Attachment

Lifestyle Reactivation Project: Jockey Club Smart Homecare Solution Specification

(Tender Reference: ELCHK-LRS/T201801)

1. Background

In response to the tremendous increase of the ageing population, Evangelical Lutheran Church Social Service - Hong Kong (ELCSS-HK) applied the Chief Executive's Community Project List 2017 and successfully got the grant to develop "Lifestyle Reactivation Project – Jockey Club Smart Homecare Solution". The purpose of the project is to make the good use of technologies and IoT (Internet of Things) devices plus the inputs from healthcare professionals, re-engineer the lifestyle of frail elders and empower their caregivers, assist them to continue living at their familiar home environment and community as long as possible. Establish a new homecare service model for frail elders at ELCSS-HK and also deploy such service model to other NGOs in the future.

2. Existing IT Facilities

Most of the service units are equipped with broadband connection with bandwidth from 1.5Mbps to 6Mbps, while the headquarters has a bandwidth of 4Mbps. Most of the PCs are installed with the operating system of Microsoft Windows 7, Windows 8 and Windows 10. No Virtual Private Network (VPN) has been installed currently though the Evangelical Lutheran Church Social Service - Hong Kong has a plan to adopt VPN for this computer solution.

3. System Overview

Home care service is one of the community support services for the elderly provided by Evangelical Lutheran Church Social Service - Hong Kong. Professionals (including social workers, nurses, occupational therapists, physiotherapists) will prepare case assessment and care plan for each service user. Frontline care workers will then provide care and support services to service users at home according to their individual needs as assessed by the professionals.

In order to facilitate case management and assist the arrangement of professionals and frontline care workers on providing home care services, Evangelical Lutheran Church Social Service - Hong Kong would develop a Smart Homecare Solution. The system would be expected to be assessed by different devices such as desktop, notebook, tablet, smart phone, etc.

Detailed functional/system requirements are described below.

4. Major Components

The Solution System will be separated into two parts:

1. Clientele Information Management System
2. Mobile App for Service Users and Caregivers Support and Reconnection Platform

5. Functional Specification

5.1. Clientele Information Management System	
1.	General Requirement
1.1.	● The system should support both traditional Chinese and English interface. ● The system should provide several user interface including but not limited to: - Professionals (including social workers, nurses, occupational therapists, physiotherapists) - frontline care workers - volunteers ● The system would be included both web platform and mobile version (Android / iOS (optional))
2.	Case Management
2.1.	Professionals will first make a home visit to clients. They will complete an initial case assessment and prepare a care plan that guides the home care service arrangement. Professionals will also monitor each case and update the relevant case file continuously.
2.2.	Case can be opened, reviewed, terminated and reopened by authorized personnel.
2.3.	Open a case ● Record basic information of a case, like case number, responsible social worker, etc. ● Identity number generation - Unique sequential identity numbers need to be generated by the system. The format of the case number is "SSC/service teamYY/Number (3 digitals) such as SSC/EH17/001 ● Case can be classified as different status such as "Moderate", "Severe", etc. ● In order to avoid data duplication, HKID number will be used for duplication checking. The System needs to perform the validation on

	data duplication, with alert message, when the users input a new record into the System. ● For re-open case, system should provide a function to record. ● Once received the case from SWD, it should be provided services to the client within 7 days, the system should provide a function to alert responsible social worker, professional staffs, etc. before the dealine.
2.4.	Case assessment (Optional) ● Keep record of assessment information, like health situation, self-care competency and home situation, etc. ● Record of care plan information. ● Record of care log information such as date, type, time, category, etc. ● An efficient input method is required for facilitating assessment taking during home visit. ● Cases without immediate needs will be classified as waiting cases. ● Services will be allocated to clients on the waiting list when sufficient services are available.
2.4.1.	Case Assessment / In-take Form Template ● 25 sets of case assessment or in-take forms would be included (Appendix A) ● Allow to configure the form by administrator ● Allow to edit or add new fields by administrator
2.4.2.	Individual Care Plan (ICP) Workflow (Appendix B): ● During the intake and assessment process, the professional staffs enter the details of the application and assessment information (including service agreement, case log, assessment chart, etc.) into the system. ● The individual care plan will be designed to let different stakeholders such as professionals, frontline care workers, volunteers, service users and caregivers to follow ● The system should allow users to insert images, notes, etc. ● Provide a function to capture the most suitable ICP services according to frequency and association with disease type or other predefined parameters. ● After completion the assessment, professionals will assign different training programs to the service users, service users will be followed the training programs via their mobile devices ● For normal case, the individual care plan would be reviewed and confirmed on every six months. ● For incident/special case, the individual care plan would be reviewed and confirmed immediately
2.5.	Training Programs ● Training Programs will be stored and categorized into different formats such as photos, sounds, videos, ppt, YouTube or other video ??sources?? ● The duration of each program is around 3-5 minutes

