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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **APPLICATION FORM**  **For MOH Health Innovation (MHI) Fund** | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
|  |  | | | |  | | | |  | | --- | | **MINISTRY OF HEALTH** | | Ministry of Health  #11-23 Harbourfront Centre  1 Maritime Square  Singapore 099253 (Lift Lobby A or B)  Tel : (65) 6622 0980  Fax : (65) 6720 0980  Website: www.moh.com.sg | | | | | | | | |  | | |
|  | | | | | | | | | | | | | | | | |
| **For MOH Internal Use** | | | | | | | | | | | | | | | | |
| Date Received | | | : | |  |  |  |  |  |  |  |  |  | | | |
| Officer-in-charge | | | : | |  |  |  |  |  |  |  |  |  | | | |
| **ALL INFORMATION PROVIDED WILL BE**  **HELD IN STRICTEST CONFIDENCE** | | | | | | | | | | | | | | | | |
|  | | USEFUL NOTES   1. Application   To assist us in evaluating your application, please provide the requested information as completely and accurately as possible. MOH reserves the right to request the applicant to amend the form or reject any incomplete application form.  You may contact the MHI Secretariat if you require information or assistance to complete the form.  Please send the completed application form (together with relevant supporting documents) via email to the MHI Secretariat at [moh\_mhi\_secretariat@moh.gov.sg](mailto:moh_mhi_secretariat@moh.gov.sg). | | | | | | | | | | | | | |  |
|  | | 1. Structure of the Application Form   The application form consists of 6 parts : - | | | | | | | | | | | | | |  |
| **Part I:** | | – Organisation Data | | | | | | | | | | | |
| **Part II:** | | – Details of Project | | | | | | | | | | | |
| **Part III:** | | – Project Costs | | | | | | | | | | | |
| **Part IV** | | – Project Deliverables | | | | | | | | | | | |
| **Part V:** | | – System Architecture | | | | | | | | | | | |
|  | | **Part VI:** | | * Declarations | | | | | | | | | | | |  |
|  | |  | |  | | | | | | | | | | | |  |
|  | | 1. MOH reserves the right to conduct interviews and on-site visits during the evaluation of the application and during the project implementation stage for progress monitoring. 2. The Organisation shall undertake to agree to the terms and conditions dictated in the application form and letter of award. The Organisation, in submitting this application form, agrees to submit progress reports half-yearly and any other materials required as and when requested by MOH. 3. The Organisation, in submitting this application form, undertakes not to divulge or communicate to any person or party any Confidential Information, including but not limited to any documents that may be forwarded from MOH to you subsequently, without first having obtained the written consent of MOH. 4. **All project members must sign the MHI Declaration Form on Conflict of Interest** and state if there are any actual, potential or perceived conflict of interest(s). Please also refer to the guidelines on conflict of interest attached below: | | | | | | | | | | | | | |  |
|  | | | | | | | | | | | | | | | |

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| --- | --- | --- | --- | --- | --- |
| |  | | --- | | **PART I –ORGANISATION DATA** | | | | | |
| 1. **GENERAL** (Compulsory) 2. Organisation Name (Legal Name): 3. Organisation UEN: 4. Address (Legal Address):      1. Type of Organisation:   Agency for Integrated Care (AIC)  Public Healthcare Institution  Intermediate & Long-Term Care Provider  Other Healthcare Providers (pls specify): | | | | |
| 1. **APPLICANT’S NAME** | | | |
| **NAME** | **ROLE IN PROJECT**  (e.g. Project Manager, Developer, Collaborator) | **ORGANISATION** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1. **TYPE OF SUBMISSION**

New submission

Project has been previously submitted to MOH (Application ID): )

1. **TYPE OF TECHNOLOGY**

Augmented/Virtual Reality  Artificial Intelligence/Machine Learning

Wearable Technology  Process Innovation  Medical Device

Robotics  Mobile App  Others (pls specify):

1. **TYPE OF PROJECT**

Proof-of-Concept (POC) *(applicants who wish to develop a prototype at the conceptualisation stage)*

Proof-of-Value (POV) *(applicants who wish to develop a working prototype that can be adopted / commercialised by the healthcare sector / organisation)*

