TITLE: FOR THE SUPPLY, DELIVERY, COMMISSIONING AND MAINTENANCE OF FACIAL RECOGNITION SYSTEM.

1.   Introduction

1.1.   The National Kidney Foundation ("NKF") wishes to invite vendor (the "Vendor") to quote for the supply, delivery, commissioning and maintenance of facial recognition system for forty-two (42) Dialysis Centres for thirty-six (36) months.

2.   Requirement Specification

2.1.   Please refer to ANNEXES A to M for details.

3.   Demonstration of Capabilities

3.1.   Vendor shall at their own expense, at the written request of NKF, prepare and conduct demonstrations/presentations in Singapore to substantiate the claims and proposals in their Offers. The time, date and venue for any such demonstrations/presentations shall be determined by NKF. The demonstration of the item/equipment etc. if required, will have to be arranged within 3 days by the Vendor.

4.   Compulsory Briefing Session

4.1.   Vendors are required to attend an online briefing session on the date and time specified below:

   Date: 16 September 2020, Wednesday
   Time: 10.00am
   Mode: Microsoft Teams

4.2.   To participate in the online briefing session, Vendors have to email to pauline.leong@nkfs.org with details on the company's name, attendee's name and email address by 14 September 2020, Monday, 11.00am. The Team meeting details would be sent to vendors who had expressed their interest to attend.

4.3.   Invitation to Quote (ITQ) submitted by Vendors who did not attend the briefing session will not be considered.

5.   Amendment to Invitation to Quote

5.1.   The National Kidney Foundation reserves the rights to amend any terms in, or to issue supplementary terms to the ITQ at any time to the Closing date.

6. Submission of ITQ

6.1. The quotation submitted by the Vendor shall be as in "**Price Schedule**" - **Annex K**. Two full sets of quotations (one original and one duplicate) must be submitted with Vendor's stamp on all pages stipulated in the ITQ. The quotation must be submitted by hand in a sealed envelope and endorsed with the words "**Invitation to Quote Ref No: NKF/PL/2020/009 ITQ for the supply, delivery, commissioning and maintenance of facial recognition system**". All submission should be no later than **22 September 2020, Tuesday, 3.00pm** (the "**Closing Date**") and delivered by:

        To deposit to   :   ITQ Box A
                                Security Counter
                                National Kidney Foundation
                                81 Kim Keat Road
                                Singapore 328836
                                Attn: Ms Pauline Leong

6.2. The submitted quotation shall be irrevocable and open for acceptance by NKF for **90 days** from the Closing Date.

6.3. The Vendor, at the point of submission of its bids, is required to provide the following information and/or documents to NKF:

    6.3.1.   Annex A to M;

    6.3.2.   Latest audited financial report or published accounts;

    6.3.3.   Extract of company/ business registration from the Accounting & Corporate Regulatory Authority (ACRA), showing a full list of directors/partners of the Vendor. The date of the extract of company/business registration from ACRA shall not exceed more than 3 months from the point of submission;

    6.3.4.   Any other documents relevant to the ITQ.

6.4. If you have any inquiries relating to this invitation to quote, please contact Ms Pauline Leong at telephone no 6506 2104 or email to pauline.leong@nkfs.org.

7. Terms and Conditions

7.1. The terms and conditions set out in **Annex L** shall form part of the binding contract between the successful Vendor and the NKF.

8. Price Quotations

8.1. All prices quoted by the Vendor shall be in the lawful currency of the Republic of Singapore and exclusive of GST.

8.2. All prices quoted by the Vendor shall represent the total cost to NKF.

9. **Payment Schedule**

9.1.   It is the responsibility of the Vendor to ensure that the documents required for payment under the contract are received by NKF. The required documents are as follows;

Required documents for payment of 100% for Hardware and Software upon delivery.

9.1.1.   Vendor's invoice showing the goods/works description, quantity, unit price and total price

9.1.2.   Delivery note for every consignment originating from the party contracted by NKF. The Delivery Note should be serialized, dated and contain the number of the Official Purchase Order

9.1.3.   Copy of Manufacturer's warranty certificate (where applicable)

9.1.4.   Packing list identifying contents of each package which list should include casing number, full description of the items and the quantities in each package.

9.1.5.   Required documents for payment of 100% for Services upon Services Completion.

9.1.6.   Vendor's invoice showing the goods/works description, quantity, unit price and total price.

9.1.7.   Acceptance tests sign off.

ANNEX A

SCOPE OF WORK

We are opening this ITQ to interested vendors for submission of quotations.
Refer to the following Annexes for more information

> **Annex A:** Scope of Work.
> **Annex B:** Technical Requirements.
> **Annex C:** Functional Requirements.
> **Annex D:** Maintenance Requirements.
> **Annex E:** High Level Project Plan.
> **Annex F:** Vendor's Experiences in Similar Projects.
> **Annex G:** Team Composition.
> **Annex H:** Project Requirement Compliances.
> **Annex I:** High Level Network Diagram.
> **Annex J:** Work Schedule.
> **Annex K:** Price Schedule.
> **Annex L:** Terms and Conditions
> **Annex M:** Information About Vendor

1. PROJECT BRIEF & INFORMATION

1.1. NKF will be calling an ITQ for the supply, delivery, commissioning and maintenance of facial recognition system.

1.2. Objective: To install a facial recognition system at every Dialysis Centre so that registered personnel can enter the Dialysis centre through facial recognition with high precision infrared human temperature acquisition with mid-range temperature measurement at the same time.

