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PROJECT PROPOSAL

HEALTHCARE CUSTOMER RELATIONSHIP MANAGEMENT (CRM) SYSTEM

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1. SYNOPSIS

The Company, known as International Saigon Healthcare, is inviting proposals from eligible vendors for the provision of an extensive Healthcare Customer Relationship Management (CRM) System. The objective is to implement a CRM system that enhances communication and collaboration between patients and the various hospital facilities under the Company's purview, ensuring efficiency and effectiveness in healthcare services.

The Company currently utilizes healthcare management software, which includes Electronic Health Records (EHR) systems. It is essential that the future-developed CRM system seamlessly integrates with the existing solution to ensure smooth operations. In addition to compatibility, the newly developed CRM system must prioritize enhancing patient engagement and satisfaction, as well as facilitating secure sharing of patient health records and feedback. Furthermore, the system should also address the Company's current operational tasks, such as analytics and reporting, to improve the overall insight and effectiveness of the services provided.

2. BACKGROUND

International Saigon Healthcare, henceforth referred to as "the Company," is a distinguished healthcare provider committed to delivering superior patient care. The Company serves a diverse patient population, operating numerous hospitals and clinics across Ho Chi Minh City, Vietnam. In its ongoing dedication to enhancing patient experience and healthcare services, the Company seeks proposals from qualified vendors for the provision of a comprehensive Healthcare Customer Relationship Management (CRM) System.

As the designated vendor, we are committed to orchestrating the implementation of the CRM system to align meticulously with the Company's specifications. This comprehensive process will unfold over a span of six months, structured into six sprints, employing the Scrum methodology to systematically develop and deliver the requisite features and functionalities. Our approach ensures a methodical and timely execution, guaranteeing the successful integration of the CRM system in adherence to the Company's standards and expectations.

3. SCOPE

As the selected vendor, our primary objective is to design, configure, and deploy a customized Healthcare CRM system that will significantly enhance customer engagement, satisfaction, and operational efficiency for your company. We are fully committed to delivering both the functional and non-functional requirements of the project. The requirements we will accomplish to enhance patient engagement and ensure a seamless healthcare journey are as follows:

Functional Requirements

1. **Patient Registration and Communication:** We will implement an authentication system that utilizes user information. Through registered accounts, patients will have the ability to communicate with the help staff and healthcare professionals, starting from their initial visit to the end of their healthcare journey.

2. **Appointment Scheduling**: Our system will incorporate a robust scheduling mechanism that will facilitate efficient booking, rescheduling, and reminders of appointments, ensuring a smooth experience for patients.

3. **Health Information Sharing**: Users' healthcare data and diagnosis information will be securely recorded and stored in a comprehensive and reliable database, ensuring the confidentiality and accessibility of critical health information.

4. **Feedback Mechanism**: Upon completion of appointments and diagnoses, users can provide valuable feedback to our staff through an intuitive and user-friendly online feedback form. This mechanism will enable continuous improvement of our services and foster a customer-centric approach.

5. **Analytic and Reporting:** In addition to these customer-centric features, we will also enhance the current operational tasks of your healthcare center. By collecting user feedback and diagnosis data, both users and the doctors responsible for their care will have the capability to export this data in PDF format. This

feature will facilitate efficient storage and retrieval of medical information, further improving the quality of medical care provided.

Given the current substantial growth of our company, our team is committed to not only fulfilling the functional requirements but also enhancing the non-functional requirements to ensure an exceptional and reliable solution.

<u>**Non-functional Requirements**</u>

1. **Data Migration:** Our team will meticulously execute the data migration process, encompassing the extraction of existing patient data from the current system, thorough data cleansing, migration testing, reconciliation, and detailed error testing. This comprehensive approach guarantees a seamless transition of data to the new CRM system.

2. **Performance and Scalability:** To optimize performance and accommodate the anticipated increase in user demand, our team will leverage cloud services such as AWS to offload computationally intensive functions and storage capabilities. This approach will enable the system to maintain high responsiveness, effectively handle a significant volume of concurrent users, and minimize delays and performance degradation.

3. **Security:** Recognizing the highly sensitive nature of medical data, we prioritize the implementation of robust security measures to safeguard patient information both at rest and in transit. Our approach includes user authentication mechanisms to ensure authorized access, as well as encryption of data at rest using strong encryption algorithms. These methods guarantee the utmost data security and confidentiality throughout the entire system.

4. **Compliance:** The developed system will comply with relevant legal and regulatory requirements, such as data protection regulations (e.g., Decree 13/2023/NĐ-CP) and healthcare industry standards (e.g HIPAA). It should also adhere to any specific organizational policies and guidelines.

