**Business Case Document**

**1. Why is this project initiated?**

This project is initiated to address inefficiencies in medical claim processing, which currently suffers from manual errors, data discrepancies, and workflow inefficiencies. These issues lead to delays, higher operational costs, and dissatisfaction among stakeholders. The project aims to improve the overall efficiency, accuracy, and scalability of the system using advanced technologies like Java and MySQL while enhancing the user experience for configuration analysts.

**2. What are the current problems?**

Data Discrepancies in Claims: Missing or incorrect data causing delays in claim processing.

Stakeholder Communication Issues: Lack of clarity in requirements from payers/providers.

Workflow Inefficiencies: Long processing times due to manual interventions.

System Limitations: Challenges in scaling due to outdated systems.

Error-Prone Processes: Manual errors contributing to processing delays.

**3. With this project, how many problems could be solved?**

Efficiency Improvement: Automating claim processing will reduce manual effort and processing time by 30%.

Error Reduction: Real-time validation will decrease errors by 20%.

Enhanced Communication: Detailed reporting tools in Facets will improve stakeholder communication and clarity.

Scalability: Utilizing advanced technologies will ensure the system can handle growing demands.

Streamlined Workflows: Automation and integration will enhance productivity for configuration analysts.

**4. What are the resources required?**

People Involved:

Project Manager

Business Analysts

Developers

Quality Assurance Team

End-users (Configuration Analysts)

Technology:

Programming: Java with Spring Boot

Database: MySQL

Tools: Draw.io, Sigma

Infrastructure:

Servers for deployment

Licenses for required tools and software

**5. How much organizational change is required to adopt this technology?**

Training: Configuration analysts and end-users will need training on the new system’s features and workflows.

Process Adaptation: Transitioning from manual to automated processes will require adjustments in current workflows.

System Integration: Ensuring seamless integration with existing systems and processes.

Stakeholder Alignment: Coordination with stakeholders to align on the new requirements and reporting formats.

**6. Time frame to recover ROI?**

Estimated ROI Recovery: Within 12-18 months post-implementation, considering the reduction in processing time, error correction costs, and enhanced productivity.

**7. How to identify stakeholders?**

Primary Stakeholders:

Payers/Providers (requiring claim processing services)

Configuration Analysts (end-users of the system)

Project Sponsors (decision-makers funding the project)

Secondary Stakeholders:

Developers and QA teams involved in building and testing the system

IT and Support teams ensuring smooth operation

Regulatory Authorities (ensuring compliance)

Methods to Identify Stakeholders:

Requirement Workshops: Gather inputs from all departments involved in claim processing.

Stakeholder Mapping: Categorize stakeholders based on their influence and impact on the project.

Surveys and Interviews: Conduct detailed discussions to identify pain points and expectations.

By addressing these points, the project will ensure a streamlined, efficient, and scalable claim processing system that meets organizational and stakeholder needs.

**Business Analyst Approach Strategy**

**1. Elicitation Techniques to Apply**

To gather requirements effectively, a combination of elicitation techniques will be employed based on stakeholder type and project needs:

Interviews: Conduct one-on-one sessions with key stakeholders to understand their needs and expectations.

Workshops: Facilitate collaborative workshops to gather detailed requirements from multiple stakeholders.

Surveys/Questionnaires: Distribute structured surveys for stakeholders who are unavailable for meetings.

Document Analysis: Review existing documentation, such as business cases, policies, and process flows.

Observation: Analyze end-user activities to understand current workflows and identify inefficiencies.

**2. Stakeholder Analysis (RACI/ILS)**

Conduct a comprehensive stakeholder analysis to define roles and responsibilities:

Identify Stakeholders: Create a stakeholder registry listing all key individuals, groups, and departments.

RACI Matrix: Define roles for each stakeholder (Responsible, Accountable, Consulted, Informed) to ensure clarity in project execution.

Influence-Level-Support (ILS) Analysis: Evaluate each stakeholder’s influence, level of support, and importance to the project to prioritize engagement.

**3. Documents to Write**

The following documents will be prepared to ensure thorough documentation and communication:

Business Requirements Document (BRD): Captures detailed requirements, objectives, and scope.

Functional Specification Document (FSD): Details functional aspects of the system to guide developers.

