**Document 1- Business case document template**

**➢ Why is this project initiated?**

Answer: The project for creating an **Auto and Property insurance policy** is initiated to meet **market demand, regulatory changes**,and maintain a **competitive advantage**. It aims to **improve customer experience, generate revenue**,and **diversify risk** through new coverage options. The project also supports **business growth, technological advancements,** and **operational efficiency** by adopting modern systems, automation, and digital solutions.

* **Market Demand:** The project is driven by the need for people to protect their property and vehicles, as more customers want insurance that fits their needs.
* **Regulatory Changes:** New laws or regulations may require changes to the insurance policy to stay compliant.
* **Competitive Advantage:** The project helps the company stand out in a crowded market by offering better or unique insurance products.
* **Technological Advancements:** New technologies, like AI, help improve risk analysis, claims processing, and customer experience.
* **Revenue Growth and Profitability:** Offering new policies can bring in more customers and increase the company’s earnings while reducing costs.
* **Improving Customer Experience:** By providing easier-to-understand policies and faster service, the company can keep customers happy and loyal.
* **Risk Mitigation:** The company can reduce its exposure to risks by offering a range of insurance policies and adjusting to emerging threats.
* **Business Growth and Expansion:** The project allows the company to expand into new markets, attract different customer groups, and grow its business.
* **Brand Image and Trust:** Offering reliable, transparent policies helps build a trustworthy reputation, making customers feel more secure.
* **Technological and Operational Enhancements:** The project improves how the company works by updating systems and processes, making everything run smoother and faster.

**➢ What are the current problems?**

Answer: The main problems with using the Waterfall Model for a PNC Auto and Property insurance policy are:

1. **Rigid Structure:** Difficult to adjust to changes once development starts.
2. **Long Development Time:** Slow to respond to market shifts or customer demands.
3. **Lack of Flexibility:** Hard to make changes during the project, risking misalignment with needs.
4. **Integration Issues:** Challenges in aligning with existing systems or third-party services.
5. **Late Testing:** Issues found late in the process can delay deployment.
6. **Limited Stakeholder Feedback:** Reduced involvement can lead to mismatched expectations.
7. **Budget and Resource Problems:** Potential for inefficiencies and cost overruns.
8. **Technological Lag:** Difficulty in adapting to emerging technologies during development.

These challenges can slow progress, increase costs, and result in a product that doesn’t fully meet market or customer expectations.

**➢ With this project how many problems could be solved?**

Answer: With this project, several problems could be solved, including:

1. **Streamlining Operations:** Through better integration of systems, reducing manual processes, and improving efficiency in underwriting and claims handling.
2. **Improving Customer Experience:** Offering more tailored, accessible, and user-friendly policies.
3. **Adapting to Market Needs:** Creating a more responsive insurance product that aligns with evolving customer demands and regulatory changes.
4. **Enhancing Risk Management:** Using advanced technologies to more accurately assess and price risk.
5. **Boosting Profitability:** By automating and optimizing processes, reducing overhead costs, and increasing customer retention.

These solutions could significantly enhance the company’s competitiveness and operational effectiveness.

**➢ What are the resources required?**

Answer: To implement the PNC Auto and Property insurance policy project, the required resources are:

1. **Human Resources:** Project managers, business analysts, underwriters, actuaries, software developers, QA testers, legal/compliance experts, and customer support teams.
2. **Technology and Tools:** Insurance management software, data analytics tools, CRM (Customer Relationship Management) systems, and testing tools.
3. **Financial Resources:** Budget for development and operational costs.
4. **Infrastructure:** Servers, hosting, and security systems.
5. **Training and Support:** Employee training and customer education materials.
6. **Marketing Resources:** Marketing team for promotional campaigns.

These resources ensure efficient development, launch, and support of the policy

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

Answer: Adopting this technology will require moderate to significant organizational change, including:

1. **Process Changes** for new systems and automation.
2. **Employee Training** on new tools and processes.
3. **Cultural Shifts** towards innovation and customer-centric approaches.
4. **Leadership Support** for guiding the transition and managing resistance.
5. **System Integration** and **data migration** to align with existing infrastructure.

Proper change management will be essential for smooth adoption.

**➢ Time frame to recover ROI?**

Answer: The time frame to recover ROI (Return on Investment) for the PNC Auto and Property insurance policy project can vary, but typically it would take 1 to 3 years. Factors influencing this include:

1. **Implementation Costs:** The initial investment in technology, resources, and training.
2. **Revenue Generation:** New policy offerings and customer acquisition may gradually increase revenue.
3. **Cost Savings:** Automation and streamlined processes could reduce operational costs over time.
4. **Market Penetration:** The speed at which the new policy gains market share and customer adoption.

A shorter recovery period (closer to 1 year) may be possible if the market demand is high and adoption is quick. However, a longer period (closer to 3 years) might be expected for slower adoption or if more extensive system integration is needed.

**➢ How to identify Stakeholders?**

Answer: By mapping out the interests and needs of each stakeholder, you can ensure effective communication and decision-making throughout the project.

