

## **UMGC Grant Call on Improving Productivity of Rail Maintenance FAQs**

### **1. Can LTA share how many other grant calls it intends to call in the coming months? How often will we launch grant calls?**

At this point in time, we do not have immediate plans to launch another grant call on railway research in the coming months. Interested participants are advised to check LTA's website

([https://www.lta.gov.sg/content/ltagov/en/industry\\_innovations/development\\_funds/research\\_technology\\_grant\\_calls.html](https://www.lta.gov.sg/content/ltagov/en/industry_innovations/development_funds/research_technology_grant_calls.html)) or NRF's Integrated Grant Management System (<https://researchgrant.gov.sg/Pages/index.aspx>) regularly for the latest information on new grant calls. Key research groups will also be alerted via email when new grant calls are launched.

### **2. How much funding will be made available for each grant call?**

The amount of funding that LTA will award for each grant call depends on the quality of the proposals received.

### **3. How will LTA assess whether to fund potential applicants?**

Proposals submitted by applicants will be subjected to a rigorous assessment process involving LTA's inhouse Subject Matter Experts as well as international and local scientific and technical experts from both Institutes of Higher Learning and the industry based on a proposals' (i) potential for impact and subsequent scalability, (ii) strength of project execution and (iii) technical competency of team.

### **4. How long will successful applicants be given to develop their projects?**

The length of projects could be up to 5 years; however, projects with duration 3 years or shorter is preferred.

### **5. 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.

**6. Will there be more than one successful applicant per grant call?**

The number of successful applicants will depend on the quality of proposals received. There is no cap on the number of projects to award.

**7. How will LTA assess whether the solutions are feasible, and will feasible solutions be implemented?**

LTA's focus is to develop technological solutions that could eventually be deployed to improve our land transport system. Some examples of key considerations to assess the feasibility of proposals include the likelihood of user adoption, expected implementation and maintenance costs, and expected improvement over current practices, systems, and/or technologies. Applicants are encouraged to identify potential testbeds or industry partners to conduct proof of concept trials. Solutions that have proven successful in the proof of concept stage could potentially be implemented in a larger scale.

**8. What were the results from previous grant calls?**

From the previous grant calls, we have awarded 6 projects ranging from bicycle parking place through image recognition to smart traffic management technologies.

**9. 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.

**10. Where can I find out more information about this grant call?**

For further enquiries on this Open Call, please email LTA at [LTA\\_Innovate@lta.gov.sg](mailto:LTA_Innovate@lta.gov.sg). More details including the challenges, related possible solutions, and guidelines on the submission of proposals can also be found on LTA's website ([https://www.lta.gov.sg/content/ltagov/en/industry\\_innovations/development\\_funds/research\\_technology\\_grant\\_calls.html](https://www.lta.gov.sg/content/ltagov/en/industry_innovations/development_funds/research_technology_grant_calls.html)).

**11. Is there any budget limit in this Grant Call initiative? Is there any budget set aside for this Grant Call?**

There is no budget limit for this call. The amount of funding that LTA will award for each project will depend on the quality, potential impact of the proposal and subsequent scalability of the solution developed. Projects with 3 years or shorter duration, substantiated with the necessary budget are preferred.

**12. Why is this call opened for only such a short period, can it be extended?**

This timeline is based on the target to award the projects by Q1 2021. This is the maximum duration that we can keep the call open in order to meet our evaluation timeframe. The deadline will not be extended.

**13. What are the grant Intellectual Property (“IP”) T&Cs?**

As UMGC is sponsored by NRF, we will follow NRF’s Research Grant T&C as the base. However, as LTA is the administrator of this grant, we reserve the rights to impose any further conditions – this will be discussed and agreed with you prior to the issuance of the Letter of Award should your project be successful in the application.

**14. 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, we are aiming to award the projects by Q1 2021.

**15. Does the proposed solution need to completely match the challenge statement or can there be some variations?**

We are looking for scalable solutions, solutions that have potential to be deployed in medium to long term. The proposed solutions which address the challenge statements are preferred, and the effectiveness of the proposed solutions will be evaluated by a Technical Evaluation Panel. The effectiveness of a proposal may also be compared with the other proposed solutions submitted, if more than one proposed solutions are able to address the same challenge.

**16. 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 do a presentation to the Technical Evaluation Panel. The panel will evaluate the proposal based on the eligibility criteria set. All proposals will also have to be approved at the NRF level subsequently.

**17. Are there any benchmarking of current solutions available for comparing with the solution provided?**

For the challenge statements we have proposed, there are no ideal solutions at the moment, hence there is no benchmarking. We are looking for innovative new solutions with deployment potential.

