

UMGC AV PUDO Grant Call

Q&A

Funding Support and Fundable Items

1. If a research institute collaborates with a company, can the company also be a PI of the project? Or should they be a collaborator? Can a collaborator receive funding for the project?
The research institute would need to discuss with the company on the arrangement (whether to be a Co-PI or collaborator). Co-PIs are eligible for funding. However, collaborators would not receive any funding.
2. Can firms be collaborators for the project and at the same time, subcontracted to do certain parts of the project?
Core research work for this project must be done by PI and the research team. Any work that will be subcontracted must be indicated clearly in the proposal (with justifications why this work should not, or could not, be undertaken by the core research team) for review by LTA.
3. If the duration is between 2-5 years, what is the possible value of each proposal?
For the research duration, we would prefer to keep it within two years so that the research outcomes could support our ongoing development work on AV. However, if a longer project duration is required, please elaborate the research approach in the proposal, and explain why it could better deliver the research outcomes.
4. Can an entity/firm/collaborator participate in multiple proposals?
There is no limit on the number of proposals an organisation can submit. Likewise, a firm could also be involved in proposals submitted by different organisations.
5. How much funding will be made available for each grant call?
Institutes of higher learning, public sector agencies and not-for-profit research laboratories qualify for up to 100% of funding support for the approved direct costs while companies and company-affiliated research entities qualify for up to 70% funding of the project's direct costs. The amount of funding that LTA will award for each project will depend on the quality of the proposals received.
6. Are individuals / SMEs allowed to apply for the grant? Does it have to be an organisation with a research department?
Grant calls are open to individuals and all R&D organisations in Singapore including publicly funded institutes of higher learning (IHLs), not-for-profit research institutes (RIs), public sector agencies, companies and company-

affiliated research entities. Organisations without a research department are still allowed to apply.

7. What is the funding source for the grant call?
The grant call is supported by NRF as part of the Research, Innovation and Enterprise 2020 Plan.
8. Does the R&D team need to be in Singapore entirely? For foreign collaborators, can the research team under him/her be allowed to engage or does research staff and activities have to be 100% in Singapore?
All R&D activities must be conducted in Singapore, unless approved by LTA. If foreign collaborators are engaged to provide consultancy or advisory services to the research team, their work is expected to be conducted in Singapore and the proposal's budget can include their air travel to Singapore and accommodation here as necessary. Such proposals will be evaluated based on the justifications of the need for such foreign consultancy services as part of the research approach, and its total project budget.
9. Are the lead PIs/co-PIs salary fundable?
Under the NRF guidelines, salaries of the Lead PI/Investigators are not fundable. Only the salaries of the research team members hired under the project will be fundable. The full list of non-fundable direct cost items is available on LTA's website.
10. Will the university's 20% indirect costs (overheads) be fundable in the grant call?
Yes. Projects under the Institutes of Higher Learning and not-for-profit research institutions are eligible for the 20% indirect costs.
11. For research scholarship (RS), how much can we budget for it? If our project is 2 years, can we still budget RS (which is typically 4 years)?
For RS, please approach your research office for advice. For a 2-year project, we will only support the RS for 2 years.

Evaluation

12. How many proposals will be awarded?
Applicants should submit proposals encompassing all the focus areas mentioned. However, the number of proposal(s) awarded will depend on the quality and quantity of the proposals received.

13. Is the involvement of an industry partner compulsory?
The involvement of industry partner is strongly encouraged and will be assessed with a higher merit during the evaluation phase. This is to ensure that the findings from the research team can resolve practical challenges on the ground and could be piloted and tested by a working AV.
14. Will track record on international research and trials be favored?
We will assess the company's track record and the strength of the research team, and hence such track records will be required in your proposal.
15. How will LTA assess whether to fund potential applicants?
Proposals submitted by applicants will be evaluated by the LTA and URA team as well as international experts. Shortlisted proposals will then be submitted to the UMGC Technical Evaluation Panel and will be evaluated based on the proposals' (i) potential for impact and deployment, (ii) strength of project execution and (iii) technical competency of team.
16. During the application period, will applicants be given the chance to review their proposals with LTA's/URA's guidance, or will applicants need to re-submit a fresh application at a separate grant call later on?
During the evaluation process, LTA and URA may require shortlisted proposals to clarify and / or revise their proposals.
17. How long is the evaluation process, what is the duration from submission to award?
The duration from submission to award will typically take about 6 months and we aim to award successful projects by Q1 2021.
18. Is there a presentation to be given to the evaluation panel before a final decision on the award is made?
The project teams for the shortlisted proposals will be invited to present to the Technical Evaluation Panel (TEP). The panel will evaluate the proposal based on the eligibility criteria set. Proposals recommended by TEP will also have to be approved by NRF subsequently.
19. Does the evaluation panel comprise individuals beyond LTA?
The proposals will be sent for peer review, where Subject Matter Experts from LTA and URA and relevant agencies will be invited to provide their views on the proposals. After which, promising proposals will be submitted to international experts for evaluation. The shortlisted proposals will then be put through the UMGC TEP which includes senior representatives from the industry, IHLs, and public agencies for consideration.