* **Conduct Stakeholder Mapping:** Identify all internal and external groups affected by the project.
* **Review Organizational Structure:** Look at departments and teams that will interact with or be impacted by the policy.
* **Consult Key Decision Makers:** Engage executives and managers to understand who else should be involved.
* **Analyze Customer Feedback:** Understand the customer base and any third parties that influence or interact with your customers.

To identify stakeholders for the PNC Auto and Property insurance policy project:

1. **Internal Stakeholders:** Include project teams (managers, developers, analysts), leadership, underwriting, marketing, sales, customer support, and IT.
2. **External Stakeholders:** Include customers, regulatory bodies, insurance agents, third-party service providers, investors, and partners (e.g., reinsurers).

Identify stakeholders through stakeholder mapping, reviewing the organizational structure, consulting decision-makers, and analysing customer feedback.

**Document 2: BA Strategy**

Write BA Approach strategy (As a business analyst, what are the steps that you would need to follow to complete a project-What Elicitation Techniques to apply, how to do Stakeholder Analysis RACI/ILS, What Documents to Write, What process to follow to Sign off on the Documents, How to take Approvals from the Client, What Communication Channels to establish n implement, How to Handle Change Requests, How to update the progress of the project to the Stakeholders, How to take signoff on the UAT- Client Project Acceptance Form)

**Answer:** As a Business Analyst (BA), here’s a structured approach to ensure the successful completion of the PNC Auto and Property Insurance Policy project:

**1. Project Initiation & Stakeholder Analysis**

* **Stakeholder Identification:**
	+ **Techniques**: Use **Stakeholder Mapping** (e.g., Influence vs. Interest Matrix) to identify key stakeholders (internal and external).
	+ **RACI Matrix:** Define roles and responsibilities (Responsible, Accountable, Consulted, Informed) for all stakeholders to clarify involvement.
	+ **ILS (Influence, Legitimacy, and Support):** Assess stakeholders’ influence and how much they are affected by the project to prioritize communication.

**2. Elicitation Techniques**

* **Interviews**: Conduct interviews with key stakeholders (e.g., underwriters, regulatory experts) to gather requirements and expectations.
* **Workshops**: Facilitate workshops to collect detailed information on business processes, policies, and systems.
* **Surveys/Questionnaires**: Use these for larger groups, particularly customers or agents, to gather opinions and feedback.
* **Document Analysis**: Review existing insurance documents, regulations, and procedures to ensure consistency with new policies.
* **Prototyping**: Create prototypes of user interfaces or insurance policy offerings for feedback.

**3. Document Writing**

* **Business Requirements Document (BRD)**: Outline high-level business needs, goals, scope, and objectives.
* **Functional Requirements Document (FRD)**: Detail specific functionality, including system behaviour, user interactions, and performance requirements.
* **Use Cases/User Stories**: Describe individual user interactions and system processes in a detailed and clear manner.
* **Data Mapping/Process Flows**: Visual representations of data and workflows, identifying data sources, flows, and systems integration.
* **Test Plans & Scenarios**: Document test scenarios and acceptance criteria for UAT (User Acceptance Testing).

**4. Process to Sign off on Documents**

* **Review & Validation**: Review the documents with stakeholders to ensure accuracy and completeness.
* **Approval Sign-off**: Request formal sign-offs from stakeholders (e.g., leadership, IT, regulatory bodies) on the final version of the documents.
* **Version Control**: Ensure documents are version-controlled for traceability and future reference.

**5. Client Approvals**

* **Client Presentation**: Present the final documents (BRD, FRD) and prototypes to the client, ensuring they align with their expectations and business goals.
* **Formal Approval Process**: Establish a clear process where the client reviews and signs off on the key documents (BRD, FRD, Use Cases).
* **Change Control Process**: If there are significant changes, use a formal change request process for client approval before proceeding.

**6. Communication Channels**

* **Regular Status Updates**: Establish weekly or bi-weekly meetings with stakeholders to update progress, risks, and milestones.
* **Project Management Tools**: Use tools like JIRA, Trello, or Microsoft Teams for real-time collaboration, task tracking, and document sharing.
* **Stakeholder Communication**: Create a communication plan outlining how information will be disseminated (email, meetings, shared documentation).
* **Escalation Procedures**: Define clear procedures for escalating issues or risks to the appropriate level of management.

**7. Handling Change Requests**

* **Change Request Log**: Establish a log to track change requests, with details on the change, impact, and approval status.
* **Impact Analysis**: Assess the impact of the change on project scope, timeline, and resources before seeking approval.
* **Approval Process**: Ensure that any change requests are formally reviewed and approved by the relevant stakeholders (e.g., business owners, project managers).

**8. Updating Progress to Stakeholders**

* **Regular Reports**: Provide weekly or bi-weekly status reports to stakeholders, summarizing progress, risks, issues, and upcoming milestones.
* **Dashboard**: Use project dashboards (e.g., in Jira or Microsoft Project) to provide a visual overview of the project's progress.
* **Meetings**: Hold regular check-in meetings with key stakeholders to ensure alignment and gather feedback.

