Project Design Phase
Problem – Solution Fit Template

Date	04 Jan 2026
Team ID	
Project Name	Metro Ticket Generating System in ServiceNow
Maximum Marks	2 Marks

Problem – Solution Fit Template:

During the Project Design Phase, the focus is to clearly identify the existing problems in traditional metro ticket booking systems and map them to effective, automated solutions using the ServiceNow platform. This ensures that the designed system directly addresses commuter pain points while aligning with operational efficiency, digital transformation goals, and user experience expectations.

The Problem–Solution Fit validates that the proposed design of the **Metro Ticket Generating System** effectively reduces manual effort, minimizes errors, improves ticket booking speed, and enhances overall metro service delivery.

Identified Problems and Proposed Solutions

Problem Area	Existing Challenges	Proposed Solution Using ServiceNow	Expected Outcome
Manual Ticket Booking	Tickets are purchased at physical counters leading to long queues and delays	Service Catalog–based digital ticket booking form	Faster and convenient ticket booking
Lack of Standardization	Ticket booking process varies across stations	Standardized catalog item with defined variables	Consistent ticket booking process
Fare Calculation Errors	Manual fare calculation causes mistakes	Automated fare calculation using scripts and Flow Designer	Accurate and reliable fare calculation
Slow Ticket Processing	Manual ticket issuance delays passenger movement	Automated request creation and processing	Faster ticket generation
Limited Visibility	Passengers cannot track ticket status digitally	Service Portal with request (RITM) tracking	Improved transparency and user satisfaction
Paper-Based Tickets	Physical tickets increase operational cost and waste	Digital ticket records stored in ServiceNow	Paperless and eco-friendly ticketing

Design Justification

The **Metro Ticket Generating System** was designed to address each identified problem using native ServiceNow capabilities, ensuring scalability, security, and ease of maintenance.

Key design choices include:

- Service Catalog–based ticket booking for uniform request intake
- Dynamic catalog variables to capture journey details
- Automated fare calculation logic
- Flow Designer–based automation to reduce manual intervention
- Secure data storage using ServiceNow tables

Each component in the design directly maps to a real-world metro ticketing challenge, ensuring strong problem–solution alignment.

Alignment with Business Objectives

Business Objective	Design Implementation
Reduce manual effort	Automated ticket booking and fare calculation
Improve operational efficiency	Centralized digital ticket management
Enhance commuter experience	User-friendly Service Portal and quick booking
Promote sustainability	Paperless digital ticketing
Improve tracking and reporting	Request records and ServiceNow reporting

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Problem–Solution Fit Validation

The effectiveness of the system design was validated through:

- End-to-end ticket booking flow testing
- Multiple journey and passenger scenarios
- User Acceptance Testing (UAT)
- Verification of fare accuracy and workflow automation

The results confirmed that the solution successfully meets both technical and business requirements.

Conclusion

The Problem–Solution Fit analysis confirms that the **Metro Ticket Generating System using ServiceNow** is well designed to solve real-world challenges in metro ticket booking. By leveraging ServiceNow's Service Catalog, automation, and workflow capabilities, the solution ensures faster ticket booking, improved accuracy, enhanced visibility, and a better commuter experience—making it a scalable and efficient digital ticketing system.