Project Scope and Execution

20. Must the proposal cover focus areas A, B and C?
The proposal should include all focus areas.
21. How long will successful applicants be given to develop their projects?
The project duration should be preferably kept within 2 years.
22. Would LTA & URA be interested in simulating changes in traffic flow & traffic intensity in a larger area/region as a result of large-scale adoption of AVs (system level)? Based on a system level AV impact study, more detailed modelling of AV demand (and throughput) at bus stops, taxi stand and PUDOs can be simulated.
The grant call's focus is on bus stops, taxi stands and PUDOs and to develop the guidelines to be implemented islandwide.
The project is not looking into the wider traffic flow in the area, district or town. Nonetheless, if the applicant feels that such a simulation is something that could add value or is important in order to develop the guidelines for PUDOs, he/she is encouraged to include it in the proposal.
23. Are there specific locations identified already?
We have not identified specific sites and locations of bus stops, taxi stands and PUDOs to be studied in this project. After the proposal is awarded, we will work with the awarded team to shortlist sites that could be used for data collection/pilots.
24. Regarding compatibility with existing systems, would agencies be open to using commercially available traffic simulation software?
The research team should ensure that the final output is usable by agencies if commercially available traffic simulation software is preferred. If the software is required to operate the system, please ensure relevant licenses are obtained and the necessary costs have been included in the budget.
25. Will existing systems used by agencies be detailed to the interested applicants?
We are unable to provide the full list of systems used by agencies at this point in time, but upon shortlisted or selected, we will work with the applicant to ensure that it is a good fit with the existing systems. In general, the product should be easily used and compatible with most, if not all of the systems available. Applicants may also contact us from now till the grant call closing date to check if their proposed solution is compatible with existing systems.

26. The factsheet mentioned “selected bus stops” - are these defined by LTA/URA or by the research team?
Applicants should propose suitable sites in their proposals and include the justification for the choice of these sites. After the proposal is awarded, we will work with the awarded team to shortlist sites that could be used for data collection/pilots.
27. Will agencies help to secure permissions to access the pilot site?
Yes, we will assist in securing permissions to access the pilot sites.
28. What does predicting future demand in Focus Area A refer to?
For focus area A, the output would be used to tackle existing problems since we have observed long queues at certain PUDOs. With AVs, we are interested in how the demand and throughput of PUDOs would change with the introduction of different AV types as future scenarios.
29. Deliverables for Focus Area B mention a ‘prototype’. Should this be a real-life working prototype, or a virtual model/design prototype?
The prototype could be a virtual model/design prototype, or a physical working prototype, subject to the ability of the project to deliver the overall scope within a preferred duration of about 2 years. In either approach, the research team must include a validation method to the proposed design of the prototype.
30. Should the validation plan for the results be included in the 2-year timeframe?
Yes, it should be included within the project timeframe.
31. Would LTA’s OLIVE team be involved and provide any data collected by the system?
OLIVE is a system that LTA uses to monitor the AV trials at the one-north AV trial site. Tenderers should provide for their own log/monitoring services, if required.
32. Would we be able to access any static sensor information e.g. traffic cameras?
Requests to access any data should be indicated in the proposal, and LTA will assess whether we are able to provide the requested information.
33. Are we allowed to install our own sensors to collect data?
We can discuss and facilitate the installation, but this would depend on what kind of sensors and the proposed location.
34. Are there any specific AVs to be used for this project or any existing AVs that LTA is currently using? Can we have details of the existing AV?

We will be focusing on AVs that are being used for public transport i.e. AV buses and AV shuttles (shared) as the priority that will be stopping at bus stops, taxi stands and PUDOs. To provide a comprehensive analysis of AVs in the future, we are also interested to understand the impact of AV sedans at taxi stands and PUDOs and the design recommendations from that.

35. Could the AV be provided or available for rent?
If necessary, we can provide references to AV developers that the proposers can consider and engage further for possible partnerships.
36. When can you share contact information of potential collaborators?
The contact list had already been sent out on 27/10/2020.