	● The system should provide user friendly interface to assign the training program to the service users (such as drag and drop calendar and scheduling)
2.6.	Case monitoring ● Record case progresses. ● Allow continuous review and update of assessment and care plan information. ● Waiting cases can be changed to immediate cases when the client's condition changes. ● Allow continuous feedback on service by the clients. ● Allow input of case information produced by other professionals like nurses or therapists.
2.7.	Case termination ● Record information of closed cases like closing date, reason of termination and service referral.
2.8.	To provide reminder notices to professionals. For example, time to take initial contact, intake assessment and review of care plan.
3.	Mobile Interface
3.1.	● Provide a function to review the health status from IoT device. ● To retrieve the case information (such as type of services, health information), QR code function would be provided. ● When the professionals, worker or helpers provide onsite support, it is requested to scan the QR code and capture the Check-in and Check-out record. ● When the workers/professional workers/social workers review/check the data, the system should be automatically count as one of the service records. ● Provide Dashboard /Report ● Support remote wiping function, it is allowed to remotely erase the data on the mobile device. ● Support user friendly interface
3.2.	Online and Offline Mode
	● Support both online and offline mode ● The mobile application is required to be available to work offline, users allow to access/update records ● Once the connection is resumed to normal, all related information should be able to synchronize into the system automatically
3.3.	Workers or Helper Page Interface ● Provide a function to review service users' information such as temperature, blood pressure, weight etc. ● Allow to review daily task list ● Provide a function to record work performed like service duration after delivering the on-site work. ● Record the service information such as service type, location, client's name, sex, training plan, etc. ● Record the client's information to the Log book such as text field, image, etc.

	● Collect client's feedback including 5 questions (rating/comment) ● Allow to record ad-hoc tasks in the mobile interface ● Record the actual working hours and planned services hours, the system should allow worker to amend the service hours if necessary ● When worker or helper amend the service records, it should provide a function to remind the in-charge supervisors to review or amend. ● Provide a function to record and predefined transport information (such as location, transport fee, etc.)
3.4.	Professional Workers Page Interface ● Reminder notices to professional and mark the appointment ● Allow to review all information such as case information, type of services, statistics, etc. ● Allow to edit the case information ● After providing assessment, it is requested to record the information via mobile interface ● List out the outstanding tasks
4.	Field Worker Maintenance Field workers will provide direct home care service to clients, for example, health caring, escort. Field workers can be ELCSS's staffs or other professionals like nurses or therapists.
4.1.	Record basic information of field workers like available working hours, contact number, specific skills, and services qualified to provide.
5.	Roster Management (Optional) Administrative staffs are responsible to assign jobs to field workers. They will generate a roster and print a copy to each field worker. If there are any changes on the roster, they will also need to inform the field workers on phone. After completing the jobs, field workers will report their work performed via mobile device, administrative staffs allow to retrieve the information such as service provided, duration, etc.
5.1.	Roster maintenance includes initiation, change and cancel of roster.
5.2.	Jobs need to be assigned to field workers include, but not limited to, health caring, escort, meal delivery, etc.
5.3.	To provide automatic validity checking (e.g. a particular field worker is not capable of delivering the job or a client has not requested the job) when assigning roster. Alerts will be generated for inconsistent assignments.
6.	Service Payment Management Administrative staffs will prepare service charge statements to clients. There are different prices for the various services, for example, times of blood pressure checking, transportation fee.
6.1.	Service charge maintenance
6.2.	Calculate service payment according to work performed and prices of service delivered.

