

Our Ref: BCA 94.20.1  
Date: 22 September 2016

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## **Circular to Professional Institutes / Associations**

Dear Sir / Madam,

### **MNDRF GRANT CALL FOR MAINTAINABLE DESIGN APPRAISAL SYSTEM**

#### **Background**

1. A Grant Call that is funded by Ministry of National Development Research Fund (MNDRF) for Maintainable Design Appraisal System has been launched on 22 September 2016.
2. This call is open to Institutes of Higher Learning (IHLs), Research Institutes, public sector agencies, private sector companies and not for-profit organisations.
3. Project shall involve researchers from academic or research organisations to collaborate with at least one relevant industry partner, such as technology and solution provider, building owner/developer or consultant.

#### **Scope of Grant Call**

4. The objective of this grant call is to develop a Maintainable Design Appraisal System (MDAS) at design stage and primarily to assess building designs with a view to appreciate their impact on the ease of carrying out downstream maintenance, to achieve labour and time efficiency. The envisaged deliverables for the project are as follows:

- a. Review of overseas practices

An important element to this project is an understanding of the correlation between building designs and maintainability in advanced economies. This would include insights on the following:

- i. Maintainability-related regulatory regimes overseas;
  - ii. Overseas good practices – including technology adoption – in design for maintainability;
  - iii. Factors and considerations when designing for maintainability
- b. Productivity research and analysis in maintenance-related works

Availability of the relevant productivity information is key to the realisation of this project. This would include

- i. Identifying the critical maintenance-related works that are labour intensive and which could be addressed at design stage to reap downstream productivity gains;
  - ii. Establishing productivity data associated with the identified critical maintenance-related works to formulate the baseline for assessing labour efficiency at design
  - iii. Identifying practical and new solutions / strategies at design to improve the aforesaid baseline productivity of the identified critical maintenance-related works
- c. Formulation of the appraisal system

This should include the following:

- i. Development of an appraisal framework to effectively assess building designs and its impact (labour and time saving) on downstream maintenance with the following considerations:
  - Systematic and scientific correlation with the productivity research and analysis under (b);
  - Allow for flexibility in design options, i.e. does not unduly restrain building designs and performance;
  - Practicality and ease-of-adoption by the industry, such as a scoring system similar to Buildability score, Constructability Score and Green Mark Score, that industry is familiar with

- ii. Piloting of the appraisal system to validate its effectiveness vis-à-vis the intended outcomes

5. Notwithstanding the envisaged deliverables mentioned at Para 4, BCA is open to other approaches in achieving the intended outcomes of the project.

### **Funding Support**

6. IHLs, research institutes, public sector agencies, private sector companies and not-for-profit organisations will qualify for up to 100% funding support of approved direct qualifying costs of a project. Only IHLs and not-for-profit entities would be allowed support for indirect costs. These include up to 20% of qualifying costs for overhead costs.

7. Proposals should not be funded or be currently considered for funding by other agencies.

8. Funding awarded cannot be used to support overseas R&D activities. All funding awarded must be used to carry out the research activities in Singapore unless approved in the grant.

9. We expect each project to be valued within a range of S\$700,000 to S\$1,000,000. The Project duration shall not be more than 18 calendar months, including any piloting.

### **Application**

10. All applicants must send in 2 hard copies and 1 electronic copy of duly signed proposals by **03 November 2016** to the following:

BCA R&I Grant Secretariat  
c/o Building and Construction Authority  
R&D Programmes Department  
200 Braddell Road  
ZEB Level 3  
Singapore 579700

11. The full details of the grant call can be found at:

[http://www.bca.gov.sg/ResearchInnovation/mndrf\\_maintainability.html](http://www.bca.gov.sg/ResearchInnovation/mndrf_maintainability.html)

12. For more information, please contact:

Mr Deva Lutchia at [deva\\_lutchia@bca.gov.sg](mailto:deva_lutchia@bca.gov.sg) (scope of grant call),

Ms Matilda Kenanga at [matilda\\_kenanga@bca.gov.sg](mailto:matilda_kenanga@bca.gov.sg) (MNDRF related enquiries) or

Ms Grace Goh at [grace\\_goh@bca.gov.sg](mailto:grace_goh@bca.gov.sg) (MNDRF related enquiries)

Thank you.



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