**9. UAT & Client Project Acceptance**

* **UAT Planning**: Prepare a **User Acceptance Test Plan** with test cases, success criteria, and timelines.
* **Client Involvement**: Involve the client in UAT testing, ensuring they validate that the system and policies meet business requirements.
* **Signoff on UAT**: Once UAT is completed, request the client to sign off on the Client Project Acceptance Form, confirming their approval.
* **Feedback Loop**: Address any issues or concerns raised during UAT before getting final client approval.

This approach ensures that the project is delivered with clear requirements, effective communication, and stakeholder alignment throughout its lifecycle.

**Document 3- Functional Specifications**

**Answer:** A functional specification (FSD) is a document that describes how a system or product will function.

|  |  |
| --- | --- |
| **Project name** | Property and Casualty (PNC) Policy Analysis for Automobile and Property |
| **Customer name** | XYZ |
| **Project Version** | Version 1.0 |
| **Project Sponsor** | Ankur Agarwal |
| **Project Manager** | Udaya K |
| **Project Initiation date** | 01/01/2025 |

**Functional Requirement specifications:**

**Answer:** Functional Requirements Specification for PNC Policy Analysis (Auto and Property)

|  |  |  |
| --- | --- | --- |
| **Req ID** | **Req Description** | **Priority** |
| FR0001 | User should be able to log in to the application to access PNC policy details for Auto and Property. | High |
| FR0002 | The system should allow users to create and manage Auto and Property insurance policies. | High |
| FR0003 | User should be able to view and update the details of existing policies (e.g., policyholder info, coverage details). | High |
| FR0004 | System should calculate policy premiums based on customer details, vehicle/property value, and coverage type. | High |
| FR0005 | User should be able to add and remove coverage options for Auto and Property policies. | Medium |
| FR0006 | System should provide automated policy renewal reminders based on the expiration date. | Medium |
| FR0007 | System should allow users to generate reports on policy status, claims history, and premium payments. | High |
| FR0008 | The system should integrate with third-party data providers for vehicle history or property valuation. | Medium |
| FR0009 | User should be able to process claims by linking claims to specific Auto or Property policies. | High |
| FR0010 | System should validate that coverage limits, deductibles, and other policy conditions comply with regulatory requirements. | High |
| FR0011 | User should be able to generate certificates of insurance for policyholders. | Medium |
| FR0012 | The application should allow users to track policyholder communications (emails, calls, letters). | Low |
| FR0013 | The system should send automated alerts to users when claims are filed or when a claim status change. | Medium |

**Non-Functional Requirements:** Non-functional requirements (NFRs) are the characteristics of a system that define how it should behave, rather than what it does

|  |  |  |
| --- | --- | --- |
| **Req ID** | **Req Description** | **Priority** |
| NFR-001 | The system must provide a response time of less than 2 seconds for policy analysis queries in 95% of the cases. | High |
| NFR-002 | The system should be capable of processing 1000 transactions per second under normal conditions. | High |
| NFR-003 | The system should be scalable to handle up to 500,000 active users and support expansion without significant downtime. | High |
| NFR-004 | The system should handle peak loads of up to 10,000 concurrent users without performance degradation. | High |
| NFR-005 | The system should have a minimum availability of 99.9%, ensuring minimal downtime. | High |
| NFR-006 | The system must implement disaster recovery to restore operations within 1 hour of an unexpected failure. | High |
| NFR-007 | Automated daily backups should be performed, with a 7-day retention period. | Medium |
| NFR-008 | The system must operate with an error rate of less than 0.01% under normal conditions. | High |
| NFR-009 | All sensitive customer data must be encrypted both in transit (TLS 1.2 or higher) and at rest (AES-256 encryption). | High |
| NFR-010 | The system must implement role-based access control (RBAC) to ensure appropriate data access. | High |
| NFR-011 | Multi-factor authentication (MFA) must be required for all users accessing the system. | High |
| NFR-012 | The system must comply with GDPR, CCPA, and other applicable privacy regulations. | High |
| NFR-013 | The user interface must be intuitive and user-friendly, ensuring efficient interaction for policy analysis tasks. | Medium |
| NFR-014 | The system must comply with WCAG 2.1 Level AA accessibility standards. | Medium |
| NFR-015 | The system must provide comprehensive training modules and user documentation. | Medium |
| NFR-016 | The system should be capable of real-time monitoring to detect anomalies and provide alerts to the development team. | High |
| NFR-017 | The system must maintain detailed logs and audit trails of user actions, data access, and errors for at least 1 year. | High |
| NFR-018 | Security patches and updates should be applied regularly, and the system must support automated patching with minimal downtime. | High |
| NFR-019 | The system must support integration with third-party services, such as underwriting systems, claims platforms, and payment gateways. | High |
| NFR-020 | The system must support multiple languages, initially including English, Spanish, and French. | Medium |
| NFR-021 | The system should handle time zone differences for global operations and adjust timestamps accordingly. | Medium |
| NFR-022 | The system must comply with all applicable insurance industry regulations, including Solvency II, NAIC, and regional standards. | High |
| NFR-023 | All transactions, policy updates, and claims must have a clearly documented audit trail. | High |
| NFR-024 | In case of system decommissioning, proper data export and archiving procedures must be followed, ensuring data accessibility for compliance purposes. | Low |

**Document 4- Requirement Traceability Matrix**

Answer: A requirements traceability matrix (RTM) is a document that shows the connection between requirements and other deliverables in a project. It's used to track and verify that all requirements are met.