6.3.	Track printed service payment receipt (e.g. record the receipt sender, date on which the receipt has been delivered to the client, payment settle date).
6.4.	Provide alerts of outstanding receipts.
6.5.	Feed payment income information to the financial management system ● Issue client statement ● Record bad debt ● Aging report for outstanding invoices ● Print receipt
7.	White Board
7.1.	A screen could be shown the status of the incident case and remind the responsible social workers, professional workers to review the case and have further follow-up.
8.	Application for Integrated Home Care and Self-finance services
8.1.	● The system should be captured the service application information such as name, type of services, date, etc. ● List out the pending service ● Allow to re-open the case ● Once confirmed the services, the application information should be transferred to be a case record automatically. (Appendix A and Appendix C)
9.	Dashboard and Reporting Tool
9.1.	Generate ad-hoc reports or data analysis by a user-friendly reporting tool.
9.2.	A single Report should support exporting to Excel, Word, PDF and HTML format, and outputting to printer directly.
9.3.	Allow users to preset their dashboard layout
9.4.	The system should be able to generate different types of Dashboard including: ● Heart-Rate by day/by weeks/by month/by year ● Blood Pressure ● Oxygen Saturation (SaO2) ● Number of Steps ● Sleep (Shallow Sleep / Deep Sleep) ● Body Temperature ● Blood Glucose Level ● Compliance of Lifestyle Reactivation Program (such as 2.4.3 Training Programs)
9.5.	The system should be provided with the following reports including: ● Full-set of Individual Care Plan (ICP) Report ● 藥物管理記錄表 ● 服務安排表 ● 服務協議書 ● 膳食服務表 ● 護送服務表

10.	SIS Reports (Optional)
	The system should be able to generate different types of SIS report including: ● Quarterly Statistical Report (Integrated Home Care Services (Ordinary Cases)) ● Quarterly Statistical Report (Enhanced Home and Community Care Services) ● Annual Statistical Report (Integrated Home Care Services (Frail Cases)) ● Integrated Discharge Support Programme for Elderly Patients ● 第二階段長者社區照顧服務券試驗計劃季度資助申請表 ● 關愛基金『支援身體機能有輕度缺損的長者』試驗計劃 The system should provide a drill-through report and show the detail of services. (Please refer - Appendix C)
11.	User Interface
11.1.	Each user can check his outstanding jobs after login (e.g. care plan has not been reviewed or service output has not been entered).
11.2.	The system should be able to interfaces with other systems including: ● Service Management System ● Finance System ● ERP System ● Meal Ordering System The system should be able to fetch input files from external systems and generate output files to external systems.
11.3.	Each user can check his roster/tasks after login.
12.	System security
12.1.	Control the access rights of Login and Role.
12.2.	Control data security so that only authorized users will be able to access the relevant data according to their access privileges.
12.3.	Access to individual functions / features / fields of the system should be defined in the security function and it should be based on the users' roles.
12.4.	Support Two-Factor Authentication
12.5.	Users only allow to view/access limited information via tablet/mobile devices.
5.2. Mobile App - Service Users and Caregivers Support and Reconnection Platform	
1.	General Requirement
	● The mobile app should support traditional Chinese interface. ● The mobile would be included both iOS and Android platform ● The layout of mobile should be clear and avoid visitor losing direction in browsing, enhancing user experience. ● Provide 3 sets of graphical design for the theme (such as elder friendly interface, etc.) of the mobile application
2.	System Administration Platform
	● An update platform with web interface should be provided for administrator users for content update. ● Allow to send broadcasting messages to service users and caregivers

