REDESIGN THE UI/UX OF THE PT MNO COMPANY PROFILE WEBSITE USING THE THINKING DESIGN METHOD

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ABSTRACT

In the current era of globalization, large and small companies must develop strategies for using websites to improve business branding to the general public. Based on the results of problem identification, there are several UI/UX problems on the PT MNO website, including an unattractive appearance, messy and overlapping fonts, and a messy layout. This research aims to redesign the PT MNO website to improve its UI/UX to make it more informative, clear, and easy to use. The solution can be implemented by redesigning the website design for PT MNO utilizing the design thinking methodology. This method has five phases: Empathize, define, imagine, prototype, and test. Based on observations and interviews, three categories of problems in the current website category were found: content, navigation, and features. Then, five pages were created for the design results or mockup solutions, namely the home page, services, portfolio, programs, and about us. Testing used a usability metric, SEQ (Single Ease Question). Based on SEQ theory, if the results given by respondents are more than 5.5, then the task or scenario is considered successful or easy to do. So, the five functions in terms of convenience were easy for the five respondents to complete.

Keywords_: Design Thinking_, Redesign, UI/UX, Website.

INTRODUCTION

Business growth in the era of globalization increases competition in all business circles, large and small companies, so they must develop strategies to improve business branding to the general public. One of the most common forms of branding media is using a website. A website is a system connected to documents used as a medium for broadcasting text, images, videos, and other content over the internet network [1][2]. A website is an information tool a company uses to convey information to the general public regarding the business services available at a company. Two factors must be considered when creating a website: user interface (UI) design and user experience (UX). This is because to meet user needs when using a website, you must consider an effective design display for user and product interaction.

PT MNO is a company that operates in IT, telecommunications & general supplier consulting services, which include cleaning service, courier service, and interior & exterior design, as well

as in the creative industry sector, which provides training (nationally certified). In running its business, PT MNO uses a website as a branding medium and a means of information regarding business services that the general public can use. Apart from that, the PT MNO website is also a means of communication for participants who want to do an internship at Y. It is hoped that PT MNO will be aware of this website by the general public and prospective intern participants in the next batch who need further information about the company.

Based on the results of interviews with *stakeholders*, PT MNO found a problem: the existing website still needed more information, and many of the features displayed on the website needed to be fixed. Meanwhile, based on the results of observations made by researchers on the PT MNO website, problems were found from 2 aspects: the user interface and user experience. Judging from the user interface aspect, issues are found, including that there are still messy and overlapping fonts, such as in the header on the main page, the website design is irregular, the appearance is inconsistent, such as several company logos that do not appear on several website pages, colors, and writing are not in sync. On certain pages, when using the website, the information displayed in the footer, service pages, and blogs could be more informative because they show data that is not appropriate for the purpose. Meanwhile, from the user experience aspect, there are problems, such as some features still needing to be more interactive and the layout being messy, making it difficult for users to understand. The login feature does not function well because it does not display buttons such as username, password, and register, so it needs to be optimized.

A website's UI/UX design greatly influences user comfort and satisfaction because if the UI/UX design is less attractive and challenging but more straightforward, it will cause users to lose interest in using the website [3]. The importance of the user interface in a system is because the UI design makes it an effective communication medium between humans and computers. Apart from that, the user experience aspect is the focus of the display flow on a website, and website layout is an essential factor in making it easier for users to use digital products [4]. Previous research written by Danang Tri Widiatmoko and Birmanti Setya Utami in 2022 showed that the creation of UI/UX applications by PKB Selektani could meet users' needs for managing daily tasks and flower-related activities. This can be seen from the test results, which show a UX Usability score of around 6.6 out of 7 points[5]. Other research conducted by Kelly in 2022 in developing the UI/UX of the Ka.com application using the design thinking method resulted in the KA.com application making a prototype for the application after testing was carried out on

potential users, and feedback was obtained that the KA.com prototype easy to understand and use[6].

Based on the problems explained and supported by previous research, the solution that can be implemented is UI/UX redesign*website*PT MNO using the design thinking method. This method prioritizes user needs and provides answers to the problems they face. This method has five phases: Empathize, define, elaborate, prototype, and test [7][8]. This method is widely used to improve the UX and UI of systems, increasing the usability of the system being studied[9]. Therefore, this research utilizes the design thinking method to improve the user experience of the PT MNO website and solve the problems faced by the business, user, and technology sides [10][11].