Use Case Documentation: Illustrates user interactions and system workflows.

Change Request Form: Standardized template to document and process change requests.

User Acceptance Test (UAT) Plan: Outlines testing criteria and scenarios for UAT.

Project Status Reports: Regular updates on progress, risks, and issues.

4. Process to Follow for Document Signoff

Draft Creation: Prepare the initial version of the document based on stakeholder input.

Internal Review: Share the draft with internal teams (e.g., project manager, quality assurance) for feedback.

Stakeholder Review: Distribute the revised document to stakeholders for review.

Approval Meeting: Organize a meeting to address queries and finalize the document.

Formal Signoff: Obtain stakeholder signatures via a signoff form or email confirmation to validate approval.

**5. Client Approval Process**

Present the finalized document to the client in a review session.

Address any client concerns or feedback promptly.

Secure client approval through formal signoff mechanisms, such as a Client Project Acceptance Form.

6. Communication Channels to Establish and Implement

Email: Primary mode for formal communication and document sharing.

Project Management Tools: Use tools like Jira or Trello to track progress and updates.

Weekly Status Meetings: Schedule regular meetings to discuss progress and address issues.

Instant Messaging: Utilize platforms like Slack or Microsoft Teams for quick updates.

Stakeholder Reports: Share bi-weekly or monthly progress reports with stakeholders.

**7. Handling Change Requests**

Document Submission: Require stakeholders to submit a Change Request Form.

Impact Analysis: Assess the technical and business impact of the requested change.

Stakeholder Review: Discuss the proposed change in stakeholder meetings.

Approval Process: Secure formal approval before implementing changes.

Update Documentation: Reflect changes in all relevant documents (e.g., BRD, FSD).

**8. Updating Progress to Stakeholders**

Regular Reports: Share progress updates through detailed status reports.

Milestone Tracking: Highlight achievements and upcoming milestones.

Risk and Issue Reporting: Proactively communicate risks and their mitigation strategies.

Dashboards: Utilize visual dashboards for real-time updates on project health.

**9. UAT and Signoff Process**

UAT Planning: Prepare a comprehensive UAT plan outlining scenarios and acceptance criteria.

Stakeholder Involvement: Ensure end-users and key stakeholders participate in UAT.

Defect Tracking: Log and track defects in a centralized tool.

Client Project Acceptance Form: Once UAT is successfully completed, obtain formal signoff using the acceptance form.

**Project Name:** Automated Medical Claims Processing System

**Customer Name:** Wellmark Healthcare Solutions

**Project Version:** 1.0

**Project Sponsor:** [Trizetto pvt Limited]

**Project Manager:** [*Michael Roberts*]

**Project Initiation Date:** [11-02-2025]



**Document 4- Requirement Traceability Matrix**



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| **Business Requirements Document****Project Name: Automated Medical Claims Processing System****Project ID: AMCPS-2025-001****Version ID: 1.0****Author: [Nilesh Bhambure]**1. **Document Revisions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Description of Change** | **Approval Status** |
| 1 | 11-02-2025 | Nilesh Bhambure | Initial Draft | Pending |
| 1.1 | 11-02-2025 | Nilesh Bhambure | Incorporated feedback | Approved |

1. **Approvals**

|  |  |  |  |
| --- | --- | --- | --- |
| **Role** | **Name** | **Date** | **Signature** |
| **Project Sponsor** | *John Anderson* | *11-Feb-25* | *J. Anderson* |
| **Business Analyst** | *Sophia Patel* | *11-Feb-25* | *S. Patel* |
| **Project Manager** | *Michael Roberts* | *11-Feb-25* | *M. Roberts* |
| **Development Lead** | *David Thompson* | *11-Feb-25* | *D. Thompson* |
| **Quality Assurance Manager** | *Emily Carter* | *11-Feb-25* | *E. Carter* |

**3. RASCI Chart for This Document****Codes Used in RASCI Chart:****Codes Used in RASCI Chart:*** **R - Responsible (Person performing the work)**
* **A - Accountable (Final decision-maker)**
* **S - Supportive (Provides resources or assistance)**
* **C - Consulted (Provides input and expertise)**
* **I - Informed (Kept in the loop, but not involved in execution)**