1.3. This facial recognition system is to complement and not replace the existing security card access systems in place for all the NKF dialysis centres.

2. GENERAL REQUIREMENTS

2.1. The facial recognition management system will be hosted centrally at the NKF Head Offices Data Centre.

2.2. The Vendor shall provide all the required equipment and services, whether explicitly mentioned in these specifications or not to fulfil the intent of the specification and to ensure the completeness, operation and maintainability of the system at no extra cost to NKF.

2.3. The Vendor is responsible for any damage found during the course of installation. The Vendor is required to rectify and reinstate the damage back to the existing. NKF will not entertain any additional cost relates to the above stated.

2.4. The Vendor may only conduct the work on Sunday. Day works are allowed provided the works do not generate excessive noise, dust and/or do not cause any inconveniences to the patients, NKF staffs, residents or general public, subjected to the approval of NKF. The NKF also reserves the right, at any time of the day, to stop any works that are deemed unfavourable to

patient care or public safety. No claims shall be entertained for expenses arising from compliance with this clause.

2.5.   All costs incurred from the coordination and liaison works between the vendor and all term contactors, specialist contractors and integrators are deemed to be included in the contract price.

2.6.   The Vendor shall submit together with his quotation:

      2.6.1.   Description of the equipment and its components as offered together with all relevant manufacturers' catalogues illustrations and diagrams. All relevant technical and descriptive literature shall be in English. Literature shall be sufficient to prove the equipment on offer fully complies with the specification listed below.

      2.6.2.   A guarantee on all equipment being offered for a minimum period of twelve (12) months against faulty workmanship and materials and on the operation of the systems as a whole. The vendor shall also guarantee the supply of spare up to the next five years following the award of the contract.

2.7.   The vendor shall provide maintenance support (including supply/replacement of spares) for a period of 3 years including warranty periods. A maintenance schedule shall be supplied with the contract giving details of what maintenance shall be carried out and to state clearly what is to be checked at every visit.

2.8.   The Vendor shall highlight and update the NKF of any new or special functionality that are useful and relevant to the user's application but not found in any part of this document.

2.9.   It shall be in the scope of the vendor to acquire any requisite authorizations or licensing from local authorities where applicable, that may be required in the course of the project.

2.10.   Installation and commissioning of the management software on NKF Servers running on VMware platform.

2.11.   Installation and commissioning of the client management software on NKF Client Workstations.

3.   PROJECT SCHEDULE

3.1.   The selected Vendor would be required to complete the supply, delivery, commissioning and maintenance of facial recognition system of 42 dialysis centres according to the following schedule listed in **ANNEX J.**

3.2.   The Vendor is however permitted to state an alternate timeline and indicate the reasons they wish to offer for such alternative schedule. The project must be completed by end of July 2021.

4.   INSPECTION, TESTING AND COMMISSIONING

4.1.   On completion of installation, all the equipment and installation shall be inspected jointly by the NKF and the Vendor for their correctness and completeness at the site of installation during acceptance tests.

4.2.   The vendor shall ensure that before the completion of the installation, at least two copies of the relevant manuals and documentation are available to NKF in hard copy and soft copy forms.

4.3.   Any other tests, as NKF may deem fit so as to confirm the performance or to establish the compliance to technical specifications of either individual hardware items or integrated operation of facial recognition system shall be conducted by the vendor on site. Should the results of these test show any deficiency/deviation to specifications, the vendor shall do the modification/replacement/addition necessary to make the system compliant to the specification at own cost.

5.   TRAINING

5.1.   The Training shall be offered to selected staff from the NKF.

5.2.   The methodology of the training shall be developed on the Vendor's experience in the design, construction, operation and maintenance of the Facial Recognition System.

5.3.   The basic structure of the training shall include, as a minimum:
5.3.1.   Operation and maintenance of the complete Facial Recognition system.
5.3.2.   Field training on site.
5.3.3.   Training shall be conducted in English.

Accepted By:

Authorized Signature: _____   Date: _____

Signatory Name: _____   Signatory Title: _____

Telephone Number: _____   Vendor's Name: _____

Email Address: _____   Vendor's Stamp: _____

ANNEX B

TECHNICAL REQUIREMENTS

1. GENERAL REQUIREMENTS

1.1. The Vendor shall be responsible for the successful implementation, commission and effective operations of the System including system integration activities with all System Software and Hardware components and external systems (e.g. Card Access System). The Vendor shall involve the NKF' Representatives in all phases of the project life-cycle, including all project meetings and reviews of all project deliverables.

1.2. The Vendor's responsibilities shall include at least the following:
    1.2.1. Resolve all Hardware, Software, network and all related problems;
    1.2.2. Manage all matters relating to the delivery, installation and operation of the proposed solution, including Hardware, Software, system interfaces, documentation, procedures, and briefings;
    1.2.3. Be responsible for capacity sizing, system architecture, configuration and overall performance of the System;
    and
    1.2.4. Ensure any impact on system interfaces are minimised in the context of application changes and system configuration of the system interfaces.

1.3. The System shall be compatible at least with the Operating System (OS), Microsoft Office and browser versions as follows:
    1.3.1. Windows 10 OS and above (64-bits);
    1.3.2. Microsoft Office 2016 and above (64-bits);
    1.3.3. Microsoft Office 365;
    1.3.4. Microsoft IE11 web browser and above.

