



# Design and Development of a Web-Based Internal Service Disruption Information System at PT. Kereta Api Indonesia Divre I North Sumatra

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Article Info	ABSTRACT
<p><b>Corresponding Author:</b> Agustiani Hotmaida Br Siahaan E-mail: <a href="mailto:tyasiahaan02@gmail.com">tyasiahaan02@gmail.com</a></p>	<p>This study aims to design and develop a Web-Based Internal Service Disruption Information System at PT. Kereta Api Indonesia (Persero) Divre I North Sumatra. The main problem faced is the manual process of submitting complaints between departments, which is inefficient and time-consuming. The web-based system is expected to simplify the process of reporting service disruptions quickly and in a structured manner without requiring employees to visit the relevant department directly. The research methods used include interviews, observations, and field research to collect relevant data regarding the internal complaint process within the company. The system was developed using Macromedia Dreamweaver CS3 and PHP MyAdmin, supported by the necessary hardware and human resources capable of operating the system. The implementation results show that the designed system can facilitate the process of submitting and handling internal complaints more efficiently. With a simple user interface and features such as complaint input, response management, operator data, and reporting, the system improves communication effectiveness and accelerates service disruption handling. Therefore, this information system can serve as a digital solution to support the improvement of internal service quality at PT. Kereta Api Indonesia Divre I North Sumatra.</p> <p><b>Keywords:</b> Information System, Service Disruption, Web-Based, PT. Kereta Api Indonesia, Internal Complaint.</p>

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## INTRODUCTION

PT. Kereta Api Indonesia (Persero) is one of the State-Owned Enterprises (BUMN) engaged in domestic public transportation, including passenger and freight services. The office of PT. Kereta Api Indonesia Division I North Sumatra serves as the control center for train stations in the city of Medan and several other stations established throughout North Sumatra Province.

Over time, as both public and private institutions have adopted computerized systems, many companies no longer rely on manual methods. The presence of computerized systems has greatly helped in completing various tasks more efficiently, saving both time and effort.

The transition from manual processes to computerized systems has brought many positive impacts. However, there are times when drawbacks also occur. For instance, a

*Design and Development of a Web-Based Internal Service Disruption Information System at PT. Kereta Api Indonesia Divre I North Sumatra* - **Agustiani Hotmaida Br Siahaan**

website cannot be accessed without an internet connection, causing interruptions in ongoing processes and forcing users to temporarily revert to manual methods. Nevertheless, continuous innovations are always being developed to minimize potential errors in any process.

In this regard, the author will conduct research at the office of PT. Kereta Api Indonesia Division I North Sumatra, which plays an important role in land transportation services. The high level of public trust in using train services must be supported by excellent service quality. In particular, when network issues occur at the railway office, resulting in disruptions to work processes, it can lead to inefficiency in operations.

Manual methods for reporting service disruptions are less effective because employees who wish to submit complaints must personally visit the complaint-handling department, thereby leaving their customer service posts, or make complaints via telephone. Such manual procedures are evidently inefficient. The implementation of a computerized system will make it easier for employees to report service disruptions directly to the relevant department responsible for resolving the issues.

The objectives expected from the preparation of this Final Project Proposal are as follows: To identify the problems that occur at PT. Kereta Api Indonesia (Persero) Division I North Sumatra. To facilitate the resolution of complaints submitted at PT. Kereta Api Indonesia (Persero) Division I North Sumatra. To determine the efforts made to address the problems that occur at PT. Kereta Api Indonesia (Persero) Division I North Sumatra.

## METHOD

In solving the existing problems, several stages need to be carried out, namely:

### 1. Interview

Conducting direct question-and-answer sessions with parties who provide the necessary data or information during the research, particularly those who are directly involved in handling complaint issues from various departments at PT. Kereta Api Indonesia (Persero) Division I North Sumatra.

### 2. Field Research

This is a type of research conducted directly in the field by approaching respondents to obtain relevant data and information.

### 3. Observation

Observation involves direct monitoring and recording of various activities carried out at the office of PT. Kereta Api Indonesia (Persero) Division I North Sumatra.

## RESULTS AND DISCUSSION

### System Implementation

#### Definition of Implementation

In general, implementation is an act or process of carrying out a plan that has been carefully and thoroughly prepared. Implementation is usually carried out after the planning stage has been finalized or fixed.

According to Nurdin Usman, implementation refers to actions, activities, and mechanisms within a system. Implementation is not merely a monotonous activity, but rather a well-planned process designed to achieve specific objectives.

## **Definition of System Implementation**

System implementation is the procedure carried out to complete the system design as specified in the approved system design document, test it, install it, and begin using the new or updated system.

During implementation, system testing is first conducted. Once errors or issues are identified during the testing phase, the system is corrected accordingly. Afterward, the system testing proceeds to the stage of actual operation.