3.	Service User Interface (support Android platform) ● Provide a system interface to sync the data in the backend system ● Remind service users to follow the pre-set activities such as training programs, services, medication reminders, etc. ● Allow caregiver, client and staff to create/review/edit daily schedule/tasks/message/news and share to client ● Provide a function to re-size video/photos ● Only assign "5GB" storage size for each service user ● The core functions and features would be included: ✓ Photo Taking and Upload photos ✓ Alert message ✓ Video alert (check health status and remind client) ✓ Payment /invoice ✓ Tailor-made games ✓ Tailor-made video (ICP) ✓ Survey ✓ Link to YouTube TV or video ✓ Family Chart (家庭架構圖表) ✓ Recording function ✓ Ranking (龍虎榜) (Games/Video) ✓ Medication reminders ✓ Video Conference function ✓ Instant Message ✓ IP Phone Call Function ✓ Check health records ✓ Show wealth information on the landing page ✓ Support Performance Bonus
4.	Caregiver User Interface (support both Android and iOS platform) ● Allow to view service users' health records ● Provide a function to review/update/create service users' schedule ● Provide a function to upload video or images ● The core functions and features would be included: ✓ About ELCSS Information ✓ Allow to retrieve Payment/Invoices ✓ Video Conference function ✓ Alert Message ✓ Assessment ✓ Amend client information ✓ E-Form ✓ Useful link

6. System Requirements

The computer solution proposed by the supplier must comply with the following system requirements:

1. Web-based system is required.
2. Support Android 5 or above / iOS 8 or above Platform
3. User-friendly operating interface is required.
4. User interface mainly in Chinese, supporting multi-language has advantages, but the input data and reports must support Unicode, i.e. English, Traditional Chinese and Simplified Chinese.
5. Support Client Side OS Platform: MS Windows 7 (32-bit and 64-bit), MS Windows 8 (64-bit), MS Windows 10 (64-bit), and latest versions of MS Windows.
6. Support Mac OS Platform: Mac OSX 10.7 or above.
7. Support Client Side Web Browser: Chrome and Safari.
8. Support Bluetooth 4.0 or above

7. Capacity:

1. Number of Users: 710
2. Number of Caregivers: 220
3. Number of Active Cases: 710
4. Number of New Cases per Year: ~200
5. Number of Tablets: ~400
6. Number of IoT Devices: 420 sets
7. Number of Closed Cases per Year: ~200
8. Number of Service Teams: 8

8. Hardware and IoT Devices

Please refer to the following table for the hardware and IoT devices to be adopted for this project. Please note that the System will be run on a Virtual Private Network (VPN) and virtual machines.

1. Hardware (for Production & Standby):	Quantity
EMC VXRail G Series - 4 Nodes - 10 cores dual sockets of Intel Xeon E5-2630v4 (per node) - Memory 512GB (per node) - Cache Size 800GB SSD (per node) - HDD 1TB x 4 (per node)	1

8-10" Smart Tab 4G	200
8-10" Smart Tab Wifi	200
2. IoT Devices	Quantity
Bluetooth 4.0 Arm Type Blood Pressure Monitor	400
Bluetooth 4.0 Pulse Oximeter	400
Bluetooth 4.0 Body Fat & Hydration Scale	400
Bluetooth 4.0 Non-contact Infrared Forehead and Surface Thermometer	400
Bluetooth 4.0 Blood Glucose & Cholesterol Meter	400
Pedometer + Heart Rate + Sleep WristBand	400

Suppliers would need to make a fair assessment on such hardware and IoT devices configuration described to ensure that the proposed solution/IoT devices product is compatible and with sufficient capacity. Besides, Suppliers would also need to ensure that such hardware/IoT devices configuration supports proper data backup (even for hot backup) and security control.

Suppliers need to propose a Disaster Recovery (DR) Plan and conduct a DR drill during the implementation period upon the request of Evangelical Lutheran Church Social Service - Hong Kong.

Suppliers should counter-propose the hardware/IoT devices configuration required if they find that there is deficiency in the above-stated hardware and infrastructure configuration.

9. Schedules

9.1. Compliance

(***** Please tick the appropriate.)

[ ] We confirm that our proposal comply fully with the required specifications, described in Sections 1 to 8 of this Document.

[ ] We confirm that our proposal does not comply fully with the required specifications, described in Sections 1 to 8 of this document, in the following aspects:

9.2. Reporting

(***** Please tick the appropriate.)

[ ] I/We confirm that our proposed solution is equipped with a reporting tool or a business intelligence tool.

[ ] I/We confirm that our proposed solution is NOT equipped with any reporting tool nor any business intelligence tool.

