

2016



MINISTRY OF HEALTH
SINGAPORE

Ageless Workplaces Innovation Grant

National Innovation Challenge (NIC) on Active and Confident Ageing

PUBLIC DOCUMENT
May 2016

Organised by:

Ministry of Health Singapore (MOH)

Supported by:

**Tripartite Committee on the Employability of Older Workers
National Research Foundation (NRF)**

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IMPORTANT NOTICES

1.1 For the avoidance of doubt, this Public Document for the Ageless Workplaces Innovation Grant shall be read with and shall be subject to the important notices as set out in Annex A.

INTRODUCTION

2.1 Population ageing is a result of (i) an increase in longevity from advances in medical sciences and public health, as well as (ii) falling fertility. If we do not make improvements to the employability of our Ageing population, Singapore will face a shrinking workforce as more Singaporeans retire and fewer Singaporeans enter the workforce. By 2030, only 0.7 Singaporeans will enter the workforce for every Singaporean who retires¹.

2.2 In order for Singapore to remain a vibrant and dynamic economy, practical disruptive innovations in the workplaces are needed to unleash the potential of the silver workforce, and help individuals maximise the opportunities that come from longevity.

OBJECTIVES

3.1 The Ageless Workplaces Innovation Grant under the NIC is organised by MOH and supported by the **National Research Foundation (NRF)** and the **Tripartite Committee on the Employability of Older Workers**.

3.2 The Ageless Workplaces Innovation Grant aims to catalyse translational research and innovations that will (i) improve the productivity and health of older workers, and/or (ii) enable older workers to be employable for as long as possible, beyond 65 years old.

3.3 Through this Grant Call, MOH seeks **novel, practical and impactful game-changing solutions** that may include (a) new inventions in automation or labour-augmenting devices that can improve the productivity of older workers or (b) significant trial of age management systems² that have never been trialled at scale locally before. Marginal improvements or changes to human resource (HR) practices or the physical workplace which can be addressed using other funding sources will not be considered.

¹ Population White Paper 2013. Based on current definition of retirement at 65 years old and working population between the age of 20 and 64 years old.

² Age management is a multi-disciplined approach to manage and assimilate mature employees in the organisation. It includes recruitment and selection policies, job redesign, flexible work arrangements, multi-generational workforce management, performance management and well-being programmes.

CHALLENGE STATEMENTS

4.1 Participants forming Project Teams can submit more than one application and the Grant Proposal should be in response to the challenge statement. However, a Project Team will only be awarded Funding for one Project.

4.2 The challenge statement to Participants is to:

Transform the workplace into an ‘ageless workplace’ that can enable a 50% improvement in the productivity of older workers aged 65 years and above and/or increase the employment of workers aged 65 years and above by 50% or more, both compared to sector and company specific benchmarks, whichever is higher.

4.3 This transformation can be a (i) physical transformation (e.g. through usage of assistive technology or tools), (ii) one that targets organisational strategies (e.g. workplace and work process re-design, progressive HR practices), or (iii) both.

4.4 For avoidance of doubt, the words and expressions in the challenge statement shall have the meanings assigned to them as follows:

“Ageless workplace” Means a place of work that is welcoming for all persons, regardless of their age such that all persons can continue to meaningfully contribute to this place of work for as long as they wish to.

“Productivity” Means output per older worker aged 65 years and above, where output can be measured in terms of physical quantities or operational efficiency etc.

4.5 Project Teams can address the challenge statement by looking at ideas (i) **across sectors** or (ii) focus on a **sector specific** solution, e.g. retail, hospitality, food & beverage (F&B), healthcare. Proposed innovations may involve, but shall not be limited to, assistive technology, workplace ergonomics, new models of age management or human resource (HR) practices for employees of all ages, optimal lifespan of certain job types and related rotation policies, flexi-hours (e.g. time-bank system to allow for work-learn or work-family), job-task innovations, job re-design, optimal mix of ages in job teams, etc.

GUIDELINES AND CONSIDERATIONS

5.1 Awardees must be willing to collaborate with MOH or MOH's Affiliates to ensure that any proposed solutions are flexible, extensible and based on open data standards used by organisations in Singapore. This is to facilitate future enhancements, information exchange and backend integration of services and functionality, to both existing and future systems.

ELIGIBILITY

General Eligibility

6.1 The Ageless Workplaces Innovation Grant is open to all Organisations, registered and/or incorporated in Singapore. There are no restrictions on nationality for individuals, but the entity they represent must be registered in Singapore either through the setting up of a local equivalent of the entity in Singapore or through a consortium with Singapore-registered entities.

