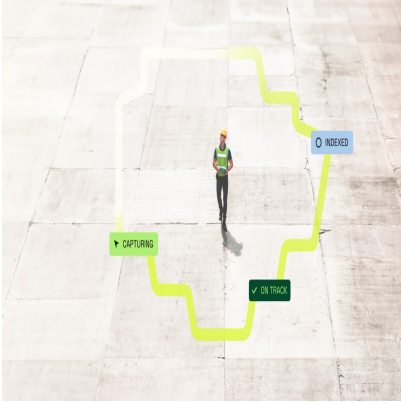




LTA opens Digital Tavern rail tech gallery, with 45 booths at Nebula X Day

Description

The Land Transport Authority (LTA) held its first Nebula X Day on Friday (23 October), gathering rail operators, technology firms and universities at its headquarters at 1 Hampshire Road. LTA Chairman Pang Kin Keong officiated. The day also opened Digital Tavern, a permanent gallery and working space for rail digitalisation projects.



Airsquire showed 360-degree site capture, drone imagery and LiDAR capture at Nebula X Day. Image: Airsquire

What was on the exhibition floor

LTA's booth list runs to 45 exhibitors, covering the rail lifecycle from construction to maintenance. On the construction side, TAG Industrial brought its EffiBOT autonomous material-handling robot and a wearable back-support suit, NOVABUILD showed an autonomous painting robot, DMX Robotics an autonomous tiling robot and Tractors Singapore a Cat Command Station for operating heavy equipment remotely.

For operations, CRRC Sifang and Operva.AI showed inspection robots for rolling stock, Hitachi its HMAX vibration monitoring system and Alstom its HealthHub for signalling. Alibaba, AWS, Huawei, NCS, SenseTime and Oracle brought AI and project management platforms.



TAG Industrial's EffiBOT can follow a worker, lead ahead or run autonomously. Image: TAG Industrial

The two train operators exhibited their own systems. SBS Transit brought SiLVia, its sign language virtual assistant, and SMRT showed Jarvis, its data analytics platform. NUS showed a smart lamp post

testbed built with Cisco, the Singapore Institute of Technology a train wheel rotator and alignment clamp for power rail installation, and NTU an autonomous vehicle.

Inside Digital Tavern

Digital Tavern is laid out in four zones under LTA's theme of "The Living Railway". A smart platform zone covers a shared tech stack for asset, map and Building Information Modelling data. A design and construction zone covers digital twins, project collaboration platforms and video analytics for site monitoring. An operations and maintenance zone covers automated tunnel defect scanning and depot workflow automation.

A walkway between the zones sets out LTA's digital governance rules: a condition monitoring baseline of more than 500 datapoints for rail assets, a common system architecture for secure data transmission, a shared naming hierarchy for assets and joint concepts of operations with the train operators, so that data insights lead to action.



Concrete Canvas exhibited its geosynthetic cementitious composite mats. Image: Concrete Canvas

How to visit

Digital Tavern is open by appointment. Requests go by email to LTA_Rail_Digitalisation@lta.gov.sg, and LTA plans to refresh the exhibits as its projects develop.

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