

Open Innovation Platform (OIP)

The Open Innovation Platform (OIP) by IMDA is the national platform for digital innovation. OIP provides corporates with business challenges with a structured, high-touch support to define their problem statement, crowdsource innovative solutions from a community of 12,000 tech solution providers, and evaluate their proposals to ensure an impactful outcome. Since 2018, OIP has facilitated over 300 challenges worth more than \$9M in prize monies covering sectors such as financial services, healthcare and manufacturing. It has covered tech domains such as AI, the Internet of Things, and AR/VR.

Land Transport Innovation Challenge Problem Statements

Title	Challenge Statement
Enhancing Inspection Process for Better Road Tunnel Maintenance	<p>How might we enhance inspection of road tunnel ventilation fan silencer and improve effectiveness and efficiency for the road maintenance industry?</p> <p>LTA works with Electrical & Mechanical (E&M) contractors to ensure proper maintenance of the E&M systems that serve road tunnels such as Kallang-Paya Lebar Expressway (KPE) and Marina Coastal Expressway (MCE).</p> <p>The E&M contractors perform regular inspection of the road tunnel E&M systems (e.g. tunnel ventilation, fire protection, drainage pumps systems and etc). There are more than 80 tunnel ventilation fans installed within KPE and MCE to ventilate the tunnels. Two silencers are attached to each fan for soundproofing to mitigate the ventilation noise, with one on top and one at the bottom of the fan. Each silencer module is about three meters high, and consists of 42 splitters which are filled with high density rockwool. These silencers modules are inspected monthly.</p> <p>LTA is seeking a solution to improve the inspection process for the tunnel ventilation fans. The goal is to improve the quality of inspections of the silencer splitters, and minimise the inspection time for each ventilation fan under the current working environment to support the overall tunnel maintenance efficiency and minimise disruption of tunnel operations.</p>
Optimised Route Planner for Oversized Vehicles to Ensure Road Safety	<p>How might we optimise route planning for companies operating oversized vehicles so they can plan the most efficient and safe route, and avoid damaging road infrastructure?</p> <p>LTA oversees the checking and processing of Oversized Vehicle Movement (OVM) permits for vehicles that exceed specific width, length or weight requirements, to ensure safety for all road users.</p> <p>The oversized vehicles, operated by transport and logistics companies, typically carry large and heavy cargo, exceeding</p>

	<p>overall width of 3m (2.6m on controlled roads), rear overhang load exceeding 40% of vehicle length (or 1.8m, whichever is lesser) and the vehicle type's laden weight limits.</p> <p>LTA is seeking a solution that provides the transport and logistics companies clear route planning functions with the necessary critical road information integrated. The goal is to streamline their route planning to application, automate and speed up the application approval process, and reduce incident rates on the road during vehicle movement.</p>
<p>Monitoring Bus Capacity to Enhance Commuter Experience</p>	<p>How can we monitor and detect passenger Unable-to-Board (UTB) instances to optimise the deployment of buses on public bus services?</p> <p>LTA continually looks at new ways to enhance the service levels and reliability of the public transport system. This includes gathering insights to understand the evolving travel needs of commuters to better plan for future of travel.</p> <p>To ensure smoother journeys and seamless connectivity for commuters, LTA regularly monitors the quality of bus services. One key area that LTA monitors and evaluates is UTB instances at bus stops, whereby commuters are unable to board the bus.</p> <p>LTA is seeking a cost-effective data collection and analytics solution to accurately detect UTB instances. With this solution, LTA will be more equipped to improve the commuters' experience through more effective and efficient deployment of the buses.</p>
<p>Monitoring Train Capacity to Enhance Commuter Experience</p>	<p>How can we monitor and detect passenger UTB instances to optimise train operations and deployment?</p> <p>LTA continually looks at new ways to enhance the service levels and reliability of the public transport system. This includes gathering insights to understand the evolving travel needs of commuters to better plan for future of travel.</p> <p>To ensure that commuters benefit from safe, reliable and comfortable train rides, LTA commits significant time and resources to monitor train services. One key area that LTA monitors and evaluates is the UTB instances at train stations, whereby commuters are unable to board the train at a specific train door.</p> <p>LTA is seeking a smart data collection and analytics solution that would be able to integrate their existing ticketing data with newly captured data to accurately detect UTB instances (such as situations where the train has reached full load, and not because passengers are not moving in).</p>

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