



## **AUTONOMOUS VEHICLE MONITORING SYSTEM (AVMS)**

### **1 INTRODUCTION**

The Land Transport Authority (LTA) spearheads land transport developments in Singapore. We plan, design, build and maintain Singapore's land transport infrastructure and systems. We aspire to strengthen Singapore's land transport connectivity and integrate a greener and more inclusive public transport system complemented by walk and cycle options. We harness technology to strengthen our rail and bus infrastructure and develop exciting options for future land transport. These are encapsulated under our Land Transport Masterplan 2040 (LTMP2040).

As we work towards achieving our goals under LTMP2040, we are often confronted with operational challenges driven by a dynamic operating environment. At the same time, we continue to strive towards better cost effectiveness, manpower optimisation, environmental sustainability, reliability and safer operations. These then present us with opportunities to work closely and co-create solutions to address the challenges and requirements with our ecosystem partners/innovators.

Autonomous vehicle (AV) is an emerging technology which has potential to address manpower constraints and challenges in public transport and commercial use cases. To support LTA's regulatory work to ensure safe and reliable adoption of AVs in Singapore, a Call-for-Solutions (CFS) is launched, where LTA invites interested partners/innovators to collaborate with us for an Autonomous Vehicle Monitoring System (AVMS).

### **2 PROBLEM STATEMENT**

LTA is inviting proposals to co-develop an AVMS which can support its regulatory work to ensure safe and reliable deployment of AVs in Singapore.

### **3 DETAILS OF WHAT ARE WE LOOKING FOR**

Requirements for the AVMS proposals will be released to interested applicants who have signed a Non-Disclosure Agreement (NDA) (provided on the Land Transport Innovation Portal) and attend the CFS briefing. See details in Section 4 below.

### **4 TIMELINE**

LTA will hold a CFS briefing on **20 August 2024, 2pm** to provide more information on the problem statement. If you are interested to attend the briefing, please [register here](#) by **15 August 2024**. The venue of the briefing will be made known to registered applicants. Please

note that every applicant is required to bring along a signed hardcopy of the NDA in order to attend the briefing.

All proposals must be submitted by **16 September 2024, 1600 hours** (SGT/GMT+8) via this [submission form](#).

We encourage interested parties to visit the [Land Transport Innovation Portal](#) for the latest updates.

## 5 EVALUATION GUIDELINES

The proposal / solution should:

1. Demonstrate and provide a comprehensive understanding of how to collect, hash, and authenticate the data from multiple AV developers. Please provide the system architecture of your solution.
2. Demonstrate how the solution will meet the various requirements for analysis and data visualisation. This includes tracking of enforcement and performance metrics, event management, and data anomaly alerts.
3. Demonstrate the ability to meet project deliverables within the given timeline.
4. Include avenues for co-development throughout each step of the process. This should also include a development platform for LTA to modify or amend certain features without disrupting operations.
5. Demonstrate the approach to scale. We encourage that the proposal considers the cost and manpower required to scale as the number of AVs deployed in Singapore increases.

## 6 GUIDELINES FOR PARTICIPATION

1. To register for this Call for Solutions, you must be from one of the following:
  - a. Private company, with local business registration;
  - b. Tertiary institution based in and operating from Singapore;
  - c. Research institution based in and operating from Singapore; or
  - d. A consortium of any of the above.
2. If you will be registering as a consortium, do appoint a lead member as the main applicant and make all submissions through this lead member. The actions by the lead member of the team will be treated as representative of the consortium. All correspondence will be directed to the lead member.
3. Please provide relevant information on your (or consortium members') past experiences that are relevant for this submission.
4. Do note that all proposals submitted through this call should be brief, but with sufficient details for LTA's preliminary evaluation and shortlisting only. If your solution is shortlisted after the close of this call, we will contact you for further clarifications. You may be asked to make presentations and/or provide more information on your

solution to LTA and/or requested to host LTA at any proposed venue and/or facilities for visits and better understanding of the proposed solution.

5. If your proposal is further shortlisted for detailed development, the approach for funding will be discussed and you may be asked to fill up further application forms to include finer details on your proposed solution. Do also note that you may be required to co-fund part of the solution development trial, subject to the respective funding guidelines.
6. Any documents submitted will be treated as confidential and not be returned. By submitting any documents, you hereby consent to any disclosure by LTA of your documents to the Government of Singapore, the relevant Government Agencies, and/or government-related agencies, as LTA considers appropriate in our discretion for purpose of evaluation in this Call for Solutions.
7. Notwithstanding any other provision in this Call for Solutions, LTA may amend, suspend or withdraw all or any part of the Call for Solutions or the Call for Solution process, which will be informed via the [Land Transport Innovation Portal](#).

## 6 CONTACT US

Should you have any further queries regarding this Call for Solutions, please direct them via email to [inno@lta.gov.sg](mailto:inno@lta.gov.sg).