

# UI/UX Design on the DISPERKIM Lombok Tengah Website using the Design Thinking Method

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**Abstract**—DISPERKIM Lombok Tengah is in an effort to improve services to the community by utilizing existing information technology, one of which is using the website. Bad user interface and user experience design from a website will make users uncomfortable and leave the website. However, the current website has not maximized the utilization of user interface and user experience. As for the results of the questionnaire conducted on 30 respondents, 5% felt bad, 43% of respondents felt it was enough, 33% felt it was quite bad, 18% felt it was quite good and 1% felt good, for the appearance and the availability of information on the DISPERKIM Lombok Tengah website right now. The method used in designing UI/UX on the DISPERKIM Lombok Tengah website uses the Design Thinking method. The Design Thinking method has five stages, namely empathize, define, ideate, prototype and test. The wireframe and prototypes are designed by using the Figma application. The Prototype results have passed the testing process to users with good results. So that the proposed design has met the needs of users and can be continued to be implemented. The prototype design is expected to increase interaction satisfaction between the user and the DISPERKIM Lombok Tengah website.

**Keywords:** Website; User Interface; User Experience; Design Thinking; Figma

## 1. INTRODUCTION

DISPERKIM (Housing and Settlement Area Service) is one of the regional apparatuses that has the duty and function to assist the Regent in carrying out the preparation and implementation of regional policies in the field of housing and residential areas, which in carrying out their duties and obligations must be honest and open to the public. Currently, people are increasingly demanding increased services provided by the government and always supervise, straighten and encourage the pace of government. Digitalization makes everything related to services and production more efficient and is a necessity for government agencies to digitize services according to the times [1]. DISPERKIM strives to provide improved services by utilizing existing technology. One of them is using the Website. The website is one of the media that is used both as a medium for commercial business, education, information dissemination, and as other efficient public services. Every company or institution certainly has its own website in the context of promoting the company or institution itself [2]. In the company's website, of course they will introduce the products or services owned by the company [3].

The website is a means of information and communication that is a liaison between an agency as a manager of services and information that exists in an agency in accordance with the service or wishes of customers (public)[4]. The website is also a form of public service which is honest and open [5]. UI/UX has a very important role in the development or creation of a software or application [6]. The User Interface is the initial appearance that is seen in operating a program or the program interface with the user [7]. While the user experience is what is felt by the user or users when operating the program [8]. If the website has a good user interface and user experience (UI/UX), it will create comfort for users when searching for the information they need [7].

Basically the DISPERKIM website itself already exists and is provided by the DISKOMINFO (Communication and Information Service) Lombok Tengah and it has been managed by DISPERKIM. The results of the questionnaire conducted on 30 respondents resulted in 5% feeling bad, 43% of respondents feeling sufficient, 33% feeling quite bad, 18% feeling quite good and 1% feeling good, for the appearance and the availability of information on the Central Lombok DISPERKIM website on right now. As for the UI/UX redesign on the DISPERKIM Lombok Tengah website, this uses the Design Thinking method. The design thinking method can help in understanding user needs [9]. The Design Thinking method consists of several stages, namely the Empathize, Define, Ideate, Prototype and Test stages [10].

The purpose of doing this redesign of the DISPERKIM Lombok Tengah website is to make a better UI/UX recommendation for the DISPERKIM Lombok Tengah website. Improved display utilization and user experience which increases comfort and makes it easier for users to carry out their activities on the DISPERKIM Lombok Tengah website. Increasing the intensity of visitors with a new and attractive appearance so that visitors feel interested in visiting the DISPERKIM Lombok Tengah website.

## 2. RESEARCH METHODOLOGY

### 2.1 Empathize

The empathize or empathy stage is how to understand and share the feelings of other people from the user's point of view. Then, focus on understanding the wants and needs of users, find out their complaints, what they want and so on, so that they get what they hope and aim for.[11]. This stage can be done by conducting interviews, questionnaires and observing the user's environment. In the observation and interview process, the best results will be obtained if it consists of at least 5 users or sources.[10].