2. HOSTING ENVIRONMENT

2.1. The System shall be hosted in NKF Head Office Data Centre, on a Hub and Spoke model where there is a central server to store all the facial prints of the people registered and for the individual devices at the various locations to capture the facial images into the server.

2.2. The system must not be accessible from the internet (external) and have no reliance of internet (external) connectivity for operation and maintenance.

2.3. The Vendor shall liaise and work with NKF-appointed representatives for the setup, implementation and support of the System.

2.4. The Vendor shall be responsible for the installation and configuration of application software product and tools required for the implementation of the System. The Vendor shall work with all NKF-appointed representatives to ensure success installation and configuration on the NKF environment for the System.

2.5. The Vendor shall provide detailed costings for the Hardware and Software components that is required for the System.

3. HARDWARE REQUIREMENTS

3.1.   GENERAL REQUIREMENTS

3.2.   Provide NKF the list and specifications of the equipment needed to support the operation of the Facial Recognition System viz. the Server(s), Notebooks etc. These will be provided by NKF.

3.3.   LOG RETENTION

3.4.   The system shall support an unrestricted number of logs and historical transactions with the maximum allowed being limited by the amount of hard disk space available.

3.5.   GROWTH AND FUTURE REQUIREMENTS

3.6.   System shall be upgradeable and scalable in terms of hardware and software to support future growth.

3.7.   The performance and System availability of the System as per this Contract shall continue to be met notwithstanding the System upgrade.

3.8.   The Vendor shall ensure that the System is sized to meet the targeted user base and projected growth.

3.9.   The Vendor shall specify in its proposal all the assumptions made in relation to its estimation.

3.10.   DOOR

3.11.   The Vendor shall be responsible to ensure the System is able to integrate with existing doors mechanism.
    3.11.1.   National Kidney Foundation HQ and Centres
        Dry contact is the preferred mechanism to issue command to open existing door installed with Facial Recognition system. Existing card access vendors are Certis Cisco & APRO.

4.   SOFTWARE REQUIREMENTS

4.1.   GENERAL REQUIREMENTS

4.2.   The Vendor shall propose a suite of system software products that is required in the production environment.

4.3.   The Vendor shall also ensure patches, upgrade etc of future releases for any software utilized by the System is done at no cost to NKF which shall include at least impact analysis, compatibility testing and installation.

5.   SYSTEM DELIVERY AND INSTALLATION

5.1.   GENERAL REQUIREMENTS

5.2.   The Vendor shall assume responsibility for the overall delivery and installation and its eventual implementation to the NKF accessing the System.

5.3.   The Vendor shall supply a detailed implementation plan and assume responsibility for the overall implementation of the proposed system. The Vendor shall provide NKF with the implementation strategy and approach.

5.4.   The Vendor shall be solely responsible for the end-to-end installation and implementation.

5.5.   The Vendor shall provide advice on all matters pertaining to the installation and operation of the System, including at least data communication and performance tuning.

5.6.   The Vendor shall provide on-site qualified and competent personnel with relevant experience to co-ordinate all work involved and to liaise with other vendors when necessary to ensure the successful implementation of the System.

5.7.   The Vendor shall package the final solution to include all necessary deliverables such as executable, source codes, documentation, for installations to be carried out by NKF.

5.8.   The System should minimise dependencies on any client software where possible. In the event that client installation is inevitably required, the Vendor shall introduce process to ensure that the client software is properly installed in the identified users' clients.

5.9.   The Vendor should ensure any client software installed for use shall be intuitive. For example, no additional settings/clicks required by the users before use and settings should be locked.

6.   CABLE INSTALLATION

6.1.   GENERAL REQUIREMENTS

6.2.   The cable installation to be provided shall include all works, services, materials and equipment necessary for the operation of the System.

6.3.   The installation works shall be performed by qualified staff in accordance with the latest Edition of the Singapore Standard Code of Practice and regulations currently enforced by the relevant authorities.

6.4.   The Vendor shall provide the necessary cable supports that are tamper proof. Signal and power cables are not allowed to be laid in the same trunking or in close proximity.

6.5.   Cables within the building shall be installed in conduits or trunking of approved types (BS4568) or in cable trenches. All conduits and trunking shall be securely supported and all cables shall be cleared or clipped over the whole section of the lengths.

6.6.   Insulated grommets, brass bushes or bus-and-locknuts shall be provided to prevent abrasion of the cables on any sharp edge especially for cables that are passing through holes in metalwork.

6.7.   All cables, terminations and equipment installed shall be appropriately labelled for identification and to facilitate troubleshooting. The location and text of the labels will be subjected to the NKF's approval before installation.

6.8.   The Vendor shall ensure that the signal strength of the cables is not compromised.

6.9.   All equipment and terminating points shall be earthed. Cable entries to equipment and control boxes shall have weatherproof connectors.

ANNEX C

FUNCTIONAL REQUIREMENTS

1.   OBJECTIVES

1.1.   The main objective of the System is to create an efficient and seamless access experience to NKF staffs, patients and caregivers working or visiting the centre.

1.2.   The System shall assist NKF in meeting the following objectives:
   1.2.1.   To authenticate the NKF staffs, patients and caregivers working or visiting the centre in an efficient manner via the use of Facial Recognition.
   1.2.2.   Non-contact automatic body temperature detection, human face and performing high precision infrared human temperature acquisition at the same time
   1.2.3.   To integrate with other systems provided by NKF e.g. Card Access System to allow seamless building access experience.
   1.2.4.   Auto identification of an unmasked personnel and provide real-time warning.
   1.2.5.   Integration with Safe Entry QR code
   1.2.6.   Support mid-range temperature measurement and real-time warning upon detecting of high temperature of a person

Currently, NKF staff will need to tap their staff pass (SSID card) at the card readers located at the physical access points, e.g. doors in order to gain access. Visitors will press the doorbell to alert NKF staff to gain access.

