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**NATIONAL UNIVERSITY FAIRVIEW**

**College of Engineering and Technology  
Bachelor of Science in Information Technology**

**with Specialization in Mobile and Internet Technology**

**Smart Fare: Automating modern public utility jeepney (MPUJ) Payment with an Innovative Fare Collection System**

Project Documentation Submitted to the Faculty of

Bachelor of Science in Information Technology

National University Fairview

In Partial Fulfillment of the Requirements for

PROJMAN – PROJECT MANAGEMENT

By

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## 6.6. ￼Change Management Plan

### 6.6.1. ￼Introduction

The implementation of a smart fare collection system signifies a significant organizational transformation. This change management plan is intended to facilitate a seamless transition to the new system, minimizing disruption to our operations while maximizing the benefits for our clients and our organization. The smart fare collection system revolutionizes how we collect fares, allowing us to incorporate modern technologies and improve the overall passenger experience. This change management plan describes the main strategies, processes, and responsibilities necessary to manage this change effectively. Adhering to this plan will ensure a smooth transition, enhanced operational efficiency, increased customer satisfaction, and improved financial performance.

### 6.6.2. ￼Change Control Board

Table Change Control Board

|  |  |  |
| --- | --- | --- |
| Name | Roles | Purpose/Responsibilities |
| Mr. Mark Anthony Quiñon | Key Stakeholder/ Project Sponsor | * To guide and support the change management plan, approve its objectives, secure resources, communicate vision and benefits to stakeholders, monitor progress, and provide feedback. |
| Mr. Christopher T. Carpio | Project Adviser | * Offer expert advice for successful change management plan implementation, sharing industry knowledge, best practices, and lessons learned. Provide insights on risks and challenges, collaborate with project managers and stakeholders, and evaluate plan effectiveness. |
| Mr. Jose Eugenio L. Quesada | Quality Assurance | * Ensure a change management plan meets quality standards and is effectively implemented, including developing quality control procedures, monitoring, and evaluating the project, conducting audits, and providing recommendations for improving change management processes. |
| Chua, Ronch Amos T. | Project Manager | * Overseeing change management plan planning, execution, and monitoring, managing project schedule and budget, coordinating with stakeholders, assigning tasks, monitoring progress, identifying risks, and implementing mitigation strategies. Communicate updates and status reports to stakeholders. |

### 6.6.3. ￼Roles and Responsibilities

Table Change Team Roles and Responsibility

|  |  |  |
| --- | --- | --- |
| **Name** | **Roles** | **Responsibilities** |
| Balunsong, April Juliana A. | Product Designer and Researcher | * Ensure product design aligns with change management plan goals by conducting user research, creating, and iterating design concepts, collaborating with team members, and testing solutions through prototyping and user feedback. |
| Baltazar, Crisha Maye O. | Product Engineer and Researcher | * Develop and refine product technical aspects in line with the change management plan, including researching and evaluating solutions, collaborating with product designer, translating design concepts into functional specifications, developing, and testing features, and ensuring product feasibility and scalability. |
| Bacaling, Dominic T. | Programmer | * Create, test, and maintain software code for implementing a change management plan, including writing high-quality code, conducting thorough testing, collaborating with team members, and providing support for troubleshooting and resolving technical issues. |

A well-structured team with clearly defined roles and responsibilities is essential for successful implementation of a smart fare collecting system. This provides clarity and ownership among team members, enabling them to work towards a shared vision of developing a reliable and efficient system.

### 6.6.4. ￼Change Control Process

Figure 9 Change Control Process

The smart fare-collection system is essential to the modern transportation infrastructure, streamlining passenger fare collection. However, as with any complex system, adjustments, and enhancements are inevitable to adapt to changing user demands, technological advances, and regulatory requirements. A well-defined change control procedure is required to ensure these changes are seamless and efficiently management. The change control procedure provides a framework for evaluating, sanctioning, and implementing proposed smart fare-collecting system modifications. Following this procedure, stakeholders can evaluate each proposed change's impact, feasibility, and hazards, make informed decisions, and minimize system downtime. The change control process is essential to preserving the smart fare collecting system's dependability, security, and functionality, allowing it to continue providing passengers with a seamless and convenient experience.

