SMARTMED HEALTH

DIGITAL PATIENT APPOINTEMNT & FEEDBACK SYSTEM

INTRODUCTION

Smart Med Health is rapidly expanding private hospital chain dedicated to delivering quality health care services. To keep pace with growth and meet modern patient expectations, the organization is seeking innovative ways to Improve service delivery, enhance efficiency, and strengthen patient engagement.



BACKGROUND

Currently, Smart Med's appointment bookings and feedback processes are handled manually across its branches. This system often result in long queues, delays, and patient dissatisfaction. Recognizing these challenges, Smart Med is proposing a Digital Patient Appointment & Feedback System to streamline booking, enable real-time feedback, and gather shift aims to create a seamless, efficient, and patient-friendly healthcare experiences.



Week 1: Identifying Project Stakeholders-Smart-Med Health

For the Smart Med Health Digital Appointment & Feedback System, Started by pinioning the people and groups who would be most impacted by the new solution. These are the individuals whose input, decisions, and experiences will shape the projects success.

The **primary stakeholders** include:

- Hospital Management & Administrators They are responsible for approving the project, allocating resources, and ensuring it aligns with the hospital's long-term goals.
- **Doctors & Medical Specialists** They rely on accurate appointment scheduling to manage their daily workload and provide timely care.
- Nurses & Support Staff They assist in patient flow, coordinate with doctors, and will interact with the system daily.
- Front Desk/Reception Team They currently handle manual bookings and will transition to using the new digital system for scheduling and feedback collection.
- Patients & Patient Caregivers The end-users of the system who
 will benefit from shorter wait times, easier booking, and a more
 structured way to share feedback.

The secondary stakeholders include:

- IT Department / System Developers Responsible for building, testing, and maintaining the platform.
- Customer Service Representatives Will handle inquiries, troubleshoot basic system issues, and escalate technical problems.
- Regulatory Bodies & Health Authorities They ensure the system complies with healthcare data privacy regulations and industry standards.

By understanding each stakeholder's role, expectations, and level of influence, we can tailor our engagement approach to ensure smooth collaboration and higher adoption rates when the system goes live.

Business Analysis Approach

For this project, I considered the two common approaches — **Waterfall** and **Agile** — and selected the most suitable one.

Waterfall Approach

- The Waterfall method follows a *step-by-step* structure where each phase must be completed before moving on to the next. It works best when:
- Requirements are clear from the start.
- Changes are unlikely during development.
- The solution is predictable and does not need much feedback from end-users during the process.
- If we used Waterfall, the hospital management would define all requirements upfront, the system would be developed in one go, and patients would only see the final product at the end. While this may provide structure, it leaves little room for flexibility if the hospital needs adjustments later.

Agile Approach

- The Agile approach is iterative and flexible. It allows continuous feedback and improvement by breaking the project into smaller deliverables (sprints). This means patients, doctors, and hospital staff can test parts of the system as it develops, and adjustments can be made early.
- For a system like Smart Med Digital Appointment & Feedback System, Agile is more suitable because:
- Patient and staff needs may evolve once they start using the digital tool.
- Feedback loops are critical to ensure the platform is userfriendly and practical.
- It reduces the risk of delivering a product that does not meet expectation

Chosen Approach

For this project, I recommend using the **Agile Approach**.

- •It supports continuous collaboration with stakeholders like patients, doctors, and admin staff.
- •Changes can be incorporated quickly without disrupting the entire project.
- •It ensures the final product aligns with both hospital goals and patient satisfaction.

Agile will help SmartMed build a system that is not only efficient but also truly responsive to real-world healthcare needs.

Business Analysis Plan SmartMed Health Digital Appointment & Feedback System

. Purpose of the BA Plan

The purpose of this plan is to outline how business analysis activities will be carried out for the SmartMed Health project. It ensures all stakeholders have a clear understanding of the approach, timelines, responsibilities, and tools to be used throughout the analysis process.

2. Objectives

- •Clearly identify and engage stakeholders.
- •Elicit, document, and validate business and system requirements.
- •Support the design of a digital appointment and feedback system that reduces queues and improves patient satisfaction.
- •Ensure alignment of requirements with business goals and user needs.

3. Scope of Analysis

The analysis will focus on:

- Patient appointment scheduling (digital booking, reminders, rescheduling)
- •Feedback management (capturing, storing, and analyzing patient feedback)
- •Integration with hospital workflows (front desk, doctors, nurses, and admin)

4. Approach

- •Methodology: Agile will be adopted, allowing iterative delivery and continuous feedback.
- •Elicitation Techniques: Interviews, workshops, surveys, and observation.
- •Requirements Management: Use of traceability matrix, prioritization techniques (MoSCoW).
- •Documentation: Business requirements document (BRD), user stories, process models, and prototypes.

5. Tools & Templates

Documentation: MS Word, Excel, PowerPointModeling: Lucidchart/Draw.io for process flows

Wireframes: FigmaTask Tracking: JIRA

•Feedback Collection: Google Forms

•Templates: Stakeholder Register, Communication Plan, RTM, BA Work Plan

6. Deliverables

- Stakeholder Register
- •BA Work Plan & Timeline
- •Requirements Management Plan
- Communication Plan
- •Requirements Documents (Functional, Non-Functional, User Stories, Use Cases)
- •Wireframes & Process Models
- Solution Evaluation Report

7. Timeline (High-Level)

- •Week 1: Planning & Stakeholder Identification
- •Week 2: Elicitation & Collaboration
- •Week 3: Requirements Lifecycle Management
- •Week 4: Strategy Analysis
- •Week 5: Requirements Analysis & Design Definition
- •Week 6: Solution Evaluation
- •Week 7: Final Documentation & Presentation
- •Week 8: Reflection & Career Mapping

Tools and Templates for SmartMed Health Project

1. Tools

- **Microsoft Word & Excel** → For documentation, requirement logs, and registers.
- **PowerPoint** → For presentations and stakeholder updates.
- Lucidchart / Draw.io → For creating process flow diagrams and system models.
- **Figma** → For wireframes and mockups of the digital appointment system.
- JIRA / Trello → For task tracking and backlog management (Agile approach).
- Google Forms / MS Forms → For surveys and collecting feedback.
- Miro / Whiteboard → For brainstorming during workshops.