Project Team Composition

6.2 Participants in the Ageless Workplaces Innovation Grant are required to partner an Implementation Partner and form a Project Team comprising:

- a) Members from multi-disciplinary (e.g. pairing medical and technology, engineering) backgrounds and/or involving more than one Organisation; and
- b) An Implementation Partner to test-bed the proposed solutions.

6.3 There is no restriction on the number of Participants in each Project Team.

6.4 Participants are expected to form their own Project Teams to participate in the Ageless Workplaces Innovation Grant. MOH reserves the right to disqualify or reject any Project Team in the event of the withdrawal of any Member from the Project Team.

Principal Investigator or Project Team Lead

6.5 Each Project Team must appoint a Principal Investigator (PI) / Project Team Lead (TL) to oversee and coordinate the implementation of the Project during the funding period of the Project.

6.6 The PI/TL will serve as the primary point of contact with MOH for the purpose of the NIC. The PI/TL shall make all reasonable efforts to ensure that all Members and Investigators in the same Project Team are informed of all matters relating to the Grant.

6.7 The PI/TL must reside in Singapore for at least six (6) months in each calendar year over the duration of the funding period of the Project.

Host Organisation

6.8 Project Teams shall identify a Host Organisation. If awarded the Grant, the Host Organisation shall receive the Funding on behalf of the Project Team. The Host Organisation shall in turn make funding arrangements with the other Members.

SUPPORT AND FUNDING

Project Funding

7.1 Awardees may qualify for funding of up to 80% of total approved qualifying costs to develop and implement their Project for a period of up to three (3) years, with the possibility of extension for another one (1) year. Approved qualifying costs include:

- a) **Developmental costs**: These may include costs related to new equipment, IT hardware or software, manpower and training that are assessed prior to the implementation of the Project, and necessary to operationalise and evaluate the Project. Other developmental costs will be assessed on a case-by-case basis.
- b) **Operating costs**: These include incremental manpower cost, engagement of consultancy services, rental and leases, utilities, communications, public relations and promotions, travelling and transport and minor assets including medical equipment that are assessed to be necessary to operationalise and evaluate the Project.

7.2 Project Teams may refer to the Funding Guide for the National Innovation Challenge on Active and Confident Ageing available for download from the National Medical Research Council (NMRC) webpage at (http://www.nmrc.gov.sg/content/nmrc_internet/home/grant-navigation/competitive-research-grants/national-innovation-challenge-on-active-and-confident-ageing.html) for more information on Funding. The actual funding quantum for selected Projects will be determined upon assessment of the impact and scope of the Project.

7.3 Support for indirect costs, on top of supportable qualifying direct costs, is capped at 20% of the supportable qualifying direct costs.

7.4 Funding will be provided in phases, subject to the successful attainment of milestones and Key Performance Indicators (KPIs) tied to each phase, as described in the table below:

	Design Phase	Development Phase	Implementation Phase
	Proof-of-Concept	Proof-of-Value	Test-bedding
Description	To articulate the concept of the programme / service / prototype and the process by which to achieve stated outcomes To provide studies and analysis that support the concept's viability for further development.	To develop and validate the programme / service / prototype so that it takes on a clearer form to achieve the intended outcomes.	To test and validate the programme / service / prototype in the field (a relevant environment) May include initial production and roll-out.
Requirements	N.A.	Successful attainment of KPIs and milestones under the Design Phase. Proof-of-concept shows promising results and clear validation plan for proposed programme/service/prototype through a pilot.	Successful attainment of KPIs and milestones under both the Design and Development phases. Validated pilot programme/service/prototype before field test-bedding.
Time Period	Three years, with the possibility of an extension for another one (1) year. Project Teams will have the flexibility to decide the time allocated to each phase. The Implementation Phase should last for at least one year.		

7.5 Project Teams are required to track three mandatory KPIs pre and post implementation of solutions in the Implementation Partner as described in clause 8.8(d) below. Project Teams should also consider at least two other KPIs.

7.6 Project Teams are to demonstrate clear outcomes for the Proof of Concept and Proof of Value stages must be demonstrated by the Project Teams before proceeding to the Test-bedding stage. Project Teams who fail to do so will not receive funding support for the Implementation Phase (or Test-bedding stage) of the Project.

7.7 All Projects must be conducted in Singapore and Funding shall not flow out of Singapore to support overseas entities.