Objectives of System Implementation:

1. To complete the system design as specified in the approved system design document.
2. To write, test, and document programs in accordance with the procedures required by the approved design document.
3. To ensure that system personnel are capable of operating the new system.
4. To verify that the system meets user requirements by conducting comprehensive system testing.
5. To ensure the system runs smoothly by properly planning, controlling, and performing installation procedures.
6. To realize the designed system within the information system, supporting facilities are required, which are generally referred to as technical aspects, namely:
  - a. Hardware
  - b. Software
  - c. Brainware

## **Hardware Requirements**

To realize the proposed system, several hardware components are required to support the process of program development.

## **Software Requirements**

In this case, the software refers to the applications used in developing the population data information system for Kelurahan Hutatoruan X, North Tapanuli Regency. The system is built using several software tools, namely Macromedia Dreamweaver CS3, Adobe Photoshop, and PHP MyAdmin.

## **Brainware Requirements**

Brainware refers to human resources who will act as users or system administrators. Users must have an understanding of Macromedia Dreamweaver CS3 and PHP MyAdmin in order to operate the population data information system effectively.

## System Implementation

### Login Page Display

This page serves as the entry point to the Internal Service Disruption Information System.

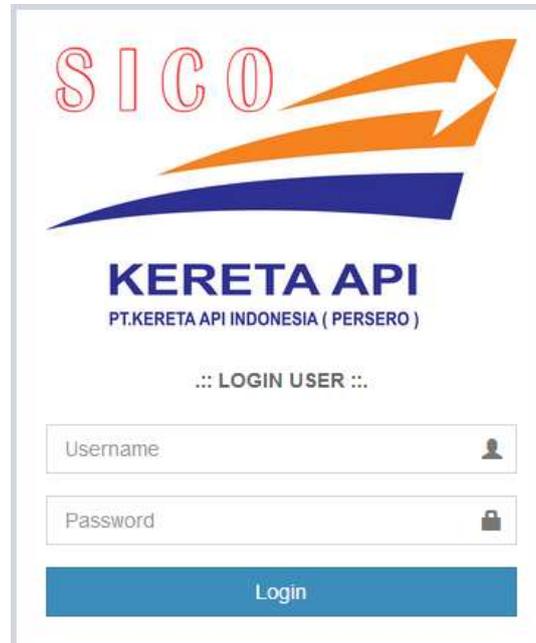


Figure 1 Login Page Display

### Main Menu Display

The main menu provides various options that can be used to access different features such as Home, Complaint, Response, Operator, Profile, and Report menus. These features can be directly accessed and utilized by the user.



Figure 2 Main Menu Page Display

### Complaint Input Page Display

The Complaint menu is used to input or submit complaints. This page also includes a search column to find the specific unit to which the complaint will be directed, allowing users to quickly and accurately locate the desired unit for complaint submission.



Figure 3 Complaint Input Page Display

### Complaint Page Display

This menu is used to display complaints that have been submitted



Figure 4 Complaint Page Display



### Operator Input Page Display

This form is used to input employee data.



Figure 7 Operator Input Page Display

### Operator Page Display

This menu is used to display operator/employee data that has been previously entered and saved.



Figure 8 Operator Page Display

### Profile Page Display

This menu is used to display personal data of operators/employees that has been previously entered and saved. Data editing can also be performed.



Figure 9 Profile Page Display

### Report Print Page Display

This form is used to select which reports to print.



Figure 10 Print Report Page Display

### Operator Data Report Page Display

Displaying Operator Data Reports

LAPORAN DATA OPERATOR PENGGUNA SISTEM INFORMASI COMPLAIN PT. KERETA API INDONESIA					
NO	ID	Nama Operator	Unit	Jabatan	Pict
1	ade	ade irawati	Bagian Kesehatan	Staff	
2	tia	Agustiani Hotmaida	Bagian Sistem Informasi	Manager	
3	tiba	Agustiani Hotmaida Br.Siahaan	Bagian Sistem Informasi	Manager	
4	chelse	Chelsea wati	Bagian Operasi	Manager	
5	eka	Eka elvi	Bagian Pengadaan Barang dan Jasa	Staff	

Figure 11 Operator Data Report Page Display

### Complaint Data Report Page Display

Displaying Complaint Data Reports

LAPORAN DATA COMPLAIN PADA SISTEM INFORMASI COMPLAIN PT. KERETA API INDONESIA					
PERIODE TANGGAL 23-08-2017 s.d 30-08-2017					
dari Bagian/ Unit: Bagian Kesehatan, dengan Status Komplain telah : replay					
No.ID	Tanggal	Nama Operator	Ditujukan	Keterangan	Status
1	27-08-2017 00:08:00	Guna dharna	Bagian Kesehatan	Tabung oksigen di kereta sanserikerta sudah bocor.	user
2	27-08-2017 00:08:00	Chelsea wati	Bagian Kesehatan	pengoperasian kereta sriewalangsra terhambat.	user

Medan, 30-08-2017  
Dibuat oleh,

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Figure 12 Complaint Data Report Page Display

