How Implementation of Roadside Towing Application to Increase Interest in Using Car Towing Services?

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Abstract
A towing service business for car owners experiencing problems is a breath of fresh air so that road users no longer need to worry and can continue their journey in peace. Car towing services are a promising business in the current era, considering the large number of cars on the road. For this reason, the Roadside Towing website application allows users to easily order services for transporting broken down or damaged vehicles. This research aims to determine implementation, obstacles, and evaluation when experiencing obstacles in using the roadside towing application for towing service users. This research collects data using observation, experiment, and literature study. The informants in this research were 3 first users of the Roadside Towing website application in East Java and 2 founders. The Roadside Towing website application can technically be implemented for car towing service users by paying attention to the technical aspects of ordering services, obstacles, and evaluation using this application. It is hoped that future researchers can research with more significant number of informants and appropriate variables to increase their contribution in the field of operational management.

Keywords: Application Digital, Car Towing Service, Implementation, Interest Using

Introduction

The rate of accidents on the road is an esssential factor in increasing business opportunities for car towing services. According to the Traffic Corps of the National Police, the number of traffic accidents reached 94,617 instances in all of Indonesia from January to September 2022 (Saptohutomo, 2022). Siregar and Dewi (2020) stated that 92% of accidents in Indonesia are caused by human factors, 5% by vehicle factors, and 3% by road infrastructure and environmental factors. Seeing due to this issue, there is a great chance for the car towing service business opportunity. due to the increase in automobiles the more accidents and vehicle breakdowns there are on the road. Towing services allow

vehicle owners to receive assistance quickly and conveniently, relieving other road users of their worries so they can continue their journey in peace. Given the vast number of automobiles on the road nowadays, towing or car towing services are a profitable industry. The Republic of Indonesia Police said that as of December 2022, there were 152.51 million motorized cars in Indonesia, and that this number is anticipated to rise annually (Sari, 2022).

A vehicle towing service internet application called Roadside Towing enables consumers to quickly order services for relocating damaged or stranded vehicles (Ahangar et al., 2021). As a way to deal with issues arising from damage or accidents that occur to automobiles on the road, roadside towing was created (Roque et al., 2015). Before this Internet application, persons who had car problems had to hunt for offline towing services online or through acquaintances, call emergency services like the police or toll road services, or both. With technological advancements and the increasing adoption of smartphones. Starting to be introduced is this online application for automobile towing services. This website's application made it simple for consumers to search for and order car towing services online through the PlayStore. Complete details about the costs, locations, and available towing services are also provided by this app.

Users can seek transportation assistance from the closest towing service provider and track the position of a broken-down vehicle using this internet application. Additionally, this internet application offers information on prices and expected arrival times. This internet application provides a security guarantee that the vehicle will be handled securely and will reach the designated point safely. Also available through this website application is insurance for vehicles towed by authorized towing companies. a towing service application overall. The simplicity of use and services offered by this vehicle are comparable to those of other e-commerce applications. This internet application, on the other hand, focuses more on towing or vehicle transportation services, making it highly helpful in crises when the vehicle has issues.

The e-commerce application and the Roadside Towing website application are identical. E-commerce is a newly developed kind of digital transformation that supports the business sector by putting efficiency and effectiveness first (Orinaldi, 2020). For instance, having an internet store helps the Edi Helm Shop in Bandar Lampung expand its market and attract more customers by selling online (Putra, 2020). Long-term marketing success is also enhanced by the usage of e-commerce in a number of Pakistani SMEs (Hussain et al., 2020). During the COVID-19 pandemic, e-commerce offers a lot of comfort and convenience for customers to obtain the goods or services they desire; in fact, e-commerce even makes use of the pandemic to boost sales by offering free shipping promotions, product discounts, and information updates (Sardjono et al., 2021).

This study intends to identify implementation, challenges, and assessment when users of towing services encounter difficulties utilizing the roadside towing application. This research was implemented only on users of roadside towing crane services in the East Java region. In previous research regarding the implementation of website applications like this, they only wanted to know the technicalities of their use without questioning the obstacles and evaluations that had been carried out.