Others (pls specify):

|  |
| --- |
| **PART II – DETAILS OF PROJECT** |

1. **PROJECT OVERVIEW**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Name** | <Limit to 20 Characters> | | | | | | | |
| **Project Type** | <New /Enhancement> | | | | | | | |
| **System Criticality** | Non Govt-owned systems: <Mission Critical / Business Critical / Standard>  Govt-owned systems: <CII / SII / Non CII or SII> | | | | | | | |
| **Data Classification** | <Unclassified-Non Sensitive | Restricted-Non Sensitive| Restricted-Sensitive Normal | Restricted-Sensitive High > | | | | | | | |
| **Ownership** | **Business Owner** | **System Owner** | | **System Operator** | | **Data Owner** | | **Data Manager** |
|  |  | |  | |  | |  |
| **Project Delivery Team** | **Entity / Division / Department** | | | | | **Project Manager** | | |
| **Project Cost for Endorsement** | **Total (S$)** | | **CAPEX (S$)** | | **One-Time OPEX (S$)** | | **Contingency (S$)**  (if applicable) | |
| **Project Schedule** | **Timeline**  From MM/YYYY> to <MM/YYYY> | | | | **Duration**  *<Project must be completed within 18 months from the day the letter of award is issued by MOH>* | | | |

1. **PROJECT DESCRIPTION**
   1. **EXECUTIVE SUMMARY**

|  |
| --- |
| *[Limit the content to* ***100 words****]*  *[Please provide a brief summary of the project.]* |

* 1. **PROJECT BACKGROUND AND OBJECTIVES**

|  |
| --- |
| *[Limit the content to* ***300 words****]*  *[Project Background: Describe as-is state and current challenges.]*  *[Project Scope: Describe objectives, to-be state covering scale and impact of project.]*  *[Project broad benefits (tangible and intangible) on the beneficiaries and any transformation that project is expected to fulfill.]* |

* 1. **APPROACH / SOLUTION**

|  |
| --- |
| *[Limit the content to* ***300 words****]*  *Innovativeness of Product/Solution*  *[Why is this product / solution unique or innovative compared to the others in the market, with mention of specific functionalities / features that benefit the organisation, end users or patients.]*  *Evaluation of the Product/Solution*  *[A high-level evaluation of the Product/Solution should be included, as well as the justification for the recommended approach. Please highlight if there are existing product/solution with similar nature / scope and how the recommended product/solution is different.]* |

* 1. **PROJECT ROADMAP**

|  |
| --- |
| *[Limit the content to* ***300 words****]*  *[Please describe the various phases of the project and its roadmap.]* |

* 1. **IS THE PROJECT SUSTAINABLE?**

Yes

No

|  |
| --- |
| *[Limit the content to* ***300 words****]*  *[Please include information on how the project will be funded after this initial tranche, which includes:*   1. ***WHO*** *will fund the project after the project has been implemented* ***(organisation, name and designation of the project sponsor (Director and above)*** 2. *Will it be self / partially funded?]*   *[If the project is not sustainable, please indicate the reason(s).]* |

* 1. **IS THE PROJECT SCALABLE?**

Yes

No

|  |
| --- |
| *[Limit the content to* ***300 words****]*  *[If the project is scalable, please explain how the project can be scaled, which includes* ***organisation, name and designation of project sponsor/partner (Director and above).*** *Most crucial to illustrate how adoption would be “nature / expected”.]*  *[If the project is not scalable, please indicate the reason(s).]* |

|  |
| --- |
| **PART III – PROJECT COST** |

1. **FUNDING REQUIREMENTS**



|  |
| --- |
| **PART IV – PROJECT DELIVERABLES** |

1. **PROJECT OUTCOMES / KPIs**

(Please indicate at least 3 tangible outcomes /KPIs)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Outcomes Owner:** | *(Please indicate name of owner, organisation and department. You may specify multiple owners to the KPIs.)* | | | | | | | |
| **Outcome Category:** | **Desired Outcomes** | | **Current Baseline**  (Please indicate how baseline measure is derived, as well as current cost for activity / process) | | **Proposed Targets**  (Please indicate how targets and the timeframe (i.e. year, quarter or month) to when the target would be achieved) | | | **Financial Implications**  (i.e. potential / estimated cost savings / avoidance, to time bound the figures annually or across ‘X’ years) |
|  |  | |  | |  | | |  |
| **Prime/Direct Impact of Proposed Targets on Beneficiaries** | | | | | | | | |
| **Outcomes Owner:** | *(Please indicate name of owner, organisation and department. You may specify multiple owners to the KPIs.)* | | | | | | | |
| **Outcome**  **Category** | **Desired Outcomes** | | **Current Baseline**  (Please indicate how baseline measure is derived, as well as current cost for activity / process) | | **Proposed Targets**  (Please indicate how targets and the timeframe (i.e. year, quarter or month) to when the target would be achieved) | | | **Financial Implications**  (i.e. potential / estimated cost savings / avoidance, to time bound the figures annually or across ‘X’ years) |
|  |  | |  | |  | | |  |
| **Prime/Direct Impact of Proposed Targets on Beneficiaries** | | | | | | | | |
| **Outcomes Owner:** | | *(Please indicate name of owner, organisation and department. You may specify multiple owners to the KPIs.)* | | | | | | |
| **Outcome**  **Category** | | **Desired Outcomes** | | **Current Baseline**  (Please indicate how baseline measure is derived, as well as current cost for activity / process) | | **Proposed Targets**  (Please indicate how targets and the timeframe (i.e. year, quarter or month) to when the target would be achieved) | **Financial Implications**  (i.e. potential / estimated cost savings / avoidance, to time bound the figures annually or across ‘X’ years) | |
|  | |  | |  | |  |  | |
| **Prime/Direct Impact of Proposed Targets on Beneficiaries** | | | | | | | | |
| *Note:*   1. *Refer to attached pdf on framework that guides the articulation of outcomes/benefits that are monetary or non-monetary.* 2. *Outcome owners should ensure there would be funding available to measure and monitor the achievement of the project outcomes when the project is implemented.* | | | | | | | | |