2. Templates

Stakeholder Register → To capture stakeholder details,roles and influence

Communication Plan → To define how, when, and what to communicate with stakeholders.

- Business Analysis Work Plan (Timeline) → To track BA tasks across 8 weeks.
- Requirements Management Plan → To define how requirements will be documented, tracked, and updated.
- Requirements Traceability Matrix (RTM) → To map requirements to business objectives and deliverables.
- Requirements Prioritization Matrix (MoSCoW) → To identify critical vs optional requirements.
- Elicitation Activity Plan → To guide interviews, workshops, and surveys.
- Use Case / User Story Templates → To describe user interactions with the system.
- Process Flow Templates (AS-IS & TO-BE) → To visualize current and future workflows.
- Solution Evaluation Matrix → To assess performance against KPIs.

Week 2: Elicitation & Collaboration

Prepare Elicitation Sessions (interview, workshop and survey)

1. Interviews

Purpose: To engage stakeholders, gather requirements, and build shared understanding of the hospital's needs for the **SMARTMED Digital Patient Appointment & Feedback System**.

Stakeholders to Interview:

- Hospital administrators
- Front desk staff / nurses handling registrations
- IT staff
- A few patients (user perspective)

Preparation Steps:

- Draft open-ended questions (e.g., "What are the biggest challenges with the current booking process?").
- Schedule 30–45 minutes with each group.
- Prepare note-taking template or use a recorder (with consent).

2. Workshops

Purpose: To bring different stakeholders together and co-create ideas, map the current process, and visualize the future system.

•Participants: Representatives from management, doctors, nurses, IT team, and patient reps.

•Activities:

- Brainstorm current challenges ("pain points").
- Map AS-IS process of booking and feedback.
- Co-create TO-BE (digital system) process using sticky notes or digital whiteboard tools (Lucidchart, Miro).

•Preparation Steps:

- Send agenda before the session.
- Arrange facilitation tools (whiteboard, markers, or digital alternatives).
- Set clear rules for collaboration.

3. Surveys

Purpose: To collect feedback from a larger group of patients and staff who can't attend workshops/interviews.

•Target Group: Patients, nurses, front desk staff.

•Preparation Steps:

- Design a short, simple survey (10–12 questions).
- Use Google Forms or Microsoft Forms for easy distribution.
- Mix of multiple-choice (e.g., satisfaction with current system) and open-ended questions (e.g., "What improvement do you expect in a digital system?").
- Share via hospital mailing list, WhatsApp groups, or printed forms.

Conduct Interviews with key stakeholders (Simulate Role-Play)

1. Purpose

To gather first-hand insights from different stakeholder groups on the **challenges of the current manual system** and expectations for the digital appointment & feedback system.

2. Key Stakeholders & Focus Areas

Stakeholder	Role in Interview	Focus Area (Questions)
Hospital Administrator	Ensures smooth operations	 - What challenges do you face with the current manual booking system? - How does it affect patient satisfaction and hospital efficiency? - What reports/analytics would help in decision-making?
Nurse/Front Desk Staff	Handles patient appointments daily	 - How do you currently manage patient queues and records? - What is the most time-consuming part of the process? - How would a digital system make your work easier?

Doctor	Provides medical services	Do delays in appointment scheduling affect your consultations? How do you want patient information to be presented before consultations? What features would save you time?
Patient	Receives hospital services	What has been your experience booking appointments manually? How long do you wait before being attended to? What would you like to see in a digital booking system?
IT/Technical staff	Supports hospital technology	Do you have infrastructure to support a digital system? What integrations [payment, SMS, email reminders] are needed? What challenges do you anticipate in implementation

3. Role-Play Simulation Plan

- •BA (You): Acts as the interviewer, guiding discussion.
- •Team Member / Peer (Simulated): Plays role of administrator, nurse, doctor, or patient.
- •Activity: Each "stakeholder" answers 3–5 guided questions.
- •Goal: Capture needs, pain points, and expectations.

Documented Needs, Pain Points & Expectations

1. Hospital Administrator

- Needs: Efficient tracking of appointments, centralized patient database, performance reports.
- Pain Points: Manual reporting delays, limited visibility of patient flow, errors in record keeping.
- Expectations: Real-time dashboards, automated reporting, improved decision-making support.
- 2. Nurses / Front Desk Staff
- Needs: Simple and fast appointment booking, easy access to patient records.
- **Pain Points:** Long queues, repetitive manual entries, difficulty managing cancellations.
- Expectations: A user-friendly interface, reduced paperwork, automated notifications.
- 3. Doctors / Medical Staff
- Needs: Access to patient appointment history and feedback.
- **Pain Points:** Missed appointments, lack of structured feedback from patient

- **Expectations:** Digital access to schedules, clear feedback reports for service improvement.
- 4. Patients
- **Needs:** Quick and convenient booking, flexibility in rescheduling, feedback channels.
- Pain Points: Long waiting time, lack of updates on appointment status, no way to share feedback.
- Expectations: Mobile-friendly booking, reminders (SMS/Email), easy feedback submission.
- 5. IT Team / Management
- **Needs:** Scalable and secure platform, integration with existing hospital systems.
- **Pain Points:** System downtime, data privacy issues, resistance to new tools.
- Expectations: A reliable solution with training and technical support.

Week-3 Requirement Life Cycle – Trace & Prioritize Requirements

Trace Requirements

To ensure that every requirement remains aligned with stakeholder needs and business goals, a **Requirements Traceability Matrix (RTM)** was created. This helped us track each requirement from its origin (stakeholder need) to its implementation (system feature), making sure nothing was missed or duplicated.