**18. Will there be assistance to link up with the Public Transport Operators (PTOs) to help potential applicants to better understand the challenges so that the proposals can address the statements directly and more specifically?**

Yes. Do contact us at [LTA\\_Innovate@lta.gov.sg](mailto:LTA_Innovate@lta.gov.sg) with your interested problem statement, we will link you up with the relevant PTOs to directly help you understand the problems more.

**19. For projects that require extensive field trials, can LTA help coordinate with the PTOs for the access of P-Way and rail systems?**

Yes. LTA can help to coordinate with the PTOs on the access.

**20. Is it mandatory to have PTOs as official members of the proposed team?**

No. It is not mandatory.

**21. Are statements of support from the PTOs an essential requirement for putting up the proposals?**

If the proposed solution adopts the same concept as those possible solutions listed, we would not require a separate support letter from the PTOs. Otherwise, if a completely new solution concept is proposed, we will need to understand the effectiveness of such a solution and the support from the PTOs will be required in this case. We can discuss this separately on a case by case basis.

**22. Can solutions be outside of the maintenance pain points, such as including operations pain points? Will the scope be open to other focus areas such as communications and signalling and other M&E systems?**

Do contact us at [LTA\\_Innovate@lta.gov.sg](mailto:LTA_Innovate@lta.gov.sg), to provide us with more details and we will assess the problem on a case-by-case basis .

**23. Will the proposed solutions be upon the existing fleet?**

While the proof of concept and deployment would be carried out on an existing fleet, we are however looking for general applications, which should be deployable in all fleets.

- 24. 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 should be conducted in Singapore, unless expressively approved by LTA. For foreign collaborators, they can provide consultancy or advisory services to the research team.

- 25. What is the expected TRL for the solution? Should it be immediately deployable? Or more of a basic proof of concept?**

The expected TRL of the project should be above 5-6. We are looking for solutions that can be deployed after 2 or 3 years of R&D. In principle, this grant would not support basic research where the TRL is very low.

- 26. Are the lead PIs/co-PIs salary fundable?**

Under the NRF guidelines, salaries of the Lead PI/Investigators are not fundable. Only the research team members hired under the project will be fundable.

- 27. Will the university's 20% indirect costs (overheads) be fundable in the grant call?**

Yes. Projects under the Institutes of Higher Learning, not-for-profit research institutions are eligible for the 20% indirect costs.

- 28. Will the commitment (eg in-kind, cash) from the industry partner be required in the proposal?**

The commitment is preferable, but not mandatory.

- 29. Will downstream set-up costs for commercialisation be fundable? Such as setting up of systems in terms of increasing productivity, some costs involved in the setting up of some of the manufacturing equipment or facilities in the manufacturing plant. Will such translational costs in fundable?**

This is assessed on a case-by-case basis. During the evaluation, we will be looking at the extent to which the equipment and/or system setup would benefit the R&D or the commercialisation efforts. If the proposed equipment is more for the commercial advantage of the applicant, it will unlikely be funded. However, in the process of research work, if the equipment and/or system setup speed up the R&D process within the proposed scope (e.g. to build a prototype to demonstrate the idea of how it works), this is potentially fundable. To note that

once the prototype is proven to work, any sort of further upscaling or creating of more prototypes for commercialisation, will not be funded through this grant.

**30. Does the evaluation panel comprise individuals beyond LTA?**

The proposals will be sent for peer review, where we will find international experts to provide their views on the proposals. After a round of international review, together with LTA's own Subject Matter Experts' review, we will do a shortlisting of proposals. The shortlisted proposals will then be put through the Technical Evaluation Panel which includes senior representatives from the industry, IHLs, and public agencies. Proposals will then be selected to be awarded.

**31. What type of contract model will this grant call be?**

This is not a contract but a research grant call, where there will be an awarded sum to each project. Each project will have milestones set up, tagged to a certain payment value that is a percentage of the total awarded value of the project. Once the milestone is achieved, payment will be through reimbursement claims based on the submission of invoices, receipts, payslips, etc.

**32. Does the final deliverable have to be a hardware or can it also be a software solution?**

This will depend on the nature of the proposed solution. We can further discuss the solution with you together with the PTOs to determine which solution could best solve the challenges.

**33. On the co-ownership of Intellectual Property, could LTA assist to talk to our institution's research office separately?**

Yes. LTA will discuss with your corresponding research offices on this. If the proposed solution is aligned with LTA's interest and we see the value in co-owning the IP rights, we will discuss with your research office to come to an agreement prior to award of projects.

**34. Are there a few main technical people in LTA we can directly correspond with for discussions on our ideas?**

Yes, we have our Subject Matter Experts with us. Do contact us via email with more details and we will link you up. A reminder that the submission of the proposal still has to be done and the deadline still applies. Contacting LTA before the submission deadline on 19 October is not equivalent to a submission. We suggest to carry out the discussions on the ideas quickly so that there is time for submission.