1. **EXIT CONDITION**

|  |
| --- |
| *[Limit the content to 300 words]*  *[Conditions / performance threshold that would trigger termination of project. E.g.project unable to meet X% of target.]* |

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| **PART V – SYSTEM ARCHITECTURE** |

1. **SOLUTION COMPONENTS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/N** | **System / Application / Hardware[[1]](#footnote-2)** | **Name & Purpose** | **Buy / Build/ Extend[[2]](#footnote-3)** | **Hosting Location[[3]](#footnote-4)** | **Standard / Non-Std**[[4]](#footnote-5) |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 3 |  |  |  |  |  |

1. **DATA MANAGEMENT – OVERALL TECHNICAL CONTROLS (REQUIRED FOR DATA CLASSIFIED AS SENSITIVE, NORMAL AND ABOVE)**

|  |  |
| --- | --- |
|  | **Overall Technical Controls to secure the dataset**  (Remove non-applicable controls) |
| **Authentication** | * IPSEC VPN authentication * User account and password authentication * 2FA authentication using SingPass/ CorpPass/ SGID * Server side authentication with digital certificates * Mutual authentication between source and destination digital certs using TLS 1.2 * Others (elaborate) |
| **Data in Transit** | * Leased line AES256 encryption between Source and Destination sites * Data is encrypted using TLS 1.2 when sent between Source and Destination system (e.g. HTTPS, SFTP) * Others (elaborate) |
| **Data at Rest** | * Application-level encryption of data using AES 256 * SQL/ Oracle database TDE encryption * File based encryption * DAM monitoring of DB activities * Endpoint detection – use of SEP, ATP or EDR agents * Others (elaborate) |

1. **DATA MANAGEMENT**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Data Groups[[5]](#footnote-6)** | **Data Element2** | **Storage Zone3** | **Technical Controls4** | **Within System**  **(years)5** | **Backup & Archival**  **(years)5** | **Data Warehouse (years)5** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

1. **SOLUTION INTERFACES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/N** | **Interface From** | **Interface To** | **Operation & Data Elements[[6]](#footnote-7)** | **Protocol & Port No[[7]](#footnote-8)** | **Daily Txn Load & ave payload size[[8]](#footnote-9)**  (Optional) |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

1. **DETAILED SOLUTION ARCHITECTURE DIAGRAM**

|  |
| --- |
| *[Detailed application architecture diagram highlighting the solution components with their hosting location and system interfaces with port numbers between them. Highlight what is in scope in the diagram as well as the new and/or changed components. Indicate if solution is leveraging / residing on any common infrastructure.]* |

1. **RESPONSIBILITY FOR NON-FUNCTIONAL REQUIREMENTS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Implementation Task** | **Agency/**  **Vendor/Use\*** |  | **Operational Task** | **Agency/**  **Vendor/**  **Use\*** |
| Secure Code Review |  | User Provisioning |  |
| Data Migration |  | User Access Matrix Review |  |
| Integration Test |  | End of Support Review |  |
| Load Test |  | Audit Log Review |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Penetration Test |  |  | App Health Check[[9]](#footnote-10) |  |
| Operation Acceptance Test |  | L1 Support (Helpdesk) |  |
| End-to-End DR Testing |  | App L2 Support1 |  |
|  |  | App L3 Support1 |  |
|  |  | App Patch Management1 |  |
|  |  | System L2 Support[[10]](#footnote-11) |  |
|  |  | System L3 Support2 |  |
|  |  |  | System Patch Management2 |  |

Note:

\* Indicate the agency department/team, vendor, or business department/team who are responsible for the task.