Methods

1. **Level of Data Collection**
   1) Observation Methods
      The researcher saw directly 3 (three) informants who were the app's original users, as well as 2 (two) informants who were the founders, during this observation stage. Then, the researcher analysed the correct implementation for 3 (three) people and informants who used the car towing service website application and 2 (two) informants from the founder.
   2) Experimental Methods
      In this experimental methods, researchers used a website application that had been built and tested in use to conduct research. After then, the application will be examined to discover whether or not there are any challenges with the website application. If there are difficulties, they will be assessed in order to overcome them.
   3) Literatur Study
      Researchers use books, journals, and articles from the library as part of this literature stage.
2. **Research Phase**
   At this research stage, a design is needed that will become reference material in the research. The researcher's stages are described as follows:
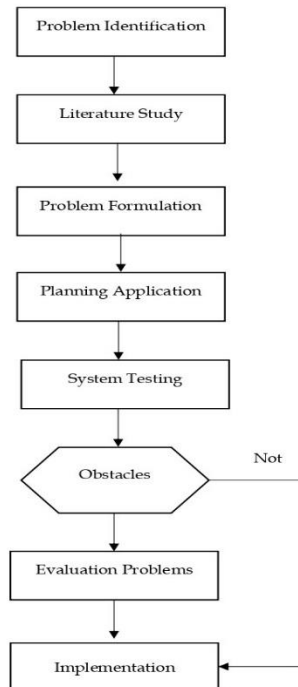
Figure 1. Research Phase
Source: Data Processed (2023)

1) Problem Identification
   Studies of the literature and observations are being made at this time. In order to investigate and determine theoretically and empirically, based on facts, the backdrop of issues that happened before the internet application was designed, literature studies and observations were carried out.
2) Literature Study
   This stage is the stage where will study references from journals, books, and articles relating to the topic under examination at this level.
3) Problem Formulation
   The difficulty related to the study object and the research objectives are developed in this subsequent step. The research analysis findings from observation and data from articles were used to formulate the problem. The outcomes of this problem formulation are also employed in the research as goals.
4) Planning Application
   The researcher built the website application operational approaches at this stage of the website application design process simply to make it user-friendly.
5) System Testing
   Whether or not the designed online application encounters challenges during the system testing stage. Further actions are required to adjust to user needs if there are implementation barriers.
6) Implementation and Evaluation Problems
   At this implementation and evaluation stage, various obstacles have been identified, and evaluations have been made to overcome these obstacles. This web application is prepared for user implementation.

Results and Discussion

Based on the research that has been carried out while answering the research objectives By conducting system testing, several research results were obtained as below:

1. **Implementation of the Roadside Towing Application for Car Towing Service Users in East Java.**

A person in need of towing services may occasionally access the internet to hunt for a service provider (Dewi Fransiska 2021). This is made possible by the Roadside Towing website application, which serves as a middleman between customers and service providers who offer door-to-door service, pick-up to the desired location, and towing and car towing services in response to customer requests. All customers can use the car towing service application Roadside Towing. When a car has issues on the road or at the place where it is delivered, an evacuation service is provided.

Customers can more easily use this application to locate the closest towing or crane service to the spot where they are having issues. Customers can use this app to find the closest towing or car towing service. The Roadside Towing website application's technical requirements are as follows and may be obtained from the Playstore:
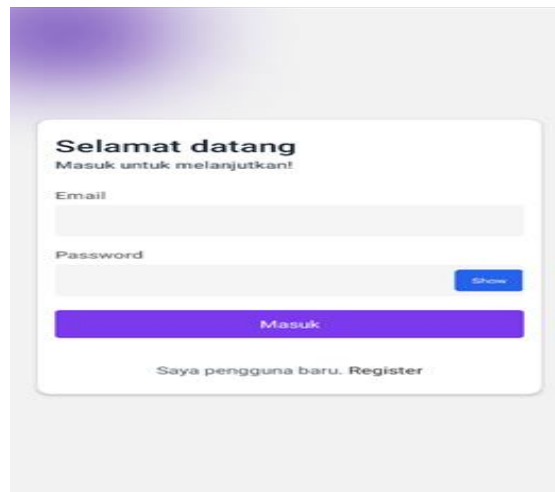
1) Before entering the application, log in first.

Figure 2. Roadside Towing Application Log in Display

2) After log in in, you will enter the application's main menu, then select the order.
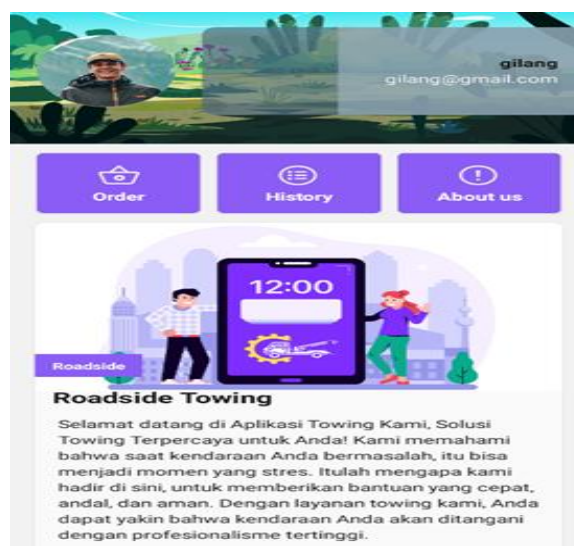

Figure 3. Main Menu Display of the Roadside Towing Application

3) After entering the order menu, please check the available columns such as car identity, car type, drive type, car condition, upload car photo, etc.