7.8 The relevant Project Teams will be notified by MOH if they are shortlisted for the award of the Grant. MOH will then enter into negotiations with the Project Teams on the terms and conditions of the Letter of Award. Funding shall be granted subject to the mutual agreement between the relevant Project Teams and MOH on the terms and conditions of the Letter of Award.

7.9 Funding will be administered and reimbursed through the NIC(PO).

GRANT PROPOSAL SUBMISSION

Overview of Grant Proposal Submission

8.1 Grant Proposals will be submitted through a **two-stage process**, as follows:

- a) **Project Abstract.** Project Teams shall first submit an abstract of their Project, using the “Project Abstract Submission Template” that can be downloaded from the NMRC webpage at (http://www.nmrc.gov.sg/content/nmrc_internet/home/grant-navigation/competitive-research-grants/national-innovation-challenge-on-active-and-confident-ageing/Ageless-Workplaces.html). Participants shall furnish all necessary information and documents as required in the template. Two hard copies of the Project Abstract and any supporting documents should reach MOH **no later than 22 July 2016 at 5:00pm**. All Project Abstracts received will be preliminarily assessed for compliance with the eligibility criteria and scope. Shortlisted eligible Project Teams will be asked to flesh out their Project in greater detail for the second stage.
- b) **Project Proposal.** MOH will invite the respective PI/TL of shortlisted Project Teams via email to submit their detailed Project Proposal using the “Project Proposal Submission Template” that will be emailed to them. Project Teams shall furnish all necessary information and documents as required in the template. Two hardcopies of the Project Proposal and any supporting documents should reach MOH no later than the deadline stated by MOH in the invitation email.

8.2 All submissions to MOH must be clearly marked as “Ageless Workplaces - National Innovation Challenge (NIC) on Active and Confident Ageing”, and delivered or mailed to:

National Innovation Challenge (NIC) on Active and Confident Ageing
Programme Office
Ministry of Health
College of Medicine Building
16 College Road Singapore 169854

8.3 In addition to submitting hard copies as provided above, Project Teams shall email soft copies of their Project Abstract and Project Proposal to NIC_Ageing@moh.gov.sg by the respective deadlines.

8.4 MOH reserves the right to reject late submissions of Grant Proposals.

Project Abstract

8.5 Project Abstracts should include, but shall not be limited to, the following:

- Objective(s) of the Project;
- Literature review and the evidence/basis for the Project;
- Key components and innovations of the Project;
- How the Project could address the challenge statement;
- Summary of the implementation plan, timelines and milestones of the Project; and
- Summary of the evaluation framework and KPIs to track for the Project.

8.6 The length of the Project Abstract should not be longer than 5 pages (excluding supporting documents).

Project Proposal

8.7 Project Proposals should include, but shall not be limited to, the following:

- Objective(s) of the Project;
- Summary of supporting evidence from the literature review for the intended objective(s) and/or solution(s) of the Project;
- Description on the key components and innovations of the Project and how the Project could address the challenge statement, including computations on KPIs;
- Detailed Project phases, including a detailed implementation plan, timelines and milestones for the Project;
- Detailed evaluation framework and KPIs to track for the Project;
- Scalability and sustainability of the Project;
- Detailed deployment plan to scale the solution;
- Estimated costs to or fees/charges payable by client, if any;
- Required Funding for the Project;
- Challenges in Project design;
- Discussion on key assumptions of the Project; and
- IP declaration.

8.8 Additional guidance on completing Grant Proposals are as follows:

- a) Roles and Responsibilities. The roles and responsibilities of every Member of the Project Team must be clearly specified. Specifically, Project

Teams are to articulate which Member will be in charge of tracking outcome measures, ensuring safety and well-being of persons involved in any activity conducted in relation to the Project and administering of the Funding if awarded.

- b) Proposed solution. Project Teams are expected to articulate in detail their proposed solution and will be expected to test-bed the proposed solution at the implementation phase if awarded the Grant. They will also be expected to ensure the safety and well-being of persons involved in any activity conducted in relation to the Project is not compromised in any manner whatsoever. The Project Teams shall remain accountable for the safety and quality of care of human subjects during the course of the Project and be responsible to submit any applications required for ethics approval, if necessary.
- c) Implementation Plan. Project Teams are required to describe all implementation activities, stages, Milestones and targets.
- d) Computation of KPIs. Project Teams are required to state the baseline and target KPIs by phases as elaborated in clause 7.4 above based on the following indicators.