## 2.2 Define

Then is the Define stage which at this stage is the process of defining user needs, their problems, and the views they have. The purpose of this stage is to detect problems that are important to solve [12]. The process of analyzing and understanding as insight that has been obtained through empathy, with the aim of determining the problem statement as a point of view or main concern in research [13].

## 2.3 Ideate

Then the ideate stage, namely the stage of collecting and filtering all ideas. The selected idea or solution will then be developed at the Prototype stage [11]

## 2.4 Prototype

After that, the prototype stage will be carried out, in which the Figma application will be used to make digital prototypes. Figma is a design application and prototyping tool for digital projects [12]. Figma is a tool that is usually used to create moodboards, wireframes, and prototypes or it can be said that figma is a cloud-based design application and prototyping tool for digital projects. [14].

## 2.5 Testing

Then continue with the test stage which is the final stage but is of a life cycle nature so that changes are possible and return to the previous planning stage if there are errors [13].

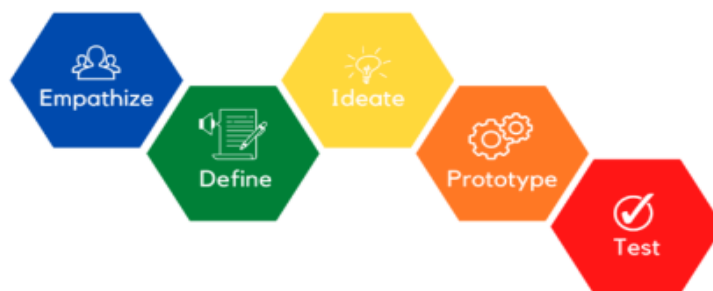


Figure 1. Design Thinking Method [11]

## 3. RESULT AND DISCUSSION

### 3.1 Empathize

The empathize process is carried out by observing interviews and distributing questionnaires to 30 respondents. The results of the questionnaire conducted on 30 respondents resulted in 5% feeling bad, 43% of respondents feeling sufficient, 33% feeling quite bad, 18% feeling quite good and 1% feeling good, for appearance and the availability of information on the DISPERKIM Lombok Tengah website on right now. In addition, an empathy map is also obtained which is the result of the accumulation of all respondents and produces 5 models of empathy maps.