**Requirement Traceability Matrix (RTM)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Req ID** | **Req Name** | **Req Description** | **Design** | **D1** | **T1** | **D2** | **T2** | **UAT** |
| FR0001 | Login | User should be able to log in to the application to access PNC policy details for Auto and Property. | Yes | Completed | Yes | Yes | Yes | Yes |
| FR0002 | Create & Manage Policies | The system should allow users to create and manage Auto and Property insurance policies. | Yes | Pending | No | Yes | Yes | Yes |
| FR0003 | View & Update Policies | User should be able to view and update the details of existing policies (e.g., policyholder info, coverage details). | Yes | Pending | Yes | No | Yes | No |
| FR0004 | Calculate Policy Premiums | System should calculate policy premiums based on customer details, vehicle/property value, and coverage type. | Yes | Completed | No | Yes | Yes | Yes |
| FR0005 | Add/Remove Coverage Options | User should be able to add and remove coverage options for Auto and Property policies. | Yes | Pending | Yes | No | No | No |
| FR0006 | Automated Policy Renewal Reminders | System should provide automated policy renewal reminders based on the expiration date. | Yes | Pending | Yes | Yes | Yes | Yes |
| FR0007 | Generate Policy Reports | System should allow users to generate reports on policy status, claims history, and premium payments. | Yes | Pending | No | Yes | No | Yes |
| FR0008 | Integration with Third-Party Providers | The system should integrate with third-party data providers for vehicle history or property valuation. | Yes | Completed | No | Yes | Yes | Yes |
| FR0009 | Process Claims | User should be able to process claims by linking claims to specific Auto or Property policies. | Yes | Pending | No | Yes | Yes | Yes |
| FR0010 | Validate Coverage Compliance | System should validate that coverage limits, deductibles, and other policy conditions comply with regulatory requirements. | Yes | Completed | Yes | Yes | Yes | Yes |
| FR0011 | Generate Certificates of Insurance | User should be able to generate certificates of insurance for policyholders. | Yes | Pending | No | Yes | Yes | Yes |
| FR0012 | Track Policyholder Communications | The application should allow users to track policyholder communications (emails, calls, letters). | Yes | Completed | Yes | Yes | Yes | Yes |
| FR0013 | Automated Alerts for Claims Status Changes | The system should send automated alerts to users when claims are filed or when a claim status change. | Yes | Pending | No | Yes | Yes | Yes |

**Document 5- BRD Template**

Answer: A business requirements document (BRD) is a document that outlines the requirements for a project. It helps keep everyone involved on the same page and prevents the project from expanding beyond its boundaries.

1. **Document Revisions**

|  |  |  |
| --- | --- | --- |
| **Date** | **Version Number** | **Document Changes** |
| 2025-02-20 | 1.0  | Initial draft of the Business Case Document. |
| 2025-02-22 | 1.1  | Updated the "Background and Context" section with additional market insights. |
| 2025-02-25 | 1.2  | Added risk mitigation strategies under the "Risks and Mitigation Strategies" section. |
| 2025-03-01 | 1.3 | Revised "Cost and Resource Estimates" section based on updated budget from finance team. |
| 2025-03-05 | 1.4  | Clarified implementation timeline and added milestones for each phase. |
| 2025-03-10 | 1.5 | Added stakeholder approval section, and revised governance structure. |

1. **Approvals**



1. **RACI Chart for This Document**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Name** | **Role** | **R (Responsible)** | **A (Accountable)** | **S (Supports)** | **C (Consulted)** | **I (Informed)** |
| **Ankur Agarwal** | Project Sponsor |  | Yes |  |  | Yes |
| **Satya Kadam** | Business Owner |  | Yes |  | Yes | Yes |
| **Udaya K** | Project Manager | Yes | Yes | Yes | Yes |  |
| **Rekha M** | System Architect | Yes |  | Yes | Yes |  |
| **Venkatesh J** | Development Lead | Yes |  | Yes | Yes |  |
| **Nishi Desai** | User Experience Lead | Yes |  | Yes | Yes |  |
| **Esha Jain** | Quality Lead | Yes |  | Yes |  | Yes |
| **Snehal C** | Content Lead | Yes |  | Yes |  | Yes |