Please indicate the proposed approach for generating the following required reports:

9.3. Risk Management

Please state your proposed approach for risk management including but not limited to the following aspects:

1. Transaction Data Backup:

2. Solution Backup:

3. Resilience:

4. Security:

5. Contingency:

6. Personal Data Handling:

7. Other risk factors:

9.4. Data Migration

Please describe your proposed data migration approach and plan.

9.5. Documentation and Deliverables

Please state if the following documentation/deliverables will be provided:

Documentation/ Deliverables	**Comply (Yes/ No)**
Project Initialization Document	
User Requirement Specification/Gap Analysis Report	
Functional Specification	
Technical Specification	
User Acceptance Test Plan	
User Manual	
Application Operation Manual	
Disaster Recovery Plan & Procedures	
Disaster Recovery Drill	
User Training	
System Nursing	

Please state the documentation/deliverables other those listed above:

9.6. Project Management Methodology

Please describe the project management methodology which will be adopted.

9.7. Project Schedule

Please provide the project schedule by Month Number, e.g. Month 1 is the 1st month since the formal project commencement.

#	Major task/ milestone	From (Month No.)	To (Month No.)
1.	Project Initialization		
2.	Gap Analysis/User Requirement Collection		
3.	System Installation/Customization/Development		
4.	User Training		
5.	User Acceptance Test		
6.	Data Migration		
7.	System Live Run		
8.	System Nursing		

9.8. Quotation Breakdown

	Item	Unit of Measure	Quantity	Unit Price	Total Price
1.	Smart Homecare Solution				
	1.1 Clientele Information System				
	1.2 Mobile APP				
2.	Professional Services				
3.	Including the first year of System Maintenance				
4.	Software License				
	Total:				
	Optional Items:				
5.	Case assessment				
6.	Roster Management				
7.	SIS Report				
8.	Support iOS platform				
9.	Additional Report Customization				

Remarks:

- Unit of Measure can be one of the followings:
  - Per named user
  - Per concurrent user
  - Per server
  - Per processor
  - Per instance
  - Per man-day
  - Per report/ function/ module

9.9. Payment Schedule

Milestone	Percentage of Project Sum
Initial Payment	30
Gap Analysis/ User Requirement Collection	10
User Acceptance Test	20
System Live Run	20
Project Completion	20

(* Please tick the appropriate.)

[ ] I/We confirm that our proposal comply fully with the payment schedule described above.

[ ] I/We confirm that our proposal does not comply fully with the Payment schedule described above in the following aspects:

9.10. System Support and Maintenance

Please describe the scope of services and service level for the system support and maintenance in the following aspects:

1. Helpdesk services:
   (Service hours, Response time of calls should be specified.)

2. Bug-fixing:

3. Free version upgrade and installation of bug-fixing patches, and the corresponding documentation:

4. Refreshment courses on how to use the System:

5. Offers regarding out-scope services:

6. On-site support services:

Maintenance Fee:

	Item	Unit of Measure	Quantity	Unit Price	Total Price
1.	First Year Annual Maintenance Fee				
2.	Second Year Annual Maintenance Fee				
3.	Third Year Annual Maintenance Fee				

9.11. Free Warranty Period

The duration of free warranty period upon the completion of the project, i.e. end of system nursing, will be _____ months.

9.12. Resume of Major Project Team Members

Please supply the resumes of the major project team members, including but not limited to the Project Director and Project Manager.

