MOH Health Innovation Framework and Fund

An Overview

20 Oct 2021

Background

- MOH Health Innovation (MHI) Framework was jointly developed by TSPO, MP&S and SGP to steer healthcare innovation in a more strategic manner in order to take healthcare transformation to the next level with the following guiding principles:
  - Forward looking. Anticipate changes in healthcare landscape, e.g. horizontal scanning/ scenario planning
  - Reflexive. Challenge current assumptions, and improve existing innovation practices
  - Collaborative. Co-creation and collaboration with healthcare partners across entire ecosystem
  - Agile. Adopt an agile approach towards planning, developing and delivering technology; to be nimble and responsive in working with partners to review available data/insights, calibrate project needs and iterate evolving prototypes

- New MHI Fund to **consolidate existing MOH Innovation funding streams (RIEP, HPF) under one grant framework** to better drive national health innovation initiatives and alignment of innovation agenda.

- Phase 1 of MHI Fund will focus on **co-funding of solutions at POC and/or POV stages** and costs arising from prototyping and system integration needs. Projects and programmes funded are those which involve
  a) Introduction of a new or significantly improved **good or service**
  b) Implementation of a new or significantly improved **production or delivery method, with and without innovative technology**

- On 30 Mar 2021, MOH EXCO gave in-principle approval to proceed with setting up the MHI Fund and MOH Coordinating Unit (renamed to MHI Coordinating Unit).

Phase 1 MHI Funding Principles and Criteria

Scope of Funding

Co-development of solutions at POC and/or POV stages and costs arising from prototyping and system integration needs for product and process innovation

Grantee

- MOH
- MOHH Entities (Clusters)
- AIC
- HSA
- HPB
- Subvented Healthcare Providers (See below)

Funding Norms

Up to 20% contribution

At least 80% funding

MOH

- Institutions that are government-owned or operated by voluntary welfare organisations (VWOs) registered as charities under the Charities Act (Cap. 37), and providing subvented ILTC healthcare services; or
- Institutions that are operated by VWOs registered as charities under the Charities Act (Cap. 37), and receiving subvention funding from MOH for the provision of ILTC social services; or
- Institutions that receive MOH or AIC programme funding for ILTC healthcare and social services; or
- Private providers receiving portable subsidies or subvention from MOH for the provision of ILTC healthcare and social services; or
- Third party service providers with Institutions of Public Character (IPC) status, providing supporting healthcare services to VWOs providing ILTC healthcare services.

Phase 1 MHI Funding Criteria (1/2)

1. Projects/programmes must fulfil **either one or both** of the transformation efforts:
   a) Sectoral Business Transformation: Population and patient-centric operating/service models, products and processes
   b) Healthcare Workforce Transformation: A sustainable and future-ready workforce

2. Projects/programmes fall under **(1) Product Innovation, or (2) Process Innovation.**

	Product Innovation	Process Innovation	
Definition	• Introduction of good or service that is new or significantly improved with respect to its characteristics or intended uses. • This includes significant improvements in technical specifications, components, materials, incorporated software, user friendliness or other functional characteristics.	• Implementation of a new or significantly improved production or delivery method, with/without innovative technology • This includes techniques, equipment, and/or software. • Removes unnecessary steps or duplication, with the intention to improve core processes and operational efficiencies and reach intended productivity goals	
Examples for illustrative purposes	a) Integration with IoT devices and consumer/medical diagnostic devices b) Knowledge management platform c) UV lamps for infection control	**With** innovative technology a) Horizontal enablers, e.g. Data/API sandbox environment to harness new insights, experiment solution, and accelerate the validation of outcomes. b) Process applications that incorporate AI into an organisation's workflow to automate processes or augment worker effectiveness (e.g., Robotic Process Automation) c) Insight applications that harness advanced capabilities to inform operational and strategic decisions across an organisation (e.g., machine learning).	**Without** innovative technology a) Job / Role re-design b) Infra redesign (e.g. changing nursing bed configuration) c) Roadmapping d) Process re-designing

Phase 1 MHI Funding Criteria (2/2)

- The following will not be funded under MHI Fund.

  a) Projects that involve solely the private sector;

  b) Initiatives which are already supported at the Ministry level, under existing funding streams, e.g. One-Rehab, or proposals currently funded under the "Hospital-to-Home" and "Outpatient-to-Community" programmes;

  c) Projects that propose a new concept, idea, service, process, or product, which may be new to the applying institution, but already available in another institution within the same cluster;

  d) Projects that propose a concept, idea, service, process, or product, which has previously been funded by non-MOH agencies;

  e) Projects which have been proven successful and identified for scaling within entire cluster or at national level will not be funded under MHI as these do not meet the critiera of *"introduction of new concept, operating model, idea, service (or service delivery model), process, or product"*

  f) Products that utilises mainstream technology that provides basic support for organisations.

Phase 1 MHI Funding Norms

- To ensure prudency, grantees will be required to fund a portion of their total budget granted. This will be applied to the total of budget granted before GST and contingency for POC and POV projects.

- Deviations from approved funding norms would be subjected to Innovation Executive Committee/ Innovation Steering Committee's approval

Category	Contribution by MOH
POC projects	90%
POV projects	80%
POC and/or POV projects; that are partially funded by other Govt Agencies [1]	Up to 15% of project value
POC and/or POV projects; within MOH's special interest areas [2]	Up to 100%

[1] E.g. AI Singapore (AI in Health Grand Challenge), National Research Foundation (National Robotics Programme).
[2] Full MOH funding will be given for POC and/or POV projects within MOH's special interest areas. However, this will only be rolled out in the next phase when these have been identified.