### RACI Roles Breakdown:

* **Project Sponsor (Ankur Agarwal)**: As the sponsor, Ankur is accountable for the document’s approval and needs to be informed of any changes but isn’t directly responsible for creating the document.
* **Business Owner (Satya Kadam)**: Satya is also accountable for ensuring the document aligns with business goals and will be consulted to ensure the document addresses business needs. He needs to be informed about the document’s progress.
* **Project Manager (Udaya K)**: Udaya is responsible for managing the creation of the document, ensuring it is accurate and complete. He is also accountable for ensuring the document's alignment with project goals and timelines. Udaya will consult with various stakeholders and keep them informed.
* **System Architect (Rekha M)**: Rekha is responsible for the technical aspects of the document, ensuring the solution’s feasibility and architecture align with the company’s infrastructure. She provides support and consults on technical aspects and needs to be informed.
* **Development Lead (Venkatesh J)**: Venkatesh contributes to the document by providing input on how the solution can be implemented technically. He is also responsible for helping design and outline development strategies.
* **User Experience Lead (Nishi Desai)**: Nishi ensures that the user experience is well-documented in the business case and will be consulted for ensuring customer-centric features and usability considerations.
* **Quality Lead (Esha Jain)**: Esha supports the quality assurance and testing aspects of the implementation, contributing to the testing section of the document. She will be informed about the progress and final approval of the document.
* **Content Lead (Snehal C)**: Snehal is responsible for creating and managing the content of the document, ensuring that the document’s language is clear, concise, and aligned with the business and project objectives.

 **4. Introduction**

**4.1. Business Goals**

The goals of the **PNC Auto and Property Insurance Policy** project are to align the organization’s services with the needs of a growing customer base in the digital space while improving internal operations. The primary organizational goals for this initiative include:

* **Improve Customer Engagement and Accessibility:**
The project aims to develop a mobile application for **Android** and **iOS** platforms, ensuring customers can access and manage their auto and property insurance policies with ease, anytime and anywhere.
* **Digital Transformation:**
By introducing a comprehensive **E-Learning Management System (LMS)**, the organization seeks to transition traditional insurance education and training into a more accessible, efficient, and scalable online platform.
* **Enhance Operational Efficiency:**
Automating the claims, policy management, and customer service processes through the integration of advanced technologies will reduce operational costs and improve response times.
* **Boost Customer Satisfaction:**
With features like real-time policy updates, claims tracking, and personalized content, the goal is to increase customer satisfaction by providing them with a transparent and seamless experience.
* **Increase Revenue Generation:**
By leveraging mobile app functionalities and offering educational courses on the LMS, the company can introduce new service offerings, such as premium services, online courses, and certifications that can generate additional revenue streams.

### ****4.2. Business Objectives****

The **Business Objectives** define the desired functionality and outcomes of the project. This includes providing the IT solution necessary for supporting the goals and ensuring successful project delivery.

#### **To Provide an IT Solution for:**

1. **Mobile Application for Android and iOS:**
	* **Cross-Platform Compatibility:** Develop applications for both **Android** and **iOS**, ensuring consistency in user experience across devices.
	* **Account Management:** Allow customers to view and manage their policies, payments, and claims, directly from their mobile devices.
	* **Claims Tracking:** Enable users to submit and track insurance claims through a simple, intuitive interface.
	* **Push Notifications:** Send updates and reminders regarding policy renewals, claims status, and upcoming payments.
	* **Policy Information Access:** Provide easy access to policy details, terms, and coverage, along with the ability to download or share documents.
	* **Interactive Tools:** Incorporate calculators (e.g., auto insurance premium calculator) and risk assessment tools for customers to calculate potential coverage needs.
2. **E-Learning Management System (LMS):**
	* **Training Content Delivery:** Provide a platform for insurance agents and customers to access training content, courses on insurance policy knowledge, customer service best practices, and regulatory compliance.
	* **Certification Management:** Offer certifications for employees after completing training modules, with automatic tracking of progress and certifications earned.
	* **Interactive Learning:** Include interactive features such as quizzes, video lessons, and scenario-based learning for better engagement.
	* **Reporting and Analytics:** Administer learning outcomes by generating reports on employee progress, engagement, and course completion.
	* **Course Management:** Enable admins to create, manage, and update training content, modules, and assessments for continuous learning and certification.
	* **User Profiles:** Allow users to create profiles, track their learning progress, and set learning goals within the LMS system.

### ****4.3. Business Rules****

The **Business Rules** section outlines the organization’s **policies, procedures**, and **regulations** that govern the implementation of the **PNC Auto and Property Insurance Policy** project. These rules ensure that the project adheres to organizational and legal standards.

