

Press release

9 November 2017

Umicore and Voxdale are proud to announce a partnership with Mahindra Racing in the Formula E Championship

The three-year technology-based partnership is a landmark for the FIA Formula E Championship. Through this partnership, Umicore and Mahindra Racing show that top electric car racing performance can be achieved using alternative energy sources, smart energy recuperation and using recycled materials for battery storage. The Electric Street Racing Series brings revolutionary electric driving in a safe, sustainable and eco-friendly way to the general public. This approach is demonstrating the Race-to-Road story that FIA is promoting through the Formula E Series.

Umicore and Mahindra Racing have agreed to undertake a technology development programme to enhance the performance of the 12V battery which enables all of the mission critical systems to be run on the Formula E cars. The results of this work will first be seen in the season five car, where drivers will no longer need to make a mandatory car swap during the race.

Mahindra Racing also welcomes Belgian innovation company Voxdale as an official design & technology supplier. Voxdale and Mahindra Racing engineers will work together to apply Voxdale's areas of expertise such as Finite Element Analysis (FEA), Computational Fluid Dynamics (CFD) and simulation techniques to further tune the performance of the electric race cars.

The team is also happy to announce Belgian racing driver Sam Dejonghe as a simulator and development driver of the team. The young and talented Belgian racing driver will work closely with the team's engineers to test new settings on a race simulator and the test car.

Dilbagh Gill, CEO and Team Principal Mahindra Racing: "We are thrilled at the culmination of this innovative partnership. Mahindra Racing are the first (and only) Formula E team to have achieved accreditation in the FIA Institute's Sustainability Programme. We are entirely committed to minimising environmental impact through a strong environmental policy. Our partnership with Umicore and Voxdale further validates our commitment to the eco-revolution by thus completing the cycle of creation, efficient and optimal use, and recycling of materials used in the field of electrical energy. Sustainability as an outcome of whatever we undertake is non-optional, everything ahead of that is progress toward the next benchmark."

Kurt Vandeputte, Senior Vice-President Umicore Rechargeable Battery Materials, is enthusiastic: "We are proud to be Official Technology Partner of Mahindra Racing in the FIA Formula E Championship. Our partnership underlines our strong common belief in clean and electric mobility and offers us a platform to test and understand our active battery materials in the most challenging circumstances."

Koen Beyers, CEO Voxdale: "Looking at former projects in Nascar and INDYCAR, we are convinced that Voxdale's expertise in design, engineering and simulation will be a great asset for Mahindra Racing. We are very excited to enter the future of mobility and we are committed to delivering performance enhancement."

Sam Dejonghe: "I cannot wait to work in such a professional environment and contribute to improve race car performance. Due to the specific city racing of Formula E it's absolutely critical to prepare and simulate the races well."

For pictures please click [here](#).

About Mahindra Racing

Mahindra Racing is one of ten founding teams – and the only Indian team – to compete in the FIA Formula E Championship, the world's first all-electric racing series. The M3Electro racecar, launched for season 3 which concluded in July 2017, proved to be a competitive package getting the team's first race win, a total of ten podiums, three pole positions and two fastest lap awards. With these strong results, Mahindra Racing secured third place in the Teams' Championship and rookie driver Felix Rosenqvist took third in the Drivers' Championship. For Season 4, commencing in Hong Kong in December 2017, the team has high technical and sporting ambitions with its newly developed M4Electro racecar that pushes the limits of technology and innovation.

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About Umicore

Umicore is a global materials technology and recycling group. It focuses on application areas where its expertise in materials science, chemistry and metallurgy makes a real difference. Umicore has a unique position in cathode materials for rechargeable batteries used in electric vehicles, portable electronics and stationary energy systems. Its continuous investments in R&D and production capacity underscore its ambition to be a global leader in materials that enable clean mobility.

Umicore's overriding goal of sustainable value creation is based on an ambition to develop, produce and recycle materials in a way that fulfills its mission: materials for a better life. The Group generated a turnover of € 6.5 billion (€ 1.5 billion excluding metal) in the first half of 2017 and currently employs 10,400 people.

www.umicore.com

www.rbm.umicore.com

About Voxdale

Voxdale, based in Antwerp, is a design, engineering and research agency for mechanical and mechatronic development of systems, equipment and vehicles for clients in Space & Aerospace, MedTech, Performance Sports, and in Mobility sectors.

The design and engineering team, consisting of seasoned experts, is continuously involved in the field of engineering, vehicle architecture, product development and technology integration, tackling challenges of thermal management, aerodynamics and materials selection.

The aim is to provide the necessary expertise and skills to guide clients through projects from the idea phase, up to building prototypes and industrialization.

By using simulations, including state-of-the-art finite element analysis (FEA) and computational fluid dynamics (CFD), Voxdale is able to minimize the development path and all risks involved, as well as optimizing existing designs and systems.

www.voxdale.be

About Mahindra

The Mahindra Group is a USD 19 billion federation of companies that enables people to rise through innovative mobility solutions, driving rural prosperity, enhancing urban living, nurturing new businesses and fostering communities. It has a leadership position in utility vehicles, information technology, financial services and vacation ownership in India and is the world's largest tractor company, by volume. It also enjoys a strong presence in agribusiness, components, commercial vehicles, consulting services, energy, industrial equipment, logistics, real estate, steel, aerospace, defence and two wheelers. Headquartered in India, Mahindra employs over 200,000 people across 100 countries.

www.mahindra.com

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About the FIA Formula E Championship

The FIA Formula E Championship is the electric street racing series and the world's first fully-electric international single-seater category in motorsport. Formula E brings electrifying wheel-to-wheel action to some of the world's leading cities, racing against the backdrop of iconic skylines such as New York, Hong Kong, Paris and Rome. The inaugural season of Formula E sparked into life in September 2014 around the grounds of the Olympic Park in Beijing. The fourth edition of the FIA Formula E Championship will see 10 teams and 20 drivers compete in 11 cities spanning five continents in the fight to be crowned Formula E champion. Hong Kong hosts the season-opener over the course of two days on December 2 & 3, with the championship coming to a close in Montreal on July 28 & 29. Formula E is a competitive platform to test and develop road-relevant technologies, acting as a catalyst for sustainable mobility solutions - helping refine the design and functionality of electric vehicle components and improving the driving experience for everyday road car users all over the world. For this season, more manufacturers have joined the electric revolution with reigning champion Lucas di Grassi looking to defend his title behind the wheel of the Audi-backed ABT Schaeffler team. More big-name manufacturers have also committed to race in Formula E - including BMW and Nissan in tandem with the new-look car and battery in season five, along with Mercedes-Benz and Porsche who also plan to join the following year.

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