5. **Usability:** The system will have a user-friendly interface and intuitive navigation, allowing users to understand and interact with its functionalities easily.

6. **Training Program**: To facilitate the smooth operation of the proposed system, our team will implement a comprehensive training program for the Company's staff. Additionally, we will produce operational guidelines that will be made available to both employees and users alike. This approach aims to ensure that all stakeholders have the necessary knowledge and skills to utilize the system effectively.

We aim to provide a comprehensive approach to ensure a seamless healthcare journey, reliable operations, and protected patient data by addressing these functional and non-functional requirements.

4. DELIVERABLES AND SCHEDULE

4.1. Expected Deliverables

➢ A complete Customer Relationship Management system with all requirements specified in Part 3 – Scope:
  ▪ Be able to customize and tailor to clients' requirements.
  ▪ Integrate with existing healthcare management software.
  ▪ Ensure security and compliance.
  ▪ All data from the current system is migrated to the new CRM system.
➢ Training program and tutorial materials to use the CRM system.
➢ Technical support and maintenance services.

4.2. Expected Timeline

• Project start date: 01/01/2024

• Project end date: 01/07/2024

• Platform Launch: 01/01/2025

• Number of sprints: 6

• Sprint estimated length: 1 month for 1 sp

5. INITIAL RELEASE SCHEDULE OF THE PRODUCT BACKLOG ITEMS

No.	Backlog Item	Dependencies	Business Value	Release Schedule
Sprint 1: Patient Engagement – Patient account registration & Patient communication channel				
F1	Allow the patient to register an account on the patient engagement platform	-	8	Sprint 1
F2	Allow the patient to login/logout the account on the patient engagement platform	F1	9	Sprint 1
F3	Allow the CRM system to store and manage user account information (backend)	F1	8	Sprint 1
F4	Create an account detail page with necessary sections to record patient information (personal info, medical history…)	-	8	Sprint 1
F5	Allow the patient to fill in their information on the account detail page	F4	7	Sprint 1
F6	Allow the patient to modify their information on the account detail page	F5	6	Sprint 1
F7	Allow the patient to delete their information on the account detail page	F5	7	
F8	Allow the CRM system to store and retrieve patient account data	-	8	Sprint 1
F9	Add a chatbox that allows the patient to send a text message to the clinic employees	-	8	Sprint 1
F10	Integrate the voice call feature to the chatbox that allows patient to make a call with the clinic employees	-	7	Sprint 1
F11	Add more options, such as sending attachments, photos, to the chatbox	-	6	Sprint 1
Sprint 2: Appointment Booking Feature				
F12	Implement the CRM feature that manages and shows the available time for appointment booking based on the clinic schedule	-	9	Sprint 2
F13	Allow the patient to filter all available appointment slots based on date, time, doctor name, clinic location	F12	8	Sprint 2
F14	Allow the patient to select an available appointment slot	F12	9	Sprint 2
F15	Add a booking confirmation pop-up to reduce the cancellations or no-shows	F14	7	Sprint 2
F16	Implement a mechanism to ensure all appointments of a patient do not conflict with each other	F14	9	Sprint 2
F17	Ensure an appointment slot is removed from the available list after being booked.	F14	8	Sprint 2
F18	Ensure the booking detail of a patient is recorded in the database of the CRM system	F14	9	Sprint 2
F19	Allow a patient to reschedule their appointments (< 3 times per day)	F14	7	Sprint 2

F20	Show other available slots when the patient selects to change the appointment schedule	F19	7	Sprint 2
F21	Ensure new booking details of a patient are updated to the database of the CRM system when the patient selects a new appointment time	F19	8	Sprint 2
F22	Allow a patient to cancel an appointment	F14	9	Sprint 2
F23	Ensure the detail of the cancelled booking is removed from the database of the CRM system	F22	9	Sprint 2
F24	Allow the patient to set a reminder about the scheduled appointment	-	8	Sprint 2
F25	Remind the patient of the scheduled appointment according to the set reminder via email	F24	8	Sprint 2
F26	Integrate patient appointments with calendar apps (Google Calendar, Outlook…)	-	8	Sprint 2
Sprint 3: Health Information Sharing				
F27	Allow the patient to upload their health records and other documents to the system (text files, videos, images are accepted)	-	9	Sprint 3
F28	Show the pop-up if uploaded formats are not supported (.exe, . json…)	F27	6	Sprint 3
F29	Ensure all uploaded health records are stored in the CRM system database	F27	9	Sprint 3
F30	Add encryption methods to protect the confidentiality and integrity of the uploaded files	F27	9	Sprint 3
F31	Add the methods to capture and store metadata of the upload documents (file format, provider name, uploaded date)	F27	7	Sprint 3
F32	Allow the patient to customize access to their health records and limit access to specific doctors	F27	9	Sprint 3
F33	Ask the patient for consent before they share the health records with the clinic.	-	8	Sprint 3
F34	Allow patient to view all their consent on a consent management page	F33	7	Sprint 3
F35	Allow the patient to update/remove the consent on a consent management page	F34	7	Sprint 3
F36	Integrate with Electronic Health Record (EHR) system to support health record sharing	-	9	Sprint 3
F37	Implement APIs and protocols related to health record sharing between the client's sharing platform and the EHR platform	-	8	Sprint 3
Sprint 4: Feedback Mechanism				

