



iJRASET

International Journal For Research in
Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 13 Issue: IV Month of publication: April 2025

DOI: <https://doi.org/10.22214/ijraset.2025.69789>

www.ijraset.com

Call:  08813907089

E-mail ID: ijraset@gmail.com

Car Washing - Business Plan

Vedanand Mujbaile¹, Harshal Sarode², Niraj Nawale³, SaiVishnu Machidi⁴, Rahul Talmale⁵

¹Assistant Professor Department of Mechanical Engineering, KDK College of Engineering, Nagpur, Maharashtra, India

^{2, 3, 4, 5}UG Student, Mechanical Engineering, KDK College of Engineering, Nagpur

Abstract: *This project proposes a business plan for car washing service sector, a technology-driven, eco-friendly car wash service aimed at revolutionizing the automobile service sector. The initiative focuses on developing a mobile application for seamless booking and doorstep services, complemented by on-center washing facilities. By integrating water-efficient techniques, High end cleaning equipment and App based scheduling, Autowasche addresses challenges such as excessive water usage, inconsistent service quality, and lack of convenience. The business plan includes research into car washing processes to prevent paint damage, alongside a comprehensive strategy for targeting urban professionals, luxury car owners, corporate fleets, and eco-conscious customers. The proposed model ensures sustainability, customer satisfaction, and scalability through subscription plans, corporate partnerships, and franchise expansion, positioning AUTOWASCHE as a leader in the growing car wash industry.*

Keywords: *car washing, mobile application, doorstep service, business plan.*

I. INTRODUCTION

This project outlines the development of Car washing business plan, a car washing and servicing business emphasizing doorstep convenience, sustainability, and technological innovation. The primary objective is to deliver high-quality, while addressing prevalent issues such as inconsistent service standards, no proper cleaning equipments and time inefficiencies in traditional car washing service provider. Autowasche operates through a dual-service model: doorstep cleaning facilitated by portable kits carried on two-wheelers and on-center services leveraging advanced equipment and skilled personnel. The business integrates a mobile application for on-demand booking, real-time tracking, and cashless payments, enhancing customer accessibility. Research into the car washing process, including the analysis of chemicals, equipment, and techniques, ensures minimal risk of paint damage or scratches, promoting vehicle safety. By targeting urban professionals, luxury car owners, corporate fleets, and eco-conscious customers, AUTOWASCHE aims to meet modern demands for convenience, quality, and environmental responsibility. The business plan encompasses subscription-based models, corporate tie-ups, and franchise expansion to ensure scalability and market penetration, establishing a sustainable and customer-centric service framework.

II. AIM AND OBJECTIVE

A. Aim

- 1) To develop a business plan for the car washing company. This company provide the affordable service of car washing to the new car owner and existing car owner who suffers to get proper services from their service provider. Giving them proper timely service, professional service, accountability for the transaction of the service for customer.
- 2) To develop the software for the data collection of consumers We develop Autowasche mobile software for the customer. The customer can be able to build their profile on an app, this profile includes the name, address, contact details, car details, service option they want to receive.

B. Objective

- 1) To study the car servicing/ washing process
- 2) To prepare a software for data
- 3) To prepare a business plan for car washing
- 4) Data collection for above software

III. LITERATURE REVIEW

- 1) H. Janik and A. Kupiec (Trends in Modern Car Washing, 2020) highlighted the environmental impact of traditional car washing, noting high water consumption and wastewater pollution. Their study emphasized the need for professional, water-efficient systems to reduce ecological footprints while maintaining cleaning efficacy, aligning with AUTOWASCHE's eco-friendly approach.