Change Management Process

|  |  |  |
| --- | --- | --- |
| **Stage** | **Description** | **Change Log Status** |
| Change Request | The team submitted a formal request for a proposed change to the system, including completing a change request form that provides detailed information about the change, such as its description, rationale, desired outcomes, and any supporting documentation. The stakeholder submits the form to the designated authority or Change Control Board (CCB). | Open (Submitted) |
| Impact Assessment and Change Request | Analyze the results in terms of the effect on technology, business, funds, and customers.  Stakeholders and other relevant parties analyze the change request's details, including the description, rationale, desired outcomes, and supporting documentation. The review's purpose is to assess the feasibility, impact, and risks associated with the proposed change. | In Progress |
| Change Prioritization | Adjustments should be prioritized depending on their level of need, significance, and congruence. | Pending |
| Change Planning | Create a thorough strategy that accounts for all the necessary procedures, periods, and materials. | Not Started |
| Change Testing, Validation, and Deployment | Do some preliminary testing of the new procedure in a safe setting. Execute the deployment plan and ensure proper communication | Not Started |
| Documentation and Reporting | Keep track of all documents pertaining to the changes, and report on the status of those changes often. | In Progress |

A well-defined change control process helps transportation authorities and stakeholders assess and manage proposed changes, minimizing risks and improving system performance. It promotes transparency, accountability, and system stability, allowing the smart fare-collecting system to adapt to evolving needs and technological advancements while maintaining a seamless and efficient fare-collection process for passengers.

Change Request Process Flow Requirements

The change request process flow is crucial for managing changes in a smart fare-collecting system. It involves a structured approach for evaluating, authorizing, and implementing proposed changes, ensuring they align with the system's objectives and stakeholders' needs. By following a well-defined process flow, organizations can ensure changes are thoroughly evaluated, approved by authorities, and implemented seamlessly, minimizing disruptions, and maximizing efficiency, providing insights into handling change requests and maintaining a solid and adaptable system in smart fare-collecting systems.

Figure Change Request Process Flow Requirements

A close-up of a green and black sign

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Table Change Request Process Flow Requirements

|  |  |
| --- | --- |
| Step | Description |
| Generate Change Request (CR) | A change request is initiated by a stakeholder to propose a change in the smart fare collecting system. |
| Log CR Status | The change request is logged, and its status is tracked throughout the process. |
| Evaluate CR | The change request is evaluated to determine its feasibility, impact, and proposed solution. |
| Evaluate CR | The change request is approved or rejected based on its alignment with business objectives and technical feasibility. |
| Implement | The approved change is implemented in the smart fare collecting system. |

#### Change Request Form and Change Management Log

Table 20 Change Request Log

|  |  |
| --- | --- |
| Element | Description |
| Project Name | The project that the suggested change is for |
| Project Manager | The project manager in charge of the project |
| CP# or CR Label | The number or label assigned by the Change Manager to designate the Change Request. |
| Request Date | The date the Change Request was created |
| Title / Item | The item or a brief description of the change request. |
| Description | Description of the desired change, the impact, or benefits of a change should also be described. |
| Submitter: | Name of the person completing the Change Request Form and who can answer questions regarding the suggested change |
| E-mail | Email of the submitter |
| Phone | Phone number of the submitter |
| Version | The project’s version that the suggested change is for |
| Priority | A code that provides a recommended categorization of the urgency of the requested change |
| Change Type | The type and area of impact the Change Request will affect. |
| Impact level | The level of severity and urgency of the change will affect the project. |
| Impact Description | The details and expected outcome of impact. |
| Estimated Time | The time and duration in which the change will take before completion. |
| Completion Date & Time | The specific date and time the change was completed. |
| Remarks | A brief note and description of any occurrence during the change. |
| Approver | The assigned approver for the change request. |
| Role | The designated role of the approver. |
| Signature | The indication of approval. |
| Date Signed | The date when the approver signed the Change Request. |

Evaluating and Authorizing Change Request

The following factors are used to determine the order of importance for requests for changes and are also considered when determining the severity of the effect of various change types.