2.   OVERVIEW

2.1.   There are 4 groups of users for this system.

S/N	GROUPS OF USERS	DESCRIPTION
a	Patients	Patients visiting Dialysis centres for treatment
b	Staff	NKF Staff working in the Dialysis Centres
c	HQ Staff Visitors	NKF Staff from HQ visiting Dialysis Centres
d	Caregivers and ambulances crews	Caregivers and Ambulances crews accompanying the Patient

2.2.   The estimated numbers of users and record based is as follows

S/N	Dialysis Centre	DESCRIPTION		
		Number of users with administrative rights	Estimated Number of Patients	Estimated Number of Staffs
1	KKT	3		
2	MSD	3		
3	PNG	3		
4	CLE	3		
5	CP1	3		
6	TP2	3		
7	SMI	3		
8	URD	3		
9	ADT	3		
10	YS3	3		
11	JE1	3		
12	CP2	3		
13	GMH	3		
14	WCR	3		
15	KLA	3		
16	TM1	3		
17	TM2	3		
18	BPJ	3		
19	JW1	3		
20	TWY	3		
21	AM2	3		
22	AM3	3		
23	HG1	3		
24	ALJ	3		
25	SRG	3		
26	UBK	3		
27	BED	3		
28	HG2	3		
29	WD1	3		
30	WD2	3		
31	YS2	3		
32	JW2	3		
33	TPH	3		
34	PSR	3		
35	YCH	3		
36	YS1	3		
37	BBK	3		
38	BP2	3		
39	BM2	3		
40	QT1	3		
41	PSR2	3		
42	Skyvista	3		

2.3.   The Vendor shall take into consideration of the physically handicapped users when proposing the design, position and height of the Facial Recognition camera at the access points.

2.4.   As NKF has many dialysis centres, the system must be flexible enough to allow for multiple system administrators at all the dialysis centres to do the registration.

2.5.   The Vendor shall note that Facial Recognition System is not the sole means of authenticating the users. In the event Facial Recognition System fails to authenticate the users, the existing card access will be used to authenticate.

2.6.   The Vendor shall work closely with the NKF's representatives and other vendors (e.g. door access Vendor, building management, IT personnel etc) throughout the project lifecycle to ensure the setup, installation and implementation are well coordinated and smooth.

2.7.   The System shall be configurable and have the flexibility for new data items to be captured and added with minimal impact.

3.   FACIAL RECOGNITION MODULE

3.1.   The System shall be able to work well under the current environmental conditions of NKF Dialysis centres, i.e. robust to ambience lighting including low-lighting condition.

3.2.   The Vendor shall propose alternate solution / recommendation in the event that the current environmental condition is not conducive for the System.

3.3.   The System must be able to function on a standalone basis and continue to capture the facial images even when the network is down, and be able to upload into the central server, all the recorded images after the outage.

3.4.   The System must be able to encrypt all the data stored so that it cannot be decrypted when the device is stolen.

3.5.   The Vendor shall be responsible for all system integration activities. This includes integrating all the necessary hardware, software and interfaces with external systems when necessary.

3.6.   The System shall be able to work well under normal walking speed. The System shall be able to authenticate user while the user is on the move and at a distance, e.g. without requiring the user to stop. The System shall allow administrator to configure the distance before facial recognition module tries to authenticate the user.

3.7.   The System will only trigger the opening of physical access upon successful authentication. Otherwise, the physical access shall remain closed.

3.8.   The Vendor shall be responsible for fine-tuning the System to ensure optimal performance.

FACIAL CAPTURING

3.9.   The System shall automatically capture and authenticate the facial image of the user without any human intervention.

3.10.   The System shall have a guaranteed 100% facial image capture for a wide range of user profile, behaviour, pose difference +/- 15 degree left and right deviation from frontal face and +/- 20 degree up/down deviation from frontal face, under different illuminations etc.

3.11.   The System shall have adjustable thresholds for False Acceptance Rate (FAR) and False Rejection Rate (FRR).

3.12.   The System shall minimally be able to match and authenticate based on the following criteria:

S/No	Description
1	Darker skin tone
2	With headgear/hood/cap/hat
3	With or without makeup, or with heavy makeup
4	Liveliness detection
5	Different heights, e.g. person sitting on wheelchair
6	Different facial expressions
7	With & without specs/sunglass
8	Changes to facial hair, eg beard/moustache
9	Hairstyle changes (also partial blockage of face)
10	Eyebrow changes
11	Weight changes

PRESENTATION ATTACK DETECTION

3.13.   The System shall minimally be able to match and authenticate based on the following criteria:
      3.13.1.   Spoofing using photographs;
      3.13.2.   Spoofing using video recordings;
      3.13.3.   Spoofing using 3D masks; and
      3.13.4.   Facial capturing without user's knowledge.

3.14.   The PAD process should require minimal interaction or response from the users.

3.15.   The PAD process shall comply with photosensitive epilepsy guideline 2.3 defined in WCAG 2.0.

AUTHENTICATION

3.16.   The System shall be able to authenticate the staff / visitors based on the enrolled facial images.

3.17.   The time required for capturing raw data for the PAD process and authentication, excluding the time taken to position correctly the users face in front of the camera, should not exceed two (2) seconds.

