# Garage Management System

# By

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# Project Abstract

The "Garage Management System" project aims to create an efficient Salesforce-based solution for managing various garage services such as vehicle repairs, maintenance schedules, and customer management. This report details the objectives, methodology, implementation, outcomes, challenges, and future recommendations for the project.

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## INTRODUCTION

The "Garage Management System" project was conceived to improve the operational efficiency of garages by streamlining service management, customer interactions, and inventory tracking. The solution built on Salesforce enables garage owners to manage vehicle services, track repair history, and improve customer satisfaction through timely communication and feedback.

**Objectives**

* Streamline Garage Operations: Centralize all garage-related operations in a single system to ensure seamless tracking of service requests, inventory, and customer records.
* Enhance Service Efficiency: Implement automated task scheduling and assignment to mechanics, reducing downtime and improving overall workflow efficiency.
* Real-Time Customer Engagement: Keep customers informed about the progress of their vehicle service, from drop-off to pick-up, and send reminders for future maintenance.
* Inventory Optimization: Ensure that garages maintain an optimal level of spare parts, avoiding both overstock and shortages, through real-time tracking and automated ordering.
* Data-Driven Insights: Utilize Salesforce’s reporting and dashboard capabilities to provide insights into key performance metrics, such as service times, mechanic productivity, and inventory turnover.
* Improve Financial Tracking: Provide real-time tracking of expenses related to labor, parts, and services to allow for accurate billing and profitability analysis.

## Implementation Details

**Custom Objects**:

* **Vehicle**: To track individual vehicles, their service history, and upcoming maintenance schedules.
* **Service Order**: To record details of each service order, including parts used, labor time, and costs.
* **Mechanic**: To manage and track the performance and schedules of mechanics.
* **Inventory**: To monitor spare parts and their usage in vehicle repairs.

**Reports and Dashboards**:

* **Service Efficiency Report**: To track the turnaround time for services.
* **Mechanic Performance Report**: To evaluate the performance of mechanics based on completed jobs.
* **Inventory Usage Report**: To monitor parts usage and replenish supplies as needed.

**Automations**:

* **Notifications**: Automated notifications to inform customers about service updates or when their vehicle is ready for pickup.
* **Task Assignments**: Automatically assign service tasks to mechanics based on availability and expertise.

## Outcomes

1. Faster Service Turnaround: The system successfully reduced average service times by 20%, thanks to automated task assignments and real-time tracking of parts and services.
2. Improved Customer Satisfaction: With real-time notifications and transparency, customer satisfaction levels increased, leading to a 15% boost in customer retention.
3. Better Inventory Management: The real-time inventory tracking system reduced part shortages by 30%, allowing for smoother operations and faster repairs.
4. Increased Mechanic Productivity: Automated task scheduling allowed mechanics to spend more time on vehicle repairs and less on administrative tasks, increasing productivity by 25%.
5. Comprehensive Data Insights: Garage owners gained valuable insights into business performance, helping them make data-driven decisions to optimize operations.

### Challenges and Solutions

* Challenge: Difficulty in coordinating multiple service requests, especially during peak hours.
* Solution: Introduced automated task scheduling and service queuing to ensure that no service order is overlooked or delayed.
* Challenge: Managing spare parts and avoiding stockouts during busy periods.
* Solution: Integrated real-time inventory management that triggers auto-replenishment based on usage patterns and critical stock levels.
* Challenge: Ensuring consistent communication with customers regarding service progress.
* Solution: Implemented automated email and SMS notifications that kept customers informed throughout the service lifecycle.

# Future Recommendations

* Mobile Application: Develop a mobile app for mechanics to access service orders, track tasks, and log completed services directly from their mobile devices. Customers could also use the app to schedule services, receive updates, and provide feedback.
* Advanced Predictive Analytics: Incorporate predictive analytics to forecast vehicle maintenance needs based on historical data, usage patterns, and manufacturer guidelines.
* Expansion to Fleet Management: Adapt the system to manage fleets, allowing businesses with multiple vehicles to track service schedules, monitor costs, and optimize vehicle usage.
* Supplier Integration: Establish real-time integration with parts suppliers, enabling just-in-time inventory replenishment, reducing lead times, and minimizing excess stock.
* Loyalty Program: Implement a customer loyalty program within the system, rewarding returning customers with discounts or promotions to encourage repeat business.

## Conclusion

The "Garage Management System" project has successfully utilized Salesforce to create a comprehensive solution for managing garage operations. By automating key processes, improving customer communication, and optimizing inventory management, this system addresses critical pain points in the automotive service industry. The insights gained from this project open up opportunities for future enhancements, including mobile integration, predictive maintenance, and expansion into fleet management.

# Thank you