Sample RTM:

Req ID	Stakeholder	Business Goal	System Feature	Status
RQ-01	Patient	Book appointment easily	Online Booking Module	In Progress
RQ-02	Doctor	Manage schedules	Scheduling Dashboard	Planned
RQ-03	Admin	Track patient feedback	Feedback Analytics	Pending

Prioritize Requirements

Not all requirements carry the same level of urgency or value. To deliver impact effectively, requirements were prioritized using the **MoSCoW framework** (Must Have, Should Have, Could Have, Won't Have).

MoSCoW Prioritization:

Requirement	Priority
Online booking system	Must Have
Appointment reminders	Must Have
Patient feedback system	Should Have
Multi-language support	Could Have
Pharmacy integration	Won't Have (for now)

This approach ensured that the most critical features were addressed first, while still documenting and planning for lower-priority requirements.

Analyze Changes to Requirement

Why Analyze Change?

Requirement in a healthcare system like SmartMed are dynamic – they may change due to.

New regulatory compliance

Evolving patient needs

Technical limitations or updates

Feedback from stakeholders during elicitation

Change Analysis Approach

To manage this, a structured change analysis process was used:

- 1. **Identify the change**: capture the requested change (e.g, "Add SMS reminders for appointments")
- 2. Assess impact: Evaluate how it affects cost, timeline and scope.
- 3. **Engage Stakeholders**: Discuss implications with doctors, patient, and admin staff.
- **4. Decide and Document**: Approve or reject the change through the change Control Board (CCB) or project lead.
- **5. Update Requirement**: Reflect approved changes in the Requirement Traceability Matrix (RTM) and BA documentation.

Baseline Requirements for Approval

Before moving forward, requirements must be reviewed and formally approved by key stakeholders to ensure alignment with business goals.

- **Key Baseline Requirements** (from the Business Case):
- **1.Digital Appointment Booking** Patients should be able to book appointments online via web/mobile.
- **2.Automated Reminders** SMS/Email reminders to reduce no-shows.
- **3.Structured Feedback Collection** Patients can submit feedback digitally after appointments.
- **4.Integration with EMR** System should sync with electronic medical records.
- **5.Dashboard & Analytics** For monitoring patient satisfaction and resource utilization.
- ✓ Approval Process:
- •Draft requirements documented by BA.
- •Stakeholders (Hospital Admin, IT Lead, Doctors, Patient Rep) review.
- •Feedback incorporated.
- •Final sign-off for implementation.

Week 4: Strategy Analysis

Analyze current state (problem analysis)

Objective:

To understand the hospital's existing processes, identify inefficiencies, and highlight areas that need improvement before implementing the digital system.

Current State Challenges (from Business Case):

- **1. Manual Appointment Booking** Patients queue to write in a logbook, which is time-consuming and prone to errors.
- **2. No Centralized Scheduling** Each department manages appointments separately, leading to overlaps and confusion.
- **3.** No Automated Reminders Patients often forget appointments, causing high no-show rates and revenue loss.
- **4. Verbal Feedback Collection** Feedback is not structured, making it hard to analyze or track trends.
- **5.** Lack of EMR Integration Patient data is scattered, reducing efficiency and accuracy in decision-making.

Impact of Current Problems:

- Long waiting times frustrate patients.
- Hospital staff spend extra hours managing schedules.
- Loss of revenue due to missed appointments.
- No data-driven insights for management.

Future State (Digital Goal)

Objective:

To introduce a **Digital Patient Appointment & Feedback System** that addresses the inefficiencies of the current manual processes and enhances both hospital operations and patient experience.

Key Features of the Future State:

- **1. Self-Service Booking (Web & Mobile):** Patients can book, reschedule, or cancel appointments online without visiting the hospital physically.
- **2. Automated Reminders:** SMS/email notifications reduce no-shows and ensure patients don't miss appointments.
- **3. Structured Digital Feedback:** Patients provide feedback via digital forms, enabling better tracking and service improvement.
- **4. Centralized Scheduling System:** A single system for all departments eliminates overlaps and confusion.
- **5. Integration with EMR (Electronic Medical Records):** Ensures patient data flows seamlessly across hospital systems for better decision-making.
- **6. Dashboards & Analytics:** Provides management with real-time insights into appointment utilization, patient satisfaction, and operational efficiency

Benefits of Future State:

- Reduced waiting times and improved patient satisfaction.
- Increased hospital efficiency and staff productivity.
- Revenue growth due to fewer missed appointments.
- · Data-driven decision-making for continuous improvement

Perform Risk Analysis

Objective:

To identify potential risks that could affect the successful implementation of the Digital Patient Appointment & Feedback System, and propose strategies to mitigate them.

Risk Category	Risk Description	Impact	Likelihood	Mitigation Strategy
Operational	Staff may resist adopting the new digital system	Medium	High	Provide hands-on training, involve staff in system design, and communicate benefits clearly
Technical	System downtime or software bugs	High	Medium	Conduct thorough testing, establish IT support, and maintain backup systems
Financial	Budget may exceed projections due to software, hardware, or training costs	Medium	Medium	Plan a phased rollout, monitor costs closely, and prioritize essential features
Change Management	Patients may not use the digital system immediately	Medium	Medium	Launch awareness campaigns, provide easy-to-use interfaces, and offer support channels
Data Security	Unauthorized access or data breaches	High	Low	Implement encryption, role-based access controls, and comply with healthcare data regulations
Integration	Difficulty integrating with the existing EMR system	High	Medium	Perform phased integration, involve IT early, and conduct rigorous testing

Key Points:

- •Risks span operational, technical, financial, and cultural aspects.
- •High-priority risks like staff resistance, technical downtime, and data security require proactive mitigation.
- •A phased rollout, combined with training and support, will minimize disruption and improve adoption.

Understanding these risks ensures that the digital system is implemented smoothly, staff and patients are supported, and the hospital can realize the expected efficiency and patient satisfaction benefits.