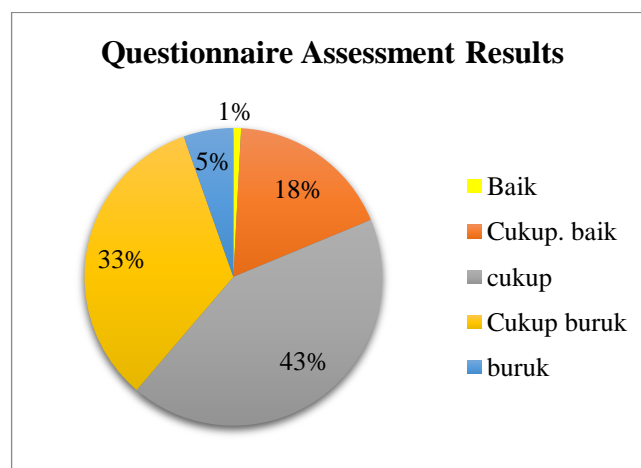


Figure 2. Initial Research Questionnaire Results

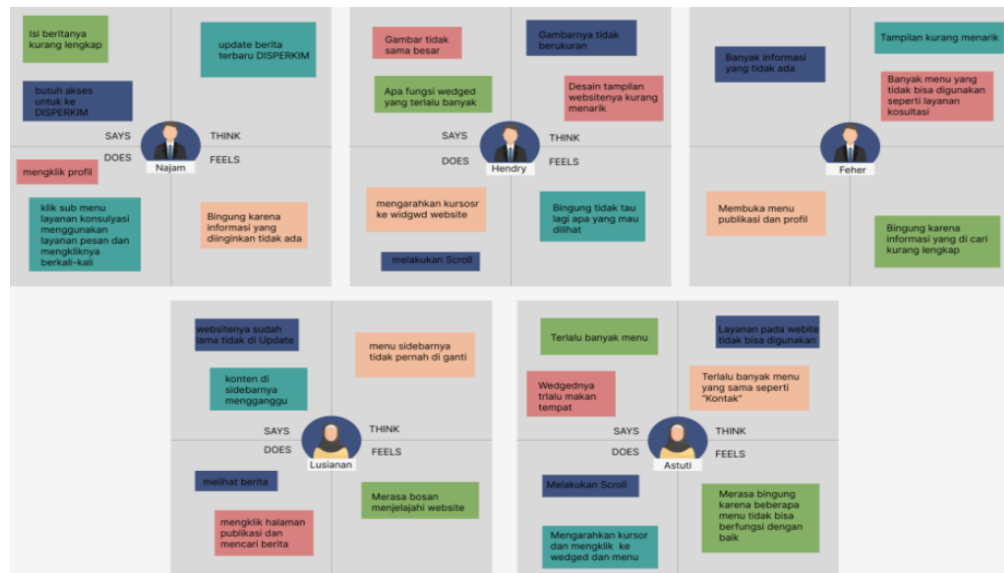


Figure 3. Empathy Map Interview Results

### 3.2 Define

To make it easier to get ideas in building possible features, functions and elements with the aim of solving problems that are experienced by users obtained from the results of the previous empathy map. Figure 4 is the result of the information gathering stage taken from the Empathy stage which is made in the form of a User Persona. User Persona is used to understand the types of users which are seen from the background and the problems that occur[15].

Through Figure 4 it can be seen that, User persona Najamudin was informed that the improvement of the expected features is to improve the appearance to make it more attractive and provide more complete information regarding activities or information about the DISPERKIM Lombok Tengah. Furthermore, the features that Hendry hopes for are improving the user interface design on the website and adding information that is still unclear, such as activity news, implementation time and so on. The features that Feherudin hopes for are to fix features that cannot be function and also improve the user interface design on the DISPERKIM website to make it more attractive. Furthermore, Lusiana wants the information provided on the website to be updated regularly or provide the latest information for the public and improve the appearance of the website so that it is even better. And finally the user persona Astuti is to reduce the "contact" menu which is displayed too much so that it takes up space and reduces the beauty of the appearance of the website and also improves the appearance of the User interface on the DISPERKIM Lombok Tengah website so that it is even more attractive.



Figure 4. User Persona

### 3.3 Ideate

At this stage, ideas will be collected and then solutions will be made from the problems that have been obtained in the Empathize phase, and also the problems that have been compiled in the Define phase. The ideas collected will be made in the form of Empathy maps, user personas, competitive analysis, and wireframes. The solutions obtained are:

- Creating a more attractive appearance. The appearance can be said to be attractive if it is in accordance with the criteria, one of which is having clear design goals (Goals), information architecture that can be understood by the user (Hierarchy), limited by white space between information or design so that information can be read easily (White

Space), the display looks simple (Simplicity) and has a type of size, type of font used, layout of writing (Typography)[10]

- b. Reduce the contact menu that is too many
- c. Displays the latest and complete news
- d. Remove menus that don't work
- e. Fixed overly dominating header display.

### 3.4 Prototype

Furthermore, the prototype phase is used to see an overview or idea design from the results of the Ideate phase. At the prototype stage, a User Flow, Sitemap and a simple wireframe will be made to test the display mockups to the user, whether the proposed display is functional and in accordance with the user's wishes. There is a comparison of the current design and the proposed design can be seen in table 1.