- 2) Johnson, R. & Lee, S. (Mobile Applications in the Automotive Industry, 2020) explored the integration of mobile technology in automotive services, demonstrating how app-based platforms enhance customer engagement and streamline operations. Their findings support AUTOWASCHE's focus on a user-friendly mobile app for booking and service tracking.
- 3) M/s Institute of Industrial Development (Market Potential Reach in Car Washing, 2021) projected the global car wash market to reach USD 41.1 billion by 2025, with India as a key growth region due to rising vehicle ownership. The study underscores the potential for app-based, on-demand services like AUTOWASCHE to capture market share.
- 4) Charles Chikwendu Okpala et al. (Mobile Water Sprayer for Car Washing, 2021) designed a water-efficient sprayer for vehicle cleaning, emphasizing locally sourced materials and high-pressure systems to remove dirt effectively. Their work informs AUTOWASCHE's adoption of advanced equipment to minimize water usage.
- 5) Azhar Abd Aziz et al. (Mobile Car Wash Booking System, 2023) presented BOOKAWASH, a waterless car wash app offering doorstep services with real-time tracking. Their model, focused on sustainability and convenience, parallels Autowasche's emphasis on eco-friendly practices and digital integration.
- 6) Gaurav Kr. Singh et al. (Door to Door Car Wash, 2020) developed an Android-based app for doorstep car washing, aiming to save customers time and effort. Their focus on user convenience and comprehensive service offerings reinforces Autowasche's strategy of combining doorstep services with a robust digital platform.

IV. RESEARCH METHODOLOGY

A. To Study the car Servicing / washing Process

A comprehensive study was conducted to understand the entire process of car washing and servicing. This involved visiting and observing operations at various car washing and servicing centers to gain firsthand insight into their workflow, tools, customer handling, and efficiency. These visits helped in closely examining the step-by-step service process, staff involvement, and the customer interaction model. In addition, thorough research papers were reviewed to explore modern methods, eco-friendly practices, and the use of technology in car washing systems. Special focus was placed on online booking systems to understand the user experience, system architecture, and operational benefits. This focus helped identify how digital integration improves service speed, convenience, and customer satisfaction.

B. To Prepare a Business plan for car Washing

A detailed business plan was developed to establish a structured and sustainable model for a car washing service. This involved studying existing businesses and reviewing business plans from other successful car care companies. These references provided a base for identifying market gaps and planning strategies accordingly. Financial planning was carefully conducted, taking into account the costs of staffing, equipment, maintenance, marketing, and operational expenses. Every cost factor was considered to ensure the plan is realistic and scalable. Market estimates and cost comparisons from various companies were analyzed to set competitive pricing and optimize profit margins. Legal requirements were also researched, including documentation for registration, licensing, insurance, and environmental compliance. This helped ensure that the business operates smoothly within the legal framework from the beginning.

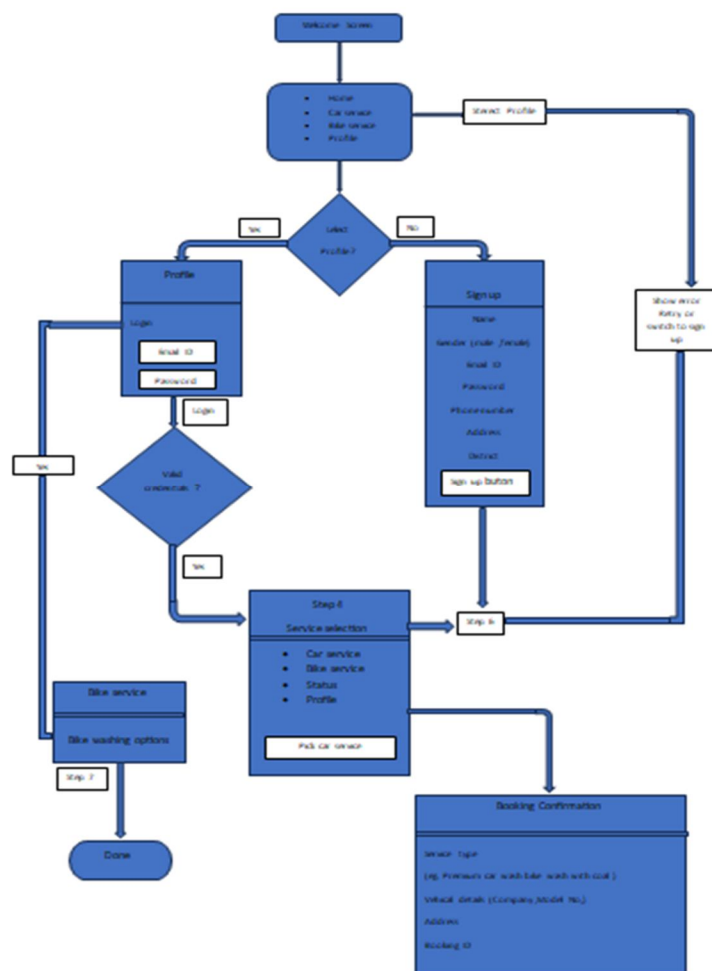
C. To Prepare Software for data management and Customer Services