Assess Readiness

Readiness Assessment

Assesses how prepared SmartMed Health is to adopt the new system across people, processes, technology, data, and culture:

Readiness Area	Assessment	Notes
People	Medium	Staff are willing but need training and guidance
Processes	Low-Medium	Manual processes dominate; standardization is needed
Technology	Medium	EMR exists but no centralized scheduling system; devices and internet are available
Data	Medium	Patient records exist but need integration; feedback is unstructured
Culture	Medium	Organization is open to digital adoption but cautious about change

Readiness Summary:

- •The hospital demonstrates **moderate readiness** for digital transformation.
- •Key focus areas: staff training, process standardization, EMR integration, and data security.
- •Recommendation: Adopt a phased implementation to manage risk, improve readiness, and support adoption.

SWOT ANALYSIS FOR- SMARTMED HEALTH

STRENGTHS

- Strengths (Internal Advantages)
- Strong management support for digital transformation.
- Growing hospital chain with resources to invest in technology.
- Clear business case with identified benefits (efficiency, satisfaction, revenue).
- Dedicated IT and administrative teams to support implementation.

WEAKNESSES

- Weaknesses (Internal Challenges)
- Staff reliance on manual booking systems.
- Limited digital skills among front-desk staff and some patients.
- Lack of existing integration with EMR and hospital IT systems.
- Potential resistance to new workflows from long-serving employees.

SWOT ANALYSIS

OPPOURTUNITIES

- Opportunities (External Benefits)
- Rising adoption of digital health solutions in Nigeria/global healthcare.
- Enhanced patient satisfaction through shorter wait times and self-service.
- Data-driven insights for better hospital decision-making.
- Competitive advantage by offering modern healthcare experiences.

THREATS

- Threats (External Risks)
- Cybersecurity and data privacy concerns with patient information.
- High cost of system deployment and maintenance.
- Potential pushback from patients less comfortable with digital tools.
- Risk of project delays due to technical or regulatory hurdles.

DEVELOP SOLUTION RECOMMENDATIONS FOR SMARTMED HEALTH

Solution Recommendations for SmartMed Health

To address the challenges of manual appointment booking and unstructured feedback, I recommend a **hybrid solution** that combines customization with existing health-tech tools:

1. Digital Appointment System (Web & Mobile):

- 1. Patients can book, reschedule, or cancel appointments online.
- 2. Automatic SMS/email reminders to reduce no-shows.

2. Integrated Feedback Module:

- 1. Short digital surveys after consultations.
- 2. Structured reports for management to track patient satisfaction.

3. Centralized Scheduling Dashboard for Staff:

- 1. Real-time view of appointments across all doctors/departments.
- 2. Reduces double-booking and improves resource utilization.

4. EMR Integration (Future Expansion):

- 1. Connects appointment records with electronic medical records.
- 2. Supports continuity of care and better clinical decisions.

5. Hybrid Delivery Approach:

- 1. Use **Agile sprints** for user-facing features (appointments & feedback).
- 2. Use **Waterfall** for critical backend integration (EMR & compliance).

3. Value of this Recommendation:

- Improves efficiency (less paperwork, reduced queues).
- Boosts patient satisfaction and loyalty.
- Provides management with data-driven insights for decisionmaking.
- Scalable for future SmartMed Health growth.

Week 5: Requirements Analysis and Design Definition

Functional Requirements (What the system should do

- **1. Appointment Booking** Patients can book, reschedule, or cancel appointments online.
- **2.** Automatic Notifications SMS/email reminders are sent before appointments.
- **3. Feedback Collection** Patients can submit structured feedback after visits.
- **4.** Dashboard Access for Staff Doctors and admins can view schedules in real time.
- **5.** User Authentication Secure login for both patients and staff.

Non-Functional Requirements (How the system should perform)

- **1. Usability** The interface must be user-friendly and accessible to patients of all ages.
- **2. Performance** The system should handle at least 1,000 concurrent users without crashing.
- **3. Security** Patient data must be encrypted and comply with healthcare privacy standards.

- **4. Scalability** The solution should support expansion across multiple hospital branches.
- **5. Availability** System uptime should be at least 99.5% to ensure reliability.

Modeling the Requirements:

- Use Case Diagrams To show interactions (e.g., patient booking, admin managing schedules).
- **Process Flow Diagrams** To map how booking and feedback are captured step by step.
- Wireframes Simple sketches of the patient booking screen, dashboard, and feedback form.

Create Use Cases, User Stories, and Process Models

1. Use Cases (High-level scenarios of system interaction)

• Actor: Patient

Pre-condition: Patient has an account.

• Steps:

Patient logs in

Selects doctor & time slot

Confirms appointment

Receives confirmation notification

• Actor: Admin/Doctor

• Steps:

Login to dashboard

View daily/weekly schedule

• Approve, reschedule, or cancel appointments

System updates availability

• \simp Use Case 3 – Submit Feedback

• Actor: Patient

• Steps:

After consultation, patient receives feedback prompt

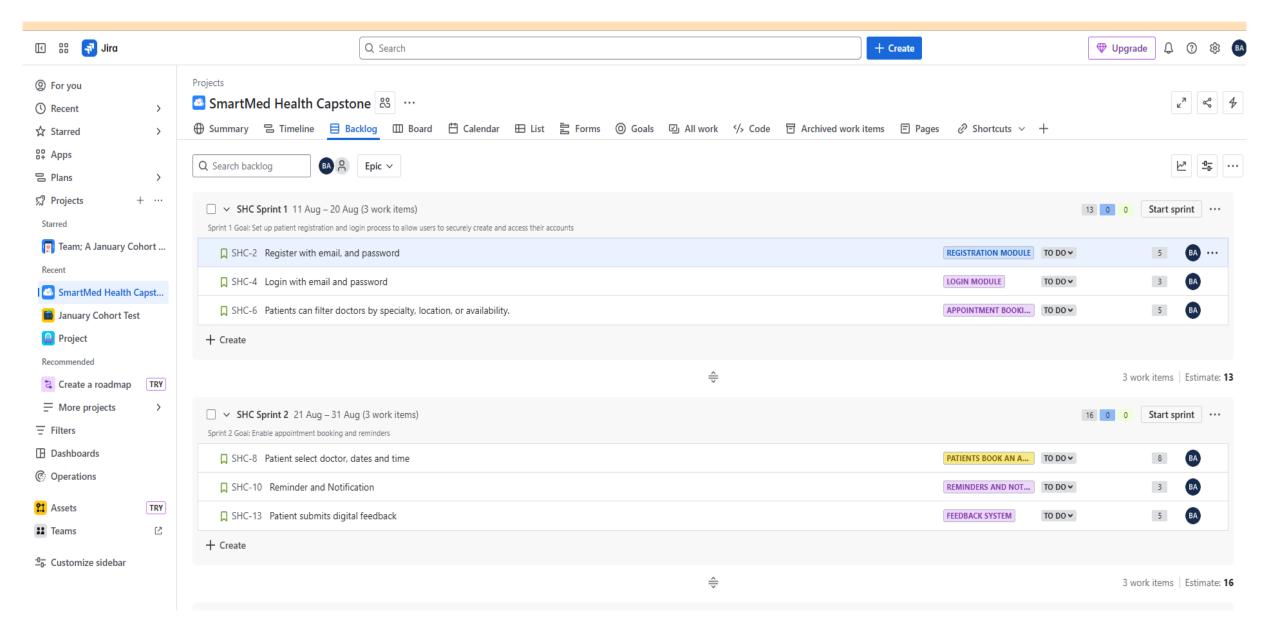
Fills quick survey

Feedback stored and analyzed in reports

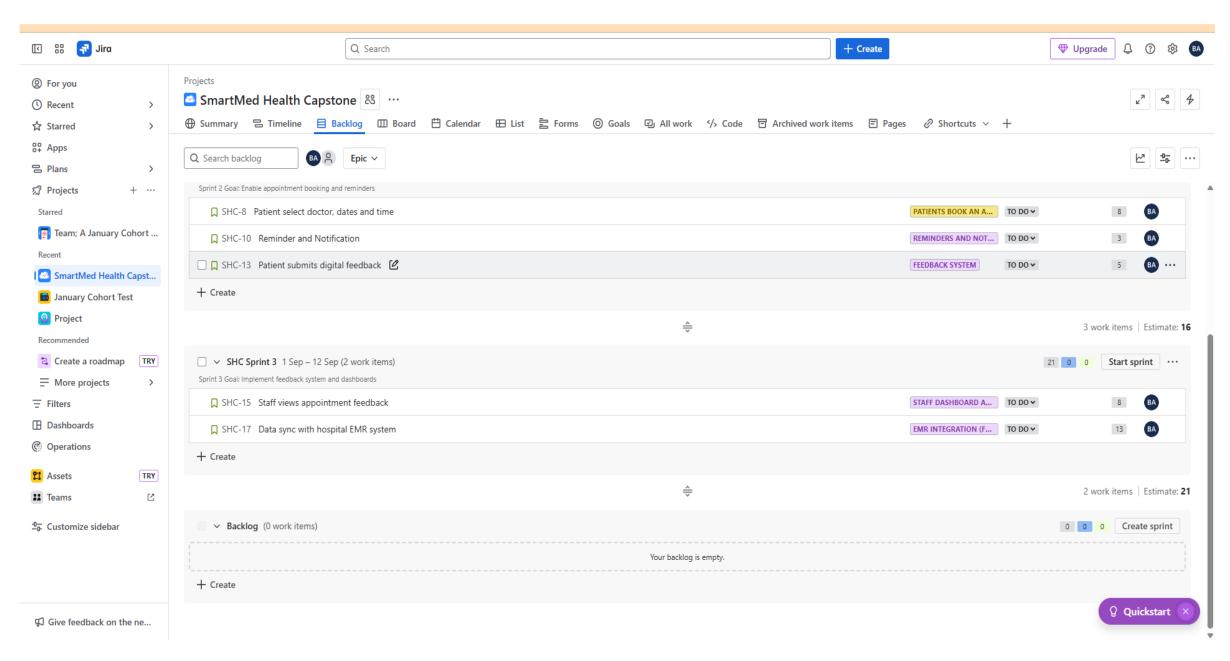
2. User Stories (Agile format: As a ... I want ... So that ...)

- As a patient, I want to book appointments online, so that I can avoid long queues at the hospital.
- As a doctor, I want to see my daily schedule, so that I can manage my time effectively.
- As an admin, I want to track patient feedback, so that I can improve hospital services.
- As a patient, I want to receive reminders, so that I don't miss my appointments.

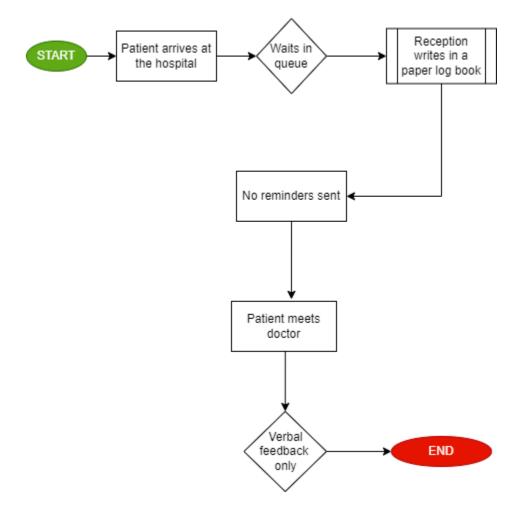
JIRA



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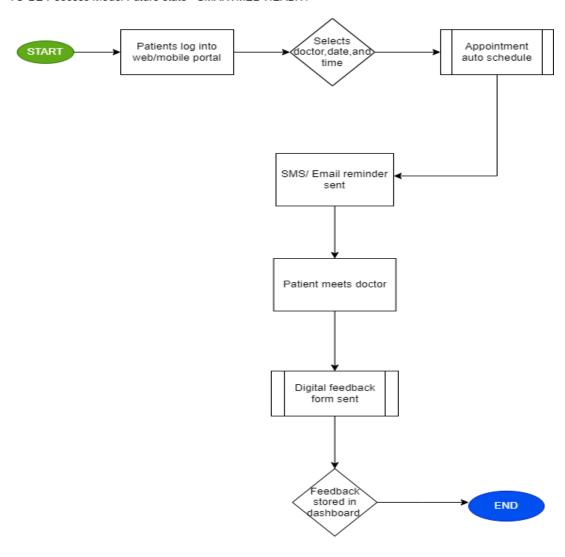
(AS-IS) Process Model (Current State- SMARTMED HEALTH)