**Table 1.** Comparison of The Current Design and The Proposed Design

Current Design	Proposed Design
There are many features on the menu bar that hinder user action	The features on the menu bar are simpler, there are only home menus, profiles, documents, publications, ppid, and contacts.
Display color is less attractive	The display color is adjusted to the agency's identity and is taken from the logo
The view layout is not precise	The display layout is neater and more organized
There are menus or options that don't work	Removed options leading to a 404 page

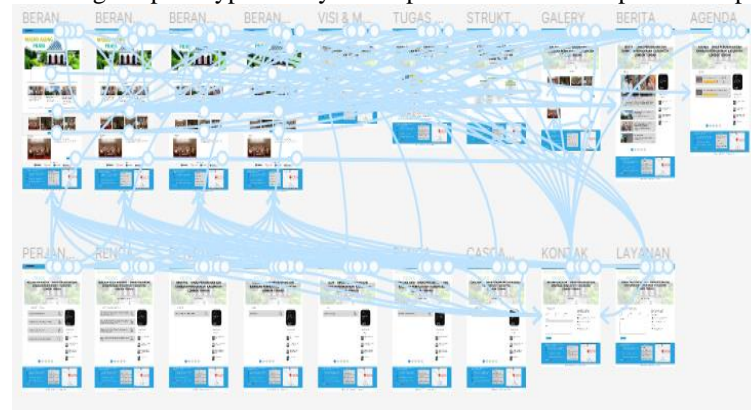
And for more details, see the comparison in Figure 5



**Figure 5.** Comparison of Current Website Dashboard Views and Proposed Websites

### 3.5 Testing

At this stage trials were carried out on the results of the prototypes that had been designed based on the ideas that had been prepared in the ideate phase. In addition, at this stage it will also be tested whether the prototype that has been built can function and is in accordance with the wishes of the user and user experience (user experience). The prototype trial stage was carried out by accessing the prototype link by the respondent then the respondent explored the prototype results.



**Figure 6.** Trial Prototype

The results obtained from the prototype test results from the respondents were that each of the respondents stated that the appearance changes on the DISPERKIM Lombok Tengah website were good, where the features and information provided were quite clear. The clearer results can be seen in the questionnaire results diagram for testing the prototype results of the DISPERKIM Lombok Tengah website in Figure 7.



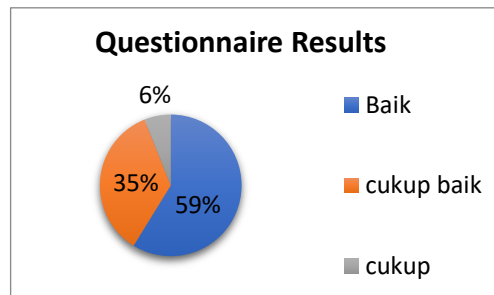


Figure 7. Results of the Final Questionnaire

## 4. CONCLUSION

The design of the user interface and user experience (UI/UX) design on the DISPERKIM Lombok Tengah website uses the design thinking method, which generates user empathy maps, user personas, and wireframes and prototypes. Making wireframes and prototypes in this study using the Figma application. The application of the method starting from the Empathize, Define, Ideate, Prototype and Test stages on the User Interface and User Experience (UI/UX) of the DISPERKIM Lombok Tengah website has fulfilled the desired expectations and is in accordance with the conditions experienced by users which can be seen from the results of the questionnaire. Based on the results of the prototype trial, it can be concluded that the proposed design of the user interface and user experience (UI/UX) display on the DISPERKIM Lombok Tengah website is better based on the results of the final questionnaire, in which 59% of respondents felt good, 35% of respondents felt good enough and 6 % of respondents felt satisfied with the appearance of the proposals that had been made. With the proposed display design for the DISPERKIM Lombok Tengah website, it is hoped that it can help increase the comfort of DISPERKIM Lombok Tengah website users. The application of design thinking in user interface and user experience (UI/UX) design on the DISPERKIM Lombok Tengah website at the test stage was only in the form of a prototype trial test to prospective users. It is hoped that in order to be able to apply the development of the testing process, we can apply usability testing to find out whether the website provides satisfactory results or not.

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