3.18.   The System shall display the name of the staff / visitors after being authenticated on the Facial Recognition display panel.

3.19.   For staff and patient, the System shall:

      3.19.1.   authenticate the staff via Facial Recognition;
      3.19.2.   log down the match score and keep an image of the photo used for matching;
      3.19.3.   create an entry/exit record in the System indicating the time and the physical access point;
      3.19.4.   if match pass, display the name of the staff on the display screen and open the door;
      3.19.5.   if match fail, to ask the staff to try again. The staff can choose to try again, or to tap their NKF pass (SSID card) at the existing card reader system for access.

3.20.   For others, the System shall:

      3.20.1.   If the visitor is a General Public and has not enrolled his/her face, then he/she should press the existing doorbell for assistance.

4.   ADMIN MODULE

4.1.   The System shall allow administrators to perform the following functions:

4.1.1. Create and maintain the list of administrators and users accounts and access rights;
4.1.2. Create and maintain the list of categorization for enrolled profiles;
4.1.3. Create and maintain the list of access grouping for facial recognition access points;
4.1.4. Set and amend the matching threshold of the System;
4.1.5. View all transactions, logs, reports that the System generates;
4.1.6. Set the validity period of an enrolled photo before an updated photo is required.

5. ENROLMENT MODULE

5.1. The System shall be designed to limit the type of functionality available based on access rights for the enrolment module.

5.2. The System shall be designed to enrol the profiles of staff and external visitors in a simple and efficient manner.

5.3. The System shall provide means for designated accounts with the access rights to remove an enrolled profiles or multiple removal of enrolled profile that is no longer required accessing the building through a user-friendly interface.

5.4. The System shall be designed to automatically purge enrolled users' profiles through configurable parameters for different categories with at least the following:
5.4.1. Last Authenticated Before Removal
5.4.2. Validity Period

ENROLMENT PHOTO STANDARDS

5.5. The system shall conform to the following standards. If the standards cannot be met, the vendor should provide clear justifications and to counter-propose other relevant standards.
5.5.1. Minimum resolution 320 X 240
5.5.2. Maximum resolution 640 X 480
5.5.3. Not exceeding 2MB per file.
5.5.4. There must be no distortion to the aspect ratio to the original image.
5.5.5. The face should be at the centre of the photo, occupies around 75% of the photo.

6. REPORT MODULE

6.1. The System shall be able to generate reports for at least the following:
6.1.1. Movement of the users who enter building. Achieve by retrieving the in records at the door.
6.1.2. Detailed overall summary, transaction records, including identifiers, date, time and authentication passed/failed result etc.
6.1.3. Listing of registered users by Dialysis Centre.
6.1.4. List of system administrator accounts.

6.2. The search parameters, logic and displayed fields shall be determined during the requirements gathering phase.

6.3. The administrator shall be able to search and see a listing of the reports available in the System.

6.4. The System should allow reports to be generated in real-time and be exported in various formats (e.g. pdf, excel), including being available in printer-friendly formats.

6.5. The Vendor shall propose any other reports that is necessary or useful for NKF.

7. CONVERSION AND MIGRATION

7.1.   The Vendor shall be responsible to convert and load the existing photos to the proposed System.

7.2.   The Vendor shall provide the mapping of data fields from the original format to any new format required.

7.3.   The Vendor shall conduct re-migration/conversion of the photos to the System. All existing photos shall be completely migrated, accounted for and approved before the migration is considered as completed.

7.4.   The Vendor shall provide all third-party tools and/or software required for the data migration.

MAINTENANCE REQUIREMENTS

1.   GENERAL REQUIREMENTS

1.1.   The Vendor should appoint a single point of contact for the maintenance of the system. We will refer to this person as the Maintenance Manager (MM).

1.2.   The vendor shall provide maintenance support (including supply/replacement of spares) for a period of 3 years including warranty periods. A maintenance schedule shall be supplied with the contract giving details of what maintenance shall be carried out and to state clearly what is to be checked at every visit.

1.3.   The Vendor shall carry out firmware upgrade and version upgrade for the system when new versions are available at no cost to NKF, after obtaining agreement from NKF on the deployment timeline of the new version.

1.4.   The Vendor shall provide a support number for NKF to report incidents.

1.5.   For Change Requests, NKF shall submit the request to the MM and the service provider shall provide an assessment of the cost/effort at no charge, within one week of the request.

1.6.   The Vendor shall support audit where required by NKF and carry out fixes to address any security issue.

HIGH LEVEL PROJECT PLAN

Vendor should provide a project plan, showing the high level activities, key dates, time frames, resources and dependencies for procuring and implementing. The plan should have defined steps with specific milestones covering all critical elements of the commissioning process. Included in the commissioning plan should be the expected outcome of the activities to be performed.