Key Area	KPI
Productivity	<p>Mandatory KPI #1</p> <p>This is measured using <u>output per older worker</u> (i.e. 65 years and above). Project Teams should establish the baseline output per older worker before the implementation of the solution. Project Teams should show a <u>productivity improvement of 50% from the existing baseline applicable to the Implementation Partner</u> (baseline may be at industry level or specific to the Implementation Partner, whichever is higher).</p> <p>Output can be expressed in terms of physical quantities (e.g. numbers of customers served, number of books printed) or operational efficiency etc.</p> <p>Project Teams are required to report the existing baseline for these KPIs in their Project Proposal and set targets to be met at the end of each phase of the Project. Project Teams are to also indicate appropriate tools for measuring these KPIs.</p>
Proportion of older workers aged 65 years and above in Implementation Partner	<p>Mandatory KPI #2</p> <p>Project Teams should achieve <u>more than 50% improvement from the existing baseline applicable to the Implementation Partner</u> (baseline may be at industry level or specific to the Implementation Partner (See <u>Table 1 below</u>), whichever is higher).</p> <p>Project Teams should also include (a) the number of older workers</p>

Key Area	KPI												
	<p>aged 65 years and above and (b) the total number of workers employed by the Implementation Partner as a whole, pre and post implementation of solutions.</p> <p>Project Teams are required to report the existing baseline for these KPIs in their Project Proposal and set targets to be met at the end of each phase of the Project. Project Teams are to also indicate appropriate tools for measuring these KPIs.</p> <p><u>Table 1: Proportion of Older Workers Aged 65 Years and Above by Industry</u></p> <table border="1" data-bbox="549 589 1417 927"> <thead> <tr> <th data-bbox="549 589 944 701">Industry</th> <th data-bbox="944 589 1417 701">Baseline Proportion of Older Workers Aged 65 Years and Above (%)³</th> </tr> </thead> <tbody> <tr> <td data-bbox="549 701 944 739">Overall (Across Sectors)</td> <td data-bbox="944 701 1417 739">5.4</td> </tr> <tr> <td data-bbox="549 739 944 777">Wholesale & Retail Trade</td> <td data-bbox="944 739 1417 777">5.5</td> </tr> <tr> <td data-bbox="549 777 944 815">Transportation & Storage</td> <td data-bbox="944 777 1417 815">7.0</td> </tr> <tr> <td data-bbox="549 815 944 889">Accommodation & Food Services</td> <td data-bbox="944 815 1417 889">11.1</td> </tr> <tr> <td data-bbox="549 889 944 927">Health & Social Services</td> <td data-bbox="944 889 1417 927">4.6</td> </tr> </tbody> </table>	Industry	Baseline Proportion of Older Workers Aged 65 Years and Above (%) ³	Overall (Across Sectors)	5.4	Wholesale & Retail Trade	5.5	Transportation & Storage	7.0	Accommodation & Food Services	11.1	Health & Social Services	4.6
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<p>Sustenance or improvement in function/physical health of older workers</p>	<p>Mandatory KPI #3</p> <p>Project Teams should show that the function or physical health of older workers are maintained or enhanced. Project Teams should consider the health issues relevant to the jobs or industries that the older workers are working in.</p> <p>Project Teams are required to report the existing baseline for these KPIs in their Project Proposal and set targets to be met at the end of each phase of the Project. Project Teams are to also indicate appropriate tools for measuring these KPIs.</p>												
<p>-</p>	<p>Project Teams are to propose at least two other KPIs to track. Possible KPIs can include:</p> <ul style="list-style-type: none"> • Reduction in exposure to work-related hazards or risks faced • Adaptability of solution (e.g. ease of use) • Improvement in attitudes of immediate supervisors and co-workers • Improvement in work motivations • Sustained work interests and job satisfaction <p>Project Teams are required to report the existing baseline for these KPIs in their Project Proposal and set targets to be met at the end of each phase of the Project. Project Teams are to also</p>												

³ Labour Force in Singapore 2015. Ministry of Manpower.

Key Area	KPI
	indicate appropriate tools for measuring these KPIs.

- e) Budget. Project Teams are required to articulate the **total required resources and budget** to implement their Project. Qualifying costs include developmental costs as described in clause 7.1(a) and operating costs as described in clause 7.1(b).

- f) Declaration of IP. Project Teams are required to disclose and describe any Background IP (whether owned by a Member of the Project Team or a third party) mentioned in the Grant Proposal. The information to be disclosed shall include the type of IP (e.g. patent, copyright, confidential information), the IP owner, whether the IP has been registered or is pending registration, and whether the IP is commercially available off-the-shelf or whether the IP must be customised for use for the Project.