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| **Activity** | **Project Sponsor** | **Business Analyst** | **Project Manager** | **Dev Lead** | **QA Manager** |
| Define Business Requirements | R | A | S | C | I |
| Approve Business Requirements | A | R | S | I | I |
| Develop Technical Specifications | I | R | A | S | C |
| Implement System Changes | I | I | C | R | S |
| Conduct Quality Testing | I | I | C | S | R |
| Approve Final Deliverables | A | S | R | C | I |

**Introduction**This Business Requirements Document (BRD) outlines the requirements, objectives, and scope of the Automated Medical Claims Processing System for Wellmark Healthcare Solutions. The project aims to eliminate inefficiencies in the current manual claims processing system by leveraging automation, reducing errors, and improving overall operational efficiency.**Business Goals*** Enhance efficiency in medical claim processing by automating key workflows.
* Reduce manual errors and data discrepancies to improve accuracy.
* Improve stakeholder communication and transparency.
* Increase scalability to handle growing demands.
* Ensure compliance with regulatory standards.

**Business Objectives*** Automate claim validation and processing to reduce turnaround time by 30%.
* Implement real-time error detection and correction to decrease errors by 20%.
* Provide detailed reporting tools to facilitate communication between stakeholders.
* Develop a scalable system using Java and MySQL to accommodate future growth.
* Improve user experience for configuration analysts through intuitive interfaces.

**Business Rules*** Claims must be validated against predefined business rules before processing.
* Only authorized users can access and modify claim data.
* All claim transactions must be logged for audit and compliance purposes.
* Real-time notifications must be sent to stakeholders upon claim status updates.
* The system should support integration with existing healthcare provider systems.

**Background** The current claim processing system is largely manual, leading to inefficiencies, errors, and increased operational costs. These issues impact stakeholders, including payers, providers, and configuration analysts, causing delays and dissatisfaction. Implementing an automated solution will streamline workflows, enhance accuracy, and ensure compliance with industry standards.Project Objective The primary objective of this project is to develop an automated medical claims processing system that reduces manual intervention, improves accuracy, and enhances communication between stakeholders. The system will leverage advanced technologies to ensure efficiency and scalability.**Project Objective**The primary objective of this project is to develop and implement an Automated Medical Claims Processing System that enhances operational efficiency, reduces manual errors, and improves communication among stakeholders. This system will leverage advanced technologies such as Java, Spring Boot, and MySQL to provide a scalable, accurate, and user-friendly solution for processing claims. The project also aims to:**Automate Claims Processing**: Minimize manual intervention and reduce processing time by 30%.Improve Data Accuracy: Implement real-time validation to reduce errors by at least 20%.Enhance User Experience: Develop an intuitive interface for configuration analysts to improve productivity.**Facilitate Stakeholder Communication**: Provide detailed reporting and notifications for better clarity and transparency.Ensure Scalability: Utilize modern, scalable technologies to handle growing data and claim volumes.**Maintain Compliance**: Ensure adherence to healthcare regulations and audit requirements for data security and accuracy.This objective will be achieved through collaborative efforts between project stakeholders, developers, configuration analysts, and end-users.**Project Scope****In-Scope Functionality:The functionalities that will be included in the project are as follows:**1. **Claims Submission:**
	* Enable users to submit medical claims electronically through a web-based portal.
	* Support manual and automated submission of claims from healthcare providers.
2. **Claims Validation:**
	* Validate claims data for completeness, accuracy, and eligibility against pre-defined business rules.
	* Flag incomplete or incorrect claims for review and resubmission.
3. **Claims Adjudication:**
	* Automate the adjudication process to determine the payable amount for each claim.
	* Apply coverage rules, co-pays, and deductibles automatically.
4. **Approval & Rejection Workflow:**
	* Provide an automated approval/rejection workflow for claims.
	* Notify users of claim status changes through email and system notifications.
5. **Reporting & Dashboards:**
	* Generate standard and custom reports for claim trends, payment history, and error rates.
	* Real-time dashboards for administrators to track claims in progress.
6. **User Management:**
	* Enable role-based access control for different users (e.g., admins, providers, analysts).
	* Allow user profile creation, updates, and deactivation.
7. **Payment Processing:**
	* Integrate with payment gateways or accounting systems to process payments.