METHODOLOGY

The implementation methodology contains the flow of research carried out for redesigning the PT MNO website. The study was conducted using design thinking methodology. In solving problems because this method prioritizes user needs and is widely employed to improve the UX and UI of the system and increase the usability of the system being studied. In general, the research was carried out in several steps, namely empathizing, defining, ideating, prototyping, testing, and the final stage, implementation. The six stages are explained in Figure 1.
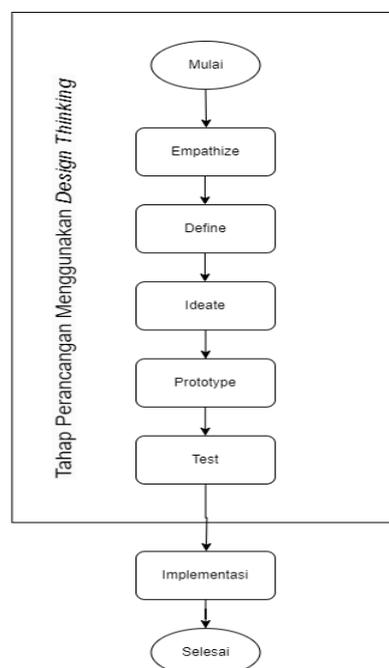

Figure 1. Flow diagram

Empathize

Empathize, namely, understanding how each user fits the product's intended use [12]. At this stage, data collection is carried out to understand user needs and the purpose of the product. This stage is carried out in 2 ways, namely observation and interviews. Comment identifies problems on the PT MNO website by analyzing and trying various features to gain direct experience and collecting competitor products to be analyzed to compare the PT MNO website and competitor websites, which can later be used as reference material for website design solutions[13]. Then, direct interviews will be conducted with PT MNO stakeholders and several others to understand the purpose of the product created and examine the problems the company is currently facing in connection with the digital product that has been developed, namely the PT MNO website.

Define

In stages, the aim is to define and analyze the problem by raising the research's main point of view or pain [12]. This stage is carried out to determine a problem based on the results obtained from the previous step through observation and interviews. Defining the problem will be done using several techniques or methods, namely compiling affinity diagrams and creating How Might We.

Ideate

Ideate is gathering ideas to solve a predefined problem [12]. This stage is the collection of various theories or solutions obtained to solve the problems being faced by the company and users on the PT MNO website that has been created. The ideate process is focused on identifying concepts or ideas that will be used as ideas when building a prototype that will be made later. Collecting ideas and solutions will use several techniques, namely, the results of preparing a sitemap, user flow, and creating wireframes.

Prototype

Prototype is the stage of designing a design that will create the appearance of a digital product that will be developed [12]. This stage begins by designing a PT MNO website design solution from the ideas obtained in the previous step. The prototype stage will be divided into creating a mockup and designing a prototype. After building a wireframe at the ideation stage, the next step is to develop a mockup in the form of a hi-fi (high fidelity) design, where in this section is

the interface or visual display that has been given color and writing/typography. Then, the final part is designing a prototype based on the results of the design solution or mockup that has been previously created to be tested as validation with potential target users to see whether it meets the user's needs.

Testing

The testing stage uses several usability metric methods: Single-ease Questions (SEQ). This stage is carried out to provide testing of the design solutions that have been created for users of the PT MNO website. The aim is to perfect the design solution that has been developed based on feedback obtained by users. This test uses the SEQ (Single Ease Question) method, where prospective users will be asked 1 question and asked respondents to give a scale from 1 to 7. If the value the user assigns is more than equal to 5, then the test is declared victorious. Testing is carried out based on a task flow created to test a feature or menu from the results of the design solution created [14].

Implementation

After all the processes of inside *design thinking* have been carried out and no more problems are found with the website interface, it will proceed to the implementation stage. At the implementation stage, the website interface that has been created is in frontend form.

RESULTS AND DISCUSSION

Making UI designs on the PT MNO website using Figma with the design thinking method for company information media. The following are the results of the analysis and design of the PT MNO Website UI design:

a.   *Empathize*

The empathize stage is the initial stage in redesigning the PT MNO website. The empathize stage is carried out to first find the needs of stakeholders and general users regarding the expected website based on the results of the research that has been carried out. The activities produced at this stage are the results of observational study, interviews, and the preparation of user personas. The observation process was carried out by directly trying the PT MNO website to identify problems on the PT MNO website and carrying out competitor analysis. Competitor analysis aims to compare and inspire designs from competitor websites. After observations,

interviews were conducted with PT MNO stakeholders and general users to collect information that included everything the company needed.