Figure 4. Car Identity Menu Display

Figure 5. Next Menu Display

4) Next, select the payment method and the towing service provider.

Figure 6. Payment Menu Display

5) If so, wait until there is confirmation from the service provider to pick you up.
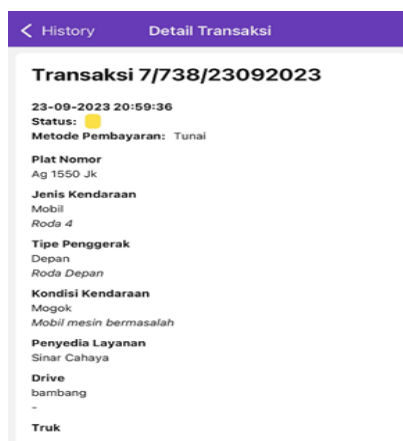

Figure 7. Payment Confirmation Page Display

2. **Barriers faced in using the Roadside Towing Application.**
   The Roadside Towing towing application faces a number of challenges that demand considerable consideration, including:
   1) Regulations and licensing are extensive and intricate. Businesses that administer website applications are frequently subject to stringent licensing requirements and governmental regulations. Each jurisdiction may have distinct requirements, such as the necessity for operational licenses, mandatory insurance, and compliance with safety regulations. Functional business application regulations are crucial for promoting B2C on a worldwide scale (Adam et al., 2020).
   2) It is creating a website application with a complicated cash and non-cash payment mechanism that cannot be efficiently controlled, integrated with navigation, or used. This entails creating dependable server infrastructure, strong software, and integration with numerous third parties, like banks or other financial organizations. Utilizing websites can also improve a company's capacity to assimilate client knowledge or preferences while developing new products (Zhang et al., 2020).
   3) No network of trustworthy and dependable driver partners exists. In the towing industry, driver partners are significant assets, and dependability and professionalism are the secrets of success.
   4) Lack of knowledge about user data security. Privacy, security, and consumer trust influence the intention to transact online at OLX.co.id (Yatminiwati et al., 2021). According to the speed and level of security in online business transactions, millennial consumers choose convenience. A top attention is given to protecting user data, including payment and vehicle details.
   5) Financing issues are difficult to handle and cost a lot of money. It can be quite difficult financially to secure the initial funding necessary to create a website application, manage initial operations, and carry out efficient marketing. Costs associated with creating a website application, advertising, and startup expenses all need to be taken into account. Compared to e-commerce business software, which aim to cut costs and time, this is different (Orinaldi, 2020).
   6) The towing service industry has intense competition. Being in competition with similar services that are well-established and hold a sizable market share might be difficult. Since people's dependence on this industry has increased due to the pandemic and the tightening of the application market in Indonesia, this is seen as a business opportunity for managers of digital platforms and business actors who use digital platforms (Orinaldi, 2020). Competition in the e-commerce sector is a constantly expanding phenomena that has a substantial impact on SME marketing performance for SMEs in Pakistan (Hussain et al., 2020).
   7) An issue that needs to be fixed is consumers' lack of trust in towing service online applications. The fact that consumers still do not trust online shopping apps serves to counteract the annual growth in internet users. Fear of danger and transaction security are the

main factors. (Kemudahan, 2020). Customer satisfaction plays a key role in the success of a towing service business.

8) Bad weather conditions might make it difficult to use online applications like this. To handle potential situations, careful planning and backup plans are required. Poor weather, persistent rain, or slick roads might delay the vehicle towing team's response time and make the towing process more difficult.

In order to develop the Roadside Towing website application for users of the automobile towing service in East Java, research be conducted to discover potential solutions for each hurdle that can be overcome.