1. **RISK MANAGEMENT**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/N** | **Risk Description** | **Gross Risk Rating**  (Likelihood, Consequence)# | **Avoidance & Mitigation2** | **Residual Risk Rating** (Likelihood, Consequence)# |
| **Implementation Risk** | | | | |
| 1 |  |  |  |  |
| **Security Risk** | | | | |
| 1 |  |  |  |  |
| **Technology Risk** | | | | |
| 1 |  |  |  |  |



How to fill in:

1. Use the Solution Risk tool for Technology and Implementation risks. Select those that apply to your solution and refine by stating the actual source, e.g. name of the non-standard component. Include others not found in the list as well.

2. Review the risk description and refine.

3. Use the likelihood and impact guide to calculate gross risk.

4. Review the suggested avoidance and mitigation and select those that are feasible and will be implemented for your project.

5. Use the likelihood and impact guide to calculate the residual risk.

6. For Security risks, use the entities’ existing risk methodology to fill in.

Notes

# Input format: Risk Rating (Likelihood, Consequence). e.g. H (3,4)

Risk rating = “Very High” (VH), “High” (H), “Medium” (M), “Low” (L)

Likelihood = Range of 1 (Low) to 5 (High)

Consequence = Range of 1 (Low) to 5 (High)

1. **DETAILED PROJECT SCHEDULE**

|  |
| --- |
| *[Insert the project schedule. The schedule should detail the project works with the expected time duration and any interdependency between the works. Also indicate the check points in the project schedule for any key milestones and deliverables.]* |

1. **PROJECT COMMITTEE**

|  |
| --- |
| *[Provide a high-level view of the committee that will oversee or guide the project planning and implementation.]* |

|  |
| --- |
| **Contact Person** (Business Contact Information) |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Name: Designation:    Telephone Number: Email Address: |

|  |
| --- |
| **PART VI – DECLARATIONS** |
| 1. I declare that the information provided by me in this application and the accompanying documents are true and accurate to the best of my knowledge, and that the Organisation is free from any litigation pertaining to the project in Singapore or overseas. 2. I agree that MOH shall have the absolute discretion to accept or reject the application made without being liable to give any reason thereof. 3. I understand that if the Organisation obtains the offer of a funding by false or misleading statements, MOH may withdraw the grant and recover immediately from the organisation any amount of the grant that may have been disbursed.     Signature of CEO (or equivalent)##    Name:  Email Address:    Date: DD/MM/YYYYY  # Please delete and indicate accordingly  # E-signatures are accepted |
|  |

1. Indicate component type with one of the following “System”, or “Application”, or “Hardware”. [↑](#footnote-ref-2)
2. Indicate “Buy” for purchasing new components or subscribing to commercial cloud service or “Build” for developing a capability or “Extend” when making changes on top of an existing component. [↑](#footnote-ref-3)
3. Specify hosting location as “HCC” (H-Commercial Cloud), “HPC” (H-Private Cloud), “HDC” (H-Data Center Co-location) or “LDC” (Local Data Centre) or “CC” (Commercial Cloud) or “GCC” (Govt Commercial Cloud) or “GDC Segregated” or “GDC Hosted” (Govt Data Center) or specify any other actual hosting site. [↑](#footnote-ref-4)
4. Indicate “Standard” if the component is under IHiS Technology Roadmap, otherwise indicate as “Non-Std”. [↑](#footnote-ref-5)
5. Categorize data into “Unclassified”, “Personal Identifiable Info” (PII). “Clinical Info”, “Genomic Info”, ”Health/Social Info“, “Sensitive Clinical Info”, “Sensitive Genomic Info” or “Sensitive Health/Social Info”.

   List down data elements in the data group.

   Identify the network zones storing these data: “Intranet Web Tier”, “Intranet App Tier”, “Intranet DB Tier”, “Internet Web Tier” “Internet App Tier”, “Internet DB Tier” or others.

   List the technical controls used to secure the data.

   No of years of data that will be stored within the system, in backup & archive media and in the Data Warehouse (if any). [↑](#footnote-ref-6)
6. Describe the purpose of the interface followed by the data subjects sent with reference to the Data Management in Table 3. [↑](#footnote-ref-7)
7. Specify the protocol which would be used for the interfacing such as SFTP, HTTPS, LDAP, HL7, etc. [↑](#footnote-ref-8)
8. Provide the estimated median/average load per day. Include the average message payload. [↑](#footnote-ref-9)
9. Indicate responsible party for every application. [↑](#footnote-ref-10)
10. Indicate responsible party for every system. [↑](#footnote-ref-11)