ANNEX F

VENDOR'S EXPERIENCE IN SIMILAR PROJECTS

*All requirement mentioned herewith are mandatory, sufficient details must be provided to demonstrate relevance to this project

S/N	Item	Numbers / Description
1	Total number of successful Facial Recognition implementations projects (> $300k SGD) in last 2 years	
2	Provide list of local client references of successful implementation of similar projects (at least 5 local client references)	
4	Provide client and project information of successful implementations of similar projects (at least 3 local client references) Client Information 1.1 Customer Name 1.2 Company Address 1.3 Company Description 1.4 Contact Person 1.5 Contact Person Telephone Number 1.6 Contact Person Email Address Project Information 1.7 2.1 Estimated Project Value (S$) 1.8 2.2 Project / Scope Description 1.9 2.3 Duration of Project	

ANNEX G

TEAM COMPOSITION

Proposed key personnel for this project (Complete one for each key person)

Name of person:	
Staff position for this project:	
Total years of experience:	
Years with current firm:	
Education (Degree and Specialization):	
Other Professional Qualifications:	

RELEVANT PROJECTS

(Complete this section for each key person)

1	Project Name: Location: Project Owner: Notice to Proceed Start Date: Substantial Completion Date: Brief Description (scope, size, cost, etc) and specific role:
2	Project Name: Location: Project Owner: Notice to Proceed Start Date: Substantial Completion Date: Brief Description (scope, size, cost, etc) and specific role:

ANNEX H

PROJECT REQUIREMENT COMPLANCES

S/N	Requirement	Comply (Yes / No)	Remarks
1	**Scope of Work** As specified in ANNEX A & please provide details listed.		
2	**Technical Requirements** As specified in ANNEX B**.**		
3	**Functional Requirements** As specified in ANNEX C.		
4	**Maintenance Requirements** As specified in ANNEX D.		
5	**High Level Project Plan** Please provide details listed in ANNEX E.		
6	**Track Records** Please provide details listed in ANNEX F.		
7	**Team Composition** Please provide details listed in ANNEX G.		

Accepted By:

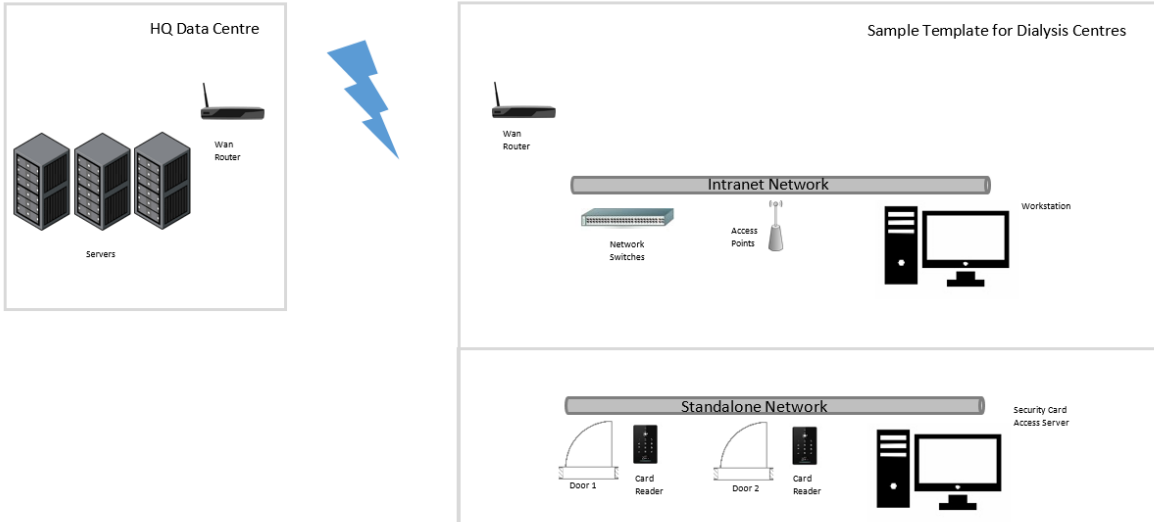Authorized Signature: _____   Date: _____

Signatory Name: _____   Signatory Title: _____

Telephone Number: _____   Vendor's Name: _____

Email Address: _____   Vendor's Stamp: _____

ANNEX I

HIGH-LEVEL NETWORK DIAGRAM

<u>**ANNEX J**</u>

WORK SCHEDULE

S/N	Dialysis Centre	No. of Biometric Device	Implementation Date
1	KKT	1	Oct 2020 - Nov 2020
2	MSD	1	Oct 2020 - Nov 2020
3	PNG	1	Oct 2020 - Nov 2020
4	CLE	1	Oct 2020 - Nov 2020
5	CP1	2	Oct 2020 - Nov 2020
6	TP2	1	Oct 2020 - Nov 2020
7	SMI	1	Oct 2020 - Nov 2020
8	URD	3	Oct 2020 - Nov 2020
9	ADT	3	Nov 2020 - Jan 2021
10	YS3	3	Nov 2020 - Jan 2021
11	JE1	1	Nov 2020 - Jan 2021
12	CP2	1	Nov 2020 - Jan 2021
13	GMH	2	Nov 2020 - Jan 2021
14	WCR	2	Nov 2020 - Jan 2021
15	KLA	1	Nov 2020 - Jan 2021
16	TM1	1	Nov 2020 - Jan 2021
17	TM2	2	Jan 2021 - Mar 2021
18	BPJ	1	Jan 2021 - Mar 2021
19	JW1	1	Jan 2021 - Mar 2021
20	TWY	1	Jan 2021 - Mar 2021
21	AM2	1	Jan 2021 - Mar 2021
22	AM3	1	Jan 2021 - Mar 2021
23	HG1	1	Jan 2021 - Mar 2021
24	ALJ	1	Jan 2021 - Mar 2021
25	SRG	1	Mar 2021- May 2021
26	UBK	1	Mar 2021- May 2021
27	BED	1	Mar 2021- May 2021
28	HG2	1	Mar 2021- May 2021
29	WD1	1	Mar 2021- May 2021
30	WD2	1	Mar 2021- May 2021
31	YS2	1	Mar 2021- May 2021
32	JW2	1	Mar 2021- May 2021
33	TPH	1	May 2021- Jul 2021
34	PSR	1	May 2021- Jul 2021
35	YCH	2	May 2021- Jul 2021
36	YS1	1	May 2021- Jul 2021
37	BBK	1	May 2021- Jul 2021
38	BP2	1	May 2021- Jul 2021
39	BM2	2	May 2021- Jul 2021
40	QT1	2	May 2021- Jul 2021
41	PSR2	2	May 2021- Jul 2021
42	Skyvista	1	May 2021- Jul 2021