3. **Evaluation when experiencing obstacles in using the Roadside Towing application.**

The Roadside Towing application on this website encountered a number of difficulties. In order to increase customer interest in this online application service, these hurdles must be evaluated. This evaluation approach makes it possible to pinpoint actual obstacles that can prevent users from utilizing the program and aids in the creation of workable alternatives. The following evaluation phases might be used depending on the challenges encountered when utilizing the Roadside Towing online application:

1) The management of a website application firm like this involves several intricate permits and laws. All of these rules should be understood and followed, and managers should make adjustments based on their priorities, available time, and available resources. As a result, you must exercise caution and have a thorough awareness of local laws.

2) Developing a website application that cannot be managed efficiently and integrated with navigation and the existence of a cash and non-cash payment system is a complex obstacle. To guarantee that users and driver partners can utilize the program smoothly and reliably, a qualified and knowledgeable development staff is needed.

3) One challenge that needs to be overcome is the lack of a network of dependable and trusted driver partners. Recruiting, educating, and supervising a large network of driver partners necessitates tremendous effort. Background checks on driver partners are also necessary to guarantee consumer safety. Building relationships effectively is important since doing so will help get company partners on board with the digital marketing system transformation (Orinaldi, 2020).

4) Because protecting user data, including payment and vehicle information, is of the utmost importance, it is important to take note of the lack of awareness surrounding user data security. putting money into reliable cybersecurity to shield sensitive data from online attacks. Users must have faith that the data they submit is secure and won't be put to other uses. Customers will feel more confident that the location is secure and that there is no fraud whatsoever the greater the level of security on an online application site. The Roadside Towing application is easy to use because its appearance is simple so that new consumers do not experience difficulties using it. In terms of security, it can be guaranteed, considering that this application does not ask for the user's complete biodata.

5) Completing a website application of this nature is also difficult because it costs a lot of money and requires complicated management. Therefore, thorough financial planning and identifying suitable funding sources are crucial stages in addressing these challenges.

6) It may be challenging to compete with established, well-known service companies that have a substantial market share. To stand out from the competition and draw in new clients, you must have an effective company strategy. It can be difficult to develop a loyal customer base. A firm commitment to offering high-quality service is necessary to develop a strong reputation in the industry and garner positive consumer feedback. Care must be taken to implement sensible client acquisition techniques and effective marketing strategies. One strategy used by business players to stay alive and compete in the digital world is to do extensive social media promotion. If the business has a tow truck, care and upkeep of the tow truck must also be taken into account. An important asset in vehicle towing operations is a dependable tow truck that is in good shape.

7) This type of online application's lack of consumer confidence is a challenge for towing service providers. A firm commitment to offering high-quality service is necessary to develop a strong reputation in the industry and garner positive consumer feedback. In addition, it's important to keep in touch with clients and respond to issues as soon as they arise. It is

envisaged that the trust in and sense of security associated with using E-commerce will affect consumer buying interest and lead to transactions (Sulistyan et al., 2023).

8) Bad weather conditions might make it difficult to use online applications like this. A technical challenge that must be faced in the technology area is making sure that the website application can run smoothly on a variety of mobile devices and internet network configurations. To optimize market coverage, website apps must be responsive and available to as many users as possible.

It is envisaged that by recognizing and solving these challenges, the Roadside Towing website application would be able to conduct evaluations with ease and offer significant added value to clients and users of automobile towing services in East Java.

Conclusion

Based on the research results, the Roadside Towing website application can technically be implemented for car towing service users in East Java by paying attention to the technical ordering of the services provided in this application. However, there are challenges with this website application service business' operation, including the need to apply for numerous permits and regulations, manage website application development effectively and seamlessly with navigation, accept both cash and non-cash payments, and operate without a network of driver partners. Reliable and trustworthy, minimal user data security, funding issues that demand a lot of money and are difficult to arrange, fierce competition for towing business services, lack of consumer trust in using the towing service website application, and the challenge of poor weather that makes it difficult to use this website application. All of these challenges can be evaluated in the following ways: by comprehending and following all regulations and by modifying them in accordance with the priority scale, time constraints, and resources at hand. Establishing a large network of driver partners requires significant efforts in recruitment, training, and supervision, investment in solid cybersecurity to protect sensitive data from cyber threats, careful financial planning, and sourcing appropriate funds, building a good reputation in service, and getting favorable press. A skilled and knowledgeable development team is required to ensure that the application can operate smoothly and can be relied upon by users and driver partners.

The only data collection methods used in this study were observational; therefore, it has limitations. To support the operational performance of the website application, more in-depth analysis using interviews, questionnaires, or focus group discussions (FGD) data collection methods is needed. By including additional informants and useful variables, the research's findings can serve as a springboard for additional analysis, which will improve contributions to the field of operational management of online application use.

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