AS-IS Process (Current State)

- •Appointment bookings are done **manually using logbooks** at each hospital branch.
- •Patients often face **long queues and wait times** just to schedule appointments.
- •There is **no centralized scheduling system**, making coordination across branches difficult.
- •Patients do not receive reminders, leading to frequent missed appointments (no-shows).
- •Feedback is collected **verbally** with no structured system in place.
- •Management lacks **real-time data or reports** for decision-making.

TO-BE Peocess Model Future state - SMARTMED HEALTH



TO-BE Process (Future State)

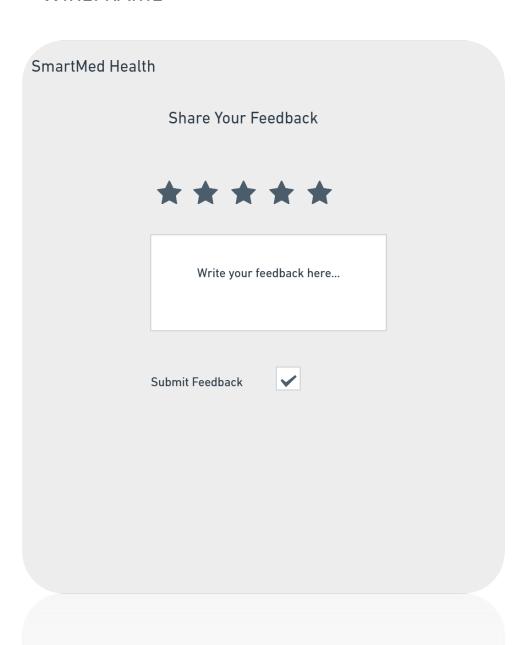
- •Patients can book appointments **online or via mobile app** anytime, anywhere.
- •A **centralized scheduling system** integrates across all hospital branches.
- •Automated reminders (SMS/Email/Notifications) reduce no-shows.
- •Patients can provide **structured digital feedback** after appointments.
- •Hospital staff can easily manage bookings using a dashboard interface.
- •Real-time data and reports help management make informed decisions.
- •Seamless integration with EMR (Electronic Medical Records) ensures continuity of care.

The SmartMed Health wireframe is a low-fidelity visual blueprint of our digital appointment and feedback system. It shows how patients and hospital staff will interact with the platform, focusing on structure, flow, and usability rather than design details. The goal is to confirm that the system is simple, user-friendly, and aligned with both patient needs and hospital goals.

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V	elcome to SmartMe	d Health
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SmartMed Health	Book an Appointment	SmartMed Health
Select Department		Appointment Confirmation
Choose Doctor		Your Appointment is Confirmed
Select Date		
Select Time		Reminder
Confirm Booking		Go Back to Dashboard
Help & Settings		Help & Settings
Settings		Settings
? Help Center		? Need Help?



Week 6: Solution Evaluation

Define Evaluation Criteria for Success

Evaluation Criteria for Success (SmartMed Health System)

To ensure the SmartMed Health digital appointment and feedback system achieves its goals, we'll measure success using clear and practical criteria:

- **1.System Usability** Patients and staff should be able to book or manage appointments in **3 steps or less**, with minimal errors.
- **2.Efficiency Improvement** Reduce average waiting time by at least 40% compared to the manual system.
- **3.Appointment Management** Achieve at least **90% reduction in no-shows** through automated reminders.
- **4.Patient Satisfaction** At least **85% of patients give positive feedback** on the booking and feedback process within the first 3 months.
- **5.Data Accuracy & Reporting** Appointment and feedback data should be **100%** accessible in real-time dashboards for decision-making.
- **6.Integration Capability** Seamless integration with the hospital's Electronic medical records, EMR without major downtime.

Assess Solution Performance Based on Proposed KPIs

KPI	Target	How to Measure	Expected Outcome
System Usability	90% of patients successfully complete booking without help	User testing & survey feedback	Easy-to-use platform
Average Waiting Time	40% reduction	Compare pre- and post- implementation data	Faster service delivery
No-show Rate	Less than 10% missed appointments	System log of missed appointments	Improved hospital efficiency
Patient Satisfaction	≥ 85% positive feedback	Post-visit digital surveys	Happier patients
Data Accuracy	100% real-time data availability	Dashboard & EMR reports	Better decision-making
Integration Performance	Smooth EMR sync with <5% errors	System testing results	Seamless hospital operations

Recommended Improvements for MVP (Minimum Viable Product)

Recommended Improvements for MVP for the **SmartMed Health Digital Appointment & Feedback System**:

1. User Experience Enhancements

- Simplify the booking process with fewer steps.
- Add multilingual support for patients who may not be fluent in English.

2. Stronger Reminder System

• Introduce SMS/WhatsApp reminders in addition to email, since not all patients check emails frequently.

3. Feedback Collection

- Make feedback forms shorter and more engaging (e.g., smiley face ratings) to encourage participation.
- Provide patients with an option to give voice notes (for elderly patients who struggle typing).

4. Integration Improvements

- Strengthen integration with hospital EMR to ensure doctors see patient notes and appointments in one place.
- Ensure data security by applying encryption and role-based access.

