km). The BMW i fleet also includes the BMW i3s (combined fuel consumption: 0.0 l/100 km; combined energy consumption: 14.3 kWh; combined CO_2 emissions: 0 g/km) as "Race Director Car" and the BMW 530e (combined fuel consumption: 2.2-2.1 l/100 km; combined energy consumption: 13.6-13.3 kWh/100 km; combined CO_2 emissions: 49-47 g/km) in its role as "Medical Car".

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