Table 1. Interview Results

No	Name	Problem
1	Respondent 1	● *The website* is still not perfect because there is still unnecessary information, and loading to enter the page takes a long time ● Some features do not function optimally, such as service, portfolio, blog, contact, and login/register ● On the About Us page, the organizational structure is no longer the same as the current situation because it has not been updated for a long time
2	Respondent 2	● The navbar is not neat when scrolling down is messy, and disturbs the user's view ● The colors are less attractive and do not display the company's characteristics ● Less supportive images
3	Respondent 3	● The information displayed is not updated, is not well structured, and is inconsistent ● There are still messy and overlapping fonts in the header ● The services displayed do not match the company's focus
4	Respondent 4	● Many website pages are still empty ● *Website* unresponsive ● Incorrect use of typography
5	Respondent 5	● In terms of user interface design, it is less friendly and seems monotonous ● The company profile information on the MKA website is currently unclear
6	Respondent 5	● Incomplete information ● Design less attractive ● The colors do not contrast
7	Respondent 6	● Website loads slowly ● The content is less interesting ● The website layout is messy

Based on the interview results, it was found that there were 19 problems where these problems would be concluded through the delicate stage. User data was obtained after collecting problem information from stakeholders and general users. So, from the user data, a user persona is created. Preparing user personas aims to group potential target visitors to the PT MNO website. The following is an example of a user persona that has been developed.
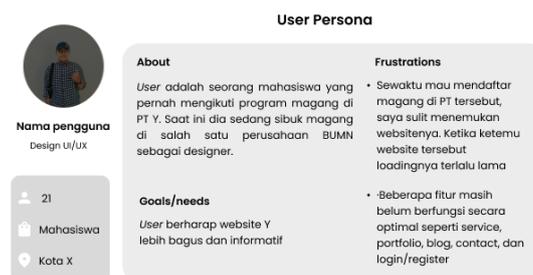

Figure 2. Example of User Persona

b. *Define*

After collecting information and problems in the empathize process, the next step is to define the issues obtained and analyze the data gathered for this stage. Based on the problems identified during the empathy process, the PT MNO website needs redesigned UI/UX to improve its appearance according to the company's needs. The activities produced at the defined

stage are compiling pain points, compiling affinity diagrams, and compiling How Might We (HMW).

1.   *Pain points* and affinity diagrams

Preparation of pain points and affinity diagrams carried out an initial analysis to identify results based on the data collection carried out, and 15 pain points were obtained. Then, from the pain points that have been collected, problem categories are grouped to prepare an affinity diagram. The problems found are divided into content, navigation, and features. The following is a picture of the results of preparing an affinity diagram, which can be seen in the following image.
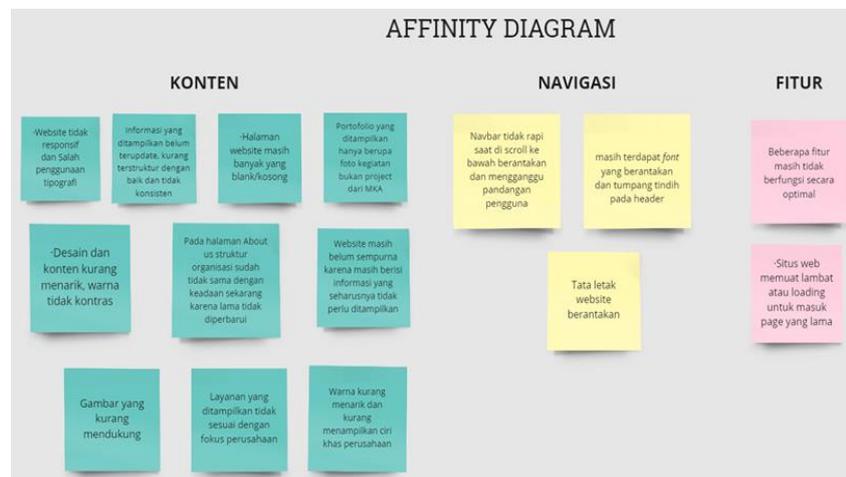
.Figure 3. Affinity diagram

2.   *How Might We*

After categorizing the problems, how might we formulate by generating questions about the issues identified to generate ideas during the brainstorming session for the ideate stage? HMW will be used at the ideate stage as a question sentence to produce answers as ideal solutions to problems arranged in pain points and affinity diagrams [15]. The solution idea is the technique used to analyze at the ideate stage. The description of how we might and the solution idea that has been created is as follows

Table 2. How Might We

HOW MIGHT WE		
CONTENT	NAVIGATION	FEATURE
1. How do you deal with typography	• What navigation needs to be appropriate to	• What is done to ensure optimal features?

in website content? 2. What is exciting portfolio content? 3. What is the content of the navbar? 4. How do I display the latest results?	make it attractive and neat?	
SOLUTION IDEA		
1. Set the spacing between text 2. Displaying work in partnership with companies 3. Create a particular page regarding MSIB on MKA 4. MKA information that focuses on the latest company profiles	• Navigation that doesn't pile up and is neat	• Removed unnecessary features and added program and portfolio features

c.   *Ideate*

At this stage, user needs are identified and expressed as ideas and solutions to problems analyzed or discovered in the defined location. A resolution was obtained based on the issues raised, namely redesigning the PT MNO website, which will be used as company information media. They compile a sitemap, user flow, and wireframe in the ideation stage.