List Supported / Non Supported Items

- Supported Items
  - Professional service
  - IHIS manpower
  - Hardware & software
  - Cloud related service
  - Communication and engagement

- Non-Supported Items
  - Furniture, stationary, printer
  - Portable storage device
  - And any other items deemed inappropriate by MOH

Classification of CAPEX and OPEX Items For MHI Projects

CAPEX	OPEX
1. Hardware * 2. Software * (non-subscription) ** In accordance to Development Fund Act, the general rule of thumb is if Item costs > $10k per unit and would be capitalised, operating budget should not be used*	1. Maintenance costs 2. Subscription costs 3. Hosting costs 4. Manpower (e.g. for project management, coordination etc.) 5. Professional services for Devt 6. Consumable items e.g. stationery (subject to IEC's approval) 7. Training costs (subject to IEC's approval) 8. Conferences (subject to IEC's approval)
	Items that are usually <u>not supported</u>: 1. Refreshments / catering 2. Overseas trips 3. Transport 4. Utilities

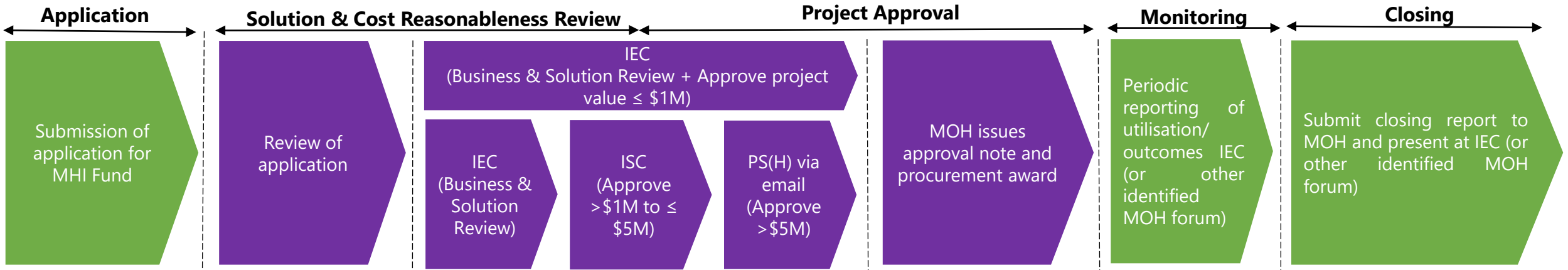
Thank you

There is a need to steer health innovation in a more strategic manner in order to take healthcare transformation to the next level

Current state	To–be state
• Lack of visibility and assessment of current investments in health innovation, unclear how future investments are being informed	• Rigorous framework to assess health innovations based on impact assessment and their potential to be adopted and scaled • Consolidation of learnings
• Duplicative efforts in development, due to lack of consolidation of learning or oversight of projects funded	• Minimal duplicative efforts in innovation through central governance • Central tracking of health innovation projects
• Poor alignment of innovation agenda across multiple funding streams as national strategy on health innovation is not clearly defined	• Better alignment of innovation agenda through clear articulation of strategic objectives under a national innovation framework • A single fund to drive national health innovation initiatives
• Cumbersome, inefficient administrative and approval processes	• Improve efficiency of grant administration • Speed up funding approval process
• Poor quality of project proposals* (and lack of monitoring and mentoring) resulting in poor utilisation of funds	• Established baseline standards for project proposals and robust processes for ongoing monitoring and mentoring

* Cluster projects requesting for RIEP funding.

Overview of MHI Governance Process



- Detailed proposal to be submitted to MHI Coordinating Unit using the appropriate templates
- Must be endorsed by the necessary senior management, e.g. CIO, CFO, CEO, relevant HOD
- Proposals will only be accepted if all sections are completed within the given template.

- MHI Coordinating Unit will review the submission and obtain inputs from relevant MOH divisions for inputs, e.g. NCAO/ IFC/ MP&S/ HSD/ PCC, etc, and contact applicants for clarifications.
- Applications to be assessed using relevant assessment tools/ parameters

- New ISC and IEC to act as proxy IPA + IAA committee to streamline business and funding approval processes and provide oversight on alignment with MOH's shifts, IT roadmap and clinical safety, governance as well as project and funding approval for the drawing down of MHI Fund.
- Where funding amount is ≤ $1M, IEC is able to approve the project funding.
- For project value >$1M to ≤ $5M, IEC to provide inputs to the presentation and surface to ISC for funding approval.

To ensure greater clarity and accountability for these resources invested, a letter of award will be issued including broad level details on the roles and responsibilities, areas of work and clear accountability of both parties.

Project teams to track KPIs and set targets and report to MHI Coordinating Unit

- Project teams to submit closing report consisting of the following:
  1. Evaluation of projects Cluster/Agencies' recommendations on scaling within cluster and across clusters
  2. MOH's assessment for feasibility/ benefits for scaling
- Project teams are also required to facilitate the sharing of their project design, implementation, outcome results and evaluation with other clusters for learning and diffusion purposes.

Note. For the purpose of expediency such as to cater for amendments, urgent grant requests, MHI Coordinating Unit will seek approval from IEC/ ISC via email.