Table Change Request Priority

|  |  |
| --- | --- |
| Priority | Description |
| Critical | The change request aims to resolve a critical security vulnerability in the smart fare collecting system, which could compromise the fare collection process. A thorough security assessment will be conducted to assess the vulnerability's extent, impact, and remediation steps. The proposed solution will be approved for immediate implementation, ensuring the system's security, and protecting passenger data. This critical priority reflects the urgency of resolving the vulnerability to safeguard user trust and integrity. |
| High | The change request aims to integrate a new payment gateway into the smart fare collecting system, allowing passengers to make fare payments using a digital wallet. This high-priority change will improve user experience and competitive advantage. The evaluation process will assess feasibility, technical requirements, compatibility, and impact analysis. Once confirmed, the change request will be authorized for implementation. |
| Medium | The change request aims to implement an automated fare adjustment feature in the smart fare collecting system to compensate passengers for service disruptions or delays. This medium priority change is crucial for customer satisfaction and fair fare adjustments. The evaluation process will assess technical complexity, fare calculation and validation processes, integration with the existing fare collecting system, regulatory compliance, and revenue reconciliation implications. |
| Low | The change request proposes a new language option for the smart fare collecting system's user interface, supporting a less commonly spoken language for a specific group of passengers. The evaluation process assesses technical feasibility, user interface design, and translation resources. User feedback and demand are also considered. The change request's low priority indicates its relative importance compared to other changes, but addressing language needs contributes to the system's usability and inclusivity. |

Change Requests for modifications are categorized into one or more of the following categories based on their outcomes:

Table Change Request Modification Category

|  |  |  |
| --- | --- | --- |
| Type | | Description |
| Scope | | Change requests involve modifying fare collection infrastructure, integrating with payment processors, updating algorithms, and enhancing user interfaces for contactless payments. |
| Time & Duration | | The contactless payment feature is expected to take about two months, including requirements gathering, system analysis, design, development, testing, and deployment phases. |
| Cost | | Change requests may require additional costs for software development, payment gateway integration, hardware upgrades, and third-party fees. |
| Resources | | Change request implementation requires a dedicated team of software developers, analysts, testers, and project managers, with additional resources for vendor management and user training. |
| Deliverables | | Change request includes updated fare collecting system, contactless payment, user documentation, and training materials. |
| Product & Processes | | The change request aims to improve the product by enhancing payment options, streamlining fare collection, and increasing convenience by modifying processes for contactless transactions. |
| Quality | Change request impacts quality by ensuring security, reliability, accuracy, adhering to industry standards, and conducting thorough testing for contactless payment transactions. | |

Change Requests for modifications are assessed and given one of the following statuses based on the results:

Table Change Request Assessment Status

|  |  |
| --- | --- |
| Status | Description |
| Open | The change request aims to add real-time fare calculation in smart fare collecting, enabling passengers to view exact fare before making payments. The request is currently in "Open" status awaiting evaluation. |
| Work in Progress | The change request integrates a loyalty program into smart fare collecting, offering rewards and incentives for passengers based on travel activities. Currently marked as "Work in Progress." |
| In Review | The change request aims to improve smart fare collecting system reporting capabilities, enabling administrators to generate comprehensive reports on passenger usage, revenue, and performance. It is currently in "In Review" status, undergoing evaluation by stakeholders and experts. |
| Testing | The change request optimizes the smart fare collecting system fare validation for faster, more efficient passenger fare validation. The changes are currently in "Testing" status, ensuring functionality and compatibility with the existing system. |
| Closed | The change request aimed to enhance the mobile fare app's user interface, aiming for a more intuitive and user-friendly experience. The request is marked as "Closed," indicating successful implementation, testing, and release to production. |