1.   *Sitemap*

In this process, researchers create a sitemap as a reference for the layout of a website menu or hierarchical menu that combines the content of each page or navigation for each website page, which is made in the form of a flow diagram or branching tree diagram. The description of the sitemap that has been created is as follows.
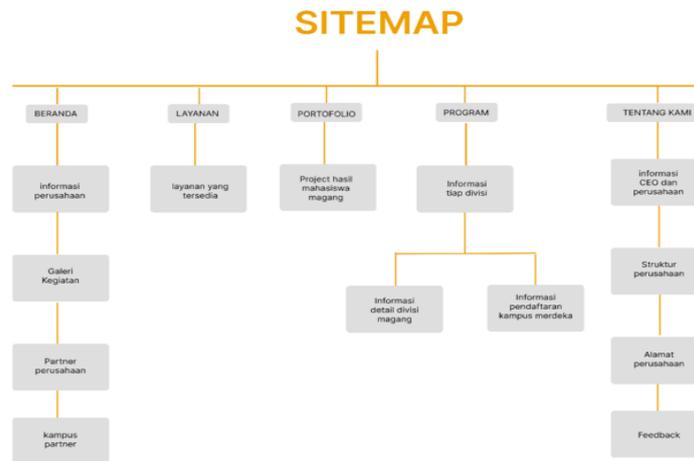
Figure 4. PT MNO Website Sitemap

Based on Figure 4. There are five menus, namely 1) Homepage containing company information, activity gallery, company partners, and partner campuses. 2) Services contain available services. 3) The portfolio contains projects from internship students; 4) The program contains information for each entry, including detailed information on the internship division and independent campus registration information; 5) About us contains CEO and company information, organizational structure, address, and feedback.

2.   *Useflow*

*Userflow*are is the steps or flow carried out by a prospective user for a particular task. Preparation of user flow is made for website usage flow. The following is an example of a user flow that has been created.

Figure 5. The home page uses a flow

In Figure 5. There is a use flow where when a user wants to go to the home page, the user needs to access the URL address, then the system will access according to the home page address, and the user will be presented with the landing page of the targeted website.

3.   *Wireframes*

A wireframe is the result of making a UI (User Interface) sketch but in digital form. Making a wireframe is a form of implementing a design in low fidelity form so that there are no colors, images/illustrations, writing in the form of information, and so on. The resulting wireframes start from the home page, services, portfolio, programs, and about us making this wireframe using the Figma tool[16]. The wireframe created will be a reference in working on the mockup design in high fidelity form. The following is a display of the resulting wireframe.
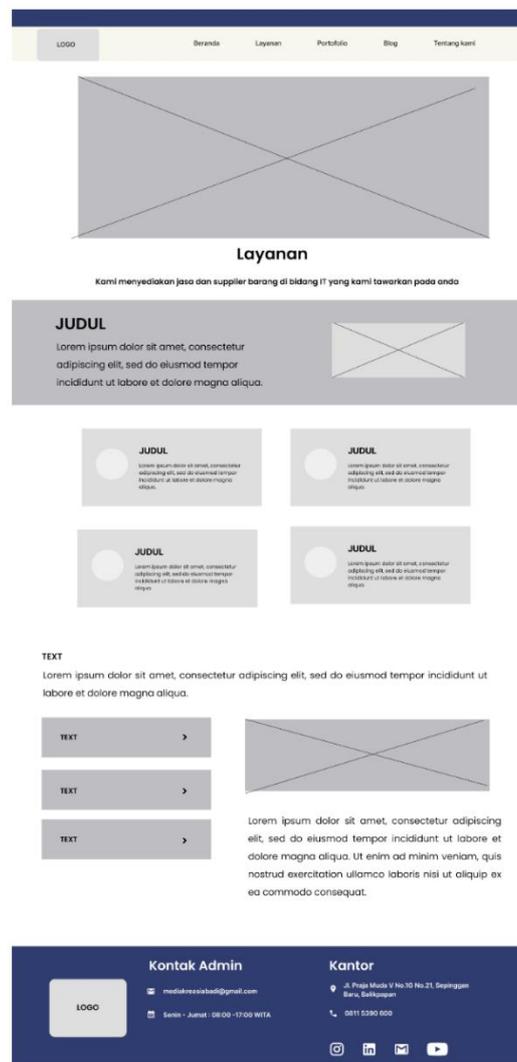