5. Scalability & Accessibility

• Start with web and mobile access, but plan for a kiosk option in hospital reception areas for patients who are not tech-savvy.

Week 7 – Consolidate All Documents & Models

1. Project Planning & Stakeholders

•Stakeholder Register, Work Plan, Communication & Requirement Management Plans

2. Elicitation & Requirements

- •Interview & Workshop Notes, Stakeholder Needs
- •Requirements Traceability & Prioritization Matrices

3. Strategy Analysis

- Current & Future State Assessment
- •SWOT, Risk Analysis, Readiness Assessment
- Business Case

4. Requirements & Design

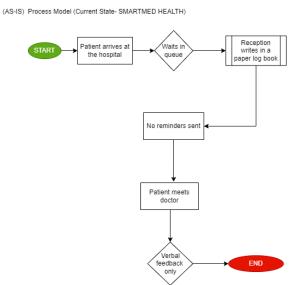
- •Functional & Non-Functional Requirements
- •Use Cases / User Stories, Process Flow Diagrams (AS-IS & TO-BE)
- Wireframes / Mockups

5. Solution Evaluation

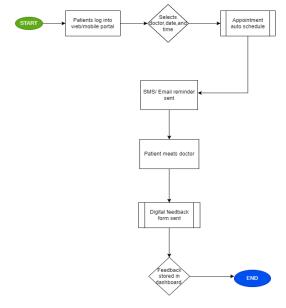
•Evaluation Plan, KPI Feedback, Recommendations

6. Project Management Tools

•Jira dashboards, Lucidchart process maps, Figma wireframes



TO-BE Peocess Model Future state - SMARTMED HEALTH



Prepare a Presentation summarizing Findings

Slide 1 - Title Slide

•Title: SmartMed Health – Digital Patient Appointment & Feedback System

•Subtitle: Business Analysis Capstone Project

• Name: Omobolanle Florence Amoo Date: 9-12-2025

Slide 2 - Executive Summary

•Problem: Manual appointments \rightarrow long queues, low patient satisfaction

•Goal: Digitize appointments and feedback collection

•Expected Benefits: Improved efficiency, patient satisfaction, data-driven decisions

Slide 3 – Project Scope & Objectives

- •Scope: Appointment booking & feedback management across all branches
- •Key Objectives:
 - Streamline scheduling
 - Collect structured feedback
 - Integrate with EMR
 - Support decision-making

Slide 4 – Stakeholders & Planning

- •Stakeholders: Management, doctors, nurses, patients, IT team
- •Planning Highlights:
 - Work Plan & Timeline
 - Communication & Requirement Management Plans
 - Jira for task tracking

Slide 5 – Elicitation & Requirements

- Activities: Interviews, workshops, surveys
- •Deliverables: Stakeholder needs, RTM, MoSCoW prioritization
- •Key Findings: Long queues, manual errors, low feedback capture

Slide 6 – Strategy Analysis

- •Current State: Manual processes, disconnected from EMR
- •Future State: Digital self-service, automated reminders, dashboards
- •SWOT Summary: Strengths, Weaknesses, Opportunities, Threats
- •Risk & Readiness Highlights: Moderate readiness, key risks identified

Slide 7 – Requirements & Design

- •Functional & Non-Functional Requirements
- Use Cases / User Stories
- •AS-IS / TO-BE Process Diagrams (include your diagram here)
- Wireframes / Mockups

Slide 8 – Solution Evaluation

- Evaluation Plan & Criteria
- •Feedback Summary & KPIs
- Recommendations for MVP improvements

Slide 9 – Tools Used

- •Jira: Task & requirement tracking
- Lucid chart / Draw.io: Process modeling
- •Figma: Wireframes & prototypes
- •Google Forms: Simulated patient feedback

Slide 10 – Key Recommendations

- •Implement the digital system in phases
- •Train staff & create awareness campaigns for patients
- •Monitor KPIs & refine the system continuously
- •Leverage dashboards for decision-making

Slide 11 – Conclusion

- •The proposed system addresses inefficiencies and enhances patient experience
- •Phased implementation reduces risk and ensures adoption
- •Provides a strong foundation for future digital initiatives

Slide 12 - Q&A

•"Questions & Feedback

Stimulate Presentation to Stakeholders

Stakeholder Presentation Script

Slide 1 - Title Slide

"Gooday Everyone

My name is **Omobolanle Florence Amoo**, and I'm excited to present the findings from my business analysis project on the **SmartMed Health Digital Patient Appointment & Feedback System**.

Over the past eight weeks, I have worked through planning, elicitation, requirements, strategy analysis, design, and evaluation to propose a solution that addresses current challenges and improves patient experience."

Slide 2 – Executive Summary

"SmartMed Health has been facing challenges with manual appointment scheduling and informal feedback collection, which lead to long patient wait times, inefficient workflows, and limited actionable data.

This project focused on designing a **digital solution** to automate appointments, gather structured feedback, and provide actionable insights to support hospital management."

Slide 3 – Project Scope & Objectives

"The scope of the project covers appointment booking and feedback management across all branches.

The main objectives are to:

- Streamline appointment scheduling
- •Reduce queues and no-shows
- Collect structured patient feedback
- •Integrate data with the existing EMR system
- •Enable management to make informed decisions based on realtime insights."

Slide 4 – Stakeholders & Planning

"To ensure success, I identified key stakeholders: hospital management, doctors, nurses, patients, and the IT team. I developed a work plan, stakeholder engagement plan, communication plan, and used Jira for task tracking throughout the project."

Slide 5 – Elicitation & Requirements

"Through interviews, workshops, and surveys, I captured stakeholders' needs and pain points.

Key findings included:

- Long queues and manual scheduling errors
- Low capture of patient feedback
- •Lack of centralized scheduling
 I documented these requirements and prioritized them using the
 MoSCoW method and a Requirements Traceability Matrix."

Slide 6 – Strategy Analysis

"I assessed the current state, which relies heavily on manual logs and verbal feedback.

