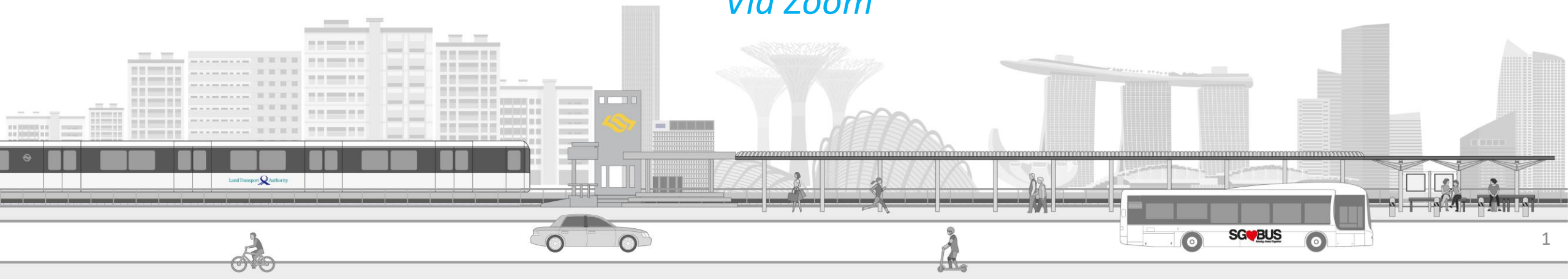


GRANT CALL FOR APPLIED RESEARCH PROJECTS TO ENHANCE TRAFFIC MANAGEMENT AND ROAD SAFETY WITH VEHICLE-TO-EVERYTHING (V2X) TECHNOLOGIES

GRANT CALL BRIEFING

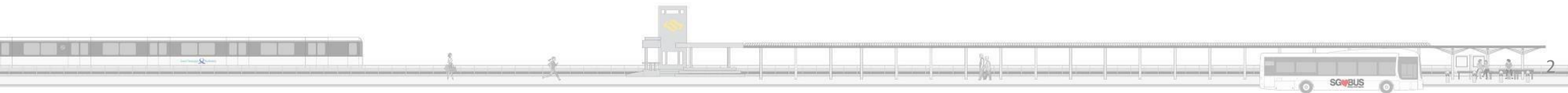
26 October 2020, 4 - 5 PM

Via Zoom



Grant Call Overview

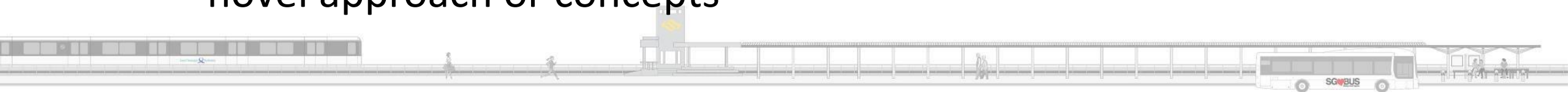
- Grant call has been launched on 19 Oct, 1200 hrs (Monday) and will close on 16 Nov, 1200 hrs (Monday)
- Funding support will be up to 5 years, however project duration should be preferably kept within 3 years.
 - Deliverables are expected to be commensurate with the length and amount of funding
- Grant call will be open to research proposals which explore new concept of operations for traffic management and road safety in response to recent developments in emerging technologies.



Objectives

- ❑ Research & testbed V2X-related use cases using advanced and emerging mobility technologies, in the following Work Streams:
 - Enhance Traffic Management
 - Enhance Road Safety

- ❑ Facilitate eco-system and support practical urban mobility solutions in an operational environment
 - Provide incubation space on the use of advanced technologies and novel approach or concepts



V2X Applied Research Projects

Desired
Operational
Outcomes

Enhance Traffic Management

- Support timely response to detected anomalies
- Improve road and traffic operations efficiency

Enhance Road Safety

- Increase situation awareness of Road Users
- Better road safety prioritisation and systems

Sensors & Detection



Architecture, Communications & Cybersecurity



Algorithms, Artificial Intelligence & Optimisation



Data Management, Fusion & Analytics



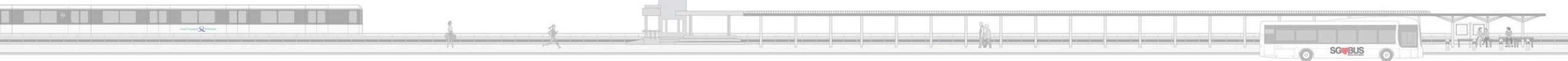
Management, Reporting & Response Systems



Suggested
R&D Focus
Areas

Project

Each funded project could be anchored on one or more of the *suggested* R&D Focus Areas.



