

## Smart carpark and EV charging system at NTU tackles space hogging

An integrated smart carpark and electric vehicle (EV) charging system has been rolled out at three carparks in Nanyang Technological University (NTU).

Known as GoParkin, the system currently covers six EV charging points installed at carparks A, B and Q at NTU's Jurong campus, NTU said in a statement on Monday.

There are plans to extend the network to a total of 14 charging points at four more carparks by June, including carpark D, Crescent Hall, North Hill and the School of Biological Sciences carparks.

Once EV users register their vehicle with the GoParkin mobile app, they will be able to use the app as a one-stop platform to find available parking spots, charge their vehicles and make cashless payment.

The system, developed by ST Engineering as a collaboration with NTU, has Automatic Number Plate Recognition technology, which can verify and validate the licence plate of each registered vehicle



Once electric vehicle users register their vehicle with the GoParkin mobile app, they will be able to use the app as a one-stop platform to find available parking spots, charge their vehicles and make cashless payment. ST PHOTO: SHINTARO TAY

that enters the EV charging space. The licence plates of vehicles that overstay their use of the charging points are automatically

routed to a parking enforcement team for quick on-the-ground response. This ability to detect and identify

space hogging by both EVs and non-EVs is unlike conventional parking systems.

Mr Ashley Yeo, deputy department manager of urban solutions at ST Engineering, said there will be a 15-minute grace period once the vehicle has finished charging.

Automated detection and identification also apply to vehicles that commit other traffic offences, including entering or exiting the carpark in the wrong direction.

The Plug-n-Charge feature ensures a seamless experience by automatically activating a charging session once users connect the plug to their vehicles. The EV charging status can be monitored via the GoParkin app while a colour-coded LED system reflects the space's charging availability, whether it is plug-and-charge ready, charging or idling.

The smart carpark system will help to reap operational and maintenance cost-savings through the use of cost-effective and low-maintenance technology.

Mr Ang Kim Siah, head of mobility road, urban solutions at ST Engineering, said there is no need to deploy people to conduct manual authorisation and identification, as the automated system provides real-time monitoring of EV charging and space hogging. This allows further optimisation of manpower compared with conventional carparks.

The system also provides advanced analytics that generate information about the charging patterns and preferences of EV users, said NTU. The data gathered will be used for planning and enhancement of future services.

When asked about the estimated breakdown of the cost-savings, a representative from ST Engineering said the details are commercially sensitive and depend on long-term use of the smart carpark system.

"With our expertise in smart carpark and EV charging systems, we are well-positioned to provide the market with an integrated, reliable

and cost-effective solution that addresses the evolving challenges of drivers, carpark owners and operators sustainably," said Mr Ang.

Ms Tan Aik Na, senior vice-president of administration at NTU, said at the launch that the system is the first of its kind in Singapore to offer both parking and EV charging via an integrated mobile app for the convenience of the community.

The initiative also aims to contribute towards NTU's sustainability goals, including achieving carbon neutrality by 2035 and reducing on-campus carbon emissions by 50 per cent.

Ms Tan said that using the 14 EV charging points can save an estimated 257,000kg of CO2 emissions over the next five years, which is equivalent to 55 per cent carbon reduction compared with petrol vehicles.

Additional chargers will be installed in more NTU carparks in future to meet increasing demand for electric vehicles.

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