- g) Deployment Plan. Project Teams are required to include a deployment plan as part of the Project Proposal. Project Teams must include plans to scale the proposed solution with **at least 5 Singapore-based organisations** within the targeted industry so that there is scalability from the onset. Please note however, that deployment to these companies will not be funded under this Grant. MOH and the Tripartite Committee on the Employability of Older Workers will work with the Awardees to explore how successful solutions can be scaled up for adoption in Singapore through other grants. The 5 Singapore-based organisations must endorse the Project Proposal, but are not required to commit to the actual scaling of the solutions, if the Grant is awarded to the Project Team.

Other Things to Note

8.9 All information submitted pursuant to the Ageless Workplaces Innovation Grant including supporting technical data and applicable documentation must be in the English language.

8.10 The following Grant Proposals will be rejected:

- a) Incomplete Grant Proposals, e.g. missing literature review, missing documents, missing signatures, sections left blank and missing CVs, etc.; and
- b) Inappropriate submission template used.

8.11 Participants should ensure that all information contained in the Grant Proposals and any other information submitted to MOH relating to the Ageless Workplaces Innovation Grant is complete, accurate and not misleading.

EVALUATION AND AWARD

Evaluation

9.1 Grant Proposals will be evaluated by an evaluation panel comprising evaluators from multidisciplinary backgrounds, including representatives from MOH, Workplace Safety and Health Institution (WSHI), Health Promotion Board (HPB), National Trades Union Congress (NTUC) and Singapore National Employers' Federation (SNEF).

9.2 Shortlisted Project Teams may be required to present their Project(s) (at their own cost and expense) and answer questions from the evaluation panel. Details on the presentation (if any) will be released to the shortlisted Project Teams at a later date.

9.3 The criteria listed below shall be used for the evaluation of the Grant Proposals:

Component	Evaluation Criteria
Grant Requirements	<ul style="list-style-type: none"> • Proposal Abstract and Project Proposal submission • Locally-based Project and PI/TL • Project Team composition • Addressed the challenge statement
General	<ul style="list-style-type: none"> • Project Proposal submission • Background of PI/TL • Track record of Members of the Project Team and Implementation Partner(s)
Business	<ul style="list-style-type: none"> • Scalability of proposed solution • Sustainability of proposed solution • Innovativeness of proposed solution
Performance	<ul style="list-style-type: none"> • Proposed model/prototype/programme • Proposed outcomes
Implementation	<ul style="list-style-type: none"> • Project feasibility in the local context • Clear implementation plans with demonstrable outcomes in field pilot stage • Reasonableness of funding request and charges

9.4 The evaluation panel reserves the right to reject any or all Grant Proposals submitted pursuant to the Ageless Workplaces Innovation Grant, without being obliged to give any reason thereof.

Moderation

9.5 Where a Grant Proposal is selected by the evaluation panel for consideration for award, the Project Team, through the Project Team Lead and Host Organisation, will be notified. The terms of the Project, Milestones, KPIs and Funding quantum may be moderated by MOH in agreement with the Project Team.

Award

9.6 The final decision to award the Grant will be made by MOH on the evaluation panel's recommendation. MOH and the evaluation panel shall not be obliged to enter into any correspondence with any Member regarding reasons for non-acceptance of a Grant Proposal.

Progress and Final Reports

9.7 Awardees will be required to submit to MOH annual progress reports on all Project-specific KPIs, the progress of the Project implementation and any challenges that may impede progress as stated in the Letter of Award.

9.8 Awardees will also be required to submit a final report at the end of the funding period of the Project detailing the learnings made and whether the Project has met the desired outcome of the challenge statement.

IMPORTANT DATES TO NOTE

10.1 The timeline for key activities under the Ageless Workplaces Innovation Grant is set out below.

Activity	Date
Call for Grant Proposals	May 2016
Public Briefing	26 May 2016 (Thurs)
Industry Networking Session	09 June 2016 (Thurs) (tentative)
Deadline for Proposal Abstract Submission	22 July 2016 (Fri)
Deadline for Submission of Project Proposal	30 September 2016 (Fri), or as otherwise specified by MOH in the invitation email
Evaluation and Negotiation Process	October 2016 – November 2016
Announcement of Results	By December 2016

CONTACT DETAILS

11.1 Any enquiries regarding the NIC and/or the Ageless Workplaces Innovation Grant should be emailed to NIC_Ageing@MOH.gov.sg.