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F38	Develop a feedback form with components like text boxes, multiple choice… (the feedback questions will be provided by our client)	-	8	Sprint 4
F39	Allow the patient to provide feedback by filling out and submitting the form	F38	9	Sprint 4
F40	Allow the patient to choose whether he/she wants to hide the identity (anonymous feedback)	F38	7	Sprint 4
F41	Ensure the feedback is recorded in the database of the CRM system	F39	9	Sprint 4
F42	Implement security measures to ensure the privacy of patient information and feedback	-	9	Sprint 4
F43	Allow CRM system administrators to filter the feedback based on date, doctor names, services…	-	8	Sprint 4
F44	Allow the CRM system to send a notification to the appropriate healthcare employee when new feedback is submitted to the CRM system (the notification includes details such as patient name (optional), date, and summary)	F39	7	Sprint 4
F45	Allow healthcare employee to view full feedback when he/she clicks on the notification	F44	7	Sprint 4
F46	Send a confirmation message to the patient after the feedback is successfully submitted	F39	7	Sprint 4
F47	Notify the patient when his/her feedback is replied to by the healthcare employee	-	8	Sprint 4
F48	Modify the user interface based on the color palette. themes, structure agreed with the customers	-	8	Sprint 4
Sprint 5: Data Analytics and Reporting				
F49	Develop mechanisms to collect patient data, such as patient outcomes, satisfaction level, popular appointment booking time	-	9	Sprint 5
F50	Ensure the collected data is stored adequately in the CRM system database	F49	9	Sprint 5
F51	Implement algorithms to allow CRM system to identify trends, patterns from the collected data	-	8	Sprint 5
F52	Integrate data visualization tools to allow CRM system to create visualizations that illustrates the identified business trends	-	8	Sprint 5
F53	Allow the CRM system to generate reports in .pdf format that summarizes metrics related to patient information and the healthcare clinic operation	-	7	Sprint 5
F54	Allow the data in the CRM database to be updated in real-time	-	9	Sprint 5
F55	Implement a data processing pipeline to analyze and support real-time data analysis	-	8	Sprint 5

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F56	Integrate dashboards to provide the system administrators and healthcare staff with insights into business trends	-	9	Sprint 5
F57	Allow the CRM system to automatically scale to handle the increasing data volume (when needed)	-	9	Sprint 5
F58	Integrate the patient feedback mechanism with the data analysis tool	-	8	Sprint 5
F59	Apply text mining techniques to extract meaningful words from patient feedback for analysis	F39	7	Sprint 5
F60	Schedule daily backup for data in the CRM system to prevent data loss	-	9	Sprint 5
Sprint 6: Security and Compliance – Data Migration – Further Support				
F61	Integrate the CRM system with healthcare management software and EHR system	-	9	Sprint 6
F62	Add security measures to ensure the CRM system adheres to data privacy regulations and security regulations (HIPAA, GDPR). If not, fix the regulation violence points.	-	9	Sprint 6
F63	Data migration: Step 1: Migration strategy - Define data fields in the source system - Define the corresponding data fields in the new CRM system - Create a mapping table	-	8	Sprint 6
F64	Data migration: Step 2: Data extraction & cleaning - Extract data from the legacy system - Clean data	F63	7	Sprint 6
F65	Data migration: Step 3: Data migration - Reconcile data of legacy system and new CRM system	F64	9	Sprint 6
F66	Data migration Step 4: Data validation - Check the completeness of the data migrated to the new CRM system	F65	8	Sprint 6
F67	Prepare training materials (slides, books, videos…)	F66	8	Sprint 6
F68	Prepare a user manual for the CRM system	-	7	Sprint 6
F69	Prepare a guideline to solve all technical issues that may happen	-	7	Sprint 6
F70	Make a maintenance plan, allocate staff responsible for further support with the CRM system	-	8	Sprint 6

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