ANNEX K

INVITATION TO QUOTE FOR THE SUPPLY, DELIVERY, COMMISSIONING AND MAINTENANCE OF FACIAL RECOGNITION SYSTEM

PRICE SCHEDULE

No.	Item	Quantity Required	Unit Price (exclusive of GST)	Total Price (exclusive of GST)
	Hardware and Software			
1	Facial Recognition Devices	56	$	$
2	Facial Recognition Management & Client Software	1	$	$
	Professional Service			
3	Supply, installation, testing, commissioning of above products including cabling and its components.	56	$	$
	Upfront 3 Years Maintenance Support			
4	Maintenance support (including supply/replacement of spares) for 3 years including warranty periods.	42	$	$

Accepted By:

Authorized Signature: _____   Date: _____

Signatory Name: _____   Signatory Title: _____

Telephone Number: _____   Vendor's Name: _____

Email Address: _____   Vendor's Stamp: _____

TERMS AND CONDITIONS

1.   Confidentiality

1.1   The Vendor agree to treat as confidential all information received from NKF where NKF has indicated in writing or labelled to be "Confidential", "Proprietary Information" or with any other comparable legend to similar effect, at the time of disclosure (or if disclosed orally, confirmed in writing by NKF as such within fifteen (15) days after its disclosure), which it may acquire in relation to NKF, including but without any limitation whatsoever, all business information, strategic and development plans, any matter concerning NKF, its affairs, business, shareholders, directors, officers, business associates, clients, patients or any other person or entity having dealings with NKF; information relating to the financial condition of NKF, its accounts, audited or otherwise, notes, memoranda, documents and/or records in any form whatsoever whether electronic or otherwise, and all records indicative of the financial health and status of NKF; technical information in any form whatsoever whether electronic or otherwise; information in any form whether electronic or otherwise, relating to methods, processes, formulae, compositions, systems, techniques, inventions, machines, computer programs, software, development codes and research projects; business plans, co-developer/collaborator identities, data, business records of every nature, customer lists and client or patient database, pricing data, project records, market reports, sources of supply, employee lists, business manuals, policies and procedures, information relating to technologies or theory and all other information which may be disclosed by NKF to the Vendor which the Vendor may be provided access by NKF whether stored electronically or otherwise; all information which is deemed by NKF to be confidential or which is generated as a result of or in connection with the business of NKF and which is not generally available to the public; and all copies, reproductions and extracts thereof, in any format or manner of storage, whether in whole or in part, together with any other property of NKF made or acquired by the Vendor or coming into their possession or control in any manner whatsoever (the "**Confidential Information**"), which shall be and remain the sole property of NKF and shall be returned to NKF forthwith on demand at any time.

1.2   The Vendor shall use all reasonable steps to ensure that any information marked as confidential or proprietary to NKF shall not be disclosed to third (3rd) parties.

1.3   The Vendor shall not, without the prior written consent of NKF, disclose any Confidential Information relating to this Contract or any of the contents hereof whether directly or indirectly to any third (3rd) party, which consent shall not be unreasonably withheld, except:-

    (a)   for the purpose contemplated in this Contract;

    (b)   with the consent of the other Party and then only to the extent specified in such consent;

    (c)   in accordance with the order of a court of competent jurisdiction; or

    (d)   to the extent as may be required by law, regulation, effective government policy or by any regulatory authority arising out of this Contract or relating to or in connection with the Vendor provided that the Vendor so required must give NKF prompt written notice and make a reasonable effort to obtain a protective order.

1.4   The restrictions on disclosure of Confidential Information described in this Clause 1 do not extend to any information that (i) already exists in the public domain at the time of its disclosure; (ii) is already in the Vendor's possession without restriction on disclosure, as evidenced by written records; (iii) is independently developed by the Vendor outside the scope of this Contract; or (iv) is rightfully obtained from third (3rd) parties.

1.5   The Vendor hereby agrees that it shall:

(a)   take all reasonably necessary steps to limit access to Confidential Information of the other Party to those principals, directors, officers, agents, employees, representatives, consultants, independent contractors and professional advisors who are directly concerned with the purposes contemplated by this Contract and are made aware of its confidential status, to the extent reasonably required for the performance of this Contract, and ensure that they do not disclose or make public or authorise any disclosure or publication of any Confidential Information in violation of this Contract; and

(b)   not to use any Confidential Information for any purpose other than the purposes for which it is intended, pursuant to and in accordance with the terms of this Contract.

1.6   The Vendor must promptly inform NKF about any unauthorised disclosure of NKF's Confidential Information.

2.   Payment

2.1   Unless otherwise specifically provided in this Contract or otherwise agreed between the parties, NKF's obligation to pay is conditional upon its receiving an invoice from the Vendor for the amount payable, giving NKF no less than thirty (30) days from receipt of such invoice to make payment.