#### **Key Business Rules:**

* **Data Privacy Compliance:** All customer data must comply with data protection regulations, such as **GDPR** and **CCPA,** ensuring that customer information is stored, processed, and shared securely.
* **Insurance Policy Documentation:** The app and **E-Learning Management System** must ensure that all insurance policies are fully documented and follow established guidelines for insurance policy creation, amendment, and termination.
* **Approval Workflow:** All claims and policy changes must pass through a structured **approval process,** with defined levels of authority for different types of requests.
* **Audit Trails:** All changes and activities within the system (including claims, policy updates, user interactions) must be logged and auditable for **compliance** and **security** purposes.
* **Subscription Rules:** Rules for customer subscription, renewal, and premium adjustments must be enforced, adhering to current insurance industry regulations.
* **User Authentication and Authorization:** Strong authentication protocols (e.g., two-factor authentication) must be implemented to ensure secure access to personal and policy-related information.

### ****4.4. Background****

The **Background** section provides a historical overview of how the project was proposed, what business challenges or opportunities led to its initiation, and the expected benefits that will result from its development.

#### **Project History:**

The need for the **PNC Auto and Property Insurance Policy** project arose from a combination of internal and external factors:

* **Customer Demands for Digital Access:** Customers increasingly demanded more convenient and efficient ways to manage their insurance policies and claims through digital platforms.
* **Manual Processing Challenges:** The organization faced inefficiencies in managing claims and policies due to outdated, manual systems, which resulted in slower response times and higher operational costs.
* **Competitive Pressure:** Competitors in the insurance market had already implemented mobile applications and e-learning platforms, creating a competitive disadvantage for PNC in offering innovative customer engagement and support tools.
* **Regulatory Changes:** The insurance industry has seen regulatory changes requiring enhanced transparency, data protection, and efficient management of policyholders' data, which prompted the need for a more scalable and compliant system.

#### **Business Issues Identified:**

* The lack of a mobile solution for managing auto and property insurance policies was leading to lower customer satisfaction.
* Slow claims processing due to inefficient manual systems was negatively impacting operational efficiency.
* The need for a training solution to ensure continuous learning for employees and customers, especially in navigating new insurance policies and regulatory changes.

#### **Expected Benefits:**

* **Improved Customer Engagement:** The mobile app will enable customers to easily access, manage, and interact with their policies, leading to increased customer satisfaction.
* **Streamlined Operations:** The automation of claims and policy management processes will reduce errors and operational overheads, increasing efficiency.
* **Compliance & Security:** The new system will ensure better data security, compliance with regulations, and more transparent processes.
* **Revenue Growth:** The ability to offer premium services through the mobile app and e-learning modules will create new revenue streams.

### ****4.5. Project Objective****

The **Project Objective** outlines the high-level goals of developing the product, along with the alignment to business objectives and the requirements for integration with other systems.

#### **Overall Goal:**

To develop a **Mobile Application (for Android & iOS)** and an **E-Learning Management System (LMS)** for the **PNC Auto and Property Insurance Policy** that will:

* Enhance customer engagement by providing accessible and convenient policy management and claims submission through mobile apps.
* Support organizational training efforts by offering an interactive and scalable e-learning solution for employees and customers.

#### **High-Level Descriptions:**

* **Mobile Application** will allow customers to view, update, and manage their insurance policies, submit claims, receive notifications, and interact with support agents.
* **E-Learning Management System (LMS)** will provide training modules on insurance policies, claims processing, and industry best practices, enhancing both customer and employee education.

#### **Alignment with Business Objectives:**

* The mobile application and LMS will support business objectives of increasing customer satisfaction, improving operational efficiency, and ensuring compliance with industry regulations.

#### **Interaction with Other Systems:**

* The mobile application will integrate with the existing **insurance management system** to provide real-time policy updates and claims tracking.
* The **LMS** will integrate with employee management and learning systems to track course progress, certifications, and performance.

### ****4.6. Project Scope****

The **Project Scope** defines the boundaries of the current project, detailing what will and won’t be included in the solution. This helps manage expectations and clarifies the deliverables.

#### **4.6.1. In Scope Functionality:**

* **Mobile Application Development (Android & iOS):** Development of both Android and iOS applications for policy management, claims submission, and real-time notifications.
* **E-Learning Management System (LMS):** Development of a platform to host training modules, track learner progress, issue certifications, and provide interactive learning resources.
* **Integration with Backend Systems:** Integration with existing **insurance management systems** to allow real-time updates on policies, claims, and customer data.
* **User Authentication and Security Features:** Implementation of secure login, two-factor authentication, and user authorization protocols to ensure data privacy and security.
* **Content Management:** Ability for administrators to upload and manage learning content and policy documentation within the LMS.
* **Analytics and Reporting:** Creation of reporting tools for tracking claims, policy updates, and user learning progress.

#### **4.6.2. Out of Scope Functionality:**

* **Development of New Insurance Products:** The creation of new insurance products or plans is not included in the current scope.
* **External Integrations:** Integration with third-party applications or external insurance management systems is not included in the project.
* **Advanced AI/Chatbot Features:** While customer support tools will be included, the development of advanced AI-based chatbots or virtual assistants is outside the project scope.

###  ****5. Assumptions****

The following assumptions are made for the project:

* The **existing backend system** for policy management will be available for integration with the new mobile and LMS solutions.
* The organization will provide sufficient **resources and subject matter experts** to assist in the development of training content for the LMS.
* The project timeline assumes no major delays in the design and development phases, and all stakeholders will be available for timely feedback.