The future state envisions a **digital self-service system** with automated reminders and dashboards.

I also conducted:

- •SWOT analysis to identify strengths, weaknesses, opportunities, and threats
- •Risk analysis to mitigate potential challenges
- •Readiness assessment, which indicated moderate readiness across staff, processes, technology, and culture."

Slide 7 – Requirements & Design

- "The solution includes:
- •Functional and non-functional requirements
- •Use cases and user stories to guide development
- •AS-IS and TO-BE process diagrams showing the transformation from manual to digital workflows
- •Wireframes to illustrate the patient appointment and feedback interface."

(Point to AS-IS/TO-BE diagrams and wireframes on the slide.)

Slide 8 – Solution Evaluation

- "I defined KPIs to measure solution success, including:
- •Reduction in patient wait times
- •Increase in appointment adherence
- •Improved patient satisfaction scores
 Feedback was analyzed, and recommendations for MVP
 improvements were made to ensure adoption and
 effectiveness."

Slide 9 – Key Recommendations

"To ensure a smooth implementation:

- 1.Roll out the digital system in **phases**, starting with one branch as a pilot.
- 2. Conduct **staff training** to encourage adoption.
- 3.Launch **patient awareness campaigns** for the new system.
- 4. Monitor KPIs and refine the solution continuously."

Slide 10 – Conclusion

"In conclusion, this digital appointment and feedback system addresses the hospital's current challenges, improves operational efficiency, enhances patient experience, and provides management with actionable insights for better decision-making.

With a phased approach, the system can be successfully adopted across all branches, setting the stage for future digital initiatives."

Slide 11 – Q&A

"I'm happy to take any questions or feedback from the team."

Week 8: Self-Assessment & Peer Review

1. Self-Reflection

"This project has been a highly rewarding experience. Working independently allowed me to take full ownership of the entire process, from planning to solution evaluation. I strengthened my business analysis skills, including stakeholder engagement, requirement elicitation, process modeling, and solution design. Using tools like Jira, Lucidchart, and Figma enhanced my ability to organize work, create clear process flows, and present ideas visually. Completing AS-IS and TO-BE diagrams, wireframes, and a stakeholder-ready presentation gave me practical, hands-on experience I can apply in real-world projects."

2. Challenges & Lessons Learned

"Managing all aspects of the project alone came with challenges, especially time management and translating stakeholder needs into structured functional requirements. I learned the importance of consistent documentation, traceability, and clear communication. Visualizing processes and designing wireframes taught me how to make complex information easy to understand, and I realized that attention to detail is key in delivering professional-quality work."

3. Skills Gained

- •Improved analytical thinking and problem-solving.
- •Enhanced **stakeholder engagement** and communication skills.
- •Gained proficiency in **process modeling, requirement prioritization, and solution evaluation**.
- •Developed the ability to **create professional presentations and reports**.

4. Simulated Peer / Mentor Feedback

"Through this project, I would expect feedback highlighting strengths such as strong independent execution, attention to detail, and effective use of digital tools. Areas for growth could include seeking more external feedback during analysis and refining time management during project execution. Overall, the project demonstrates readiness to handle real business analysis tasks professionally."

One-on-One Mentor Review Session

Purpose of the Session

"This session was aimed at reviewing my completed SmartMed Health project with a mentor to gain professional guidance. The focus was on evaluating my approach, deliverables, and overall business analysis process, while identifying areas to strengthen my skills and career readiness."

Key Discussion Points

- •Project Approach: Feedback on planning, stakeholder engagement, and methodology selection.
- •**Deliverables:** Review of requirements documentation, AS-IS/TO-BE diagrams, wireframes, and solution evaluation.
- •Tools & Techniques: Assessment of how effectively Jira, Lucid chart, Figma, and survey tools were applied.
- •Presentation & Communication: Suggestions for clarity, flow, and professional delivery during the Week 7 stakeholder presentation.
- •Problem-Solving & Critical Thinking: Feedback on analysis, prioritization, and recommendations.

Mentor Feedback (Simulated / Example)

- •"You demonstrated strong independent execution and excellent documentation skills."
- •"Your diagrams and wireframes effectively communicate complex processes."
- •"In future projects, consider incorporating more simulated stakeholder feedback to validate assumptions."
- "Presentation skills were clear and professional; small improvements could be made in pacing and timing."

Reflection & Action Points

- •Continue building on independent analysis skills while practicing collaborative feedback.
- •Enhance visual communication of complex processes for clarity.
- •Focus on improving **presentation pacing and time management**.
- •Use mentor feedback to strengthen future business analysis projects and internship readiness.

Develop Career Roadmap & Portfolio

Career Roadmap:

"This stage focuses on planning the next steps in my career as a Business Analyst. Building on the skills and experiences gained from the SmartMed Health project, I am mapping out short-term and long-term goals to guide my professional growth. The roadmap includes securing internships or entry-level BA roles, enhancing my expertise in tools like Jira, Lucid chart, and Figma, and continuously learning industry best practices. It also highlights skill development areas such as stakeholder communication, requirements elicitation, and solution design to ensure readiness for real-world BA challenges."

Portfolio Development:

"I have consolidated all project deliverables into a comprehensive **Business Analysis portfolio**, showcasing my competencies across all phases of a BA project. This includes:

- Stakeholder registers and planning documents
- •Elicitation notes, RTM, and prioritization matrices
- •AS-IS/TO-BE diagrams and wireframes
- Solution evaluation and recommendations
- Presentation materials and feedback reports

This portfolio not only demonstrates my ability to handle end-to-end BA projects independently but also serves as a professional showcase for potential employers or internship opportunities."

Next Steps:

- •Regularly update the portfolio with new projects and learning experiences.
- •Use the roadmap to target internships, mentorships, and skill-building opportunities.
- •Seek continuous feedback to refine both skills and portfolio quality.

THANK YOU

SMARTMED HEALTH DIGITAL PATIENT APPOINTMENT & FEEDBACK SYSTEM