R&D Focus Areas are delineated along the V2X Value Chain

Suggested
R&D Focus Areas
to support
Desired
Operational
Outcomes



**Sensors &
Detection**

Sensors and detection systems to reliably understand and track traffic-influencing information (including but not limited to Motorists and Pedestrians).



**Architecture,
Communications
& Cybersecurity**

Scalable and feasible system architectures and the required communications protocols (e.g. technologies such as 5G or DSRC). It can also consider pertinent issues such as the required information rate and capacity, wireless interferences and cybersecurity to support the Capability.



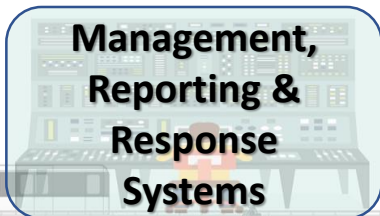
**Algorithms,
Artificial
Intelligence &
Optimisation**

Algorithms, AI and Optimisation tools which can predict, facilitate or automate sense-making, recommendation and response processes to optimise resources.



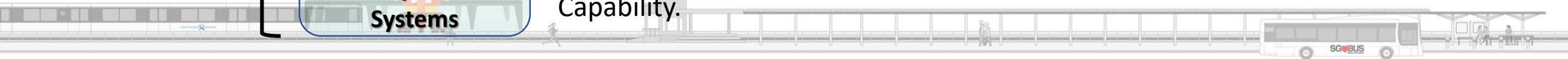
**Data
Management,
Fusion &
Analytics**

Management of large traffic-related datasets and/or the fusion of different data sources, and draw further insights and relationships through analytics.



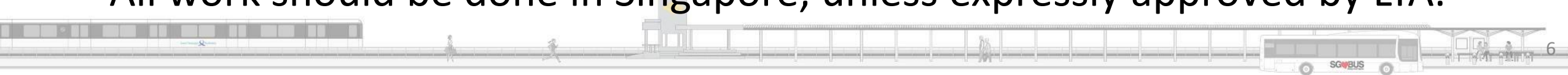
**Management,
Reporting &
Response
Systems**

Command and Control system setup, management or dashboard tools to exert functionality jurisdiction and monitoring oversight of the developed Capability.



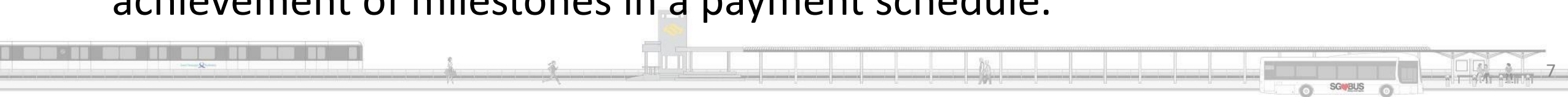
Eligibility Criteria

- The call will be open to all R&D organisations in Singapore including publicly funded **institutes of higher learning (IHLs), not-for-profit research institutions (RIs), public sector agencies, companies and company-affiliated research entities.**
- The Lead Principal Investigator will be required to have a minimum time commitment of 9 months per year in Singapore.
- International parties can participate in the project as Collaborators.
- All work should be done in Singapore, unless expressly approved by LTA.



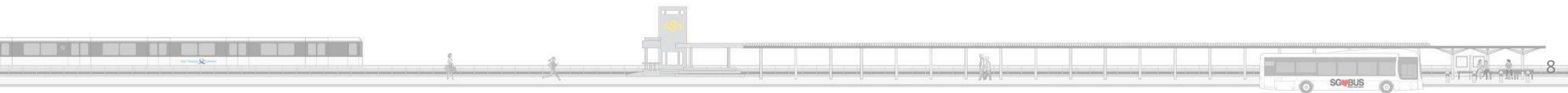
Funding Support

- LTA will support **100% of the approved qualifying direct costs of a project for IHLs, not-for-profit research institutions and public sector agencies.**
- **Companies and company-affiliated research entities will qualify for up to 70%** of the approved qualifying direct costs of a project.
- Funding support will be up to 5 years, however project duration should be preferably kept within 3 years.
- Deliverables are expected to be commensurate with the level of funding requested. LTA may require that funding support will be based on achievement of milestones in a payment schedule.