A user-friendly Mobile application And backend system were developed to facilitate online booking, data management, and service tracking. The software was designed with a simple, intuitive interface for ease of use by both customers and service providers. It enables customers to book services, track service history, and make secure payments. This improves customer convenience and transparency in the service process. On the backend, it allows efficient handling of customer data, appointment scheduling, staff allocation, and performance analytics. The app aims to bridge the gap between traditional car washing methods and modern digital convenience. Overall, the software was built to enhance workflow efficiency and improve customer satisfaction through technology.

D. Data Collection for the Softwar

Data collection was a crucial step to ensure the software meets customer needs and supports business operations. Information was gathered from a wide range of users, including the type of vehicles they own (sedan, SUV, hatchback, etc.), their preferred services (basic wash, deep cleaning, polishing, etc.), average frequency of car washing, location preferences (home service vs. workshop), and feedback on pricing and convenience.

This information helped in identifying service patterns and designing relevant features. Additionally, customer behavior trends and service demand patterns were analyzed to enable personalized recommendations and dynamic service planning. This datadriven approach ensures enhanced user satisfaction and operational efficiency by aligning the software with actual user exceptions



V. CONCLUSION

The development of business plan for automobile service sector integrates high quality car-washing solutions, advanced technology, high end cleaning equipment, on demand service and a customer-centric approach to transform the car washing industry. By leveraging a mobile application for seamless booking, employing water-efficient techniques, and targeting diverse customer segments, the plan addresses key challenges such as water wastage, inconsistent quality, and lack of convenience. Strategic initiatives like subscription plans, corporate partnerships, and franchise expansion ensure scalability and market competitiveness. This comprehensive framework positions AUTOWASCHE a car washing company was a sustainable, innovative solution, developed to meet the evolving needs of modern vehicle.

REFERENCES

- [1] H. Janik, A. Kupiec, "Trends in Modern Car Washing," 2020.
- [2] Johnson, R., Lee, S., "Mobile Applications in the Automotive Industry," 2020.
- [3] M/s Institute of Industrial Development, "Market Potential Reach in Car Washing," 2021.
- [4] Charles Chikwendu Okpala, Dick Paul Uchechukwu, Ozommah Chidinma, Ekweoba Ifeanyi, "Mobile Water Sprayer for Car Washing," Issue 7, July-2021, ISSN 2229-5518.
- [5] Azhar Abd Aziz, Nurul Farisya Said, Afiza Ismail, Saidatul Rahah Hamidi, "Mobile Car Wash Booking System," Procedia Computer Science 216 (2023) 112-119.
- [6] Gaurav Kr. Singh, Aman Verma, Devarshi Himmat Singhka, "Door to Door Car Wash," Volume: 07 Issue: 05 | May 2020.



10.22214/IJRASET



45.98



IMPACT FACTOR:
7.129



IMPACT FACTOR:
7.429



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24*7 Support on Whatsapp)