



Request for Proposal

Version 1.2

Reporting pipelines modernization

Document History

Version	When	Who	What
1.0	Sep 20th, 2025	Brian Pham	Initial Drafting
1.1	Sep 24th, 2025	Justin Chanhom	Logo + Schedule Addition
1.2	Sep 26th, 2025	Team	Final edits

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1. Problem Description / Expression of Need

Currently, clients still primarily rely on Excel spreadsheets for critical medical data reports. Our initial assessment reveals that while this method is familiar, it has become increasingly inefficient in practice. Departments must repeatedly manually input and consolidate data, which is not only time-consuming but also prone to errors due to the lack of standardized protocols. The circulation of multiple versions of spreadsheets complicates collaboration, leading to delayed information updates and preventing management from accessing accurate, first-hand data. Over time, this slows decision-making and undermines the overall efficiency of healthcare operations. More critically, the absence of stable version control poses compliance risks when handling sensitive patient information. Addressing these challenges, the client urgently needed to upgrade their reporting process from Excel to a secure, web-based system. This upgrade would enable standardized data entry, lower error rates, enhance collaboration efficiency, and automate reporting..

2. Project Objectives

Specify the objectives in detail:

- **Standardize and streamline data entry:** introduce webform-based input with built-in validation rules to reduce human error and ensure consistency.
- **Enhance data security and compliance:** Implement secure access control that complies with FIPPA standard to ensure patient and financial data remain confidential.
- **Enable real-time reporting and analytics:** Automate data flow from entry points into the data warehouse and provide interactive dashboards.
- **Improve collaboration and version control:** Transform from static Excel files to a centralized system where multiple users can input, update and review at the same time without duplication and version conflicts.
- **Reduce manual processes and operational inefficiencies:** Automate repetitive reporting tasks and data transfer processes to minimize manual workload, reduce the error rates and accelerate the overall reporting cycle.
- **Support integration with existing infrastructure:** Design the solution to deliver standardized, validated data directly into the current data warehouse and ensure compatibility with existing tools such as Power BI.

3. Current System(s)

Currently, most users still rely primarily on Excel spreadsheets for data reporting and management, and employees across different departments still need to manually enter patient and financial operational information, which requires significant time and repeated verification. Furthermore, the lack of standardized validation rules makes the

verification process slow and error-prone. The same files are often transferred repeatedly via email or cloud storage, making it difficult to determine which version is the most recent and accurate. Furthermore, data must be re-entered into a central database, resulting in duplication of effort and inefficiencies. Reports generated in this manner are often static and outdated, preventing management and clinical staff from obtaining timely and reliable information. While Excel is easy to use and familiar, it no longer meets the security, efficiency, and collaboration requirements that healthcare institutions require when handling sensitive information.

4. Intended Users of the System

Current system is used primarily by financial and administrative professionals within the regional health authority and their partnered agencies (clinics, hospitals), and includes the following:

- **Healthcare administrators:** logging patient data and information (primary users)
- **Financial analysts and accountants:** submit and review financial reports(primary users)
- **Data analysts and reporting staffs:** generate reports from financial and patient data (secondary users)
- **Management teams:** review reports created by analysts (secondary users)
- **External auditors/ regulatory bodies:** review reports created by analysts and raw data within data warehouse (secondary users)

5. Known Interactions within or outside the Client Organization

Some interactions known within Client Organization and within partnered/audit agencies:

- Clinics and hospitals report their expenditure through the system
- Clinics and Hospitals report their patients' data through the system
- Data flows into a data warehouse through manual data entry
- Data from data warehouse go into Power BI for data analysts' report creation
- Management review reports
- External auditors and partnered agencies review public and validated reports

6. Known Constraints to the Solution

Know constants to the solution:

- Must comply with Freedom of Information and Protection of Privacy Act (FIPPA)

due to storing personal data from patients

- Must deliver data to current data warehouse
- Must result in removal or reduction of manual data entry processes or Excel report pipelines

7. Project Schedule

The project will be split into tasks that must be completed weekly. The gantt chart below details when each task must be completed. (Each week's task will have a deadline of either Tuesday or Friday of the specified week, with week 1 ending on Sep 13, 2025, and so on).

Task (Deadline) / Week	1	2	3	4	5	6	7	8	9	10	11	12
Project Website (13/9)												
Idea Presentation (17/9)												
Request For Proposals (26/9)												
Project Charter (3/10)												
Project Requirements (10/10)												
Project Use Cases (24/10)												
Data Model (31/10)												
Process Model (7/10)												
UI Prototype (14/10)												
Project Presentation (27/10)												

8. Project Team

Project team member's info and roles.

Add your own info and role in the project, remember this is a project where we all are analysts and another team would be clients.

Contact info.

Brian Pham - System Analyst

Brian is a system analyst on the team with experience in modernizing legacy systems. He specializes in data-centric healthcare providers and has delivered multiple projects in this area.

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Xiangyu Yang- System Analyst

Xiangyu Yang is a system analyst on the team. Primarily responsible for requirements gathering and problem analysis. This assignment involved completing the problem description.

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Yilun Shi - Client

Yilun is a client on the team who helps clarify organization needs and provides clear requirements for the proposed system. He works closely with the analysis team to review deliveries, offer feedback on prototypes, and ensure the final solution aligns with the client organization's goal.

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Justin Chanhom - Client

Justin Chanhom is a client with the responsibilities of quality assurance and reinforcement of deadlines in order to guarantee a rapid and effective development process.

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Nitin Ruhil - System Analyst

Nitin is a system analyst on the team, contributing to problem analysis, data modeling, and the development of system specifications. He focuses on ensuring requirements are accurately translated into technical solutions and that deliverables meet client expectations.

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9. Glossary of Terms

Term	Definition
Client Organization	Healthcare group (hospitals, clinics) that will use the new system.
System Analyst	Team members who study problems, gather requirements, and help design solutions.
Excel Spreadsheets	Current tool used for reports and data entry. Easy to use but slow, error-prone, and hard to manage.

Webform-Based Input	Online forms that allow users to enter data in a standard, secure way with built-in checks.
Data Warehouse	A central storage place where all patient and financial data is collected and kept for reports.
Power BI	A tool used to create charts, dashboards, and reports from data in the warehouse.
Validation Rules	Simple checks in forms that make sure data is correct.
Version Control	A way to keep track of the latest data and reports so everyone works with the same copy
FIPPA (Freedom of info and protection of privacy Act)	A law that protects patient information.
Healthcare Admin	Main users who enter patient and hospital data.
Financial Analysts	Main users who work with financial reports.
Data Analysts	Staff who create reports from stored data.
Management Teams	Leaders who review reports to make decisions.
Real-time Reporting	Reports that update automatically so that information is always current.
Standardization	Making sure data is entered the same way by everyone to reduce mistakes.