###  ****6. Constraints****

#### **Key Constraints:**

* **Timeline:** The project must be completed within a 12-month period due to regulatory requirements and the need to remain competitive in the market.
* **Budget:** The project must be developed within the allocated budget, which may limit the scope of additional features or integrations.
* **Technology Stack:** The project must be developed using the existing technology stack, which may limit certain functionalities or features.
* **Compliance:** The project must adhere to local and international insurance regulations, which could impose limitations on certain features, such as data storage and processing.

 **7. Risks**

**Risk Identification and Mitigation Strategies:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Likelihood** | **Cost if Occurs** | **Mitigation Strategy** |
| **Regulatory Changes Impacting Project Scope** | High | High | **Mitigate** – Continuously monitor industry regulations and adjust project deliverables to comply. |
| **Integration Challenges with Legacy Systems** | Medium | Medium | **Mitigate** – Work closely with the IT team to understand system limitations and plan for necessary adjustments. |
| **Delays in Development** | High | High | **Transfer** – Engage an external vendor to provide additional development support if internal resources are overburdened. |
| **Data Privacy Concerns** | High | High | **Avoid** – Conduct regular security audits and ensure compliance with data protection laws. |
| **Stakeholder Availability** | Medium | Low | **Accept** – Plan ahead with clear timelines for stakeholder involvement and maintain constant communication. |

This structure provides comprehensive details for each section of the **BRD**, focusing on the key areas such as **Business Rules, Project Scope, Risks,** and more, ensuring a clear understanding of the project's objectives, scope, and potential challenges.

**7. Technological Risks for PNC Auto and Property Insurance Policy Project (Waterfall Model)**

In this section, we assess the technological risks associated with the development and deployment of the PNC Auto and Property Insurance Policy in the Waterfall model. These risks refer to the challenges that may arise when using new or existing technologies to support the project's goals.

**Technological Risks**

1. **Integration with Legacy Systems:** The project may require integrating with existing legacy systems that are outdated or incompatible with newer technologies. This could cause delays and technical difficulties.
	* **Risk:** Legacy system architecture may not support seamless integration with the mobile app or e-learning system.
	* **Mitigation:** Early identification of integration points and performing pilot tests for system compatibility before full-scale development.
2. **Security and Data Privacy Concerns:** The handling of sensitive customer data (such as personal information, policy details, claims data) introduces significant risks related to security breaches or data leaks.
	* **Risk:** Inadequate security measures could expose sensitive insurance data to hackers, violating privacy laws.
	* **Mitigation:** Implement end-to-end encryption, comply with GDPR, CCPA, and other relevant regulations, and regularly conduct security audits throughout the development process.
3. **Technological Compatibility and Performance:** The need to develop a mobileapplication for both Android and iOS may introduce challenges with maintaining performance and functionality across multiple platforms.
	* **Risk:** The mobile app may suffer from performance issues (e.g., slow loading times, crashes) if not optimized for both platforms.
	* **Mitigation:** Use robust cross-platform development frameworks like React Native or Flutter, and perform rigorous load testing for scalability and performance optimization.
4. **Cloud Infrastructure Dependence:** If the project utilizes cloud-based technologies for storage, processing, and delivery of services, there is a risk of over-dependence on cloud vendors.
	* **Risk:** A failure in the cloud service provider (e.g., outage, lack of compliance with SLAs) could disrupt service continuity.
	* **Mitigation:** Choose reliable cloud service providers with guaranteed uptime and redundancy, and implement failover solutions.
5. **Emerging Technologies and Innovations:** The project may introduce new technologies that the team or organization is not fully familiar with, such as AI-driven chatbots for customer support or machine learning algorithms for claims prediction.
	* **Risk:** Inexperience with emerging technologies could lead to misconfigurations, delays, or underperformance.
	* **Mitigation:** Ensure comprehensive training and involve external subject matter experts or consultants with relevant expertise in emerging technologies.

**Skills Risks**

Skills risks highlight the challenges that could arise due to a lack of technical expertise within the team, which may hinder the successful execution of the project.

1. **Lack of Expertise in Mobile Development:** The team may lack experience in mobile app development for both **Android** and **iOS** using modern frameworks.
	* **Risk:** The development of the mobile app could be delayed or compromised due to insufficient mobile development expertise.
	* **Mitigation:** Hire specialized mobile developers or provide training to existing team members on mobile app development.
2. **E-Learning Platform Expertise:** The development of the E-Learning Management System (LMS) might require specific knowledge in instructional design and the integration of learning management systems.
	* **Risk:** The LMS may not meet the expected user engagement or functionality if the development team is not familiar with e-learning best practices.
	* **Mitigation:** Involve instructional designers and LMS specialists early in the project to ensure proper implementation of learning modules.
3. **Lack of System Integration Skills:** Integrating new systems with existing insurance management systems requires specialized knowledge in API integration, data flow, and system architecture.
	* **Risk:** Inability to successfully integrate the mobile app and LMS with backend systems could delay the project.
	* **Mitigation:** Bring in experienced systems integrators and conduct thorough testing to identify any integration gaps early on.

