NTU to trial Singapore's first driverless vehicle on the roads

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Singapore's first clean and green driverless shuttle transportation system will soon see passengers shuttling between Nanyang Technological University (NTU) and JTC Corporation's (JTC) CleanTech Park.

In a partnership between NTU, JTC and Induct Technologies, and supported by the Singapore Economic Development Board (EDB), an autonomous electric shuttle manufactured by Induct is expected to ply the two kilometre route providing a safe, reliable and environmentally-friendly alternative mode of transportation.

The two-year collaboration will see the Energy Research Institute @ NTU (ERI@N) test and optimise Induct's electric shuttle named NAVIA and enable it to intermingle safely with traffic in Singapore. ERI@N and Induct will also work to improve and enhance electric vehicle battery reliability and charging speeds, maximizing the efficiency of NAVIA which can carry eight passengers and has a maximum speed of 20.1 km/h.

As part of NTU's drive to be at the forefront of electromobility research, the partnership will also see the development and testing of various new charging technologies such as wireless induction and new super capacitors for electric vehicles. Software and intelligence systems will also be programmed for planned operation within pre-defined route operating between JTC's CleanTech One building and the NTU Yunnan Garden campus.

This test-bed is the first of its kind in the region and could pave the way for the integration of autonomous vehicles in Singapore's transport system to alleviate the "first mile, last mile" transport problem (the first and final legs of a journey, the typical potential bottlenecks in a transportation system) faced by urban cities.

Professor Subodh Mhaisalkar, Executive Director of ERI@N, said the NAVIA platform brings together two state-of-the-art concepts critical for future transportation in urban cities.

"Both concepts of a driverless transport and an efficient electric transport are at the forefront of research for personal transportation, last-mile transportation, and for logistics applications in leading automotive companies around the world," said Prof Mhaisalkar.

"Leveraging on NTU's expertise in engineering and clean energy, we are confident that our partnership with Induct will see us explore breakthroughs in autonomous driving, wireless fast charging, and advanced battery technologies for sustainable transportation solutions."

Pierre Lefevre, Induct's CEO, said: "The synergies between industry in JTC's CleanTech Park and academia in NTU present a unique opportunity for Induct, both from a test bedding and power management expertise perspective. The planned route between JTC's CleanTech One and the NTU campus represents a real world scenario of shuttling passengers within a short range, with varying topography and pre-defined routes. Induct is proud to be given the opportunity to set up its Asian office in JTC's newly opened CleanTech One. The company strongly believes that Singapore is the ideal location for its technological and economic development."

Mr Heah Soon Poh, JTC's Assistant Chief Executive Officer, said, "CleanTech One has seeded a vibrant ecosystem focused on cleantech R&D in CleanTech Park, which is being developed to position Singapore as an epicentre for research, innovation and commercialisation in clean technology. JTC has been actively partnering industry players in the development of sustainable urban solutions and providing the platform to test-bed new clean technology, and Induct is one such partner. We welcome more creative minds to partner JTC in the CleanTech Park community to broaden the exciting venture into cleantech research."

Assistant Managing Director of the Singapore Economic Development Board, Mr Julian Ho, said, "We are pleased that Induct and NTU are embarking on an electric autonomous vehicle testbed in Singapore. Autonomous vehicles, alongside electric vehicles, represent new growth opportunities that will allow Singapore to build systems-level capabilities such as intelligent sensors and charging solutions. This testbed is also aligned with Singapore's position as a 'Living Lab' where companies can develop, test and commercialise innovative urban solutions for global markets."

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