9.13. Reference Projects

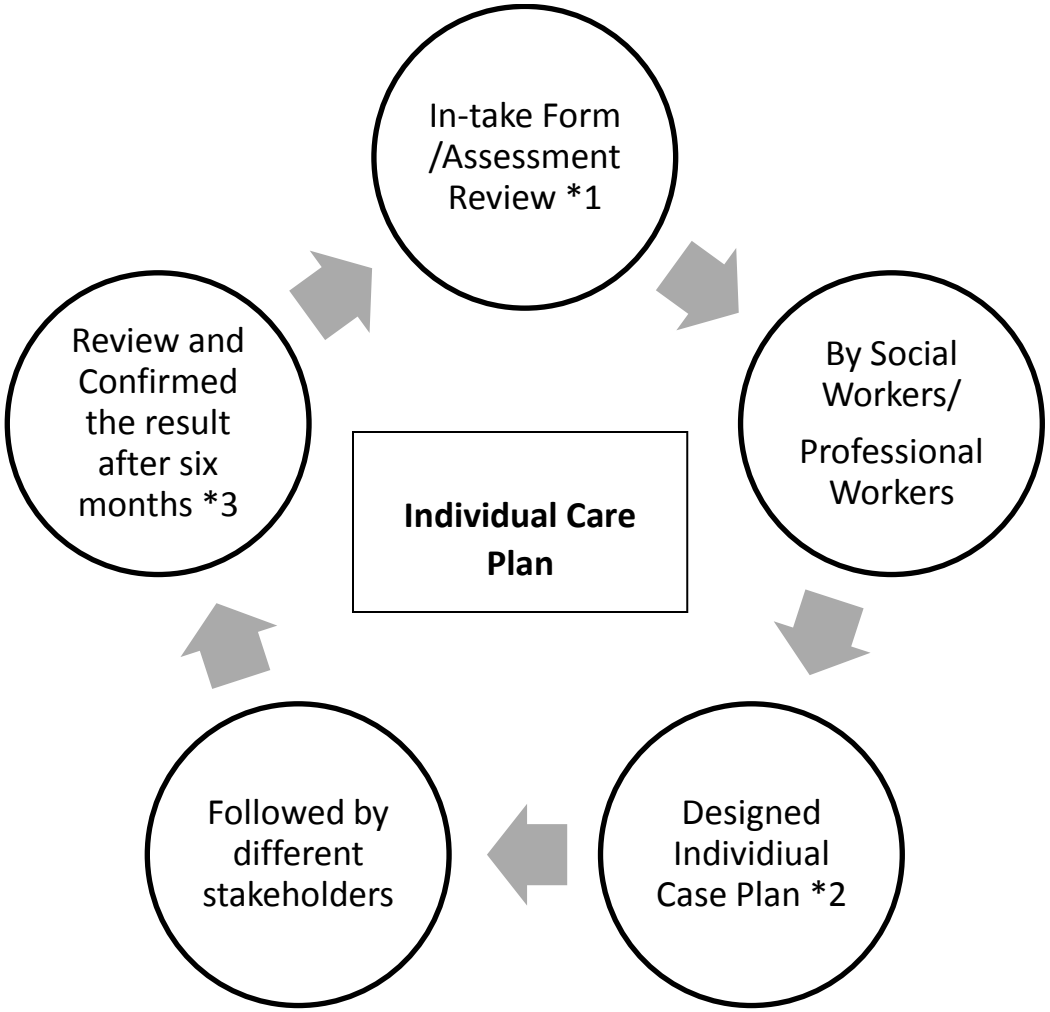
Please list your reference projects in the table below and provide supplementary details if relevant.

#	System/ Project Name	Client	Supplementary
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Appendix A - Assessment Forms

Form 1	社會工作評估表
Form 2	Family Assessment Form on Dementia Care (FAF-DC)
Form 3	老人抑鬱短量表
Form 4	護老者壓力評估表
Form 5	Nursing Assessment Form
Form 6	個人健康變化情況報告
Form 7	Physiotherapy Assessment Form
Form 8	Occupational Therapy Assessment Form
Form 9	沙田區綜合家居照顧服務轉介表-普通個案
Form 10	IHCST 表格 1a_轉介服務
Form 11	個案評估及服務資料表 (IDSP & HST)
Form 12	FHC 服務申請表
Form 13	服務安排表
Form 14	服務協議書
Form 15	個人照顧計劃 (社會工作)
Form 16	個人照顧計劃 (護理服務)
Form 17	個人照顧計劃 (物理治療服務)
Form 18	個人照顧計劃 (職業治療服務)
Form 19	家訪記錄表
Form 20	膳食服務表
Form 21	護送服務表
Form 22	藥物管理記錄表
Form 23	關愛基金『支援身體機能有輕度缺損的長者』試驗計劃評估表 (To Be Confirmed by SWD)

Appendix B - Individual Care Plan (ICP) Workflow



1. Including in-take and assessment forms from professionals (such as OT, PT, etc.)
2. Signed Agreement/ Required Service form
3. Fill-in different questionnaires
4. Generate full-set of Individual Care Plan (ICP)