Figure 6. Main page wireframe

In Figure 6. The header section has the company logo, homepage, services, portfolio, programs, and about us. Below the header is brief information about the company and several pictures or photos of activities that PT MNO has carried out; there is information about partners who have collaborated and campus partners who have held internships at PT MNO.

d.   *Prototype*

At this stage, it is done to start designing the interface (UI) in high fidelity form. The software used to develop the interface is using Figma [16]. The activities produced at this stage are making mockups and prototypes. The website design mockup components created by PT MNO consist of color composition, images or illustrations, text, and layout. From the results of the UI mockup design process, design results were obtained for the PT MNO website, which consisted of a home page, service page, portfolio page, program page, and about us page. The following is an example of a mockup that has been created.

Figure 7. Making a Mockup

In Figure 7, one of the mockup results is a mockup of the home page according to the resulting wireframe. After completing the mockup creation process, the next step is to carry out

prototyping for the design solution that has been built. Prototyping is carried out so that the finished mockup can be given to target users during testing.

e.   Test

At this stage, testing is carried out on the design results using the design thinking methodology. This stage aims to evaluate and measure the level of convenience of the design solution that has been created. Testing was carried out using SEQ (Single Ease Question) with a Likert scale of 1-7. 5 tasks will be tested on the prototype results made for respondents. In Table 1, the tasks will be tested on prospective users below.

Table 1. Tasks Tested

No	Function Name	*Tasks*
1	Home page	Users are required to access the home page and view the available information.
2	Services page	Users are asked to access the service page and view information regarding available services.
3	Portfolio page	Users are asked to view student work/project information and try to access the Play Store
4	Program page	Users are asked to view available internship program information and view program information for each division by clicking the register button here
5	About us page	Users are requested to see how to access

No	Function Name	Tasks
		information about the company.

After testing tasks related to the prototype that had been made on five respondents, the results of the feedback given by the respondents regarding the functions that had been carried out were obtained. The results obtained for the user interface design test can be seen in Table 2.

Table 2. Task Test Results

Tasks	Respondent					Average
	R1	R2	R3	R4	R5	
Tasks1	6	7	5	6	7	6.2
Tasks2	6	7	5	6	4	5.6
Tasks3	6	5	6	7	6	6
Tasks4	5	6	7	7	5	6
Tasks5	6	6	7	6	7	6.4

f.   Implementation

After going through 5 stages of design thinking for redesigning the PT MNO website, the final step is implementing the results of the website redesign into frontend form. In the initial stages of website implementation, researchers used technologies such as HTML, CSS, Javascript, and Bootstrap to assist in developing the website. After choosing the technology, the next stage is designing the UI/UX for the PT MNO website. This involves creating the layout, colors, typography, and other visual elements that suit the objectives of the PT MNO website.

CONCLUSION

Based on the research that has been carried out, namely redesigning the UI/UX of PT MNO's company profile website using the design thinking method, it can be concluded that the UI/UX redesign has been successfully carried out, and a design solution of 5 pages was obtained. On the home page is information about the company, a gallery/documentation of activities carried out by the company, and partnerships from PT MNO. On the page displaying services, four services are available at PT MNO. On the portfolio page is an application resulting from an internship project carried out by an independent campus intern employee connected directly to the Play Store. The program page contains information about the divisions at PT MNO for

registration for the Independent Campus internship program. Then, finally, on the About Us page, there is information about the company history, CEO profile, Vision and Mission, Our Team, and the location of PT MNO.

Next, based on the design solution created, design testing continues to find out whether the product that has been designed in terms of convenience is successful using the usability metric method, namely SEQ (Single Ease Question), which consists of 5 tasks addressed to 5 respondents. Based on the average of the test results, the results showed that in task 1, the average test result was 6.2; in task 2, the average test result was 5.6; in task 3, the average test result was 6; in task 4, the test result was obtained. An average of 6, and finally, in Task 5, the average test result was 6.4. Based on SEQ theory, if the results given by respondents are more than 5.5, then the task or scenario is considered successful or easy to do. So, it can be concluded that the 5 studies were easy to carry out in terms of convenience for the 5 respondents.

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