2.2   If any invoice is not submitted to NKF within six (6) months upon completion of the Services, NKF shall be released and discharged from any liability to make any payment of the debt in relation to such invoice.

2.3   Payment by NKF of any invoices shall not affect NKF's right to reject any of the Services or Deliverables or the Vendor's responsibility to re-perform any Services or re-deliver any Deliverables that do not conform to this Contract. NKF shall have no obligation to pay for any such Services or Deliverables which have not been re-performed or re-delivered by the Vendor in accordance with Requirement Specification in Annex A. Such non-payment shall not constitute a default or breach of this Contract by NKF. In the event of any dispute between NKF and the Vendor with respect to the invoiced Services and/or other related matters, NKF shall pay the undisputed amount and NKF and the Vendor shall promptly seek to resolve the disputed matters with the Vendor.

2.4   The Vendor shall submit such invoices or other documents as NKF may require for the purpose of making payment.

2.5   NKF shall not pay for expenses or cost of whatever nature other than those expressly set forth in this Contract.

2.6   There will be no late payment service charge of any kind.

3.   Termination

3.1   NKF shall be entitled to terminate this Contract, giving the other not less than two (2) months' notice in writing and thereupon this Contract shall come to end but without prejudice to any right of action of either party against the other in respect of any antecedent breach of the terms and conditions of this Contract by the other. For the avoidance of doubt, no reason needs to be given for the said notice.

4.   Personal Data

4.1   Without prejudice to Clause 1 herein, the Vendor shall take all reasonable measures to ensure:

(a)   that any personal data (as defined in the Personal Data Protection Act 2012 ("Act") as may be amended from time to time) belonging to NKF which is held by the Vendor pursuant to this Contract is protected against loss, unauthorised access, use, modification, disclosure or other misuse in accordance with the provisions of the Act and/or its regulations etc, and that only authorised personnel have access to that personal data;

(b)   that, to the extent that the personal data is no longer required by the Vendor for legal or business purposes, that personal data is destroyed or re-delivered to NKF in accordance with this Contract;

(c)   that NKF is immediately alerted in writing (with full particulars) of any unauthorised access, disclosure or other breach of this Clause 4 and the Vendor shall take, as soon as reasonably practicable, all steps to prevent further unauthorised access, disclosure or other breach of this Clause 4 (including providing NKF with such reports or information concerning such steps as and when requested by NKF); and

(d)   it keeps itself appraised of any and all notices and circulars which NKF may from time to time notify to the Vendor, including without limitation any policies, guidelines, circulars or notices relating to personal data ("**Documentation**"), and to perform its duties or discharge its liabilities pursuant to this Contract in a manner which is consistent with Documentation, and will not cause NKF to be in breach of the same.

4.2   For the purposes of (c) above, the Vendor hereby expressly acknowledges and agrees that it has read the Documentation and is aware of and will compensate NKF for any and all potential loss and damage caused to NKF arising from or in connection with any breach of the above. The Vendor will indemnify and hold NKF harmless from claims or proceedings by third parties and any proceedings, investigations, orders, directions, judgments issued by a court, statutory body or regulatory authority, in connection with any breach of this obligation.

4.3   Notwithstanding and further to anything stated elsewhere in this Contract, NKF reserves the right and the Vendor agrees that NKF may conduct (or appoint a qualified, independent third party to conduct) an audit and/or assessment of the standard of compliance or non-compliance by the Vendor with the obligations under this Clause 4.

4.4   To the extent that the Vendor sub-contracts its obligations under this Contract to a sub-contractor, such sub-contracting shall be subject to NKF's prior written approval and the Vendor agrees and acknowledges that it shall ensure that this Clause 4 is incorporated into the sub-contractor's contract.

4.5   Subject to the foregoing, the Vendor's confidentiality obligations under this Clause 4 shall survive the expiry or termination of this Contract

Accepted By:

Authorized Signature: _____   Date: _____

Signatory Name: _____   Signatory Title: _____

Telephone Number: _____   Vendor's Name: _____

Email Address: _____   Vendor's Stamp: _____

ANNEX M

INFORMATION ABOUT VENDOR

ITQ REF NO. _____

ITQ FOR _____

1. Vendor's name: _____

2. Company/Business registration no.: _____

3. Registered address: _____

   _____

4. GST registration no. (if applicable): _____

5. Type of business (please select)

   (   ) Sole proprietorship   (   ) Private company (limited by shares)

   (   ) Partnership   (   ) Public company (limited by shares)

   (   ) Others (please specify): _____

   _____

6. Contact person

   Name: _____

   Title: _____

   Tel No.:   _____

   Fax No.:   _____

   Email: _____

7. **I declare that I/the Vendor is not related[1] to any person in NKF who is involved in this ITQ howsoever and whatsoever.**

8. The above named Vendor certifies and declares that all information, documents and materials provided in connection with its quotation bid are true and accurate to the best of its knowledge.

Authorised Signature: _____

Signatory's name: _____   Signatory's title: _____

Vendor's name: _____   Vendor's stamp:_____

[1]Related refers to the following: Spouse, domestic partner, child, mother, father, brother or sister or close associates; any corporation, business or non-profit organization of which you are serving as staff, officer, board member, partner, participate in management or are employed by; any trust or other estate in which you have a substantial interest or as to which you serve as a trustee or in a similar capacity.