**Out-of-Scope Functionality:**The functionalities that will not be included in this project are as follows:1. **Integration with External Systems (Phase 2):**
	* Integration with third-party EHR (Electronic Health Records) or other insurance systems is out of scope for this phase.
2. **Mobile App Development:**
	* Native or hybrid mobile application development will not be part of the initial project scope.
3. **Fraud Detection System:**
	* Advanced fraud detection algorithms and AI-based fraud prevention features will not be implemented in this phase.
4. **Multi-Language Support:**
	* The system will only be available in English; additional language support is out of scope.
5. **Custom Rule Engine Development:**
	* Any request for building a fully custom rule engine for claims adjudication will be deferred to future phases.
6. **Paper-Based Claims Processing:**
	* Processing and handling paper-based claims will not be included in this project.
7. **Manual Claim Audits:**
	* Manual claim audits and paper records archiving are excluded.

**Assumptions*** Stakeholders will actively participate in requirement gathering and testing.
* The system will integrate seamlessly with existing healthcare IT infrastructure.
* Adequate training will be provided to end-users for a smooth transition.
* Necessary hardware and software resources will be made available for implementation.

**Constraints*** The project must be completed within the allocated budget and timeframe.
* Compliance with healthcare regulatory requirements is mandatory.
* Integration with legacy systems may present technical challenges.
* User adoption may require a structured change management strategy.

**Risks*** Resistance to change from stakeholders accustomed to manual processes.
* Potential integration issues with existing healthcare systems.
* Data security and compliance risks related to handling sensitive medical information.
* Project delays due to unforeseen technical or operational challenges.

**Business Process Overview****Legacy System (AS-IS)**The current process in the legacy system for claims management is highly manual, fragmented, and lacks automation. It consists of multiple manual data entry points, disconnected systems, and paper-based workflows that slow down the entire process. Here is a high-level overview of the legacy process:**Legacy Process Flow (AS-IS)**1. **Claims Submission:**
	* Claims are submitted manually or through fax/email by healthcare providers.
	* No automated validation occurs at the submission point.
2. **Data Entry:**
	* Claims data is manually entered into the system by operators, which introduces errors and delays.
3. **Claims Review:**
	* Manual verification of eligibility, coverage, co-pays, and deductibles by staff.
	* No standard business rules for validation, leading to inconsistency.
4. **Claims Approval/Rejection:**
	* Approval/rejection decisions are made manually, often without clear documentation or rules.
5. **Payment Processing:**
	* Payments are processed manually through separate accounting systems.
	* Payment delays are common due to miscommunication and manual handling.

**Proposed Recommendations (TO-BE)**The proposed "TO-BE" system focuses on automating and streamlining the claims management process with an integrated, web-based platform. This system will eliminate manual inefficiencies and introduce real-time validation, automated adjudication, and comprehensive reporting.**Proposed Process Flow (TO-BE)**1. **Claims Submission:**
	* Healthcare providers submit claims via an online portal.
	* Automatic data capture from submission forms or electronic files.
2. **Automated Validation:**
	* Real-time validation checks are performed at the submission point for completeness and accuracy.
3. **Claims Adjudication:**
	* Automated adjudication rules are applied to determine eligibility, coverage, and payable amounts.
	* Business rules are consistently applied to all claims.
4. **Approval/Rejection Decision:**
	* Approved claims are automatically forwarded for payment.
	* Rejected claims are flagged for manual review with clear reasons documented.
5. **Payment Processing:**
	* Approved claims are processed automatically through an integrated payment gateway.

PlantUML diagram**Business Requirements**1. The system must support real-time validation of claim data.
2. Users should receive automated notifications for claim status updates.
3. The system must allow role-based access control.
4. Reports should be generated to provide insights into claim processing trends.
5. The database must be secure and support high-volume transactions.
6. The interface should be user-friendly and designed for efficient navigation.
7. The system should comply with HIPAA and other healthcare regulations.

**Appendices*** **Business Requirements Document (BRD):**
* Outlines the business needs, goals, and high-level requirements for the system.
* **Functional Requirements Specification (FRS):**
* Defines the detailed functional requirements and expected behavior of the proposed system.
* **Non-Functional Requirements Document (NFR):**
* Covers performance, scalability, security, usability, and other non-functional aspects.
* **Use Case Document:**
* Describes specific scenarios and workflows for various system users.
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