**Business Requirements Document**

**Project name: Enhancing Operational Efficiency at HealthFirst Care**

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| **Project Overview** |
| **This project aims to address several operational challenges at HealthFirst Care by modernizing the appointment scheduling system and improving inter-departmental communications. The focus will be on automating appointment scheduling, reducing double bookings, and streamlining resource allocation to improve patient experiences and overall system efficiency.** |

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| **Background and Problem Statement** |
| **HealthFirst Care is currently challenged by outdated manual scheduling processes that result in long patient wait times and frequent double bookings. Patients experience delays exceeding 30 minutes and receive limited communication regarding the status of their appointments. Concurrently, resource allocation throughout the hospital is hampered by scheduling conflicts and a lack of real-time visibility into department availability. These issues create operational bottlenecks, reduce staff efficiency, and negatively impact patient satisfaction.** |

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| **Project scope** | |
| **In-scope**  **Automated Appointment Scheduling: Implement a system to automate the booking process.**  **Real-Time Updates & Notifications: Integrate email/SMS alerts to keep patients and staff informed.**  **Double Booking Prevention: Develop mechanisms to flag and prevent overlapping appointments.**  **Resource Integration: Connect scheduling with resource allocation systems (rooms, equipment, staff availability).** | **Out-of-scope**  **Redesigning clinical workflows or altering medical procedures.**  **Overhauling non-IT operational processes unrelated to scheduling.**  **Any enhancements outside the realm of scheduling, notifications, or resource visibility.** |

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| **Stakeholders** |
| **Patients: End-users experiencing long wait times and communication challenges.**  **Doctors & Nurses: Providers affected by resource allocation issues and scheduling gaps.**  **Administrative Staff: Responsible for managing appointments and patient records.**  **IT Teams: Tasked with implementing and maintaining the new systems.**  **Management: Oversee the project’s alignment with broader operational goals.** |

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| **Business objectives** |
| **Efficiency Gains: Streamline the scheduling process to reduce manual errors.**  **Improved Patient Experience: Decrease waiting times and enhance communication with patients.**  **Operational Cost Reduction: Minimize administrative load by reducing double bookings.**  **Resource Optimization: Ensure better alignment of staffing and equipment schedules with patient needs.** |

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| **Requirements** | |
| **Functional requirements**   * **Automated Appointment Scheduling:**    + **Develop a system that allows patients to book, modify, and cancel appointments online.**   + **Ensure the system automatically checks and updates calendar availability in real time.** * **Double Booking Prevention:**    + **Implement mechanisms to detect and prevent overlapping appointments.** * **Real-Time Notifications:**    + **Enable automated email and SMS alerts for appointment confirmations, cancellations, and updates.** * **Integrated Resource Management:**    + **Connect the scheduling platform to existing hospital resource systems for seamless allocation of equipment and staff.** | **Non-functional requirements**   * **Performance:**    + **Achieve a system uptime of at least 99.5%.** * **Usability:**    + **Provide an intuitive interface accessible to both technical and non-technical users.** * **Security:**    + **Ensure data protection that complies with healthcare regulations.** * **Scalability:**    + **Design the system to support future growth in patient volume and additional functional enhancements.** |

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| **Assumptions** |
| * **The existing IT infrastructure will support integration with a modern, cloud-based scheduling system.** * **Users (both patients and staff) will require minimal training due to the user-friendly design.** * **Legacy data can be migrated without significant disruption.** |

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| **Constraints** |
| * **Budget Limitations: The available budget will restrict the scale and immediacy of system upgrades and infrastructure improvements.** * **Other constraints such as timing and resource availability will be managed in alignment with the budget.** |

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| **Supporting Data** |
| **Appointment Patterns:**   * **Highlight the predictable scheduling times alongside the issues of “No Show,” “Rescheduled,” and “Cancelled” statuses for certain departments. This supports the need to enhance reminder systems and offer flexibility for patients.**   **Feedback Insights:**   * **Emphasize patient complaints regarding communication delays and difficulties with the online scheduling system. This validates the requirement for an improved user interface and notifications system.**   **Resource Utilization Trends:**   * **Draw attention to the resource constraints identified from interviews and assumed data trends. This justifies integrating resource management with the scheduling system to prevent overbooking and ensure better equipment/staff utilization.** |

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| **Conclusion** |
| **State that data-driven insights underscore the need for a modernized, integrated scheduling platform which, once implemented, is expected to improve operational efficiency and reduce scheduling discrepancies.** |