**Political Risks**

Political risks refer to the external factors, such as government regulations and policy changes, that could affect the project.

1. **Changes in Insurance Regulations:** The insurance industry is heavily regulated, and new regulations could be introduced during the project that impact how data is stored or shared.
	* **Risk:** New regulatory changes could affect the functionality of the mobile app, LMS, or the way insurance policies are managed.
	* **Mitigation:** Maintain constant communication with legal and compliance teams to ensure that all developments align with current and upcoming regulations.
2. **Data Protection Laws:** Stringent data protection regulations (e.g., GDPR, CCPA) may evolve, requiring quick adaptation of the system to remain compliant.
	* **Risk:** Failure to meet new privacy requirements could lead to legal penalties or customer trust issues.
	* **Mitigation:** Regularly review and update privacy protocols, ensure data storage methods are secure, and involve legal experts in the process.

**Business Risks**

Business risks focus on the potential business impacts if the project is cancelled or faces significant setbacks.

1. **Loss of Competitive Advantage:** Without the implementation of the mobile app and LMS, PNC could lose ground to competitors offering better customer engagement tools.
	* **Risk:** Cancellation or delay of the project could result in market share loss and reduced customer retention.
	* **Mitigation:** Regularly assess the project’s alignment with business goals and communicate its importance to stakeholders, ensuring continued support.
2. **Operational Inefficiencies:** Without the new technologies, the company will continue to rely on older manual processes that are slow and error-prone.
	* **Risk:** Without project delivery, operational costs could remain high, and customer experience could continue to suffer.
	* **Mitigation:** Implement agile reviews throughout the Waterfall phases to catch any potential issues early, ensuring the project stays on track.

**Requirements Risks**

Requirements risks address the potential issues related to incorrect or incomplete requirements gathering.

1. **Misunderstood Mobile App Functionalities:** If the business requirements for the mobile app are not clearly defined, it could lead to feature creep or essential features being overlooked.
	* **Risk:** The final product might not align with customer expectations, leading to poor user adoption.
	* **Mitigation:** Regularly validate requirements with stakeholders through workshops and ensure that functional specifications are clearly documented.
2. **Incomplete E-Learning Features:** The requirements for the LMS might not fully address the needs of the end users (employees, customers), leading to a subpar learning experience.
	* **Risk:** Employees and customers may struggle to navigate the LMS, resulting in lower training effectiveness.
	* **Mitigation:** Conduct early-stage user testing of the LMS and ensure continuous feedback loops during the development process.

**Other Risks**

This section includes any additional risks not covered in the previous categories.

1. **User Resistance to Change:** Users may be resistant to adopting the new mobile app or LMS, preferring to stick with older methods of interacting with the insurance system.
	* **Risk:** Low adoption rates could undermine the success of the project.
	* **Mitigation:** Offer training and onboarding support for users and communicate the benefits of the new system through marketing and internal campaigns.
2. **Vendor Delays or Reliability Issues:** If external vendors or contractors are involved in the development of key components (e.g., mobile app development or LMS platform), delays or issues with vendor performance could disrupt the project.
	* **Risk:** Delays in vendor deliveries could extend the project timeline and affect its budget.
	* **Mitigation:** Select reliable vendors with a proven track record, and establish clear Service Level Agreements (SLAs) to manage expectations.

 **8. Business Process Overview**

This section outlines the flow of business processes across different project phases, from the Legacy System (AS-IS) to the Proposed Recommendations (TO-BE).

**8.1. Legacy System (AS-IS)**

* **Process Overview:** The current system relies on a manual workflow for claims processing, policy management, and customer service. These processes are disconnected, resulting in delays and potential errors.
* **Challenges:**
	+ Manual data entry and record keeping
	+ Lack of real-time updates for policyholders
	+ Difficulty in training employees due to outdated training resources
	+ Customer interactions are not streamlined or fully digitalized

**8.2. Proposed Recommendations (TO-BE)**

* **New System:** The proposed mobile app and LMS will address the inefficiencies in the legacy system by automating tasks, improving real-time interactions, and providing a scalable learning environment for employees and customers.
* **Improvements:**
	+ Automation of policy updates and claims submission
	+ Digital self-service portals for customers
	+ Continuous e-learning for employees, ensuring compliance and upskilling

 **9. Business Requirements**

This section includes detailed business requirements for the project, categorized by **priority** and **functionality area**. Each requirement will link to specific **use cases** and reference material to ensure completeness

**Flow Chart Diagram**

Start

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Requirements Gathering & Analysis

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System Design & Architecture

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Policy Issuance Process

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Payment Processing

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Policy Endorsements/Modifications

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Claims Process

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Policy Renewal Process

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System Testing

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Deployment

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End