Proposal Guidelines

- Objective: importance of problem to be addressed and how expected outcomes will achieve the desired objectives
- Approach: how the team's proposed approach is better than the current state of the art technology, as well as potential pathways to deployment or commercialization
- Project Execution Plan: team members, budget, timeline, key milestones
 - Indicators (not required to propose targets for all): industry projects, industry R&D funding, industry R&D spending, industry RSE jobs created, technologies deployed



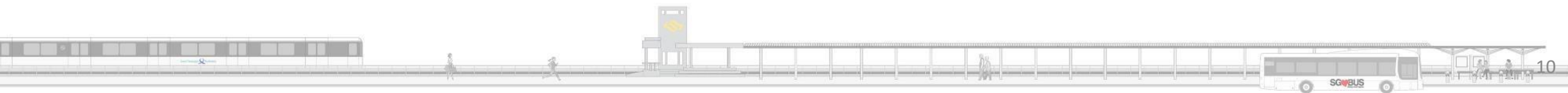
Application Process

- All relevant documents and templates will be available for downloading on the LTA website.
- Proposals are to adhere to the full proposal guidelines under Attachment 1. Interested applicants should submit full proposals (including Offline Application Package, Annex C and D) to [LTA Innovate@lta.gov.sg](mailto:LTA_Innovate@lta.gov.sg) by **16 Nov 2020 (Monday), 1200hrs**. Submissions are to indicate the email subject title as “[Submission for UMGC V2X] Title of Proposal”.
- Only documents in Word, Excel and PDF will be accepted. Please keep the total submission size of your documents to 10 Mb.
- For applications from IHLs and A*STAR Research Institutes, please submit your proposal through your respective research offices. Research offices are to consolidate the proposals and obtain DOR endorsement for submission.



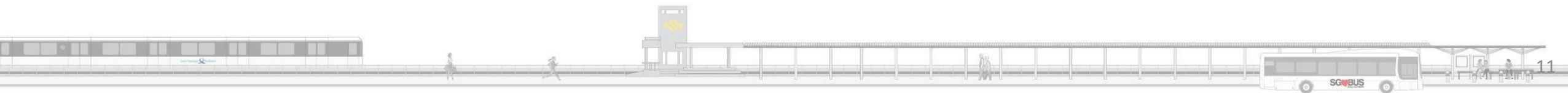
Evaluation Criteria

- Proposals will be selected and evaluated based on **i) potential for impact and subsequent scalability, ii) strength of project execution, and iii) technical competency of team.**
- Proposals that provide cash or in-kind contributions will be viewed favourably.
- Multi-disciplinary/organisation teams or teams with industry collaborators are encouraged to perform holistic analysis and facilitate downstream commercialisation and deployment of R&D technologies developed.



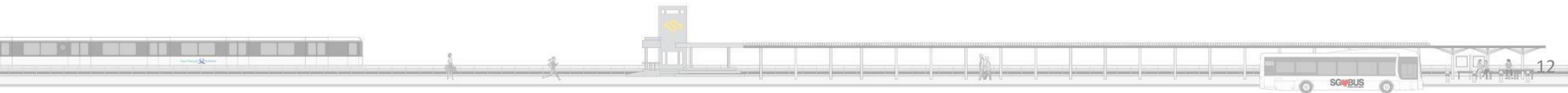
Common Observations by Evaluation Panel and Reviewers

- R&D value of proposals needs to be strengthened
- Relevance of solutions should be further elaborated
- Proposals should include quantitative targets to be achieved
- Clarity on how ideas can be implemented/deployed



Q & A

*Grant Call FAQs and Briefing Q&A will be uploaded onto the LTA website



Thank You!

For further enquiries on this Open Call, please email LTA at LTA_Innovate@lta.gov.sg.

LTA website:

[https://www.lta.gov.sg/content/ltagov/en/industry_innovations/development_funds/research_technology_grant_calls/Enhance Traffic Management and Road Safety with V2X.html](https://www.lta.gov.sg/content/ltagov/en/industry_innovations/development_funds/research_technology_grant_calls/Enhance_Traffic_Management_and_Road_Safety_with_V2X.html)

